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**HL7 CDA® R2 Implementation Guide:**

**NHSN Healthcare Associated Infection (HAI) Reports**

**Release 3, STU 2—US Realm**

**Volume 3—Appendix:**

**Antimicrobial Resistance (AR) and**

**Antimicrobial Use (AU)**

**Subset For Implementers**

October 2018

**Release 3, 3rd HL7 Standard for Trial Use (STU)**

**Sponsored by:   
Structured Documents Work Group**

**National Healthcare Safety Network (NHSN)**

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1. **Introduction**
   1. ***Purpose***

This appendix is a stand-alone document containing the CDA implementation guidance for Single-Person (Numerator) and Summary (Denominator) Reports dealing with Antimicrobial Resistance (AR) and Antimicrobial Use (AU) data. These reports are the Antimicrobial Resistance Option (ARO) Summary Report (Denominator), the Antimicrobial Use (AUP) Summary Report (Denominator), and the HAI AUR Antimicrobial Resistance Option (ARO) Report (Numerator).

The templates contained in this appendix document are exact copies of the AU and AR templates contained in *HL7 Implementation Guide for CDA® Release 2: NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 3—US Realm, Volume 2 - Templates and Supporting Material.*

This appendix also contains much of the material presented in the *HL7 Implementation Guide for CDA® Release 2: NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 3—US Realm, Volume 1 - Introductory Material.*

* 1. ***Audience***

The audience for this work is all developers of software systems who want to enable their systems for reporting HAI data to the NHSN.

* 1. ***Organization of the Appendix***
     1. Introductory Material

These chapters provide an overview of Clinical Document Architecture (CDA), recent changes to the standard, and information on how to understand and use the CDA templates provided.

* **Chapter 1—Introduction**
* **Chapter 2—CDA R2 Background** contains selected background material on the CDA Release 2 (CDA R2) base standard to aid the reader in conceptualizing the “templated CDA” approach to implementation guide development.
* **Chapter 3—Design Considerations** describes design considerations and overarching principles that have been developed and applied across the CDA templates in this guide. Material in this section can be thought of as “heuristics”, as opposed to the formal and testable constraints found in chapters 5 through 7 of this guide.
* **Chapter 4—Using This Implementation Guide** describes the rules and formalisms used to constrain the CDA R2 standard. It describes the formal representation of CDA templates, the mechanism by which templates are bound to vocabulary, and additional information necessary to understand and correctly implement the normative content found in chapters 5 through 7 of this guide.
  + 1. CDA Templates and Supporting Material
* **Chapter 5—Document-Level Templates** defines the report requirements for HAI CDA documents.

The Healthcare Associated Infection Report requirements apply to any HAI CDA document. They apply to constraints on the CDA header and sections, and include the requirement that the body be represented by a structuredBody element.

The header requirements for population summary reports and for single-person reports differ significantly. HAI defines a generic header template for each of these two sets of requirements. Report-specific templates give additional requirements for each report type in this guide.

* **Chapter 6—Section-Level Templates** defines the generic constraints that apply to all sections along with specific requirements for each section used by the HAI reports in this guide.
* **Chapter 7—Entry-Level Templates** defines clinical statements. Machine processable data are sent in the entry templates. The entry templates are referenced by one or more section templates. Entry-level templates are always contained in section-level templates, and section-level templates are always contained in a document. Requirements for all entries (including organizers) used by the reports in this guide are in alphabetical order.
* **Chapter 8—Template IDs in This Guide** lists the template identifiers used by this guide for HAI reporting to NHSN. These template identifiers are assigned at the document, section, and entry level. Tables list NHSN templates by type and name and by containment.
* **Chapter 9—Value Sets in This Guide** lists all value set names and OIDs used by HAI templates in this guide. Links are provided to external value set sources if appropriate. Additionally, the hai\_voc.xls spreadsheet is provided as a resource for value-set information.
* **Chapter 10—Code Systems in This Guide** lists all code system names and OIDs used by HAI templates in this guide, both for value sets and single-value bindings.
* **Chapter 11—Changes From Previous Version** details all changes made in templates for this release.
* **Chapter 12—References**lists documents and sources cited by this guide.
* **Appendices** include a list of acronyms and abbreviations, example instance identifiers, and vocabulary heuristics for code systems and value sets.
  + 1. Example Instance Identifiers

Much of the initial development of this guide was driven by a pilot project in July 2007. The pilot project used object identifiers (OIDs) assigned to a fictional facility and vendor to illustrate the numbering schemes for which facilities and vendors are responsible.

Except for the example patient identifiers, the example code in this document and the accompanying sample files use these pilot OIDs. Example patient identifiers use the HL7 example OID. In practice, the identifiers will be assigned by facilities and software applications submitting reports to NHSN.

These pilot instance identifiers begin with 2.16.840.1.113883.3.117.1.1.5; HL7 example identifiers begin with 2.16.840.1.113883.19.5. They are used throughout this guide and are documented in the appendix on [Example Instance Identifiers (Non-normative).](#App_Example_Instance_Identifers)

1. **CDA R2 Background**

This implementation guide uses the *HL7 Clinical Document Architecture, Release 2.0 (CDA R2)* as its base standard.[[1]](#footnote-1) CDA R2 is “… a document markup standard that specifies the structure and semantics of ‘clinical documents’ for the purpose of exchange” [CDA R2, Section 1.1]. Clinical documents, according to CDA, have the following characteristics:

* Persistence
* Stewardship
* Potential for authentication
* Context
* Wholeness
* Human readability

CDA defines a header that for classification and management and a document body that carries the clinical record. While the header metadata are prescriptive and designed for consistency across all instances, the body is highly generic, leaving the designation of semantic requirements to implementation.

* 1. ***T******emplated CDA***

CDA R2 can be constrained by mechanisms defined in the “Refinement and Localization”[[2]](#footnote-2) section of the *HL7 Version 3 Interoperability Standards*. The mechanism most commonly used to constrain CDA is referred to as “templated CDA”. In this approach, a library is created containing modular CDA templates such that the templates can be reused across any number of CDA document types, as shown in the following figure.

***Figure 1: Templated CDA***



Many different kinds of templates may be created. Among them, the most common are:

* **Document-level templates:** These templates constrain fields in the CDA header, and define containment relationships to CDA sections. For example, a History-and-Physical document-level template might require that the patient’s name be present, and that the document contain a Physical Exam section.
* **Section-level templates:** These templates constrain fields in the CDA section, and define containment relationships to CDA entries. For example, a Physical-exam section-level template might require that the section/code be fixed to a particular LOINC code, and that the section contain a Systolic Blood Pressure observation.
* **Entry-level templates:** These templates constrain the CDA clinical statement model in accordance with real world observations and acts. For example, a Systolic-blood-pressure entry-level template defines how the CDA Observation class is constrained (how to populate observation/code, how to populate observation/value, etc.) to represent the notion of a systolic blood pressure.

A CDA implementation guide (such as this one) includes reference to those templates that are applicable. On the implementation side, a CDA instance populates the template identifier (templateId) field where it wants to assert conformance to a given template. On the receiving side, the recipient can then not only test the instance for conformance against the CDA XML schema, but also test the instance for conformance against asserted templates.

Template identifiers are critical to the validation methods chosen at this time for submissions to the NHSN. NHSN may reject as nonconformant instances that do not conform to the template identifier constraints defined here.

Please reference the NHSN webpage (<http://www.cdc.gov/nhsn/>) to identify which HAI release NHSN currently supports for a given report.

* 1. ***Change Notification Process***

CDC maintains an e-mail list of contacts at organizations interested in or responsible for implementations of CDA for HAI reporting to NHSN. To be added to the list, send a request with your contact information to [nhsncda@cdc.gov](mailto:nhsncda@cdc.gov). CDC uses the list for e-mail notifications of changes, including new data requirements. Changes may apply to this guide and to other documents such as business rules that are needed to implement and support CDA for HAI reporting to NHSN. NHSN CDA related information may be found at <https://www.cdc.gov/nhsn/cdaportal/index.html>.

1. **Design Considerations**

Design considerations describe overarching principles that have been developed and applied across the CDA templates in this guide. Material in this section can be thought of as “heuristics”, as opposed to the formal and testable constraints found in chapters 5 through 7 of this guide.

* 1. ***Rendering Header Information for Human Presentation***

Metadata carried in the header may already be available for rendering from electronic health records (EHRs) or other sources external to the document; therefore, there is no strict requirement to render directly from the document. An example of this would be a doctor using an EHR that already contains the patient’s name, date of birth, current address, and phone number. When a CDA document is rendered within that EHR, those pieces of information may not need to be displayed since they are already known and displayed within the EHR’s user interface.

Good practice recommends that the following be present whenever the document is viewed:

* Document title and document dates
* Service and encounter types, and date ranges as appropriate
* Names of all persons along with their roles, participations, participation date ranges, identifiers, address, and telecommunications information
* Names of selected organizations along with their roles, participations, participation date ranges, identifiers, address, and telecommunications information
* Date of birth for recordTarget(s)
  1. ***U******nknown and No Known Information***

Information technology solutions store and manage data, but sometimes data are not available. An item may be unknown, not relevant, or not computable or measurable, such as where a patient arrives at an Emergency Department unconscious and with no identification.

In many cases, the CDA standard will stipulate that a piece of information is required (e.g., via a **SHALL** conformance verb). However, in most of these cases, the standard provides an “out”, allowing the sender to indicate that the information isn’t known.

Here, we provide guidance on representing unknown information. Further details can be found in the HL7 V3 Data Types, Release One specification that accompanies the CDA R2 normative standard.

A “@nullFlavor” attribute may be used to indicate that information is unknown. Allowable values for populating the attribute give more details about the reason the information is unknown, as shown in the following example.

***Figure 2: nullFlavor Example***

<!-- CDA requires the consumable element, however NHSN does not

collect further information about the antifungal -->

<consumable>

<manufacturedProduct>

<templateId root="2.16.840.1.113883.10.20.22.4.37"/>

<manufacturedMaterial>

<code nullFlavor="NI"/>

</manufacturedMaterial>

</manufacturedProduct>

</consumable>

Use null flavors for unknown, required, or optional attributes, where allowed per the NHSN protocol:

NI No information. This is the most general and default null flavor.

NA Not applicable. Known to have no proper value (e.g., last menstrual period for a male).

UNK Unknown. A proper value is applicable, but is not known.

ASKU Asked, but not known. Information was sought, but not found (e.g., the patient was asked but did not know).

NAV Temporarily unavailable. The information is not available, but is expected to be available later.

NASK Not asked. The patient was not asked.

MSK There is information on this item available but it has not been provided by the sender due to security, privacy, or other reasons. There may be an alternate mechanism for gaining access to this information.

OTH The actual value is not an element in the value domain of a variable. (e.g., concept not provided by required code system).

The list above contains those null flavors that are commonly used in clinical documents. For the full list and descriptions, see the nullFlavor vocabulary domain in the CDA R2 normative standard.

Unless a nullFlavor is explicitly stated in a constraint in the IG, nullFlavors are not allowed.

***Figure 3: Attribute Required—nullFlavor not allowed***

**1. SHALL** contain exactly one [1..1] code (CONF:15407).

a. This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List   
 (CodeSystem: LOINC 2.16.840.1.113883.6.1) (CONF:15408).

or

2**. SHALL** contain exactly one [1..1] **effectiveTime/@value** (CONF:5256).

***Figure 4: Allowed nullFlavors When Element is Required—with XML examples***

1. **SHALL** contain at least one [1..\*] id

2. **SHALL** contain exactly one [1..1] code

3. **SHALL** contain exactly one [1..1] effectiveTime

<entry>

<observation classCode="OBS" moodCode="EVN">

<id nullFlavor="**NI**"/>

<code nullFlavor="**OTH**">

<originalText>New Grading system</originalText>

</code>

<statusCode code="completed"/>

<effectiveTime nullFlavor="**UNK**"/>

<value xsi:type="CD" nullFlavor="OTH">

<originalText>Spiculated mass grade 5</originalText>

</value>

</observation>

</entry>

If a sender wants to state that a piece of information is unknown, the following principles apply:

1. If the sender doesn’t know an attribute of an act, that attribute can be null.

***Figure 5: Unknown Medication Example***

<entry>

**<text>patient was given a medication but I do not know what it was</text>**

<substanceAdministration moodCode="EVN" classCode="SBADM">

<consumable>

<manufacturedProduct>

<manufacturedLabeledDrug>

<code **nullFlavor="NI"**/>

</manufacturedLabeledDrug>

</manufacturedProduct>

</consumable>

</substanceAdministration>

</entry>

2. If the sender doesn’t know if an act occurred, the nullFlavor is on the act (detail could include specific allergy, drug, etc.).

***Figure 6: Unknown Medication Use of Anticoagulant Drug Example***

<entry>

<substanceAdministration moodCode="EVN" classCode="SBADM" **nullFlavor="NI">**

**<text>I do not know whether or not patient received an anticoagulant**

**drug</text>**

<consumable>

<manufacturedProduct>

<manufacturedLabeledDrug>

**<code code="81839001" displayName="anticoagulant drug"**

**codeSystem="2.16.840.1.113883.6.96"**

**codeSystemName="SNOMED CT"/>**

</manufacturedLabeledDrug>

</manufacturedProduct>

</consumable>

</substanceAdministration>

</entry>

3. If the sender wants to state ‘no known’, a negationInd can be used on the corresponding act (substanceAdministration, Procedure, etc.)

***Figure 7: No Known Medications Example***

<entry>

<substanceAdministration moodCode="EVN" classCode="SBADM" **negationInd=”true”>**

**<text>No known medications</text>**

<consumable>

<manufacturedProduct>

<manufacturedLabeledDrug>

**<code code="410942007" displayName="drug or medication"**

**codeSystem="2.16.840.1.113883.6.96"**

**codeSystemName="SNOMED CT"/>**

</manufacturedLabeledDrug>

</manufacturedProduct>

</consumable>

</substanceAdministration>

</entry>

These next examples illustrate additional nuances of representing unknown information in coded fields.

***Figure 8: Value Known—code for value not known***

<entry>

<observation classCode="OBS" moodCode="EVN">

...

<value xsi:type="CD" nullFlavor="OTH">

<originalText>Spiculated mass grade 5</originalText>

</value>

</observation>

</entry>

***Figure 9: Value Completely Unknown***

<entry>

<observation classCode="OBS" moodCode="EVN">

...

<value xsi:type="CD" nullFlavor="UNK"/>

</observation>

</entry>

***Figure 10: Value Known—code in required code system not known but code from another code system is known***

<entry>

<observation classCode="OBS" moodCode="EVN">

...

<value xsi:type="CD" nullFlavor="OTH">

<originalText>Spiculated mass grade 5</originalText>

<translation code="129742005" displayName="spiculated lesion"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"/>/>

</value>

</observation>

</entry>

* 1. ***Negating Clinical Statements***

Usually, clinical statements in a CDA document assert positive statements. A procedure element represents a procedure that took place and an observation represents an observation about a patient condition or a laboratory result. In this implementation guide, when negationInd is set to true, it is understood that it negates the act as described by the act’s descriptive properties (including act.code, procedure.effectiveTime, observation.value, etc.) and any of the act’s components, rather than at the level of a specific value in the act. The inert properties such as act.id, act.moodCode, and act.confidentialityCode are not negated and always have the same meaning. In other words, when an act is negated, it indicates that the event as specified did not occur. For example, if the clinical statement is asserting that a wrong procedure has been performed on a certain date and its negationInd is set to true, the whole clinical statement is negated, including any attributes such as the assertion and the effectiveTime. This clinical statement indicates that we are not asserting that this event occurred on this date—there is no assertion that a wrong procedure was performed on this date. For further details and examples, see the definition of Act.negationInd in the HL7 Reference Information Model (RIM), Version 2.07 (the version of the HL7 RIM from which CDA, Release 2 is derived) and the discussion of *Negation Indicators in RIM Classes* in *Core Principles and Properties of V3 Models*.

* 1. ***Summary Document ServiceEvent Codes***

For all the summary reports, the documentationOf/serviceEvent/code element records the type of summary data reported. This corresponds to the NHSN form type. This pattern is similar to that used in C-CDA (all releases) (e.g., Operative Note).

1. **Using This Implementation Guide**

This chapter describes the rules and formalisms used to constrain the CDA R2 standard. It describes the formal representation of CDA templates, the mechanism by which templates are bound to vocabulary, and additional information necessary to understand and correctly implement the normative content found in chapters 5 through 7 of this guide.

* 1. ***Levels of Constraint***

The CDA standard describes conformance requirements in terms of three general levels corresponding to three different, incremental types of conformance statements:

* Level 1 requirements impose constraints upon the CDA Header. The body of a Level 1 document may be XML or an alternate allowed format. If XML, it must be CDA-conformant markup.
* Level 2 requirements specify constraints at the section level of a CDA XML document: most critically, the section code and the cardinality of the sections themselves, whether optional or required.
* Level 3 requirements specify constraints at the entry level within a section. A specification is considered “Level 3” if it requires any entry-level templates.

Note that these levels are rough indications of what a recipient can expect in terms of machine-processable coding and content reuse. They do not reflect the level or type of clinical content, and many additional levels of reusability could be defined.

The section libraries for each document type list the required and optional sections.

* 1. ***Conformance Conventions Used in This Guide*** 
     1. Templates and Conformance Statements

Conformance statements within this implementation guide are presented as constraints from Trifolia Workbench, a template repository. An algorithm converts constraints recorded in Trifolia to a printable presentation. Each constraint is uniquely identified by an identifier at or near the end of the constraint (e.g., CONF:86-7345). The digits in the conformance number before the hyphen identify which IG the template belongs to and the number after the hyphen is unique to the owning IG. Together, these two numbers uniquely identify each constraint. These identifiers are persistent but not sequential. Conformance numbers in this guide associated with a conformance statement that is carried forward from a previous version of this guide will carry the same conformance number from the previous version. This is true even if slightly edited. If a conformance statement is entirely new, it will have a new conformance number.

Bracketed information following each template title indicates the template type (section, observation, act, procedure, etc.), the identifier oid or identifier urn, and whether the template is [open or closed](#IG_S_Open_and_Closed_Templates). The identifier oid is the templateId/@root value; all templateIds have an @root value. Newer and/or versioned templates also have an @extension value, which is a date identifying the version of this template; such templates are identified by urn and the HL7 version (urn:hl7ii). The urn identifier includes both the @root and @extension value for the templateId (for example, identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2014-06-09).

Each section and entry template in this guide includes a context table. The "Contained By" column indicates which templates use this template, and if the template is optional or required in the containing template. The "Contains" column indicates any templates that the template uses.

***Figure 11: Context Tables***

***XXX: Allergy Problem Act (V2) Contexts***

| **Contained By:** | **Contains:** |
| --- | --- |
| Allergies Section (entries optional) (V2) (optional)  Allergies Section (entries required) (V2) (required) | Allergy - Intolerance Observation (V2)  Author Participation |

Each template also includes a constraint overview table to summarize the constraints in the template.

***Figure 12: Constraints Overview Table Example***

| **XPath** | **Card.** | **Verb** | **Data Type** | **CONF#** | **Fixed Value** |
| --- | --- | --- | --- | --- | --- |
| observation[identifier: oid:2.16.840.1.113883.10.20.22.4.31] | | | | | |
| @classCode | 1..1 | SHALL |  | XXXX | 2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | XXXX | 2.16.840.1.113883.5.1001 (ActMood) = EVN |
| code | 1..1 | SHALL |  | XXXX |  |
| @code | 1..1 | SHALL |  | XXXX | 2.16.840.1.113883.6.96 (SNOMED CT) = 445518008 |
| value | 1..1 | SHALL | PQ | XXXX |  |
| @unit | 1..1 | SHALL | CS | XXXX | 2.16.840.1.113883.11.20.9.21 (AgePQ\_UCUM) |
| templateId | 1..1 | SHALL |  | XXXX |  |
| @root | 1..1 | SHALL |  | XXXX | 2.16.840.1.113883.10.20.22.4.31 |
| statusCode | 1..1 | SHALL |  | XXXX |  |
| @code | 1..1 | SHALL |  | XXXX | 2.16.840.1.113883.5.14 (ActStatus) = completed |

The following figure shows a typical template’s set of constraints presented in this guide. The next chapters describe specific aspects of conformance statements—open vs. closed statements, conformance verbs, cardinality, vocabulary conformance, containment relationships, and null flavors. The expression “such that it” means, you (**SHALL**/**SHOULD**/**MAY**) have one of those things that look like that, but you can also have another one of those things that look different. The example below states that you must have templateId with a root of 2.16.840.1.113883.10.20.22.4.31 but you can also have other template IDs.

***Figure 13: Constraints Format Example***

***Age Observation***

[observation: identifier oid:2.16.840.1.113883.10.20.22.4.31(open)]

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass 2.16.840.1.113883.5.6 STATIC) (CONF:XXXX).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: ActMood 2.16.840.1.113883.5.1001 STATIC) (CONF: XXXX).
3. SHALL contain exactly one [1..1] templateId (CONF:XXXX) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.31" (CONF: XXXX).
4. SHALL contain exactly one [1..1] code (CONF:7615).
   1. This code SHALL contain exactly one [1..1] @code="445518008" Age At Onset (CodeSystem: SNOMED CT 2.16.840.1.113883.6.96 STATIC) (CONF: XXXX).
5. SHALL contain exactly one [1..1] statusCode (CONF: XXXX).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: ActStatus 2.16.840.1.113883.5.14 STATIC) (CONF: XXXX).
6. SHALL contain exactly one [1..1] value with @xsi:type="PQ" (CONF:XXXX).
   1. This value SHALL contain exactly one [1..1] @unit, which SHALL be selected from ValueSet AgePQ\_UCUM 2.16.840.1.113883.11.20.9.21 DYNAMIC (CONF: XXXX).
      1. Template Versioning

A new version of an existing implemenation guide reuses templates from the previous version. During the ballot phase or update phase, templates carry the designation “Published” to indicate the template is unchanged from the previous version or “Draft” to indicate a new or revised template. Substantial revisions to previously published templates are always indicated by “(Vn)” in all cases: ballot-phase, update-phase, and published guides.

If there are no substantive changes to a template that has been successfully published, the template will carry the same templateId/@root (identifier oid) and templateId/@extension as in the previous implementation guide (in the case of older templates, the @extension attribute will not be present). During a new ballot or update phase, “Published” is appended to the main heading for the template to indicate that the template cannot be commented on in the ballot or update. The “Published” designation is removed on final publication versions.

A revised version of a previously published template keeps the same templateId/@root as the previous version, but it is assigned a new templateId/@extension. The notation “(Vn)” (V2, V3, etc.) is also added to the template name. Versions are not necessarily forward or backward compatible. A versioning may be due to substantive changes in the template and/or the fact that a contained template has changed. The “(Vn)” designation is persistent; it appears with that template when it is used in subsequent guides. During a new ballot or update phase, “Draft” is appended to the main heading for the template to indicate that it may be voted on in the ballot or commented on in the update; the “Draft” designation is removed on final publication versions.

A revised version of a template is explicitly linked to the prior version. When a new version appears for the first time in an IG, a detailed change log is automatically generated, a detailed change log is automatically generated. All such changes for a given IG are shown in Chapter 12 “Changes From Previous Version”.

The following figure shows an example of a versioned template: HAI AUR Antimicrobial Resistance Option (ARO) Report (oid:2.16.840.1.113883.10.20.5.31) has versioned to HAI AUR Antimicrobial Resistance Option (ARO) Report (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.31:2014-06-09).

***Figure 14: Versioned Template Change Log Example***

| **Change** | **Old** | **New** |
| --- | --- | --- |
| Name | HAI AUR Antimicrobial Resistance Option (ARO) Report | HAI AUR Antimicrobial Resistance Option (ARO) Report (V2) |
| Oid | oid:2.16.840.1.113883.10.20.5.31 | urn:hl7ii:2.16.840.1.113883.10.20.5.31:2014-06-09 |
| CONF #: 1129-30474 Added |  | SHALL contain exactly one [1..1] @extension="2014-06-09" (CONF:1129-30474). |
| CONF #: 1129-21153 Modified | SHALL contain exactly one [1..1] Findings Section in an ARO Report (identifier: oid:2.16.840.1.113883.10.20.5.5.32) | SHALL contain exactly one [1..1] Findings Section in an ARO Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2014-06-09) |

* + 1. Open and Closed Templates

HAI templates are, with one exception, closed templates. This means that the template constraints specify everything that is allowed. In open templates, by contrast, all of the features of the CDA R2 base specification are allowed except as constrained by the templates.

The exception to closed templates in HAI reports is that the structuredBody is open: it may contain sections not specified in this guide. The content of such unspecified sections is not processed by NHSN.

* + 1. Conformance Verbs (Keywords)

The keywords **shall, should, may, need not, should not,** and **shall not** in this document are to be interpreted as described in the HL7 Version 3 Publishing Facilitator's Guide.[[3]](#footnote-3)

* **shall**: an absolute requirement
* **shall not**: an absolute prohibition against inclusion
* **should/should not**: best practice or recommendation. There may be valid reasons to ignore an item, but the full implications must be understood and carefully weighed before choosing a different course
* **may/need not**: truly optional; can be included or omitted as the author decides with no implications

The keyword "**shall"** allows the use of nullFlavor unless the requirement is on an attribute or the use of nullFlavor is explicitly precluded.

* + 1. Cardinality

The cardinality indicator (0..1, 1..1, 1..\*, etc.) specifies the allowable occurrences within a document instance. The cardinality indicators are interpreted with the following format “m…n” where m represents the least and n the most:

* 0..1 zero or one
* 1..1 exactly one
* 1..\* at least one
* 0..\* zero or more
* 1..n at least one and not more than n

When a constraint has subordinate clauses, the scope of the cardinality of the parent constraint must be clear. In the next figure, the constraint says exactly one participant is to be present. The subordinate constraint specifies some additional characteristics of that participant.

***Figure 15: Constraints Format—only one allowed***

1. **SHALL** contain exactly one [1..1] **participant** (CONF:2777).

a. This participant **SHALL** contain exactly one [1..1] **@typeCode**="LOC"   
 (CodeSystem: 2.16.840.1.113883.5.90 HL7ParticipationType)   
 (CONF:2230).

In the next figure, the constraint says only one participant “like this” is to be present. Other participant elements are not precluded by this constraint.

***Figure 16: Constraints Format—only one like this allowed***

1. **SHALL** contain exactly one [1..1] **participant** (CONF:2777) such that it

a. **SHALL** contain exactly one [1..1] **@typeCode**="LOC" (CodeSystem:

2.16.840.1.113883.5.90 HL7ParticipationType) (CONF:2230).

* + 1. Optional and Required with Cardinality

The terms *optional* and *required* describe the *lower* bound of cardinality as follows:

*Optional* means that the number of allowable occurrences of an element may be 0; the cardinality will be expressed as [0..1] or [0..\*] or similar. In these cases, the element may not be present in the instance.

*Required* means that the number of allowable occurrences of an element must be at least 1; the cardinality will be expressed as [m..n] where m >=1 and n >=m for example [1..1] or [1..\*]. In these cases, the element must be present in the instance. If an element is required, but is not known (and would otherwise be omitted if it were optional), it must be represented by a null flavor. See “[Unknown and No Known Information”](#IG_S_Unknown_and_No_Known_Information).

* + 1. Vocabulary Conformance

The templates in this document use terms from several code systems. These vocabularies are defined in various supporting specifications and may be maintained by other bodies, as is the case for the LOINC and SNOMED CT vocabularies.

Note that value-set identifiers (e.g., ValueSet 2.16.840.1.113883.1.11.78 Observation Interpretation (HL7) **DYNAMIC)** do not appear in CDA submissions; they tie the conformance requirements of an implementation guide to the appropriate code system for validation.

Value-set bindings adhere to HL7 Vocabulary Working Group best practices, and include both a conformance verb (**shall**, **should**, **may**, etc.) and an indication of **dynamic** vs. **static** binding. Value-set constraints can be **static**, meaning that they are bound to a specified version of a value set, or **dynamic**, meaning that they are bound to the most current version of the value set. A simplified constraint, used when the binding is to a single code, includes the meaning of the code, as follows.

***Figure 17: Binding to a Single Code***

**2. SHALL** contain exactly one [1..1] **code** (CONF:15403).

a) This code **SHALL** contain exactly one [1..1] **@code**="11450-4" Problem List

(CONF:15408).

b) This code **SHALL** contain exactly one [1..1] **@codeSystem**="2.16.840.1.113883.6.1"

(CodeSystem: LOINC 2.16.840.1.113883.6.1 **STATIC**) (CONF: 31141).

The notation conveys the actual code (11450-4), the code’s displayName (Problem List), the OID of the codeSystem from which the code is drawn (2.16.840.1.113883.6.1), and the codeSystemName (LOINC).

HL7 Data Types Release 1 requires the codeSystem attribute unless the underlying data type is “Coded Simple” or “CS”, in which case it is prohibited. The displayName and the codeSystemName are optional, but recommended, in all cases.

The above example would be properly expressed as follows.

***Figure 18: XML Expression of a Single-code Binding***

<code code="11450-4" codeSystem="2.16.840.1.113883.6.1"/>

<!-- or -->

<code code="11450-4" codeSystem="2.16.840.1.113883.6.1"

displayName="Problem List"

codeSystemName=”LOINC”/>

A full discussion of the representation of vocabulary is outside the scope of this document; for more information, see the HL7 V3 Normative Edition 2010[[4]](#footnote-4) sections on Abstract Data Types and XML Data Types R1.

Value set tables are presented below the first template that uses that value set; links are provided in subsequent templates that use the same value set. The value set tables include the value set identifier, a description, a link (where appropriate), and a list of codes in the value set. Ellipses in the last row of value-set members shown indicate that the list is an excerpt and the complete source must be accessed to see all members. Where the table is an excerpt and no link is provided, the full set of values are contained in the hai\_voc.xls spreadsheet included with this package.

***Figure 19: Example Value Set Table***

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Referral Types 2.16.840.1.113883.11.20.9.56  A value set of SNOMED CT codes descending from "3457005" patient referral (procedure).  Value Set Source: https://vsac.nlm.nih.gov | | | |
| **Code** | **Code System** | **Code System OID** | **Print Name** |
| 44383000 | SNOMED CT | 2.16.840.1.113883.6.96 | Patient referral for consultation |
| 391034007 | SNOMED CT | 2.16.840.1.113883.6.96 | Refer for falls assessment (procedure) |
| 86395003 | SNOMED CT | 2.16.840.1.113883.6.96 | Patient referral for family planning (procedure) |
| 306106002 | SNOMED CT | 2.16.840.1.113883.6.96 | Referral to intensive care service (procedure) |
| 306140002 | SNOMED CT | 2.16.840.1.113883.6.96 | Referral to clinical oncology service (procedure) |
| 396150002 | SNOMED CT | 2.16.840.1.113883.6.96 | Referral for substance abuse (procedure) |
| ... |  |  |  |

* + 1. Data Types

All data types used in a CDA document are described in the CDA R2 normative standard. All attributes of a data type are allowed unless explicitly prohibited by this specification.

* + 1. Succession Management

CDA-conformant HAI instances use the elements defined in the CDA header (documentId, setId, version number, and relatedDocument/typeCode) to manage replacements and updates of the documents. As with all CDA documents, the ClinicalDocument/id uniquely identifies a document instance (an electronic file). Incremented version numbers identify subsequent versions of the document.

NHSN assigns each participating facility a root OID. The vendor system generates the ClinicalDocument/setId. The vendor is responsible for extending its OID as necessary to support the several unique numbering schemes it must generate; these include document identifiers and facility-generated procedure identifiers.

* 1. ***XML Conventions Used in This Guide***
     1. XPath Notation

Instead of the traditional dotted notation used by HL7 to represent RIM classes, this document uses XML Path Language (XPath) notation[[5]](#footnote-5) in conformance statements and elsewhere to identify the Extensible Markup Language (XML) elements and attributes within the CDA document instance to which various constraints are applied. The implicit context of these expressions is the root of the document. This notation provides a mechanism that will be familiar to developers for identifying parts of an XML document.

XPath statements appear in this document in a monospace font.

XPath syntax selects nodes from an XML document using a path containing the context of the node(s). The path is constructed from node names and attribute names (prefixed by a ‘@’) and catenated with a ‘/’ symbol.

***Figure 20: XML Document Example***

<author>

<assignedAuthor>

...

<code codeSystem='2.16.840.1.113883.6.96'

codeSystemName='SNOMED CT'

code='17561000'

displayName='Cardiologist' />

...

</assignedAuthor>

</author>

In the above example, the code attribute of the code could be selected with the XPath expression in the next figure.

***Figure 21: XPath Expression Example***

author/assignedAuthor/code/@code

* + 1. XML Examples and Sample Documents

Extensible Mark-up Language (XML) examples appear in figures in this document in this monospace font. Portions of the XML content may be omitted from the content for brevity, marked by an ellipsis (...) as shown in the example below.

***Figure 22: ClinicalDocument Example***

<ClinicalDocument xmls="urn:h17-org:v3">

...

</ClinicalDocument>

Within the narrative, XML element (code, assignedAuthor, etc.) and attribute (SNOMED CT, 17561000, etc.) names also appear in this monospace font.

* 1. ***Supporting Tools***
     1. Validation

This guide expresses CDA R2 constraints in a technology-neutral formalism. The release when published also provides a non-normative set of Schematron schemas based on the technology-neutral formalism, which can test template conformance.

Schematron is “a language for making assertions about patterns found in XML documents.” The schemas provided for CDA and for this package support two-stage validation. First, the CDA schema CDA.xsd validates the basic structural and semantic requirements of any CDA instance. Second, the IG-specific Schematron schema validates the specific requirements of this package.

Validation services are provided through the NHSN import mechanism and by Lantana Group’s CDA Validator (<https://www.lantanagroup.com/validator/>). The CDA Validator is an online application that validates a CDA document’s conformance to several standards and implementation guides; it includes the Schematron files described above.

* + 1. Generation of Narrative Block

Clinical documents generated by clinicians for a patient chart can assume an almost infinite set of semantic structures. For this reason, CDA relies on a narrative block (section/text) to convey the comprehensive clinical report, i.e., all the information that a human reader would consider the definitive, legal content of the record. (Human readability and rendering requirements are described in CDA R2, Section 1.2.3. See [References](#IG_S_References).)

In contrast, the structure and semantics of HAI reports to the NHSN are tightly constrained for unambiguous insertion into the NHSN database. Few elements allow unstructured, uncoded narrative. The definitive, human-readable, legal contents of a report can be derived entirely from the CDA titles and coded entries. Therefore, for the convenience of implementers, this project created a transform that derives the narrative block from the CDA entries. Use of this transform is not required; implementers can use local methods to create the CDA narrative block.

* + 1. Display Transforms

The content required for correct interpretation by a human reader of a compliant instance must be displayable using any CDA stylesheet. Thus, instances conforming to this IG can be viewed using CDA.xsl or any other stylesheet.

In addition, this project has a customized stylesheet that conforms more closely to the display format typical of such records.

# Document-Level Templates

Healthcare Associated Infection Report

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.4.25 (open)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 1 - US Realm

This template records constraints on all NHSN Healthcare Associated Infection Reports (generic constraints). Further constraints are found in the specialization templates for single-patient and population summary reports, and in the templates for specific report types.  
Annotations before some constraints provide additional information for the implementer.  
Elements required by CDA that are not further constrained in this guide are not presented as HAI-specific constraints.  
Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Table 1: Healthcare Associated Infection Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.25) | | | | | |
| realmCode | 1..1 | SHALL |  | [86-18431](#C_86-18431) |  |
| @code | 1..1 | SHALL | CD | [86-18432](#C_86-18432) | US |
| typeId | 1..1 | SHALL |  | [86-18463](#C_86-18463) |  |
| @root | 1..1 | SHALL |  | [86-18464](#C_86-18464) | 2.16.840.1.113883.1.3 |
| @extension | 1..1 | SHALL |  | [86-18465](#C_86-18465) | POCD\_HD000040 |
| templateId | 1..1 | SHALL |  | [86-18460](#C_86-18460) |  |
| @root | 1..1 | SHALL |  | [86-18461](#C_86-18461) | 2.16.840.1.113883.10.20.5.4.25 |
| @extension | 0..0 | SHALL NOT |  | [86-18462](#C_86-18462) |  |
| id | 1..1 | SHALL |  | [86-18466](#C_86-18466) |  |
| @root | 0..1 | MAY |  | [86-18467](#C_86-18467) |  |
| @extension | 0..1 | MAY |  | [86-18468](#C_86-18468) |  |
| code | 1..1 | SHALL |  | [86-18433](#C_86-18433) |  |
| @code | 1..1 | SHALL |  | [86-18434](#C_86-18434) | 51897-7 |
| @codeSystem | 1..1 | SHALL |  | [86-27413](#C_86-27413) | urn:oid:2.16.840.1.113883.6.1 (LOINC) |
| title | 1..1 | SHALL |  | [86-18435](#C_86-18435) |  |
| effectiveTime | 1..1 | SHALL |  | [86-18436](#C_86-18436) |  |
| confidentialityCode | 1..1 | SHALL |  | [86-18437](#C_86-18437) |  |
| @code | 1..1 | SHALL | CD | [86-18438](#C_86-18438) | urn:oid:2.16.840.1.113883.5.25 (HL7Confidentiality) = N |
| languageCode | 1..1 | SHALL |  | [86-18439](#C_86-18439) |  |
| @code | 1..1 | SHALL |  | [86-18440](#C_86-18440) | en-US |
| setId | 1..1 | SHALL |  | [86-18441](#C_86-18441) |  |
| versionNumber | 1..1 | SHALL |  | [86-18442](#C_86-18442) |  |
| recordTarget | 1..\* | SHALL |  | [86-18472](#C_86-18472) |  |
| author | 1..\* | SHALL |  | [86-18473](#C_86-18473) |  |
| custodian | 1..1 | SHALL |  | [86-18443](#C_86-18443) |  |
| assignedCustodian | 1..1 | SHALL |  | [86-18444](#C_86-18444) |  |
| representedCustodianOrganization | 1..1 | SHALL |  | [86-18445](#C_86-18445) |  |
| id | 1..1 | SHALL |  | [86-18446](#C_86-18446) |  |
| @root | 1..1 | SHALL |  | [86-18447](#C_86-18447) | 2.16.840.1.114222.4.3.2.11 |
| legalAuthenticator | 0..1 | SHOULD |  | [86-18474](#C_86-18474) |  |
| relatedDocument | 0..\* | MAY |  | [86-18469](#C_86-18469) |  |
| @typeCode | 1..1 | SHALL |  | [86-18470](#C_86-18470) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RPLC |
| parentDocument | 1..1 | SHALL |  | [86-28401](#C_86-28401) |  |
| id | 1..\* | SHALL |  | [86-28402](#C_86-28402) |  |
| component | 1..1 | SHALL |  | [86-18448](#C_86-18448) |  |
| structuredBody | 1..1 | SHALL |  | [86-18449](#C_86-18449) |  |
| component | 1..\* | SHALL |  | [86-18475](#C_86-18475) |  |

1. SHALL contain exactly one [1..1] realmCode (CONF:86-18431).
   1. This realmCode SHALL contain exactly one [1..1] @code="US" (CONF:86-18432).
2. SHALL contain exactly one [1..1] typeId (CONF:86-18463).
   1. This typeId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.1.3" (CONF:86-18464).
   2. This typeId SHALL contain exactly one [1..1] @extension="POCD\_HD000040" (CONF:86-18465).
3. SHALL contain exactly one [1..1] templateId (CONF:86-18460) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.4.25" (CONF:86-18461).
   2. SHALL NOT contain [0..0] @extension (CONF:86-18462).

CDA requires a ClinicalDocument/id element representing a unique identifier for the document. The id may be represented by either @root or @root plus @extension, so long as the resulting id is globally unique.

CDA provides id, setId, versionNumber, and relatedDocument elements to support succession management (document versioning).

The id element identifies the CDA document instance (the electronic file). It is independent of the setId and versionNumber elements.

1. SHALL contain exactly one [1..1] id (CONF:86-18466).
   1. This id MAY contain zero or one [0..1] @root (CONF:86-18467).
   2. This id MAY contain zero or one [0..1] @extension (CONF:86-18468).
2. SHALL contain exactly one [1..1] code (CONF:86-18433).
   1. This code SHALL contain exactly one [1..1] @code="51897-7" Healthcare Associated Infection Report (CONF:86-18434).
   2. This code SHALL contain exactly one [1..1] @codeSystem (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-27413).

The preferred title content for each report type is given with the constraints for each report type.

1. SHALL contain exactly one [1..1] title (CONF:86-18435).
2. SHALL contain exactly one [1..1] effectiveTime (CONF:86-18436).

CDA requires a confidentiality code that indicates the sensitivity of the document. All HAI submissions carry the same value of "normal". Note that this designation does not affect local policy on safeguarding confidentiality of patient-identifiable personal health information.

1. SHALL contain exactly one [1..1] confidentialityCode (CONF:86-18437).
   1. This confidentialityCode SHALL contain exactly one [1..1] @code="N" Normal (CodeSystem: HL7Confidentiality urn:oid:2.16.840.1.113883.5.25 STATIC) (CONF:86-18438).
2. SHALL contain exactly one [1..1] languageCode (CONF:86-18439).
   1. This languageCode SHALL contain exactly one [1..1] @code="en-US" (CONF:86-18440).
3. SHALL contain exactly one [1..1] setId (CONF:86-18441).
4. SHALL contain exactly one [1..1] versionNumber (CONF:86-18442).

CDA requires a recordTarget element that must contain a patientRole element. This is represented differently in single-person and population summary reports. See the templates for generic single-person and population summary reports for details of how to represent the patient or group subject.

1. SHALL contain at least one [1..\*] recordTarget (CONF:86-18472).

In a single-person report, the author may be software or may be a person in the role of infection control professional (ICP). In a population summary report, the author will be the software forming the message. The effect of the CDA Release 2.0 requirements is:  
An author element shall be present. The author element shall contain a time element that represents the time of authoring of the information, and an assignedAuthor element that represents the author of the information. The assignedAuthor element shall contain an id element. (from CDA R2)

When the report author is vendor software, it can record the software installation id, an email address, and the vendor name.

1. SHALL contain at least one [1..\*] author (CONF:86-18473).

CDA requires that the document custodian be recorded. The NHSN is the custodian of NHSN HAI Reports.

1. SHALL contain exactly one [1..1] custodian (CONF:86-18443).
   1. This custodian SHALL contain exactly one [1..1] assignedCustodian (CONF:86-18444).
      1. This assignedCustodian SHALL contain exactly one [1..1] representedCustodianOrganization (CONF:86-18445).
         1. This representedCustodianOrganization SHALL contain exactly one [1..1] id (CONF:86-18446).
            1. This id SHALL contain exactly one [1..1] @root="2.16.840.1.114222.4.3.2.11" (CONF:86-18447).

CDA requires that a legalAuthenticator element be present if the document has been legally authenticated. Local policy may delegate the function of legal authentication to a device or system that generates the CDA document. In these cases, the legal authenticator must still be a person accepting responsibility for the document content, not the device or system. The effect of the CDA Release 2.0 requirements is:  
The legalAuthenticator element shall contain a time element that represents the time of authentication of the document, a signatureCode element where the value of @code is S, and an assignedEntity element that represents the authenticator of the document. The assignedEntity element shall contain an id element. (from CDA R2)  
HAI Reports are not signed reports and do not require a legalAuthenticator.

1. SHOULD contain zero or one [0..1] legalAuthenticator (CONF:86-18474).
2. MAY contain zero or more [0..\*] relatedDocument (CONF:86-18469).
   1. The relatedDocument, if present, SHALL contain exactly one [1..1] @typeCode="RPLC" replace (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-18470).
   2. The relatedDocument, if present, SHALL contain exactly one [1..1] parentDocument (CONF:86-28401).
      1. This parentDocument SHALL contain at least one [1..\*] id (CONF:86-28402).
         1. The value of id SHALL be populated with the ClinicalDocument/id of the document being replaced (CONF:86-28403).
   3. If versionNumber/@value is greater than 1, a relatedDocument element SHALL be present (CONF:86-18471).
3. SHALL contain exactly one [1..1] component (CONF:86-18448).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:86-18449).
      1. This structuredBody SHALL contain at least one [1..\*] component (CONF:86-18475).
      2. The structuredBody element SHALL contain a component element for each section required by the particular report type. Additional sections may be present but their content will not be processed by NHSN (CONF:86-18450).

HAI Population Summary Report Generic Constraints

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.4.28 (open)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 1 - US Realm

A Population Summary Report records summary data for a group, such as the patients in a particular ward, during a specified period. This report type differs in several ways from the HAI single-person reports.

These report types are used to record many different data sets. The basic structure of the body templates for this report type are:  
• A Summary Data Section:  
o A Summary Encounter records the location to which the data pertain.  
o Various Summary Data Observations record data as code-value pairs.

A population-summary report must conform to the Healthcare Associated Infection Report above. In addition:  
• The patient identifier (required by CDA) is recorded with a nullFlavor.  
• A participant element records that the subject of the report is a group.  
• A second participant element records the reporting facility. (The in-facility unit identifier and type to which the data pertain are recorded in the Summary Encounter Section of the document body.)  
• In the documentationOf/serviceEvent element,  
o The effectiveTime element records the first and last days of the period reported.  
o The code element records the type of summary data reported. This corresponds to the NHSN form type.  
The data set being reported is identified by a code in the CDA header; for example, the cdcNHSN concept “1887-9” identifies the data set “Summary data reporting Antimicrobial Usage”. The codes for these data sets are listed in value set NHSNPopulationSummaryReportTypeCode (2.16.840.1.114222.4.11.3595).

Note that a few data sets are stratified. For example, the NICU (Neonatal Intensive Care Unit) data set is stratified by birthweight; the Antimicrobial Usage data set is stratified by antimicrobial and by route of administration. The stratifying factor is recorded as a CDA element in the Summary Encounter or Summary Data Observation. For example, in an Antimicrobial Use report, the antimicrobial information is represented as a participant. The requirements for each data set are provided in the relevant Summary Data Observation.

Most of the concepts reported are defined for the NHSN protocol and are not expected to see widespread external use: the codes for these concepts come from the NHSN code system.  
Key encounter data:  
• Facility identifier is required. This represents the reporting facility; the location to which the data pertain, such as a unit, is recorded with the data in the Summary Encounter.  
• A code identifying the data set is required.  
• The period reported is required.

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Table 2: HAI Population Summary Report Generic Constraints Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22431](#C_86-22431) |  |
| @root | 1..1 | SHALL |  | [86-22432](#C_86-22432) | 2.16.840.1.113883.10.20.5.4.28 |
| recordTarget | 1..1 | SHALL |  | [86-22433](#C_86-22433) |  |
| patientRole | 1..1 | SHALL |  | [86-22434](#C_86-22434) |  |
| id | 1..1 | SHALL |  | [86-22435](#C_86-22435) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22436](#C_86-22436) | NA |
| participant | 1..1 | SHALL |  | [86-22437](#C_86-22437) |  |
| @typeCode | 1..1 | SHALL |  | [86-22438](#C_86-22438) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SBJ |
| @contextControlCode | 1..1 | SHALL | CS | [86-22439](#C_86-22439) | urn:oid:2.16.840.1.113883.5.1057 (HL7ContextControl) = OP |
| associatedEntity | 1..1 | SHALL |  | [86-22440](#C_86-22440) |  |
| @classCode | 1..1 | SHALL |  | [86-22441](#C_86-22441) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PRS |
| code | 1..1 | SHALL |  | [86-22442](#C_86-22442) |  |
| @code | 1..1 | SHALL |  | [86-22443](#C_86-22443) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 389109008 |
| participant | 1..1 | SHALL |  | [86-22444](#C_86-22444) |  |
| @typeCode | 1..1 | SHALL |  | [86-22445](#C_86-22445) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| @contextControlCode | 1..1 | SHALL | CS | [86-22446](#C_86-22446) | urn:oid:2.16.840.1.113883.5.1057 (HL7ContextControl) = OP |
| associatedEntity | 1..1 | SHALL |  | [86-22447](#C_86-22447) |  |
| @classCode | 1..1 | SHALL |  | [86-22448](#C_86-22448) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC |
| id | 1..1 | SHALL |  | [86-22449](#C_86-22449) |  |
| @root | 1..1 | SHALL |  | [86-22450](#C_86-22450) |  |
| documentationOf | 1..1 | SHALL |  | [86-22451](#C_86-22451) |  |
| serviceEvent | 1..1 | SHALL |  | [86-22452](#C_86-22452) |  |
| @classCode | 1..1 | SHALL |  | [86-22453](#C_86-22453) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CASE |
| code | 1..1 | SHALL |  | [86-22454](#C_86-22454) | urn:oid:2.16.840.1.114222.4.11.3595 (NHSNPopulationSummaryReportTypeCode) |
| effectiveTime | 1..1 | SHALL |  | [86-22456](#C_86-22456) |  |
| low | 1..1 | SHALL |  | [86-22457](#C_86-22457) |  |
| high | 1..1 | SHALL |  | [86-22458](#C_86-22458) |  |

1. Conforms to [Healthcare Associated Infection Report](#D_Healthcare_Associated_Infection_Repor) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.25).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22431) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.4.28" (CONF:86-22432).
3. SHALL contain exactly one [1..1] recordTarget (CONF:86-22433).
   1. This recordTarget SHALL contain exactly one [1..1] patientRole (CONF:86-22434).
      1. This patientRole SHALL contain exactly one [1..1] id (CONF:86-22435).
         1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" not applicable (CONF:86-22436).
4. SHALL contain exactly one [1..1] participant (CONF:86-22437) such that it
   1. SHALL contain exactly one [1..1] @typeCode="SBJ" Subject (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-22438).
   2. SHALL contain exactly one [1..1] @contextControlCode="OP" (CodeSystem: HL7ContextControl urn:oid:2.16.840.1.113883.5.1057 STATIC) (CONF:86-22439).
   3. SHALL contain exactly one [1..1] associatedEntity (CONF:86-22440).
      1. This associatedEntity SHALL contain exactly one [1..1] @classCode="PRS" Person (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:86-22441).
      2. This associatedEntity SHALL contain exactly one [1..1] code (CONF:86-22442).
         1. This code SHALL contain exactly one [1..1] @code="389109008" Group (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-22443).
5. SHALL contain exactly one [1..1] participant (CONF:86-22444) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-22445).
   2. SHALL contain exactly one [1..1] @contextControlCode="OP" (CodeSystem: HL7ContextControl urn:oid:2.16.840.1.113883.5.1057 STATIC) (CONF:86-22446).
   3. SHALL contain exactly one [1..1] associatedEntity (CONF:86-22447).
      1. This associatedEntity SHALL contain exactly one [1..1] @classCode="SDLOC" Service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 STATIC) (CONF:86-22448).
      2. This associatedEntity SHALL contain exactly one [1..1] id (CONF:86-22449).

The value of @root must be the NHSN assigned Facility OID.

* + - 1. This id SHALL contain exactly one [1..1] @root (CONF:86-22450).

1. SHALL contain exactly one [1..1] documentationOf (CONF:86-22451).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:86-22452).
      1. This serviceEvent SHALL contain exactly one [1..1] @classCode="CASE" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22453).
      2. This serviceEvent SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNPopulationSummaryReportTypeCode](#NHSNPopulationSummaryReportTypeCode) urn:oid:2.16.840.1.114222.4.11.3595 STATIC (CONF:86-22454).
      3. This serviceEvent SHALL contain exactly one [1..1] effectiveTime (CONF:86-22456).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-22457).
         2. This effectiveTime SHALL contain exactly one [1..1] high (CONF:86-22458).
2. The author SHALL represent the software forming the message (CONF:86-22459).

Table 3: NHSNPopulationSummaryReportTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNPopulationSummaryReportTypeCode urn:oid:2.16.840.1.114222.4.11.3595  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1879-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Summary data reporting catheter and ventilator use in a ICU/Other |
| 1880-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Summary data reporting catheter and ventilator use in a SCA |
| 1881-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Summary data reporting catheter and ventilator use in a NICU |
| 1884-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Summary data reporting Active Surveillance Testing |
| 2316-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Summary data reporting vascular access types for chronic hemodialysis patients |
| 1887-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Summary data reporting Antimicrobial Usage |
| 2410-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Summary data reporting antimicrobial resistance patterns at a facility |
| 1657-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Summary data reporting Outpatient procedure component events at a facility |
| 2543-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hemovigilance Module - Monthly Reporting Denominator |
| 86558-4 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Summary data reporting healthcare personnel influenza vaccinations |

Antimicrobial Resistance Option (ARO) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.46:2015-04-01 (closed)]

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Table 4: Antimicrobial Resistance Option (ARO) Summary Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (ARO) (V2)](#S_Summary_Data_Section_ARO_V2) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The required title for the CDA document is “Denominator for Antimicrobial Resistance Option (ARO)”. The tables below show the data required at the time of publication.  
The ARO Report extends the simple pattern for Summary Encounter. Required data elements are recorded as entries within the Summary Encounter, with a specified location of 'Facility Wide Inpatient'.

Table 5: Antimicrobial Resistance Option (ARO) Summary Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.46:2015-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1181-28301](#C_1181-28301) |  |
| @root | 1..1 | SHALL |  | [1181-28302](#C_1181-28302) | 2.16.840.1.113883.10.20.5.7.2 |
| templateId | 1..1 | SHALL |  | [1181-22969](#C_1181-22969) |  |
| @root | 1..1 | SHALL |  | [1181-2970](#C_1181-2970) | 2.16.840.1.113883.10.20.5.46 |
| @extension | 1..1 | SHALL |  | [1181-30544](#C_1181-30544) | 2015-04-01 |
| title | 1..1 | SHALL |  | [1181-22971](#C_1181-22971) | Denominator for Antimicrobial Resistance Option (ARO) |
| documentationOf | 1..1 | SHALL |  | [1181-22972](#C_1181-22972) |  |
| serviceEvent | 1..1 | SHALL |  | [1181-22973](#C_1181-22973) |  |
| code | 1..1 | SHALL |  | [1181-22974](#C_1181-22974) |  |
| @code | 1..1 | SHALL |  | [1181-22975](#C_1181-22975) | 2410-9 |
| @codeSystem | 1..1 | SHALL |  | [1181-22976](#C_1181-22976) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [1181-22977](#C_1181-22977) |  |
| structuredBody | 1..1 | SHALL |  | [1181-22978](#C_1181-22978) |  |
| component | 1..1 | SHALL |  | [1181-22979](#C_1181-22979) |  |
| section | 1..1 | SHALL |  | [1181-22980](#C_1181-22980) | [Summary Data Section (ARO) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2015-04-01](#S_Summary_Data_Section_ARO_V2) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:1181-28301) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2" (CONF:1181-28302).
2. SHALL contain exactly one [1..1] templateId (CONF:1181-22969) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.46" (CONF:1181-2970).
   2. SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30544).
3. SHALL contain exactly one [1..1] title="Denominator for Antimicrobial Resistance Option (ARO)" (CONF:1181-22971).
4. SHALL contain exactly one [1..1] documentationOf (CONF:1181-22972).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:1181-22973).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:1181-22974).
         1. This code SHALL contain exactly one [1..1] @code="2410-9" Summary data reporting antimicrobial resistance patterns at a facility (CONF:1181-22975).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1181-22976).
5. SHALL contain exactly one [1..1] component (CONF:1181-22977).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1181-22978).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1181-22979).
         1. This component SHALL contain exactly one [1..1] [Summary Data Section (ARO) (V2)](#S_Summary_Data_Section_ARO_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2015-04-01) (CONF:1181-22980).

Antimicrobial Use (AUP) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01 (closed)]

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Table 6: Antimicrobial Use (AUP) Summary Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (AUP) (V2)](#S_Summary_Data_Section_AUP_V2) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The required title for the CDA document is the “Antimicrobial Use, Pharmacy Option (AUP) Summary Report”.

NHSN reporting requires:  
• Patient presence:  
o If the reporting location is a single unit such as a ward, Number of Patient-Present Days, or  
o If the encounter location is facility-wide rather than a single unit, Number of Admissions and Number of Patient-present Days.  
• Antimicrobial usage: for each antimicrobial reported,  
o Number of Therapy Days for the antimicrobial (this is not a simple total of the stratified data; consult the NHSN protocol for the calculation)  
o Number of Therapy Days for the antimicrobial stratified by route of actual administration (four observations, one for each route)

Table 7: Antimicrobial Use (AUP) Summary Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1181-28303](#C_1181-28303) |  |
| @root | 1..1 | SHALL |  | [1181-28304](#C_1181-28304) | 2.16.840.1.113883.10.20.5.7.2 |
| templateId | 1..1 | SHALL |  | [1181-22898](#C_1181-22898) |  |
| @root | 1..1 | SHALL |  | [1181-22899](#C_1181-22899) | 2.16.840.1.113883.10.20.5.44 |
| @extension | 1..1 | SHALL |  | [1181-30543](#C_1181-30543) | 2015-04-01 |
| title | 1..1 | SHALL |  | [1181-22900](#C_1181-22900) | Antimicrobial Use, Pharmacy Option (AUP) Summary Report |
| documentationOf | 1..1 | SHALL |  | [1181-22901](#C_1181-22901) |  |
| serviceEvent | 1..1 | SHALL |  | [1181-22902](#C_1181-22902) |  |
| code | 1..1 | SHALL |  | [1181-22903](#C_1181-22903) |  |
| @code | 1..1 | SHALL |  | [1181-22904](#C_1181-22904) | 1887-9 |
| @codeSystem | 1..1 | SHALL |  | [1181-22905](#C_1181-22905) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [1181-22906](#C_1181-22906) |  |
| structuredBody | 1..1 | SHALL |  | [1181-22907](#C_1181-22907) |  |
| component | 1..1 | SHALL |  | [1181-22908](#C_1181-22908) |  |
| section | 1..1 | SHALL |  | [1181-22909](#C_1181-22909) | [Summary Data Section (AUP) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01](#S_Summary_Data_Section_AUP_V2) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:1181-28303) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2" (CONF:1181-28304).
2. SHALL contain exactly one [1..1] templateId (CONF:1181-22898) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.44" (CONF:1181-22899).
   2. SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30543).
3. SHALL contain exactly one [1..1] title="Antimicrobial Use, Pharmacy Option (AUP) Summary Report" (CONF:1181-22900).
4. SHALL contain exactly one [1..1] documentationOf (CONF:1181-22901).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:1181-22902).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:1181-22903).
         1. This code SHALL contain exactly one [1..1] @code="1887-9" Summary data reporting antimicrobial usage (CONF:1181-22904).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1181-22905).
5. SHALL contain exactly one [1..1] component (CONF:1181-22906).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1181-22907).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1181-22908).
         1. This component SHALL contain exactly one [1..1] [Summary Data Section (AUP) (V2)](#S_Summary_Data_Section_AUP_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01) (CONF:1181-22909).

Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 2 - US Realm

Table 8: Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (HP-FLU)](#S_Summary_Data_Section_HPFLU) (required)  [NHSN Comment Section](#S_NHSN_Comment_Section) (optional) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The preferred title for the CDA document is the “Healthcare Personnel Influenza Vaccination Summary”.

The HP-FLU Summary Report further constrains the location participant to include a location code from the NHSNInfluenzaVaccinationSetting value set.

The HP-FLU Summary Report records the number of healthcare personnel (HCP) in each vaccination category for the influenza season being tracked.

Table 9: Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3311-1](#C_3311-1) |  |
| @root | 1..1 | SHALL |  | [3311-10](#C_3311-10) | 2.16.840.1.113883.10.20.5.7.3.2 |
| templateId | 1..1 | SHALL |  | [3311-8](#C_3311-8) |  |
| @root | 1..1 | SHALL |  | [3311-13](#C_3311-13) | 2.16.840.1.113883.10.20.5.50 |
| @extension | 1..1 | SHALL |  | [3311-14](#C_3311-14) | 2017-04-01 |
| participant | 1..1 | SHALL |  | [3311-28424](#C_3311-28424) |  |
| @typeCode | 1..1 | SHALL |  | [3311-28427](#C_3311-28427) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| @contextControlCode | 0..1 | SHALL |  | [3311-28428](#C_3311-28428) | urn:oid:2.16.840.1.113883.5.1057 (HL7ContextControl) = OP |
| associatedEntity | 1..1 | SHALL |  | [3311-28425](#C_3311-28425) |  |
| @classCode | 1..1 | SHALL |  | [3311-28429](#C_3311-28429) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC |
| id | 1..1 | SHALL |  | [3311-28426](#C_3311-28426) |  |
| @root | 0..1 | MAY |  | [3311-28430](#C_3311-28430) |  |
| code | 1..1 | SHALL |  | [3311-28431](#C_3311-28431) | urn:oid:2.16.840.1.113883.10.20.5.9.7 (NHSNInfluenzaVaccinationSetting) |
| @nullFlavor | 0..1 | MAY |  | [3311-28467](#C_3311-28467) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| documentationOf | 1..1 | SHALL |  | [3311-2](#C_3311-2) |  |
| serviceEvent | 1..1 | SHALL |  | [3311-3](#C_3311-3) |  |
| code | 1..1 | SHALL |  | [3311-4](#C_3311-4) |  |
| @code | 1..1 | SHALL |  | [3311-11](#C_3311-11) | 86558-4 |
| @codeSystem | 1..1 | SHALL |  | [3311-12](#C_3311-12) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| effectiveTime | 1..1 | SHALL |  | [3311-16](#C_3311-16) |  |
| low | 1..1 | SHALL |  | [3311-28416](#C_3311-28416) |  |
| @value | 1..1 | SHALL |  | [3311-28418](#C_3311-28418) |  |
| high | 1..1 | SHALL |  | [3311-28417](#C_3311-28417) |  |
| @value | 1..1 | SHALL |  | [3311-28419](#C_3311-28419) |  |
| component | 1..1 | SHALL |  | [3311-5](#C_3311-5) |  |
| structuredBody | 1..1 | SHALL |  | [3311-6](#C_3311-6) |  |
| component | 1..1 | SHALL |  | [3311-7](#C_3311-7) |  |
| section | 1..1 | SHALL |  | [3311-9](#C_3311-9) | [Summary Data Section (HP-FLU) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01](#S_Summary_Data_Section_HPFLU) |
| component | 0..1 | MAY |  | [3311-28422](#C_3311-28422) |  |
| section | 1..1 | SHALL |  | [3311-28423](#C_3311-28423) | [NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01](#S_NHSN_Comment_Section) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3311-1) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.2" (CONF:3311-10).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-8) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.50" (CONF:3311-13).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-14).
3. SHALL contain exactly one [1..1] participant (CONF:3311-28424) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-28427).
   2. SHALL contain zero or one [0..1] @contextControlCode="OP" (CodeSystem: HL7ContextControl urn:oid:2.16.840.1.113883.5.1057) (CONF:3311-28428).
   3. SHALL contain exactly one [1..1] associatedEntity (CONF:3311-28425).
      1. This associatedEntity SHALL contain exactly one [1..1] @classCode="SDLOC" Service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-28429).
      2. This associatedEntity SHALL contain exactly one [1..1] id (CONF:3311-28426).  
         Note: Facility Id
         1. This id MAY contain zero or one [0..1] @root (CONF:3311-28430).
      3. This associatedEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNInfluenzaVaccinationSetting](#NHSNInfluenzaVaccinationSetting) urn:oid:2.16.840.1.113883.10.20.5.9.7 DYNAMIC (CONF:3311-28431).  
         Note: Location
         1. This code MAY contain zero or one [0..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28467).
4. SHALL contain exactly one [1..1] documentationOf (CONF:3311-2).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:3311-3).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:3311-4).
         1. This code SHALL contain exactly one [1..1] @code="86558-4" Healthcare Personnel Influenza Vaccination Summary (CONF:3311-11).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-12).
      2. This serviceEvent SHALL contain exactly one [1..1] effectiveTime (CONF:3311-16).  
         Note: Influenza season (e.g. 2016-2017)
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3311-28416).
            1. This low SHALL contain exactly one [1..1] @value (CONF:3311-28418).

DocumentationOf/serviceEvent/effectiveTime/low/@value SHALL contain a 4 digit year (CONF:3311-28420).

* + - 1. This effectiveTime SHALL contain exactly one [1..1] high (CONF:3311-28417).
         1. This high SHALL contain exactly one [1..1] @value (CONF:3311-28419).

DocumentationOf/serviceEvent/effectiveTime/high/@value SHALL contain a 4 digit year (CONF:3311-28421).

1. SHALL contain exactly one [1..1] component (CONF:3311-5).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3311-6).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3311-7) such that it
         1. SHALL contain exactly one [1..1] [Summary Data Section (HP-FLU)](#S_Summary_Data_Section_HPFLU) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01) (CONF:3311-9).
      2. This structuredBody MAY contain zero or one [0..1] component (CONF:3311-28422) such that it
         1. SHALL contain exactly one [1..1] [NHSN Comment Section](#S_NHSN_Comment_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:3311-28423).

Table 10: NHSNInfluenzaVaccinationSetting

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNInfluenzaVaccinationSetting urn:oid:2.16.840.1.113883.10.20.5.9.7  Location where the influenza vaccination was given.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1263-3 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Non-CMS Hospital Unit(s) |
| 1265-8 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Inpatient Psychiatric Facility Unit(s) |
| 1264-1 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Inpatient Rehabilitation Facility Unit(s) |

Hemovigilance (HV) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.49:2016-08-01 (closed)]

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Table 11: Hemovigilance (HV) Summary Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (HV) (V2)](#S_Summary_Data_Section_HV_V2) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The required title for the CDA document is the “Hemovigilance Module - Monthly Reporting Denominator”.

The HV Summary Report records monthly summary data for a facility.

Table 12: Hemovigilance (HV) Summary Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.49:2016-08-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3247-30738](#C_3247-30738) |  |
| @root | 1..1 | SHALL |  | [3247-30608](#C_3247-30608) | 2.16.840.1.113883.10.20.5.7.3.1.1 |
| templateId | 1..1 | SHALL |  | [3247-30606](#C_3247-30606) |  |
| @root | 1..1 | SHALL |  | [3247-30611](#C_3247-30611) | 2.16.840.1.113883.10.20.5.49 |
| @extension | 1..1 | SHALL |  | [3247-30612](#C_3247-30612) | 2016-08-01 |
| title | 1..1 | SHALL |  | [3247-30613](#C_3247-30613) | Hemovigilance Module - Monthly Reporting Denominator |
| documentationOf | 1..1 | SHALL |  | [3247-30600](#C_3247-30600) |  |
| serviceEvent | 1..1 | SHALL |  | [3247-30739](#C_3247-30739) |  |
| code | 1..1 | SHALL |  | [3247-30740](#C_3247-30740) |  |
| @code | 1..1 | SHALL |  | [3247-30609](#C_3247-30609) | 2543-7 |
| @codeSystem | 1..1 | SHALL |  | [3247-30610](#C_3247-30610) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [3247-30741](#C_3247-30741) |  |
| structuredBody | 1..1 | SHALL |  | [3247-30604](#C_3247-30604) |  |
| component | 1..1 | SHALL |  | [3247-30605](#C_3247-30605) |  |
| section | 1..1 | SHALL |  | [3247-30607](#C_3247-30607) | [Summary Data Section (HV) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01](#S_Summary_Data_Section_HV_V2) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3247-30738) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.1.1" (CONF:3247-30608).
2. SHALL contain exactly one [1..1] templateId (CONF:3247-30606) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.49" (CONF:3247-30611).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30612).
3. SHALL contain exactly one [1..1] title="Hemovigilance Module - Monthly Reporting Denominator" (CONF:3247-30613).
4. SHALL contain exactly one [1..1] documentationOf (CONF:3247-30600).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:3247-30739).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:3247-30740).
         1. This code SHALL contain exactly one [1..1] @code="2543-7" Hemovigilance Module - Monthly Reporting Denominator (CONF:3247-30609).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3247-30610).
5. SHALL contain exactly one [1..1] component (CONF:3247-30741).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3247-30604).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3247-30605).
         1. This component SHALL contain exactly one [1..1] [Summary Data Section (HV) (V2)](#S_Summary_Data_Section_HV_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01) (CONF:3247-30607).

Intensive Care Unit (ICU) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01 (closed)]

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Table 13: Intensive Care Unit (ICU) Summary Report (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section](#S_Summary_Data_Section) (required)  [Report No Events Section](#S_Report_No_Events_Section) (optional) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report”.

Table 14: Intensive Care Unit (ICU) Summary Report (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-28321](#C_3357-28321) |  |
| @root | 1..1 | SHALL |  | [3357-28322](#C_3357-28322) | 2.16.840.1.113883.10.20.5.7.3.3 |
| templateId | 1..1 | SHALL |  | [3357-22793](#C_3357-22793) |  |
| @root | 1..1 | SHALL |  | [3357-22794](#C_3357-22794) | 2.16.840.1.113883.10.20.5.40 |
| @extension | 1..1 | SHALL |  | [3357-30596](#C_3357-30596) | 2018-04-01 |
| title | 1..1 | SHALL |  | [3357-30866](#C_3357-30866) |  |
| documentationOf | 1..1 | SHALL |  | [3357-22800](#C_3357-22800) |  |
| serviceEvent | 1..1 | SHALL |  | [3357-22801](#C_3357-22801) |  |
| code | 1..1 | SHALL |  | [3357-22802](#C_3357-22802) |  |
| @code | 1..1 | SHALL |  | [3357-22803](#C_3357-22803) | 1879-6 |
| @codeSystem | 1..1 | SHALL |  | [3357-22804](#C_3357-22804) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [3357-22795](#C_3357-22795) |  |
| structuredBody | 1..1 | SHALL |  | [3357-22796](#C_3357-22796) |  |
| component | 1..1 | SHALL |  | [3357-22797](#C_3357-22797) |  |
| section | 1..1 | SHALL |  | [3357-22798](#C_3357-22798) | [Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47](#S_Summary_Data_Section) |
| component | 0..1 | MAY |  | [3357-30854](#C_3357-30854) |  |
| section | 1..1 | SHALL |  | [3357-30855](#C_3357-30855) | [Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01](#S_Report_No_Events_Section) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3357-28321) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28322).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-22793) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.40" (CONF:3357-22794).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30596).

Preferred document title: “Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report”.

1. SHALL contain exactly one [1..1] title (CONF:3357-30866).
2. SHALL contain exactly one [1..1] documentationOf (CONF:3357-22800).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:3357-22801).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:3357-22802).
         1. This code SHALL contain exactly one [1..1] @code="1879-6" Summary data reporting catheter and ventilator use in an ICU (CONF:3357-22803).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22804).
3. SHALL contain exactly one [1..1] component (CONF:3357-22795).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3357-22796).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-22797) such that it
         1. SHALL contain exactly one [1..1] [Summary Data Section](#S_Summary_Data_Section) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47) (CONF:3357-22798).
      2. This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30854) such that it
         1. SHALL contain exactly one [1..1] [Report No Events Section](#S_Report_No_Events_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30855).

Neonatal Intensive Care Unit (NICU) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01 (closed)]

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Table 15: Neonatal Intensive Care Unit (NICU) Summary Report (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (NICU) (V2)](#S_Summary_Data_Section_NICU_V2) (required)  [Report No Events Section](#S_Report_No_Events_Section) (optional) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Denominator for Neonatal Intensive Care Unit (NICU)”.

Table 16: Neonatal Intensive Care Unit (NICU) Summary Report (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-28323](#C_3357-28323) |  |
| @root | 1..1 | SHALL |  | [3357-28324](#C_3357-28324) | 2.16.840.1.113883.10.20.5.7.3.3 |
| templateId | 1..1 | SHALL |  | [3357-22805](#C_3357-22805) |  |
| @root | 1..1 | SHALL |  | [3357-22806](#C_3357-22806) | 2.16.840.1.113883.10.20.5.41 |
| @extension | 1..1 | SHALL |  | [3357-30595](#C_3357-30595) | 2018-04-01 |
| title | 1..1 | SHALL |  | [3357-30867](#C_3357-30867) |  |
| documentationOf | 1..1 | SHALL |  | [3357-22808](#C_3357-22808) |  |
| serviceEvent | 1..1 | SHALL |  | [3357-22809](#C_3357-22809) |  |
| code | 1..1 | SHALL |  | [3357-22810](#C_3357-22810) |  |
| @code | 1..1 | SHALL |  | [3357-22811](#C_3357-22811) | 1881-2 |
| @codeSystem | 1..1 | SHALL |  | [3357-22812](#C_3357-22812) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [3357-22813](#C_3357-22813) |  |
| structuredBody | 1..1 | SHALL |  | [3357-22814](#C_3357-22814) |  |
| component | 1..1 | SHALL |  | [3357-22815](#C_3357-22815) |  |
| section | 1..1 | SHALL |  | [3357-22816](#C_3357-22816) | [Summary Data Section (NICU) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01](#S_Summary_Data_Section_NICU_V2) |
| component | 0..1 | MAY |  | [3357-30612](#C_3357-30612) |  |
| section | 1..1 | SHALL |  | [3357-30613](#C_3357-30613) | [Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01](#S_Report_No_Events_Section) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3357-28323) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28324).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-22805) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.41" (CONF:3357-22806).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30595).

Preferred document title: “Denominator for Neonatal Intensive Care Unit (NICU)”.

1. SHALL contain exactly one [1..1] title (CONF:3357-30867).
2. SHALL contain exactly one [1..1] documentationOf (CONF:3357-22808).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:3357-22809).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:3357-22810).
         1. This code SHALL contain exactly one [1..1] @code="1881-2" Summary data reporting catheter and ventilator use in a NICU (CONF:3357-22811).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22812).
3. SHALL contain exactly one [1..1] component (CONF:3357-22813).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3357-22814).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-22815) such that it
         1. SHALL contain exactly one [1..1] [Summary Data Section (NICU) (V2)](#S_Summary_Data_Section_NICU_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01) (CONF:3357-22816).
      2. This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30612) such that it
         1. SHALL contain exactly one [1..1] [Report No Events Section](#S_Report_No_Events_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30613).

Prevention Process and Outcome Measures (POM) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.43:2018-04-01 (closed)]

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Table 17: Prevention Process and Outcome Measures (POM) Summary Report (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (POM) (V2)](#S_Summary_Data_Section_POM_V2) (required)  [Report No Events Section](#S_Report_No_Events_Section) (optional) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Prevention Process and Outcome Measures (POM) Monthly Monitoring”.

The POM Report records summary data for a location during a specified period. It can be submitted at the facility-wide level or at the unit level.

Table 18: Prevention Process and Outcome Measures (POM) Summary Report (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.43:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-30549](#C_3357-30549) |  |
| @root | 1..1 | SHALL |  | [3357-30550](#C_3357-30550) | 2.16.840.1.113883.10.20.5.7.3.3 |
| templateId | 1..1 | SHALL |  | [3357-22886](#C_3357-22886) |  |
| @root | 1..1 | SHALL |  | [3357-22887](#C_3357-22887) | 2.16.840.1.113883.10.20.5.43 |
| @extension | 1..1 | SHALL |  | [3357-30476](#C_3357-30476) | 2018-04-01 |
| title | 1..1 | SHALL |  | [3357-30868](#C_3357-30868) |  |
| documentationOf | 1..1 | SHALL |  | [3357-22889](#C_3357-22889) |  |
| serviceEvent | 1..1 | SHALL |  | [3357-22890](#C_3357-22890) |  |
| code | 1..1 | SHALL |  | [3357-22891](#C_3357-22891) |  |
| @code | 1..1 | SHALL |  | [3357-22892](#C_3357-22892) | 1884-6 |
| @codeSystem | 1..1 | SHALL |  | [3357-22893](#C_3357-22893) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [3357-22894](#C_3357-22894) |  |
| structuredBody | 1..1 | SHALL |  | [3357-22895](#C_3357-22895) |  |
| component | 1..1 | SHALL |  | [3357-22896](#C_3357-22896) |  |
| section | 1..1 | SHALL |  | [3357-30433](#C_3357-30433) | [Summary Data Section (POM) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2014-12-01](#S_Summary_Data_Section_POM_V2) |
| component | 0..1 | MAY |  | [3357-30858](#C_3357-30858) |  |
| section | 1..1 | SHALL |  | [3357-30859](#C_3357-30859) | [Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01](#S_Report_No_Events_Section) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3357-30549) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-30550).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-22886) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.43" (CONF:3357-22887).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30476).

Preferred document title: “Prevention Process and Outcome Measures (POM) Monthly Monitoring”.

1. SHALL contain exactly one [1..1] title (CONF:3357-30868).
2. SHALL contain exactly one [1..1] documentationOf (CONF:3357-22889).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:3357-22890).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:3357-22891).
         1. This code SHALL contain exactly one [1..1] @code="1884-6" Summary data reporting Active Surveillance Testing (CONF:3357-22892).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22893).
3. SHALL contain exactly one [1..1] component (CONF:3357-22894).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3357-22895).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-22896) such that it
         1. SHALL contain exactly one [1..1] [Summary Data Section (POM) (V2)](#S_Summary_Data_Section_POM_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2014-12-01) (CONF:3357-30433).
      2. This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30858) such that it
         1. SHALL contain exactly one [1..1] [Report No Events Section](#S_Report_No_Events_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30859).

Specialty Care Area (SCA) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01 (closed)]

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Table 19: Specialty Care Area (SCA) Summary Report (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section](#S_Summary_Data_Section) (required)  [Report No Events Section](#S_Report_No_Events_Section) (optional) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Denominator for Specialty Care Area (SCA)”.

This summary report uses the basic pattern for Summary Encounter and Summary Data Observation. Consult the NHSN protocol for which data to report.

Table 20: Specialty Care Area (SCA) Summary Report (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-28327](#C_3357-28327) |  |
| @root | 1..1 | SHALL |  | [3357-28328](#C_3357-28328) | 2.16.840.1.113883.10.20.5.7.3.3 |
| templateId | 1..1 | SHALL |  | [3357-22843](#C_3357-22843) |  |
| @root | 1..1 | SHALL |  | [3357-22844](#C_3357-22844) | 2.16.840.1.113883.10.20.5.42 |
| @extension | 1..1 | SHALL |  | [3357-30594](#C_3357-30594) | 2018-04-01 |
| title | 1..1 | SHALL |  | [3357-30869](#C_3357-30869) |  |
| documentationOf | 1..1 | SHALL |  | [3357-22846](#C_3357-22846) |  |
| serviceEvent | 1..1 | SHALL |  | [3357-22847](#C_3357-22847) |  |
| code | 1..1 | SHALL |  | [3357-22848](#C_3357-22848) |  |
| @code | 1..1 | SHALL |  | [3357-22849](#C_3357-22849) | 1880-4 |
| @codeSystem | 1..1 | SHALL |  | [3357-22850](#C_3357-22850) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [3357-22851](#C_3357-22851) |  |
| structuredBody | 1..1 | SHALL |  | [3357-22852](#C_3357-22852) |  |
| component | 1..1 | SHALL |  | [3357-22853](#C_3357-22853) |  |
| section | 1..1 | SHALL |  | [3357-22854](#C_3357-22854) | [Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47](#S_Summary_Data_Section) |
| component | 0..1 | MAY |  | [3357-30856](#C_3357-30856) |  |
| section | 1..1 | SHALL |  | [3357-30857](#C_3357-30857) | [Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01](#S_Report_No_Events_Section) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3357-28327) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28328).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-22843) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.42" (CONF:3357-22844).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30594).

Preferred document title: “Denominator for Specialty Care Area (SCA)”.

1. SHALL contain exactly one [1..1] title (CONF:3357-30869).
2. SHALL contain exactly one [1..1] documentationOf (CONF:3357-22846).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:3357-22847).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:3357-22848).
         1. This code SHALL contain exactly one [1..1] @code="1880-4" Summary data reporting catheter and ventilator use in a SCA (CONF:3357-22849).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22850).
3. SHALL contain exactly one [1..1] component (CONF:3357-22851).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3357-22852).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-22853) such that it
         1. SHALL contain exactly one [1..1] [Summary Data Section](#S_Summary_Data_Section) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47) (CONF:3357-22854).
      2. This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30856) such that it
         1. SHALL contain exactly one [1..1] [Report No Events Section](#S_Report_No_Events_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30857).

Vascular Access Type Report (VAT) Summary Report (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 21: Vascular Access Type Report (VAT) Summary Report (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (VAT)](#S_Summary_Data_Section_VAT) (required)  [Report No Events Section](#S_Report_No_Events_Section) (optional) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Preferred document title: “Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report”.

Table 22: Vascular Access Type Report (VAT) Summary Report (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-28329](#C_3357-28329) |  |
| @root | 1..1 | SHALL |  | [3357-28330](#C_3357-28330) | 2.16.840.1.113883.10.20.5.7.3.3 |
| templateId | 1..1 | SHALL |  | [3357-22921](#C_3357-22921) |  |
| @root | 1..1 | SHALL |  | [3357-22922](#C_3357-22922) | 2.16.840.1.113883.10.20.5.45 |
| @extension | 1..1 | SHALL |  | [3357-30860](#C_3357-30860) | 2018-04-01 |
| title | 1..1 | SHALL |  | [3357-30870](#C_3357-30870) |  |
| documentationOf | 1..1 | SHALL |  | [3357-22924](#C_3357-22924) |  |
| serviceEvent | 1..1 | SHALL |  | [3357-22925](#C_3357-22925) |  |
| code | 1..1 | SHALL |  | [3357-22926](#C_3357-22926) |  |
| @code | 1..1 | SHALL |  | [3357-22927](#C_3357-22927) | 2316-8 |
| @codeSystem | 1..1 | SHALL |  | [3357-22928](#C_3357-22928) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [3357-22929](#C_3357-22929) |  |
| structuredBody | 1..1 | SHALL |  | [3357-22930](#C_3357-22930) |  |
| component | 1..1 | SHALL |  | [3357-22931](#C_3357-22931) |  |
| section | 1..1 | SHALL |  | [3357-22932](#C_3357-22932) | [Summary Data Section (VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.50](#S_Summary_Data_Section_VAT) |
| component | 0..1 | MAY |  | [3357-30861](#C_3357-30861) |  |
| section | 1..1 | SHALL |  | [3357-30862](#C_3357-30862) | [Report No Events Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01](#S_Report_No_Events_Section) |

1. Conforms to [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.28).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3357-28329) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28330).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-22921) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.45" (CONF:3357-22922).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30860).

Preferred document title: “Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report”.

1. SHALL contain exactly one [1..1] title (CONF:3357-30870).
2. SHALL contain exactly one [1..1] documentationOf (CONF:3357-22924).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:3357-22925).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:3357-22926).
         1. This code SHALL contain exactly one [1..1] @code="2316-8" Summary dialysis data reporting vascular access types in maintenance (chronic) hemodialysis patients (CONF:3357-22927).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-22928).
3. SHALL contain exactly one [1..1] component (CONF:3357-22929).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3357-22930).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-22931) such that it
         1. SHALL contain exactly one [1..1] [Summary Data Section (VAT)](#S_Summary_Data_Section_VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.50) (CONF:3357-22932).
      2. This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30861) such that it
         1. SHALL contain exactly one [1..1] [Report No Events Section](#S_Report_No_Events_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) (CONF:3357-30862).

HAI Single-Person Report Generic Constraints

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.4.27 (open)]

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This template records the constraints for HAI single-person reports. It is used by all numerator reports covered by this guide. It is also used by the Procedure Denominator Report.

A single-person report must conform to the Healthcare Associated Infection Report template. In addition, key data about the patient are recorded in the recordTarget element.  
• A patient identifier representing the facility-assigned patient ID is required. Other identifiers for the person can also be present, such as a United States Social Security Number (id/@root = 2.16.840.1.113883.4.1), a Medicare beneficiary identifier (id/@root = 2.16.840.1.113883.4.338), or secondary patient IDs (id/@root = the appropriate facility OID for patient IDs).  
• The patient name is optional; consult the NHSN reporting protocol and requirements.  
• Patient gender and birthdate are required.  
The report-specific requirements specify the encounter data to record for each single-person report type. These data always include an identifier for the reporting facility, and usually include the encounter type (inpatient or outpatient), the admission date or encounter date, and the facility unit identifier and type.

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

Table 23: HAI Single-Person Report Generic Constraints Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22415](#C_86-22415) |  |
| @root | 1..1 | SHALL |  | [86-22416](#C_86-22416) | 2.16.840.1.113883.10.20.5.4.27 |
| recordTarget | 1..1 | SHALL |  | [86-22417](#C_86-22417) |  |
| patientRole | 1..1 | SHALL |  | [86-22418](#C_86-22418) |  |
| id | 1..\* | SHALL |  | [86-22419](#C_86-22419) |  |
| @root | 1..1 | SHALL |  | [86-22420](#C_86-22420) |  |
| @extension | 1..1 | SHALL |  | [86-22421](#C_86-22421) |  |
| patient | 1..1 | SHALL |  | [86-22422](#C_86-22422) |  |
| name | 0..1 | MAY |  | [86-22423](#C_86-22423) |  |
| administrativeGenderCode | 1..1 | SHALL |  | [86-22424](#C_86-22424) |  |
| @code | 1..1 | SHALL |  | [86-22425](#C_86-22425) | urn:oid:2.16.840.1.113883.1.11.1 (Administrative Gender (HL7 V3)) |
| birthTime | 1..1 | SHALL |  | [86-22426](#C_86-22426) |  |
| @value | 1..1 | SHALL |  | [86-22427](#C_86-22427) |  |
| raceCode | 0..1 | MAY |  | [86-22428](#C_86-22428) | urn:oid:2.16.840.1.114222.4.11.7232 (NHSNRaceCategory) |
| ethnicGroupCode | 0..1 | MAY |  | [86-22429](#C_86-22429) | urn:oid:2.16.840.1.114222.4.11.837 (Ethnicity) |

1. Conforms to [Healthcare Associated Infection Report](#D_Healthcare_Associated_Infection_Repor) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.25).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22415) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.4.27" (CONF:86-22416).
3. SHALL contain exactly one [1..1] recordTarget (CONF:86-22417).
   1. This recordTarget SHALL contain exactly one [1..1] patientRole (CONF:86-22418).
      1. This patientRole SHALL contain at least one [1..\*] id (CONF:86-22419).
         1. Such ids SHALL contain exactly one [1..1] @root (CONF:86-22420).
         2. Such ids SHALL contain exactly one [1..1] @extension (CONF:86-22421).
      2. This patientRole SHALL contain exactly one [1..1] patient (CONF:86-22422).

In the name element, the sub-elements should be in the following order: family, given, and optionally a second given representing the middle name(s). A name element is not allowed to contain mixed content.

* + - 1. This patient MAY contain zero or one [0..1] name (CONF:86-22423).
      2. This patient SHALL contain exactly one [1..1] administrativeGenderCode (CONF:86-22424).
         1. This administrativeGenderCode SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet [Administrative Gender (HL7 V3)](#Administrative_Gender_HL7_V3) urn:oid:2.16.840.1.113883.1.11.1 STATIC (CONF:86-22425).
      3. This patient SHALL contain exactly one [1..1] birthTime (CONF:86-22426).
         1. This birthTime SHALL contain exactly one [1..1] @value (CONF:86-22427).
      4. This patient MAY contain zero or one [0..1] raceCode, which SHALL be selected from ValueSet [NHSNRaceCategory](#NHSNRaceCategory) urn:oid:2.16.840.1.114222.4.11.7232 DYNAMIC (CONF:86-22428).
      5. This patient MAY contain zero or one [0..1] ethnicGroupCode (ValueSet: [Ethnicity](#Ethnicity) urn:oid:2.16.840.1.114222.4.11.837 STATIC) (CONF:86-22429).

1. The author MAY be software or MAY be a person in the role of infection control professional (ICP) (CONF:86-22430).

Table 24: Administrative Gender (HL7 V3)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Administrative Gender (HL7 V3) urn:oid:2.16.840.1.113883.1.11.1  Administrative Gender based upon HL7 V3 vocabulary. This value set contains only male, female and undifferentiated concepts.  Value Set Source: <https://vsac.nlm.nih.gov/> | | | |
| Code | Code System | Code System OID | Print Name |
| F | HL7AdministrativeGender | urn:oid:2.16.840.1.113883.5.1 | Female |
| M | HL7AdministrativeGender | urn:oid:2.16.840.1.113883.5.1 | Male |
| UN | HL7AdministrativeGender | urn:oid:2.16.840.1.113883.5.1 | Undifferentiated |

Table 25: NHSNRaceCategory

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNRaceCategory urn:oid:2.16.840.1.114222.4.11.7232  A full listing of codes can be found in the hai\_voc.xls file provided with this package.  Value Set Source: <https://phinvads.cdc.gov> | | | |
| Code | Code System | Code System OID | Print Name |
| 1002-5 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | American Indian or Alaska Native |
| 2028-9 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Asian |
| 2054-5 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Black or African American |
| 2076-8 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Native Hawaiian or Other Pacific Islander |
| 2106-3 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | White |

Table 26: Ethnicity

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Ethnicity urn:oid:2.16.840.1.114222.4.11.837  Whether the patient is hispanic or not.  Value Set Source: <https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.837/expansion> | | | |
| Code | Code System | Code System OID | Print Name |
| 2135-2 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Hispanic or Latino |
| 2186-5 | Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 | Not Hispanic or Latino |

HAI AUR Antimicrobial Resistance Option (ARO) Report (V4)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.31:2016-08-01 (closed)]

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Table 27: HAI AUR Antimicrobial Resistance Option (ARO) Report (V4) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Findings Section in an ARO Report (V3)](#S_Findings_Section_in_an_ARO_Report_V3) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records the antimicrobial susceptibility testing results for one pathogen isolate from an individual inpatient subject. Each report records a single organism.

Preferred document title: “Antimicrobial Resistance Option (ARO) Report”

Key encounter data:  
• The encounter type (inpatient or outpatient) is required.  
• An admission date is required.  
• The facility identifier is required. Unit identifier and unit type are not recorded in the header.

Other dates and locations:  
• Date of specimen collection is recorded in the effectiveTime element of the Specimen Collection Procedure (V2) template.

Table 28: HAI AUR Antimicrobial Resistance Option (ARO) Report (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.31:2016-08-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3247-30540](#C_3247-30540) |  |
| @root | 1..1 | SHALL |  | [3247-30541](#C_3247-30541) | 2.16.840.1.113883.10.20.5.7.3.1.1 |
| templateId | 1..1 | SHALL |  | [3247-21951](#C_3247-21951) |  |
| @root | 1..1 | SHALL |  | [3247-21952](#C_3247-21952) | 2.16.840.1.113883.10.20.5.31 |
| @extension | 1..1 | SHALL |  | [3247-30542](#C_3247-30542) | 2016-08-01 |
| componentOf | 1..1 | SHALL |  | [3247-21139](#C_3247-21139) |  |
| encompassingEncounter | 1..1 | SHALL |  | [3247-21140](#C_3247-21140) |  |
| code | 1..1 | SHALL |  | [3247-21141](#C_3247-21141) | urn:oid:2.16.840.1.113883.13.1 (NHSNEncounterTypeCode) |
| effectiveTime | 1..1 | SHALL |  | [3247-21143](#C_3247-21143) |  |
| low | 1..1 | SHALL |  | [3247-21144](#C_3247-21144) |  |
| @value | 1..1 | SHALL |  | [3247-21145](#C_3247-21145) |  |
| location | 1..1 | SHALL |  | [3247-21146](#C_3247-21146) |  |
| healthCareFacility | 1..1 | SHALL |  | [3247-21147](#C_3247-21147) |  |
| id | 1..1 | SHALL |  | [3247-21148](#C_3247-21148) |  |
| @root | 1..1 | SHALL |  | [3247-21149](#C_3247-21149) |  |
| component | 1..1 | SHALL |  | [3247-21150](#C_3247-21150) |  |
| structuredBody | 1..1 | SHALL |  | [3247-21151](#C_3247-21151) |  |
| component | 1..1 | SHALL |  | [3247-21152](#C_3247-21152) |  |
| section | 1..1 | SHALL |  | [3247-21153](#C_3247-21153) | [Findings Section in an ARO Report (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2016-08-01](#S_Findings_Section_in_an_ARO_Report_V3) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3247-30540) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.1.1" (CONF:3247-30541).
2. SHALL contain exactly one [1..1] templateId (CONF:3247-21951) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.31" (CONF:3247-21952).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30542).
3. SHALL contain exactly one [1..1] componentOf (CONF:3247-21139).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:3247-21140).
      1. This encompassingEncounter SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNEncounterTypeCode](#NHSNEncounterTypeCode) urn:oid:2.16.840.1.113883.13.1 STATIC (CONF:3247-21141).
      2. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:3247-21143).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3247-21144).
            1. This low SHALL contain exactly one [1..1] @value (CONF:3247-21145).  
               Note: Admission Date
         2. The value of the admission date SHALL NOT be earlier than January 1, 1986; SHALL NOT be earlier than the date of birth; and SHALL NOT be later than the event date (CONF:3247-23358).
      3. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:3247-21146).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:3247-21147).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:3247-21148).

The value of @root must be the NHSN assigned Facility OID.

This id SHALL contain exactly one [1..1] @root (CONF:3247-21149).

1. SHALL contain exactly one [1..1] component (CONF:3247-21150).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3247-21151).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3247-21152) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in an ARO Report (V3)](#S_Findings_Section_in_an_ARO_Report_V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2016-08-01) (CONF:3247-21153).

Table 29: NHSNEncounterTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNEncounterTypeCode urn:oid:2.16.840.1.113883.13.1  Code System: HL7 ActCode 2.16.840.1.113883.5.4  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| AMB | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | Outpatient |
| IMP | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | Inpatient encounter |

HAI Bloodstream Infection Report (BSI) (V3)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.32:2018-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 30: HAI Bloodstream Infection Report (BSI) (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Infection Details Section in a BSI Report](#S_Infection_Details_Section_in_a_BSI_Re) (required)  [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (required)  [NHSN Comment Section](#S_NHSN_Comment_Section) (optional)  [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report type records a bloodstream infection event.

Preferred document title: “Bloodstream Infection Report (BSI)”.

Key encounter data:

• A value for admission date is required.  
• A value for discharge date may be recorded.  
• The facility id, unit identifier, and unit type are required.

Other dates and locations:

• The date of the infection event is recorded as effectiveTime in the Infection-Type Observation.

Table 31: HAI Bloodstream Infection Report (BSI) (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.32:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-28307](#C_3357-28307) |  |
| @root | 1..1 | SHALL |  | [3357-28308](#C_3357-28308) | 2.16.840.1.113883.10.20.5.7.3.3 |
| templateId | 1..1 | SHALL |  | [3357-22460](#C_3357-22460) |  |
| @root | 1..1 | SHALL |  | [3357-22461](#C_3357-22461) | 2.16.840.1.113883.10.20.5.32 |
| @extension | 1..1 | SHALL |  | [3357-28432](#C_3357-28432) | 2018-04-01 |
| title | 1..1 | SHALL |  | [3357-30865](#C_3357-30865) |  |
| componentOf | 1..1 | SHALL |  | [3357-22462](#C_3357-22462) |  |
| encompassingEncounter | 1..1 | SHALL |  | [3357-22463](#C_3357-22463) |  |
| effectiveTime | 1..1 | SHALL |  | [3357-22464](#C_3357-22464) |  |
| low | 1..1 | SHALL |  | [3357-22465](#C_3357-22465) |  |
| @value | 1..1 | SHALL |  | [3357-22466](#C_3357-22466) |  |
| high | 0..1 | MAY |  | [3357-22467](#C_3357-22467) |  |
| @value | 1..1 | SHALL |  | [3357-22468](#C_3357-22468) |  |
| location | 1..1 | SHALL |  | [3357-22469](#C_3357-22469) |  |
| healthCareFacility | 1..1 | SHALL |  | [3357-22470](#C_3357-22470) |  |
| id | 1..1 | SHALL |  | [3357-22471](#C_3357-22471) |  |
| @root | 1..1 | SHALL |  | [3357-22472](#C_3357-22472) |  |
| @extension | 1..1 | SHALL |  | [3357-22473](#C_3357-22473) |  |
| code | 1..1 | SHALL |  | [3357-22474](#C_3357-22474) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [3357-22476](#C_3357-22476) |  |
| structuredBody | 1..1 | SHALL |  | [3357-22477](#C_3357-22477) |  |
| component | 1..1 | SHALL |  | [3357-22478](#C_3357-22478) |  |
| section | 1..1 | SHALL |  | [3357-22479](#C_3357-22479) | [Infection Risk Factors Section in a BSI Report (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01](#S_Infection_Risk_Factors_Sect_BSI_V3) |
| component | 1..1 | SHALL |  | [3357-22480](#C_3357-22480) |  |
| section | 1..1 | SHALL |  | [3357-22481](#C_3357-22481) | [Infection Details Section in a BSI Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.38](#S_Infection_Details_Section_in_a_BSI_Re) |
| component | 1..1 | SHALL |  | [3357-22482](#C_3357-22482) |  |
| section | 1..1 | SHALL |  | [3357-22483](#C_3357-22483) | [Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45](#S_Findings_Section_in_an_InfectionType_) |
| component | 0..1 | MAY |  | [3357-28411](#C_3357-28411) |  |
| section | 1..1 | SHALL |  | [3357-28412](#C_3357-28412) | [NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01](#S_NHSN_Comment_Section) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3357-28307) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28308).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-22460) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.32" (CONF:3357-22461).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-28432).

Preferred document title: “Bloodstream Infection Report (BSI)”.

1. SHALL contain exactly one [1..1] title (CONF:3357-30865).
2. SHALL contain exactly one [1..1] componentOf (CONF:3357-22462).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:3357-22463).
      1. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:3357-22464).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3357-22465).
            1. This low SHALL contain exactly one [1..1] @value (CONF:3357-22466).  
               Note: Admission Date
         2. This effectiveTime MAY contain zero or one [0..1] high (CONF:3357-22467).
            1. The high, if present, SHALL contain exactly one [1..1] @value (CONF:3357-22468).  
               Note: Discharge Date
         3. The value of the admission date SHALL NOT be earlier than January 1, 1986; SHALL NOT be earlier than the date of birth; and SHALL NOT be later than the event date (CONF:3357-23359).
      2. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:3357-22469).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:3357-22470).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:3357-22471).

The value of @root must be the NHSN assigned Facility OID.

This id SHALL contain exactly one [1..1] @root (CONF:3357-22472).

The value of @extension must be a value registered with NHSN.

This id SHALL contain exactly one [1..1] @extension (CONF:3357-22473).

* + - * 1. This healthCareFacility SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC (CONF:3357-22474).

1. SHALL contain exactly one [1..1] component (CONF:3357-22476).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3357-22477).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-22478) such that it
         1. SHALL contain exactly one [1..1] [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01) (CONF:3357-22479).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-22480) such that it
         1. SHALL contain exactly one [1..1] [Infection Details Section in a BSI Report](#S_Infection_Details_Section_in_a_BSI_Re) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.38) (CONF:3357-22481).
      3. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-22482) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:3357-22483).
      4. This structuredBody MAY contain zero or one [0..1] component (CONF:3357-28411) such that it
         1. SHALL contain exactly one [1..1] [NHSN Comment Section](#S_NHSN_Comment_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:3357-28412).

Table 32: NHSNHealthcareServiceLocationCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNHealthcareServiceLocationCode urn:oid:2.16.840.1.113883.13.19  A classification of patient care locations within healthcare facilities for public health surveillance purposes.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1250-0 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | All Inpatient Locations [FACWIDEIN] |
| 1251-8 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | All Outpatient Locations [FACWIDEOUT] |
| 1025-6 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Trauma Critical Care |
| 1026-4 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Burn Critical Care |
| 1027-2 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Medical Critical Care |
| 1028-0 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Medical Cardiac Critical Care |
| 1029-8 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Medical/Surgical Critical Care |
| 1030-6 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Surgical Critical Care |
| 1031-4 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Neurosurgical Critical Care |
| 1032-2 | HSLOC | urn:oid:2.16.840.1.113883.6.259 | Surgical Cardiothoracic Critical Care |
| ... | | | |

HAI Central-Line Insertion Practice Numerator Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.36:2014-12-01 (closed)]

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Table 33: HAI Central-Line Insertion Practice Numerator Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Procedure Details Section in a CLIP Report](#S_Procedure_Details_Section_in_a_CLIP_R) (required)  [Infection Risk Factors Section in a CLIP Report (V2)](#S_Infection_Risk_Factors_Section_in_a_C) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records whether the steps in a central-line insertion practice protocol were followed in the required order.

Preferred document title: “Central-Line Insertion Practices (CLIP) Report”

Key encounter data:

• Admission date is recorded as nullFlavor NI (no information).

• Facility id, unit identifier, and unit type are required.

Other dates and locations: None

Table 34: HAI Central-Line Insertion Practice Numerator Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.36:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-30543](#C_1129-30543) |  |
| @root | 1..1 | SHALL |  | [1129-30544](#C_1129-30544) | 2.16.840.1.113883.10.20.5.7.2.2.1 |
| templateId | 1..1 | SHALL |  | [1129-22553](#C_1129-22553) |  |
| @root | 1..1 | SHALL |  | [1129-22554](#C_1129-22554) | 2.16.840.1.113883.10.20.5.36 |
| @extension | 1..1 | SHALL |  | [1129-30284](#C_1129-30284) | 2014-12-01 |
| componentOf | 1..1 | SHALL |  | [1129-22555](#C_1129-22555) |  |
| encompassingEncounter | 1..1 | SHALL |  | [1129-22556](#C_1129-22556) |  |
| effectiveTime | 1..1 | SHALL |  | [1129-22557](#C_1129-22557) |  |
| low | 1..1 | SHALL |  | [1129-22558](#C_1129-22558) |  |
| @nullFlavor | 1..1 | SHALL | CS | [1129-22559](#C_1129-22559) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI |
| location | 1..1 | SHALL |  | [1129-22560](#C_1129-22560) |  |
| healthCareFacility | 1..1 | SHALL |  | [1129-22561](#C_1129-22561) |  |
| id | 1..1 | SHALL |  | [1129-22562](#C_1129-22562) |  |
| @root | 1..1 | SHALL |  | [1129-22563](#C_1129-22563) |  |
| @extension | 1..1 | SHALL |  | [1129-22564](#C_1129-22564) |  |
| code | 1..1 | SHALL |  | [1129-22565](#C_1129-22565) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [1129-22567](#C_1129-22567) |  |
| structuredBody | 1..1 | SHALL |  | [1129-22568](#C_1129-22568) |  |
| component | 1..1 | SHALL |  | [1129-22569](#C_1129-22569) |  |
| section | 1..1 | SHALL |  | [1129-30424](#C_1129-30424) | [Infection Risk Factors Section in a CLIP Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01](#S_Infection_Risk_Factors_Section_in_a_C) |
| component | 1..1 | SHALL |  | [1129-22571](#C_1129-22571) |  |
| section | 1..1 | SHALL |  | [1129-22572](#C_1129-22572) | [Procedure Details Section in a CLIP Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.42](#S_Procedure_Details_Section_in_a_CLIP_R) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:1129-30543) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-30544).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22553) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.36" (CONF:1129-22554).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30284).
3. SHALL contain exactly one [1..1] componentOf (CONF:1129-22555).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:1129-22556).
      1. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:1129-22557).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:1129-22558).
            1. This low SHALL contain exactly one [1..1] @nullFlavor="NI" No information (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008 STATIC) (CONF:1129-22559).
      2. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:1129-22560).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:1129-22561).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:1129-22562).

The value of @root must be the NHSN assigned Facility OID.

This id SHALL contain exactly one [1..1] @root (CONF:1129-22563).

The value of @extension must be a value registered with NHSN.

This id SHALL contain exactly one [1..1] @extension (CONF:1129-22564).

* + - * 1. This healthCareFacility SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC (CONF:1129-22565).

1. SHALL contain exactly one [1..1] component (CONF:1129-22567).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1129-22568).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1129-22569) such that it
         1. SHALL contain exactly one [1..1] [Infection Risk Factors Section in a CLIP Report (V2)](#S_Infection_Risk_Factors_Section_in_a_C) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01) (CONF:1129-30424).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:1129-22571) such that it
         1. SHALL contain exactly one [1..1] [Procedure Details Section in a CLIP Report](#S_Procedure_Details_Section_in_a_CLIP_R) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.42) (CONF:1129-22572).

HAI Evidence of Infection (Dialysis) Report (V5)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.37:2016-08-01 (closed)]

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Table 35: HAI Evidence of Infection (Dialysis) Report (V5) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (optional)  [Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)](#S_Risk_Factors_Section_in_an_Evidence_o) (required)  [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

The report records evidence of infection in a chronic hemodialysis patient.

Preferred document title: “Evidence of Infection, Dialysis Report (EOID)”

Key encounter data:

• Encounter type is recorded as outpatient (AMB).

• Admission date is recorded as nullFlavor NA (not applicable).

• Facility id, unit identifier, and unit type are required.

Other dates and locations: None

Table 36: HAI Evidence of Infection (Dialysis) Report (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.37:2016-08-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3247-30545](#C_3247-30545) |  |
| @root | 1..1 | SHALL |  | [3247-30546](#C_3247-30546) | 2.16.840.1.113883.10.20.5.7.3.1.1 |
| templateId | 1..1 | SHALL |  | [3247-22573](#C_3247-22573) |  |
| @root | 1..1 | SHALL |  | [3247-30254](#C_3247-30254) | 2.16.840.1.113883.10.20.5.37 |
| @extension | 1..1 | SHALL |  | [3247-30285](#C_3247-30285) | 2016-08-01 |
| componentOf | 1..1 | SHALL |  | [3247-22575](#C_3247-22575) |  |
| encompassingEncounter | 1..1 | SHALL |  | [3247-22576](#C_3247-22576) |  |
| code | 1..1 | SHALL |  | [3247-22577](#C_3247-22577) |  |
| @code | 1..1 | SHALL |  | [3247-22578](#C_3247-22578) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = AMB |
| effectiveTime | 1..1 | SHALL |  | [3247-22579](#C_3247-22579) |  |
| low | 1..1 | SHALL |  | [3247-22580](#C_3247-22580) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-22581](#C_3247-22581) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| location | 1..1 | SHALL |  | [3247-22582](#C_3247-22582) |  |
| healthCareFacility | 1..1 | SHALL |  | [3247-22583](#C_3247-22583) |  |
| id | 1..1 | SHALL |  | [3247-22584](#C_3247-22584) |  |
| @root | 1..1 | SHALL |  | [3247-22585](#C_3247-22585) |  |
| @extension | 1..1 | SHALL |  | [3247-22586](#C_3247-22586) |  |
| code | 1..1 | SHALL |  | [3247-22587](#C_3247-22587) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [3247-22589](#C_3247-22589) |  |
| structuredBody | 1..1 | SHALL |  | [3247-22590](#C_3247-22590) |  |
| component | 1..1 | SHALL |  | [3247-22591](#C_3247-22591) |  |
| section | 1..1 | SHALL |  | [3247-22592](#C_3247-22592) | [Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2015-10-01](#S_Risk_Factors_Section_in_an_Evidence_o) |
| component | 1..1 | SHALL |  | [3247-22593](#C_3247-22593) |  |
| section | 1..1 | SHALL |  | [3247-30253](#C_3247-30253) | [Details Section in an Evidence of Infection (Dialysis) Report (V5) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2016-08-01](#S_Details_Section_in_an_Evidence_of_Inf) |
| component | 0..1 | MAY |  | [3247-23302](#C_3247-23302) |  |
| section | 1..1 | SHALL |  | [3247-23303](#C_3247-23303) | [Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45](#S_Findings_Section_in_an_InfectionType_) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3247-30545) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.1.1" (CONF:3247-30546).
2. SHALL contain exactly one [1..1] templateId (CONF:3247-22573) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.37" (CONF:3247-30254).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30285).
3. SHALL contain exactly one [1..1] componentOf (CONF:3247-22575).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:3247-22576).
      1. This encompassingEncounter SHALL contain exactly one [1..1] code (CONF:3247-22577).
         1. This code SHALL contain exactly one [1..1] @code="AMB" Ambulatory (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4 STATIC) (CONF:3247-22578).
      2. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:3247-22579).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3247-22580).
            1. This low SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008 STATIC) (CONF:3247-22581).
      3. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:3247-22582).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:3247-22583).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:3247-22584).

The value of @root must be the NHSN assigned Facility OID.

This id SHALL contain exactly one [1..1] @root (CONF:3247-22585).

The value of @extension must be a value registered with NHSN.

This id SHALL contain exactly one [1..1] @extension (CONF:3247-22586).

* + - * 1. This healthCareFacility SHALL contain exactly one [1..1] code (ValueSet: [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC) (CONF:3247-22587).

1. SHALL contain exactly one [1..1] component (CONF:3247-22589).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3247-22590).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3247-22591) such that it
         1. SHALL contain exactly one [1..1] [Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)](#S_Risk_Factors_Section_in_an_Evidence_o) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2015-10-01) (CONF:3247-22592).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:3247-22593) such that it
         1. SHALL contain exactly one [1..1] [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2016-08-01) (CONF:3247-30253).
      3. This structuredBody MAY contain zero or one [0..1] component (CONF:3247-23302) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:3247-23303).
         2. If a positive blood culture was obtained SHALL contain a component containing a Findings Section in an Infection-type Report (CONF:3247-23304).

HAI Laboratory-Identified Organism (LIO) Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.38:2014-12-01 (closed)]

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Table 37: HAI Laboratory-Identified Organism (LIO) Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Encounters Section in a LIO Report (V2)](#S_Encounters_Section_in_a_LIO_Report_V2) (required)  [Findings Section in a LIO Report (V2)](#S_Findings_Section_in_a_LIO_Report_V2) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records the laboratory identification of a microorganism in a specimen. This is not an infection-type report: the presence of the organism is not equivalent to the presence of an infection. These reports are submitted if the facility is monitoring the organism identified. Each report records a single organism.

Preferred document title: “Laboratory-identified Organism Report (LIO)”

Key encounter data:

• The encounter type (inpatient/outpatient) is required.

• An admission date or encounter date is required. (If the patient is an outpatient, the date of specimen collection is also used in the header as the date of admission.)

• The facility identifier is required. Unit identifier and unit type are not recorded in the header.

Other dates and locations:

• The date of admission to the in-facility location where the specimen was collected is recorded in encompassingEncounter/effectiveTime.

• The date of specimen collection (also recorded as admission date if the patient was an outpatient) is recorded in effectiveTime in the Specimen Collection Procedure (LIO) template.

Table 38: HAI Laboratory-Identified Organism (LIO) Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.38:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-30547](#C_1129-30547) |  |
| @root | 1..1 | SHALL |  | [1129-30548](#C_1129-30548) | 2.16.840.1.113883.10.20.5.7.2.2.1 |
| templateId | 1..1 | SHALL |  | [1129-22597](#C_1129-22597) |  |
| @root | 1..1 | SHALL |  | [1129-22598](#C_1129-22598) | 2.16.840.1.113883.10.20.5.38 |
| @extension | 1..1 | SHALL |  | [1129-30286](#C_1129-30286) | 2014-12-01 |
| componentOf | 1..1 | SHALL |  | [1129-22599](#C_1129-22599) |  |
| encompassingEncounter | 1..1 | SHALL |  | [1129-22600](#C_1129-22600) |  |
| code | 1..1 | SHALL |  | [1129-22601](#C_1129-22601) | urn:oid:2.16.840.1.113883.13.1 (NHSNEncounterTypeCode) |
| effectiveTime | 1..1 | SHALL |  | [1129-22603](#C_1129-22603) |  |
| low | 1..1 | SHALL |  | [1129-22604](#C_1129-22604) |  |
| @nullFlavor | 0..1 | MAY |  | [1129-23305](#C_1129-23305) |  |
| @value | 0..1 | MAY |  | [1129-22605](#C_1129-22605) |  |
| location | 1..1 | SHALL |  | [1129-22606](#C_1129-22606) |  |
| healthCareFacility | 1..1 | SHALL |  | [1129-22607](#C_1129-22607) |  |
| id | 1..1 | SHALL |  | [1129-22608](#C_1129-22608) |  |
| @root | 1..1 | SHALL |  | [1129-22609](#C_1129-22609) |  |
| component | 1..1 | SHALL |  | [1129-22610](#C_1129-22610) |  |
| structuredBody | 1..1 | SHALL |  | [1129-22611](#C_1129-22611) |  |
| component | 1..1 | SHALL |  | [1129-22612](#C_1129-22612) |  |
| section | 1..1 | SHALL |  | [1129-30420](#C_1129-30420) | [Findings Section in a LIO Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01](#S_Findings_Section_in_a_LIO_Report_V2) |
| component | 1..1 | SHALL |  | [1129-22614](#C_1129-22614) |  |
| section | 1..1 | SHALL |  | [1129-30421](#C_1129-30421) | [Encounters Section in a LIO Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01](#S_Encounters_Section_in_a_LIO_Report_V2) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:1129-30547) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-30548).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22597) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.38" (CONF:1129-22598).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30286).
3. SHALL contain exactly one [1..1] componentOf (CONF:1129-22599).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:1129-22600).
      1. This encompassingEncounter SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNEncounterTypeCode](#NHSNEncounterTypeCode) urn:oid:2.16.840.1.113883.13.1 STATIC (CONF:1129-22601).
      2. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:1129-22603).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:1129-22604).
            1. This low MAY contain zero or one [0..1] @nullFlavor (CONF:1129-23305).
            2. This low MAY contain zero or one [0..1] @value (CONF:1129-22605).  
               Note: Admission Date
            3. If encounter type is IMP, effectiveTime/low/@value is required; if encounter type is AMB, effectiveTime/low/@value is required (use (copy) Date Specimen Collected) (CONF:1129-23306).
         2. The value of the admission date SHALL NOT be earlier than January 1, 1986; SHALL NOT be earlier than the date of birth; and SHALL NOT be later than the event date (CONF:1129-23360).
      3. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:1129-22606).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:1129-22607).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:1129-22608).

This id SHALL contain exactly one [1..1] @root (CONF:1129-22609).

1. SHALL contain exactly one [1..1] component (CONF:1129-22610).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1129-22611).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1129-22612) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in a LIO Report (V2)](#S_Findings_Section_in_a_LIO_Report_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01) (CONF:1129-30420).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:1129-22614) such that it
         1. SHALL contain exactly one [1..1] [Encounters Section in a LIO Report (V2)](#S_Encounters_Section_in_a_LIO_Report_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01) (CONF:1129-30421).

HAI Procedure Denominator Report (V2)

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.35.2 (closed)]

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Table 39: HAI Procedure Denominator Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (required)  [Procedure Details Section in a Procedure Report (V2)](#Procedure_Details_Section_in_a_Procedur) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records a procedure performed.

Preferred document title: “Denominator for Procedure Report”

Key encounter data:

• The encounter type (inpatient or outpatient) is required.

• If the patient was an inpatient, a value for admission date is required.

• The facility id is required. Unit identifier and unit type are not reported.

Other dates and locations:

• The date of the procedure is recorded as effectiveTime in the Procedure Details Clinical Statement in a Procedure Report (V2).

Other notes: The procedure id is recorded in the Procedure Details Clinical Statement in a Procedure Report (V2). NHSN uses this to establish a link between Procedure and SSI Reports.

Table 40: HAI Procedure Denominator Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.35.2) | | | | | |
| templateId | 1..1 | SHALL |  | [1101-30309](#C_1101-30309) |  |
| @root | 1..1 | SHALL |  | [1101-30310](#C_1101-30310) | 2.16.840.1.113883.10.20.5.7.2.1.1 |
| templateId | 1..1 | SHALL |  | [1101-22531](#C_1101-22531) |  |
| @root | 1..1 | SHALL |  | [1101-30255](#C_1101-30255) | 2.16.840.1.113883.10.20.5.35.2 |
| componentOf | 1..1 | SHALL |  | [1101-22533](#C_1101-22533) |  |
| encompassingEncounter | 1..1 | SHALL |  | [1101-22534](#C_1101-22534) |  |
| code | 1..1 | SHALL |  | [1101-22535](#C_1101-22535) | urn:oid:2.16.840.1.113883.13.1 (NHSNEncounterTypeCode) |
| location | 1..1 | SHALL |  | [1101-22537](#C_1101-22537) |  |
| healthCareFacility | 1..1 | SHALL |  | [1101-22538](#C_1101-22538) |  |
| id | 1..1 | SHALL |  | [1101-22539](#C_1101-22539) |  |
| @root | 1..1 | SHALL |  | [1101-22540](#C_1101-22540) |  |
| @extension | 0..1 | MAY |  | [1101-22541](#C_1101-22541) |  |
| code | 0..1 | MAY |  | [1101-22542](#C_1101-22542) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [1101-22545](#C_1101-22545) |  |
| structuredBody | 1..1 | SHALL |  | [1101-22546](#C_1101-22546) |  |
| component | 1..1 | SHALL |  | [1101-22547](#C_1101-22547) |  |
| section | 1..1 | SHALL |  | [1101-30256](#C_1101-30256) | [Procedure Details Section in a Procedure Report (V2) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.43.2](#Procedure_Details_Section_in_a_Procedur) |
| component | 1..1 | SHALL |  | [1101-22551](#C_1101-22551) |  |
| section | 1..1 | SHALL |  | [1101-22552](#C_1101-22552) | [Infection Risk Factors Section in a Procedure Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.35](#S_Infection_Risk_Factors_Section_in_a_P) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:1101-30309) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.1.1" (CONF:1101-30310).
2. SHALL contain exactly one [1..1] templateId (CONF:1101-22531) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.35.2" (CONF:1101-30255).
3. SHALL contain exactly one [1..1] componentOf (CONF:1101-22533).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:1101-22534).
      1. This encompassingEncounter SHALL contain exactly one [1..1] code (ValueSet: [NHSNEncounterTypeCode](#NHSNEncounterTypeCode) urn:oid:2.16.840.1.113883.13.1 STATIC 2009-01-30) (CONF:1101-22535).
      2. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:1101-22537).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:1101-22538).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:1101-22539).

The value of @root must be the NHSN assigned Facility OID.

This id SHALL contain exactly one [1..1] @root (CONF:1101-22540).

The value of @extension, if supplied, must be a value registered with NHSN.

This id MAY contain zero or one [0..1] @extension (CONF:1101-22541).

* + - * 1. This healthCareFacility MAY contain zero or one [0..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC (CONF:1101-22542).
    1. If the patient is an inpatient (code/@code='IMP'), admission date is recorded: An effectiveTime element SHALL be present. This effectiveTime SHALL [1..1] contain a low element. This low element SHALL [1..1] contain @value (CONF:1101-22544).

1. SHALL contain exactly one [1..1] component (CONF:1101-22545).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1101-22546).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1101-22547) such that it
         1. SHALL contain exactly one [1..1] [Procedure Details Section in a Procedure Report (V2)](#Procedure_Details_Section_in_a_Procedur) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.43.2) (CONF:1101-30256).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:1101-22551) such that it
         1. SHALL contain exactly one [1..1] [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.35) (CONF:1101-22552).

HAI Surgical Site Infection Report (SSI) (V2)

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.33.2 (closed)]

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Table 41: HAI Surgical Site Infection Report (SSI) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (required)  [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report type records a surgical site infection event.

Preferred document title: “Surgical Site Infection Report (SSI)”.

Key encounter data:

• The encounter type (inpatient or outpatient) is required.

• A value for admission date is required.  
• A discharge date may be recorded.

• The facility id is required.

Other dates and locations:

• The date of the infection is recorded as effectiveTime in the Infection-Type Observation.

Other notes: The procedure id is recorded in the Procedure Details Clinical Statement in an Infection-Type Report. NHSN uses this to establish a link between Procedure and SSI Reports.

Table 42: HAI Surgical Site Infection Report (SSI) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.33.2) | | | | | |
| templateId | 1..1 | SHALL |  | [1101-30311](#C_1101-30311) |  |
| @root | 1..1 | SHALL |  | [1101-30312](#C_1101-30312) | 2.16.840.1.113883.10.20.5.7.2.1.1 |
| templateId | 1..1 | SHALL |  | [1101-22484](#C_1101-22484) |  |
| @root | 1..1 | SHALL |  | [1101-30276](#C_1101-30276) | 2.16.840.1.113883.10.20.5.33.2 |
| componentOf | 1..1 | SHALL |  | [1101-22486](#C_1101-22486) |  |
| encompassingEncounter | 1..1 | SHALL |  | [1101-22487](#C_1101-22487) |  |
| code | 1..1 | SHALL |  | [1101-22488](#C_1101-22488) | urn:oid:2.16.840.1.113883.13.1 (NHSNEncounterTypeCode) |
| effectiveTime | 1..1 | SHALL |  | [1101-22490](#C_1101-22490) |  |
| low | 1..1 | SHALL |  | [1101-27762](#C_1101-27762) |  |
| @value | 1..1 | SHALL |  | [1101-27763](#C_1101-27763) |  |
| high | 0..1 | MAY |  | [1101-22491](#C_1101-22491) |  |
| @value | 1..1 | SHALL |  | [1101-22492](#C_1101-22492) |  |
| location | 1..1 | SHALL |  | [1101-22493](#C_1101-22493) |  |
| healthCareFacility | 1..1 | SHALL |  | [1101-22494](#C_1101-22494) |  |
| id | 1..1 | SHALL |  | [1101-22495](#C_1101-22495) |  |
| @root | 1..1 | SHALL |  | [1101-22496](#C_1101-22496) |  |
| @extension | 0..1 | MAY |  | [1101-22497](#C_1101-22497) |  |
| code | 0..1 | MAY |  | [1101-22498](#C_1101-22498) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [1101-22501](#C_1101-22501) |  |
| structuredBody | 1..1 | SHALL |  | [1101-22502](#C_1101-22502) |  |
| component | 1..1 | SHALL |  | [1101-22503](#C_1101-22503) |  |
| section | 1..1 | SHALL |  | [1101-22504](#C_1101-22504) | [Infection Details Section in an SSI Report (V2) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.39.2](#S_Infection_Details_Section_in_an_SSI_V2) |
| component | 1..1 | SHALL |  | [1101-22505](#C_1101-22505) |  |
| section | 1..1 | SHALL |  | [1101-22506](#C_1101-22506) | [Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45](#S_Findings_Section_in_an_InfectionType_) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:1101-30311) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.1.1" (CONF:1101-30312).
2. SHALL contain exactly one [1..1] templateId (CONF:1101-22484) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.33.2" (CONF:1101-30276).
3. SHALL contain exactly one [1..1] componentOf (CONF:1101-22486).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:1101-22487).
      1. This encompassingEncounter SHALL contain exactly one [1..1] code (ValueSet: [NHSNEncounterTypeCode](#NHSNEncounterTypeCode) urn:oid:2.16.840.1.113883.13.1 STATIC 2009-01-30) (CONF:1101-22488).
      2. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:1101-22490).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:1101-27762).
            1. This low SHALL contain exactly one [1..1] @value (CONF:1101-27763).  
               Note: Admission Date
         2. This effectiveTime MAY contain zero or one [0..1] high (CONF:1101-22491).
            1. The high, if present, SHALL contain exactly one [1..1] @value (CONF:1101-22492).  
               Note: Discharge Date
      3. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:1101-22493).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:1101-22494).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:1101-22495).

The value of @root must be the NHSN assigned Facility OID.

This id SHALL contain exactly one [1..1] @root (CONF:1101-22496).

The value of @extension, if supplied, must be a value registered with NHSN.

This id MAY contain zero or one [0..1] @extension (CONF:1101-22497).

* + - * 1. This healthCareFacility MAY contain zero or one [0..1] code (ValueSet: [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC) (CONF:1101-22498).

1. SHALL contain exactly one [1..1] component (CONF:1101-22501).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1101-22502).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1101-22503) such that it
         1. SHALL contain exactly one [1..1] [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.39.2) (CONF:1101-22504).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:1101-22505) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:1101-22506).

HAI Urinary Tract Infection Numerator Report (UTI)

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.34 (closed)]

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Table 43: HAI Urinary Tract Infection Numerator Report (UTI) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Infection Risk Factors Section in a UTI Report](#S_Infection_Risk_Factors_Section_in_a_U) (required)  [Infection Details Section in a UTI Report](#S_Infection_Details_Section_in_a_UTI_Re) (required)  [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (required) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report records a urinary tract infection event.

Preferred document title: “Urinary Infection Report (UTI)”

Key encounter data:

• A value for admission date is required.  
• A discharge date may be recorded.

• The facility id, unit identifier, and unit type are required.

Other dates and locations:

• The date of the infection is recorded as effectiveTime in the Infection-Type Observation.

Table 44: HAI Urinary Tract Infection Numerator Report (UTI) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.34) | | | | | |
| templateId | 1..1 | SHALL |  | [86-28319](#C_86-28319) |  |
| @root | 1..1 | SHALL |  | [86-28320](#C_86-28320) | 2.16.840.1.113883.10.20.5.7.2.1.1 |
| templateId | 1..1 | SHALL |  | [86-22507](#C_86-22507) |  |
| @root | 1..1 | SHALL |  | [86-27433](#C_86-27433) | 2.16.840.1.113883.10.20.5.34 |
| componentOf | 1..1 | SHALL |  | [86-22509](#C_86-22509) |  |
| encompassingEncounter | 1..1 | SHALL |  | [86-22510](#C_86-22510) |  |
| effectiveTime | 1..1 | SHALL |  | [86-22511](#C_86-22511) |  |
| low | 1..1 | SHALL |  | [86-22512](#C_86-22512) |  |
| @value | 1..1 | SHALL |  | [86-22513](#C_86-22513) |  |
| high | 0..1 | MAY |  | [86-22514](#C_86-22514) |  |
| @value | 1..1 | SHALL |  | [86-22515](#C_86-22515) |  |
| location | 1..1 | SHALL |  | [86-22516](#C_86-22516) |  |
| healthCareFacility | 1..1 | SHALL |  | [86-22517](#C_86-22517) |  |
| id | 1..1 | SHALL |  | [86-22518](#C_86-22518) |  |
| @root | 1..1 | SHALL |  | [86-22519](#C_86-22519) |  |
| @extension | 1..1 | SHALL |  | [86-22520](#C_86-22520) |  |
| code | 1..1 | SHALL |  | [86-22521](#C_86-22521) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [86-22523](#C_86-22523) |  |
| structuredBody | 1..1 | SHALL |  | [86-22524](#C_86-22524) |  |
| component | 1..1 | SHALL |  | [86-22525](#C_86-22525) |  |
| section | 1..1 | SHALL |  | [86-22526](#C_86-22526) | [Infection Risk Factors Section in a UTI Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.36](#S_Infection_Risk_Factors_Section_in_a_U) |
| component | 1..1 | SHALL |  | [86-22527](#C_86-22527) |  |
| section | 1..1 | SHALL |  | [86-22528](#C_86-22528) | [Infection Details Section in a UTI Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.40](#S_Infection_Details_Section_in_a_UTI_Re) |
| component | 1..1 | SHALL |  | [86-22529](#C_86-22529) |  |
| section | 1..1 | SHALL |  | [86-22530](#C_86-22530) | [Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45](#S_Findings_Section_in_an_InfectionType_) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:86-28319) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.1.1" (CONF:86-28320).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22507) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.34" (CONF:86-27433).
3. SHALL contain exactly one [1..1] componentOf (CONF:86-22509).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:86-22510).
      1. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:86-22511).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-22512).
            1. This low SHALL contain exactly one [1..1] @value (CONF:86-22513).  
               Note: Admission Date
         2. This effectiveTime MAY contain zero or one [0..1] high (CONF:86-22514).
            1. The high, if present, SHALL contain exactly one [1..1] @value (CONF:86-22515).  
               Note: Discharge Date
         3. The value of the admission date SHALL NOT be earlier than January 1, 1986; SHALL NOT be earlier than the date of birth; and SHALL NOT be later than the event date (CONF:86-23362).
      2. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:86-22516).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:86-22517).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:86-22518).

This id SHALL contain exactly one [1..1] @root (CONF:86-22519).

The value of healthCareFacility/id/@extension must be a value previously registered with NHSN.

This id SHALL contain exactly one [1..1] @extension (CONF:86-22520).

* + - * 1. This healthCareFacility SHALL contain exactly one [1..1] code (ValueSet: [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC) (CONF:86-22521).

1. SHALL contain exactly one [1..1] component (CONF:86-22523).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:86-22524).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:86-22525) such that it
         1. SHALL contain exactly one [1..1] [Infection Risk Factors Section in a UTI Report](#S_Infection_Risk_Factors_Section_in_a_U) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.36) (CONF:86-22526).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:86-22527) such that it
         1. SHALL contain exactly one [1..1] [Infection Details Section in a UTI Report](#S_Infection_Details_Section_in_a_UTI_Re) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.40) (CONF:86-22528).
      3. This structuredBody SHALL contain exactly one [1..1] component (CONF:86-22529) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:86-22530).

Late Onset Sepsis/Meningitis Event (LOS) Report

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.53:2018-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 45: Late Onset Sepsis/Meningitis Event (LOS) Report Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (optional)  [NHSN Comment Section](#S_NHSN_Comment_Section) (optional)  [Infection Details in Late Onset Sepsis Report](#S_Infection_Details_in_Late_Onset_Sepsi) (required)  [Risk Factors Section (LOS/Men)](#S_Risk_Factors_Section_LOSMen) (required) |

This report type records a late onset sepsis/meningitis infection event.

Preferred document title: "Late Onset Sepsis/Meningitis Event (LOS)".

For Late Onset Sepsis/Meningitis Event Reports, a Medicaid beneficiary number may be present.

Table 46: Late Onset Sepsis/Meningitis Event (LOS) Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.53:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-30728](#C_3357-30728) |  |
| @root | 1..1 | SHALL |  | [3357-30745](#C_3357-30745) | 2.16.840.1.113883.10.20.5.7.3.3 |
| templateId | 1..1 | SHALL |  | [3357-30873](#C_3357-30873) |  |
| @root | 1..1 | SHALL |  | [3357-30874](#C_3357-30874) | 2.16.840.1.113883.10.20.5.53 |
| @extension | 1..1 | SHALL |  | [3357-30875](#C_3357-30875) | 2018-04-01 |
| title | 1..1 | SHALL |  | [3357-30729](#C_3357-30729) |  |
| recordTarget | 1..1 | SHALL |  | [3357-30897](#C_3357-30897) |  |
| patientRole | 1..1 | SHALL |  | [3357-30898](#C_3357-30898) |  |
| id | 0..1 | MAY |  | [3357-30899](#C_3357-30899) |  |
| @root | 1..1 | SHALL |  | [3357-30900](#C_3357-30900) | 2.16.840.1.113883.10.20.5.9.28 |
| @extension | 1..1 | SHALL |  | [3357-30901](#C_3357-30901) |  |
| componentOf | 1..1 | SHALL |  | [3357-30730](#C_3357-30730) |  |
| encompassingEncounter | 1..1 | SHALL |  | [3357-30731](#C_3357-30731) |  |
| effectiveTime | 1..1 | SHALL |  | [3357-30732](#C_3357-30732) |  |
| low | 1..1 | SHALL |  | [3357-30733](#C_3357-30733) |  |
| high | 0..1 | MAY |  | [3357-30820](#C_3357-30820) |  |
| location | 1..1 | SHALL |  | [3357-30822](#C_3357-30822) |  |
| healthCareFacility | 1..1 | SHALL |  | [3357-30823](#C_3357-30823) |  |
| id | 1..1 | SHALL |  | [3357-30824](#C_3357-30824) |  |
| @root | 1..1 | SHALL |  | [3357-30825](#C_3357-30825) |  |
| @extension | 1..1 | SHALL |  | [3357-30826](#C_3357-30826) |  |
| code | 1..1 | SHALL |  | [3357-30827](#C_3357-30827) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [3357-30747](#C_3357-30747) |  |
| structuredBody | 1..1 | SHALL |  | [3357-30748](#C_3357-30748) |  |
| component | 1..1 | SHALL |  | [3357-30749](#C_3357-30749) |  |
| section | 1..1 | SHALL |  | [3357-30750](#C_3357-30750) | [Infection Details in Late Onset Sepsis Report (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01](#S_Infection_Details_in_Late_Onset_Sepsi) |
| component | 1..1 | SHALL |  | [3357-30751](#C_3357-30751) |  |
| section | 1..1 | SHALL |  | [3357-30752](#C_3357-30752) | [Risk Factors Section (LOS/Men) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2018-04-01](#S_Risk_Factors_Section_LOSMen) |
| component | 0..1 | MAY |  | [3357-30828](#C_3357-30828) |  |
| section | 1..1 | SHALL |  | [3357-30829](#C_3357-30829) | [Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45](#S_Findings_Section_in_an_InfectionType_) |
| component | 0..1 | MAY |  | [3357-30843](#C_3357-30843) |  |
| section | 1..1 | SHALL |  | [3357-30844](#C_3357-30844) | [NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01](#S_NHSN_Comment_Section) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3357-30728) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-30745).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-30873) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.53" (CONF:3357-30874).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30875).

Preferred document title: "Late Onset Sepsis/Meningitis Event (LOS) Report"

1. SHALL contain exactly one [1..1] title (CONF:3357-30729).
2. SHALL contain exactly one [1..1] recordTarget (CONF:3357-30897).
   1. This recordTarget SHALL contain exactly one [1..1] patientRole (CONF:3357-30898).

For Late Onset Sepsis/Meningitis Event Reports, a Medicaid beneficiary number may be present.

* + 1. This patientRole MAY contain zero or one [0..1] id (CONF:3357-30899) such that it
       1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.9.28" (CONF:3357-30900).  
          Note: Specifies that this is a Medicaid beneficiary number
       2. SHALL contain exactly one [1..1] @extension (CONF:3357-30901).  
          Note: Medicaid beneficiary number

1. SHALL contain exactly one [1..1] componentOf (CONF:3357-30730).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:3357-30731).
      1. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:3357-30732).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3357-30733).  
            Note: Admission Date
         2. This effectiveTime MAY contain zero or one [0..1] high (CONF:3357-30820).  
            Note: Discharge Date
      2. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:3357-30822).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:3357-30823).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:3357-30824).

The value of @root must be the NHSN assigned Facility OID

This id SHALL contain exactly one [1..1] @root (CONF:3357-30825).

The value of @extension must be a value registered with NHSN

This id SHALL contain exactly one [1..1] @extension (CONF:3357-30826).

* + - * 1. This healthCareFacility SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 (CONF:3357-30827).

1. SHALL contain exactly one [1..1] component (CONF:3357-30747).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3357-30748).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-30749) such that it
         1. SHALL contain exactly one [1..1] [Infection Details in Late Onset Sepsis Report](#S_Infection_Details_in_Late_Onset_Sepsi) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01) (CONF:3357-30750).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:3357-30751) such that it
         1. SHALL contain exactly one [1..1] [Risk Factors Section (LOS/Men)](#S_Risk_Factors_Section_LOSMen) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2018-04-01) (CONF:3357-30752).
      3. This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30828) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:3357-30829).
         2. If a positive blood culture was obtained SHALL contain a component containing a Findings Section in an Infection-type Report (CONF:3357-30842).
      4. This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30843) such that it
         1. SHALL contain exactly one [1..1] [NHSN Comment Section](#S_NHSN_Comment_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:3357-30844).

Ventilator Associated Event (VAE) Report

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.51:2017-04-01 (closed)]

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Table 47: Ventilator Associated Event (VAE) Report Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (required)  [Infection Details Section in a VAE Report](#S_Infection_Details_Section_in_a_VAE_Re) (required)  [Risk Factors Section in a VAE Report](#S_Risk_Factors_Section_in_a_VAE_Report) (required)  [NHSN Comment Section](#S_NHSN_Comment_Section) (optional) |

Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.

This report type records a ventilator associated infection event.

Preferred document title: “Ventilator Associated Event (VAE)”

Key encounter data:

• A value for admission date is required.  
• A value for discharge date may be recorded.  
• The facility id, unit identifier, and unit type are required.

Other dates and locations:

• The event date is recorded as effectiveTime in the Infection-Type Observation.

Table 48: Ventilator Associated Event (VAE) Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.51:2017-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3311-97](#C_3311-97) |  |
| @root | 1..1 | SHALL |  | [3311-113](#C_3311-113) | 2.16.840.1.113883.10.20.5.7.3.2 |
| templateId | 1..1 | SHALL |  | [3311-111](#C_3311-111) |  |
| @root | 1..1 | SHALL |  | [3311-122](#C_3311-122) | 2.16.840.1.113883.10.20.5.51 |
| @extension | 1..1 | SHALL |  | [3311-123](#C_3311-123) | 2017-04-01 |
| componentOf | 1..1 | SHALL |  | [3311-98](#C_3311-98) |  |
| encompassingEncounter | 1..1 | SHALL |  | [3311-99](#C_3311-99) |  |
| effectiveTime | 1..1 | SHALL |  | [3311-100](#C_3311-100) |  |
| low | 1..1 | SHALL |  | [3311-101](#C_3311-101) |  |
| @value | 1..1 | SHALL |  | [3311-114](#C_3311-114) |  |
| high | 0..1 | MAY |  | [3311-102](#C_3311-102) |  |
| @value | 1..1 | SHALL |  | [3311-115](#C_3311-115) |  |
| location | 1..1 | SHALL |  | [3311-103](#C_3311-103) |  |
| healthCareFacility | 1..1 | SHALL |  | [3311-104](#C_3311-104) |  |
| id | 1..1 | SHALL |  | [3311-105](#C_3311-105) |  |
| @root | 1..1 | SHALL |  | [3311-117](#C_3311-117) |  |
| @extension | 1..1 | SHALL |  | [3311-118](#C_3311-118) |  |
| code | 1..1 | SHALL |  | [3311-119](#C_3311-119) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [3311-106](#C_3311-106) |  |
| structuredBody | 1..1 | SHALL |  | [3311-107](#C_3311-107) |  |
| component | 1..1 | SHALL |  | [3311-108](#C_3311-108) |  |
| section | 1..1 | SHALL |  | [3311-136](#C_3311-136) | [Infection Details Section in a VAE Report (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01](#S_Infection_Details_Section_in_a_VAE_Re) |
| component | 1..1 | SHALL |  | [3311-109](#C_3311-109) |  |
| section | 1..1 | SHALL |  | [3311-137](#C_3311-137) | [Findings Section in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45](#S_Findings_Section_in_an_InfectionType_) |
| component | 1..1 | SHALL |  | [3311-110](#C_3311-110) |  |
| section | 1..1 | SHALL |  | [3311-171](#C_3311-171) | [Risk Factors Section in a VAE Report (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01](#S_Risk_Factors_Section_in_a_VAE_Report) |
| component | 0..1 | MAY |  | [3311-185](#C_3311-185) |  |
| section | 1..1 | SHALL |  | [3311-186](#C_3311-186) | [NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01](#S_NHSN_Comment_Section) |

1. Conforms to [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.27).

This template id represents the IG in which this template is published.

1. SHALL contain exactly one [1..1] templateId (CONF:3311-97) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.2" (CONF:3311-113).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-111) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.51" (CONF:3311-122).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-123).
3. SHALL contain exactly one [1..1] componentOf (CONF:3311-98).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:3311-99).
      1. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:3311-100).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3311-101).
            1. This low SHALL contain exactly one [1..1] @value (CONF:3311-114).  
               Note: Admission Date
         2. This effectiveTime MAY contain zero or one [0..1] high (CONF:3311-102).
            1. The high, if present, SHALL contain exactly one [1..1] @value (CONF:3311-115).  
               Note: Discharge Date
         3. The value of the admission date SHALL NOT be earlier than January 1, 1986; SHALL NOT be earlier than the date of birth; and SHALL NOT be later than the event date (CONF:3311-116).
      2. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:3311-103).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:3311-104).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:3311-105).

This id SHALL contain exactly one [1..1] @root (CONF:3311-117).

The value of healthCareFacility/id/@extension must be a value previously registered with NHSN.

This id SHALL contain exactly one [1..1] @extension (CONF:3311-118).

* + - * 1. This healthCareFacility SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC (CONF:3311-119).

1. SHALL contain exactly one [1..1] component (CONF:3311-106).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3311-107).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3311-108) such that it
         1. SHALL contain exactly one [1..1] [Infection Details Section in a VAE Report](#S_Infection_Details_Section_in_a_VAE_Re) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01) (CONF:3311-136).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:3311-109) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) (CONF:3311-137).
      3. This structuredBody SHALL contain exactly one [1..1] component (CONF:3311-110) such that it
         1. SHALL contain exactly one [1..1] [Risk Factors Section in a VAE Report](#S_Risk_Factors_Section_in_a_VAE_Report) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01) (CONF:3311-171).
      4. This structuredBody MAY contain zero or one [0..1] component (CONF:3311-185) such that it
         1. SHALL contain exactly one [1..1] [NHSN Comment Section](#S_NHSN_Comment_Section) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:3311-186).

# Section-Level Templates

HAI Section Generic Constraints

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.4.26 (closed)]

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This template records the constraints that apply to all sections specified in the NHSN HAI Implementation Guide.

Table 49: HAI Section Generic Constraints Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26) | | | | | |
| templateId | 1..1 | SHALL |  | [86-21958](#C_86-21958) |  |
| @root | 1..1 | SHALL |  | [86-21959](#C_86-21959) | 2.16.840.1.113883.10.20.5.4.26 |
| code | 1..1 | SHALL |  | [86-21953](#C_86-21953) |  |
| @code | 1..1 | SHALL |  | [86-21954](#C_86-21954) | urn:oid:2.16.840.1.113883.6.1 (LOINC) |
| title | 1..1 | SHALL |  | [86-21955](#C_86-21955) |  |
| text | 1..1 | SHALL |  | [86-21956](#C_86-21956) |  |
| entry | 1..\* | SHALL |  | [86-21957](#C_86-21957) |  |

1. SHALL contain exactly one [1..1] templateId (CONF:86-21958) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.4.26" (CONF:86-21959).
2. SHALL contain exactly one [1..1] code (CONF:86-21953).
   1. This code SHALL contain exactly one [1..1] @code (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 STATIC) (CONF:86-21954).
3. SHALL contain exactly one [1..1] title (CONF:86-21955).
4. SHALL contain exactly one [1..1] text (CONF:86-21956).
5. SHALL contain at least one [1..\*] entry (CONF:86-21957).

Details Section in an Evidence of Infection (Dialysis) Report (V5)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2016-08-01 (closed)]

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Table 50: Details Section in an Evidence of Infection (Dialysis) Report (V5) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Evidence of Infection (Dialysis) Report (V5)](#D_HAI_Evidence_of_Infection_Dialysis_Re) (required) | [Death Observation in an Evidence of Infection (Dialysis) Report](#E_Death_Observation_in_an_Evidence_of_I) (required)  [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) (required)  [Hospital Admission Clinical Statement](#E_Hospital_Admission_Clinical_Statement) (required)  [Dialysis Clinic Admission Clinical Statement](#E_Dialysis_Clinic_Admission_Clinical_St) (required)  [Loss of Vascular Access Observation](#E_Loss_of_Vascular_Access_Observation) (required)  [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) (required) |

The clinical statements in this section record the criteria used in the diagnosis of an infection or the identification of an adverse reaction. They also record any infection indicators, dialysis clinic admission date in comparison to event date, whether the patient was hospitalized, and death observation.

Table 51: Details Section in an Evidence of Infection (Dialysis) Report (V5) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2016-08-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3247-22338](#C_3247-22338) |  |
| @root | 1..1 | SHALL |  | [3247-30224](#C_3247-30224) | 2.16.840.1.113883.10.20.5.5.41 |
| @extension | 1..1 | SHALL |  | [3247-30282](#C_3247-30282) | 2016-08-01 |
| code | 1..1 | SHALL |  | [3247-22340](#C_3247-22340) |  |
| @code | 1..1 | SHALL |  | [3247-22341](#C_3247-22341) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [3247-30598](#C_3247-30598) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [3247-22342](#C_3247-22342) |  |
| organizer | 1..1 | SHALL |  | [3247-30428](#C_3247-30428) | [Infection Indicator Organizer (V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2016-08-01](#E_Infection_Indicator_Organizer_V4) |
| entry | 1..1 | SHALL |  | [3247-22344](#C_3247-22344) |  |
| organizer | 1..1 | SHALL |  | [3247-22345](#C_3247-22345) | [Criteria of Diagnosis Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180](#E_Criteria_of_Diagnosis_Organizer) |
| entry | 1..1 | SHALL |  | [3247-22346](#C_3247-22346) |  |
| act | 1..1 | SHALL |  | [3247-22347](#C_3247-22347) | [Hospital Admission Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.133](#E_Hospital_Admission_Clinical_Statement) |
| entry | 1..1 | SHALL |  | [3247-22348](#C_3247-22348) |  |
| observation | 1..1 | SHALL |  | [3247-22349](#C_3247-22349) | [Death Observation in an Evidence of Infection (Dialysis) Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.121](#E_Death_Observation_in_an_Evidence_of_I) |
| entry | 1..1 | SHALL |  | [3247-22350](#C_3247-22350) |  |
| encounter | 1..1 | SHALL |  | [3247-22351](#C_3247-22351) | [Dialysis Clinic Admission Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.124](#E_Dialysis_Clinic_Admission_Clinical_St) |
| entry | 1..1 | SHALL |  | [3247-30222](#C_3247-30222) |  |
| observation | 1..1 | SHALL |  | [3247-30223](#C_3247-30223) | [Loss of Vascular Access Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.203](#E_Loss_of_Vascular_Access_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3247-22338) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.41" (CONF:3247-30224).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30282).
3. SHALL contain exactly one [1..1] code (CONF:3247-22340).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:3247-22341).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3247-30598).
4. SHALL contain exactly one [1..1] entry (CONF:3247-22342) such that it
   1. SHALL contain exactly one [1..1] [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2016-08-01) (CONF:3247-30428).
5. SHALL contain exactly one [1..1] entry (CONF:3247-22344) such that it
   1. SHALL contain exactly one [1..1] [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180) (CONF:3247-22345).
6. SHALL contain exactly one [1..1] entry (CONF:3247-22346) such that it
   1. SHALL contain exactly one [1..1] [Hospital Admission Clinical Statement](#E_Hospital_Admission_Clinical_Statement) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.133) (CONF:3247-22347).
7. SHALL contain exactly one [1..1] entry (CONF:3247-22348) such that it
   1. SHALL contain exactly one [1..1] [Death Observation in an Evidence of Infection (Dialysis) Report](#E_Death_Observation_in_an_Evidence_of_I) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.121) (CONF:3247-22349).
8. SHALL contain exactly one [1..1] entry (CONF:3247-22350) such that it
   1. SHALL contain exactly one [1..1] [Dialysis Clinic Admission Clinical Statement](#E_Dialysis_Clinic_Admission_Clinical_St) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.124) (CONF:3247-22351).
9. SHALL contain exactly one [1..1] entry (CONF:3247-30222) such that it
   1. SHALL contain exactly one [1..1] [Loss of Vascular Access Observation](#E_Loss_of_Vascular_Access_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.203) (CONF:3247-30223).

Figure 23: Details Section in an Evidence of Infection (Dialysis) Report (V5) Example

<section>

<!-- HAI Generic section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D1.1] Details Section in an Evidence of Infection (Dialysis) Report (V5) -->

<templateId root="2.16.840.1.113883.10.20.5.5.41"

extension="2016-08-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Details Section"/>

<title>Details</title>

...

<entry typeCode="DRIV">

<organizer classCode="CLUSTER" moodCode="EVN”>

<!-- [HAI R3D1.1] Infection Indication Organizer (V4) -->

<templateId root="2.16.840.1.113883.10.20.5.6.181"

extension="2016-08-01"/>

...

</organizer >

</entry>

<entry typeCode="DRIV">

< organizer classCode="CLUSTER" moodCode="EVN”>

<!-- Criteria of Diagnosis Organizer -->

<templateId root="2.16.840.1.113883.10.20.5.6.180"/>

...

</organizer >

</entry>

<entry typeCode="DRIV">

<act classCode="ACT" moodCode="EVN" negationInd="false">

<!—Hospital Admission Clinical Statement -->

<templateId root="2.16.840.1.113883.10.20.5.6.133"/>

...

</act >

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" nullFlavor="NI">

<!-- C-CDA Deceased Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.79"/>

<!-- HAI Death Observation in an Evidence of Infection (Dialysis) Report -->

<templateId root="2.16.840.1.113883.10.20.5.6.121"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- Dialysis Clinic Admission Clinical Statement -->

<templateId root="2.16.840.1.113883.10.20.5.6.124"/>

...

</encounter >

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation Type -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- Loss of Vascular Access Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.203"/>

...

</observation>

</entry>

</section>

Encounters Section in a LIO Report (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01 (closed)]

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Table 52: Encounters Section in a LIO Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Laboratory-Identified Organism (LIO) Report (V2)](#D_HAI_LaboratoryIdentified_Organism_LIO) (required) | [Prior Discharge Encounter (V2)](#E_Prior_Discharge_Encounter_V2) (required)  [Last Physical Overnight Location Act](#E_Last_Physical_Overnight_Location_Act) (required)  [Other Facility Discharge Act](#E_Other_Facility_Discharge_Act) (required) |

In a LIO Report, the Encounters Section contains entries representing the last physical overnight location of the patient along with whether in the past four weeks the patient was either discharged from the facility or from another facility. It also records the date of that discharge.

Table 53: Encounters Section in a LIO Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-22364](#C_1129-22364) |  |
| @root | 1..1 | SHALL |  | [1129-22365](#C_1129-22365) | 2.16.840.1.113883.10.20.5.5.44 |
| @extension | 1..1 | SHALL |  | [1129-30283](#C_1129-30283) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-22366](#C_1129-22366) |  |
| @code | 1..1 | SHALL |  | [1129-22367](#C_1129-22367) | 46240-8 |
| @codeSystem | 1..1 | SHALL |  | [1129-30599](#C_1129-30599) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [1129-22368](#C_1129-22368) |  |
| encounter | 1..1 | SHALL |  | [1129-30422](#C_1129-30422) | [Prior Discharge Encounter (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01](#E_Prior_Discharge_Encounter_V2) |
| entry | 1..1 | SHALL |  | [1129-28240](#C_1129-28240) |  |
| act | 1..1 | SHALL |  | [1129-30588](#C_1129-30588) | [Other Facility Discharge Act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01](#E_Other_Facility_Discharge_Act) |
| entry | 1..1 | SHALL |  | [1129-30273](#C_1129-30273) |  |
| act | 1..1 | SHALL |  | [1129-30575](#C_1129-30575) | [Last Physical Overnight Location Act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01](#E_Last_Physical_Overnight_Location_Act) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22364) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.44" (CONF:1129-22365).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30283).
3. SHALL contain exactly one [1..1] code (CONF:1129-22366).
   1. This code SHALL contain exactly one [1..1] @code="46240-8" History of Encounters (CONF:1129-22367).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30599).
4. SHALL contain exactly one [1..1] entry (CONF:1129-22368) such that it
   1. SHALL contain exactly one [1..1] [Prior Discharge Encounter (V2)](#E_Prior_Discharge_Encounter_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01) (CONF:1129-30422).
5. SHALL contain exactly one [1..1] entry (CONF:1129-28240) such that it
   1. SHALL contain exactly one [1..1] [Other Facility Discharge Act](#E_Other_Facility_Discharge_Act) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01) (CONF:1129-30588).
6. SHALL contain exactly one [1..1] entry (CONF:1129-30273) such that it
   1. SHALL contain exactly one [1..1] [Last Physical Overnight Location Act](#E_Last_Physical_Overnight_Location_Act) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01) (CONF:1129-30575).

Figure 24: Encounters Section in an LIO Report (V2) Example

<section>

<!-- HAI Generic section templateId -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- Encounters Section in an LIO Report (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.5.44"

extension="2014-12-01" />

<code code="46240-8"

codeSystem="2.16.840.1.113883.6.1"

displayName="History of Encounters" />

<title>Encounters</title>

<text>...</text>

<entry typeCode="DRIV">

<!-- Prior Discharge Encounter (V2) -->

<encounter classCode="ENC" moodCode="EVN">

<!-- C-CDA Encounter activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- HAI Prior Discharge Encounter (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.151"

extension="2014-12-01" />

...

</encounter>

</entry>

<entry typeCode="DRIV">

<!-- Other Facility Discharge Act -->

<act classCode="ACT" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.228"

extension="2014-12-01" />

...

</act>

</entry>

<entry typeCode="DRIV">

<!-- Last Physical Overnight Location Act -->

<act classCode="ACT" moodCode="EVN">

<!-- Last Physical Overnight Location Act templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.227"

extension="2014-12-01" />

...

</act>

</entry>

</section>

Findings Section in a LIO Report (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01 (closed)]

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Table 54: Findings Section in a LIO Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Laboratory-Identified Organism (LIO) Report (V2)](#D_HAI_LaboratoryIdentified_Organism_LIO) (required) | [Pathogen Identified Observation (LIO) (V2)](#E_Pathogen_Identified_Observation_LIO_V2) (required) |

The Findings Section in a LIO Report records a laboratory-identified microorganism. It differs from the Findings Section in Infection Reports in that it records only one microorganism (if more were identified, each is recorded in a separate report), details about the specimen collection are recorded, and no drug-susceptibility test results are recorded. If no organism is found, no report is submitted; thus, the explicit statement "no organism found", which is used in the Findings Section in Infection Reports, is not used here.

Table 55: Findings Section in a LIO Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-22378](#C_1129-22378) |  |
| @root | 1..1 | SHALL |  | [1129-22379](#C_1129-22379) | 2.16.840.1.113883.10.20.5.5.46 |
| @extension | 1..1 | SHALL |  | [1129-30463](#C_1129-30463) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-22380](#C_1129-22380) |  |
| @code | 1..1 | SHALL |  | [1129-22381](#C_1129-22381) | 18769-0 |
| @codeSystem | 1..1 | SHALL |  | [1129-30600](#C_1129-30600) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [1129-22382](#C_1129-22382) |  |
| observation | 1..1 | SHALL |  | [1129-30419](#C_1129-30419) | [Pathogen Identified Observation (LIO) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01](#E_Pathogen_Identified_Observation_LIO_V2) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22378) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.46" (CONF:1129-22379).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30463).
3. SHALL contain exactly one [1..1] code (CONF:1129-22380).
   1. This code SHALL contain exactly one [1..1] @code="18769-0" Findings Section (CONF:1129-22381).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30600).
4. SHALL contain exactly one [1..1] entry (CONF:1129-22382) such that it
   1. SHALL contain exactly one [1..1] [Pathogen Identified Observation (LIO) (V2)](#E_Pathogen_Identified_Observation_LIO_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01) (CONF:1129-30419).

Figure 25: Findings Section in an LIO Report (V2) Example

<section>

<!-- HAI Generic section template -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- HAI Findings Section in an LIO Report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.46"

extension="2014-12-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="18769-0"

displayName="Findings Section" />

<title>Findings</title>

...

<entry typeCode="DRIV">

<observation>

<!-- Pathogen Identified Observation (LIO) V2 -->

<templateId root="2.16.840.1.113883.10.20.5.6.146"

extension="2014-12-01" />

...

</observation>

</entry>

</section>

Findings Section in an ARO Report (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2016-08-01 (closed)]

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Table 56: Findings Section in an ARO Report (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI AUR Antimicrobial Resistance Option (ARO) Report (V4)](#D_HAI_AUR_Antimicrobial_Resistance_Opti) (required) | [Specimen Collection Procedure (ARO) (V3)](#E_Specimen_Collection_Procedure_ARO_V3) (required) |

The Findings Section in an ARO Report records the details concerning one pathogen isolate and its related antimicrobial susceptibility testing results.

Table 57: Findings Section in an ARO Report (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2016-08-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3247-21128](#C_3247-21128) |  |
| @root | 1..1 | SHALL |  | [3247-21129](#C_3247-21129) | 2.16.840.1.113883.10.20.5.5.32 |
| @extension | 1..1 | SHALL |  | [3247-30475](#C_3247-30475) | 2016-08-01 |
| code | 1..1 | SHALL |  | [3247-21132](#C_3247-21132) |  |
| @code | 1..1 | SHALL |  | [3247-21133](#C_3247-21133) | 18769-0 |
| @codeSystem | 1..1 | SHALL |  | [3247-30601](#C_3247-30601) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [3247-21136](#C_3247-21136) |  |
| procedure | 1..1 | SHALL |  | [3247-30473](#C_3247-30473) | [Specimen Collection Procedure (ARO) (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2016-08-01](#E_Specimen_Collection_Procedure_ARO_V3) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3247-21128) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.32" (CONF:3247-21129).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30475).
3. SHALL contain exactly one [1..1] code (CONF:3247-21132).
   1. This code SHALL contain exactly one [1..1] @code="18769-0" Findings Section (CONF:3247-21133).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3247-30601).
4. SHALL contain exactly one [1..1] entry (CONF:3247-21136).
   1. This entry SHALL contain exactly one [1..1] [Specimen Collection Procedure (ARO) (V3)](#E_Specimen_Collection_Procedure_ARO_V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2016-08-01) (CONF:3247-30473).

Figure 26: Findings Section in an ARO Report (V3) Example

<section>

<!-- [HAI R1] HAI Section Generic Constraints -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D1.1] Findings Section in an ARO Report (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.5.32" extension="2016-08-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="18769-0"

displayName="Findings section" />

<title>Findings</title>

<text>

...

</text>

<entry typeCode="DRIV">

<procedure classCode="PROC" moodCode="EVN">

<!-- [HAI R3D1.1] Specimen Collection Procedure (ARO) (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.188" extension="2016-08-01" />

...

</procedure>

</entry>

</section>

Findings Section in an Infection-Type Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.45 (closed)]

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Table 58: Findings Section in an Infection-Type Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Urinary Tract Infection Numerator Report (UTI)](#D_HAI_Urinary_Tract_Infection_Numerator) (required)  [HAI Surgical Site Infection Report (SSI) (V2)](#D_HAI_Surgical_Site_Infection_Report_V2) (required)  [HAI Evidence of Infection (Dialysis) Report (V5)](#D_HAI_Evidence_of_Infection_Dialysis_Re) (optional)  [Ventilator Associated Event (VAE) Report](#D_Ventilator_Associated_Event_VAE_Repor) (required)  [HAI Bloodstream Infection Report (BSI) (V3)](#D_HAI_BSI_Rep_V3) (required)  [Late Onset Sepsis/Meningitis Event (LOS) Report](#D_Late_Onset_SepsisMeningitis_Event_LOS) (optional) | [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) (optional)  [MDRO/CDI Observation](#E_MDROCDI_Observation) (optional)  [Findings Organizer](#E_Findings_Organizer) (optional) |

The Findings Section in an Infection-Type Report records whether infection organisms were identified and, if so, records details about them.

Table 59: Findings Section in an Infection-Type Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.45) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22371](#C_86-22371) |  |
| @root | 1..1 | SHALL |  | [86-22372](#C_86-22372) | 2.16.840.1.113883.10.20.5.5.45 |
| code | 1..1 | SHALL |  | [86-22373](#C_86-22373) |  |
| @code | 1..1 | SHALL |  | [86-22374](#C_86-22374) | 18769-0 |
| @codeSystem | 1..1 | SHALL |  | [86-28357](#C_86-28357) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 0..3 | MAY |  | [86-23048](#C_86-23048) |  |
| organizer | 1..1 | SHALL |  | [86-23049](#C_86-23049) | [Findings Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182](#E_Findings_Organizer) |
| entry | 0..1 | MAY |  | [86-23051](#C_86-23051) |  |
| observation | 1..1 | SHALL |  | [86-23052](#C_86-23052) | [Pathogen Identified Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145](#E_Pathogen_Identified_Observation) |
| entry | 0..1 | MAY |  | [86-23054](#C_86-23054) |  |
| observation | 1..1 | SHALL |  | [86-23055](#C_86-23055) | [MDRO/CDI Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.142](#E_MDROCDI_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22371) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.45" (CONF:86-22372).
3. SHALL contain exactly one [1..1] code (CONF:86-22373).
   1. This code SHALL contain exactly one [1..1] @code="18769-0" Findings Section (CONF:86-22374).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28357).
4. MAY contain [0..3] entry (CONF:86-23048) such that it
   1. SHALL contain exactly one [1..1] [Findings Organizer](#E_Findings_Organizer) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182) (CONF:86-23049).
   2. If pathogens were identified, the Findings Section SHALL contain at least one and no more than three entry elements containing a Findings Organizer reporting pathogens identified (CONF:86-23050).
5. MAY contain zero or one [0..1] entry (CONF:86-23051) such that it
   1. SHALL contain exactly one [1..1] [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145) (CONF:86-23052).
   2. If no pathogens were identified, the Findings Section SHALL contain a single entry element containing a Pathogen Identified Observation reporting that no pathogens were identified (CONF:86-23053).
6. MAY contain zero or one [0..1] entry (CONF:86-23054) such that it
   1. SHALL contain exactly one [1..1] [MDRO/CDI Observation](#E_MDROCDI_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.142) (CONF:86-23055).
   2. If pathogens were identified, and the report is a UTI, SSI, VAE, or BSI Report, an entry element SHALL be present, containing an MDRO/CDI Observation (CONF:86-23056).

Figure 27: Findings Section in an Infection-Type Report Example

<section>

<!-- HAI Generic section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Findings section in an infection-type report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.45"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="18769-0"

displayName="Findings Section"/>

<title>Findings</title>

...

<entry typeCode="DRIV">

<organizer>

<!-- Findings Organizer -->

<templateId root="2.16.840.1.113883.10.20.5.6.182"/>

...

</organizer>

</entry>

<entry typeCode="DRIV">

<observation>

<!-- Pathogen Identified Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.145"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation>

<!-- MDRO/CDI Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.142"/>

...

</observation>

</entry>

</section>

Infection Details in Late Onset Sepsis Report

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01 (open)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 60: Infection Details in Late Onset Sepsis Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [Late Onset Sepsis/Meningitis Event (LOS) Report](#D_Late_Onset_SepsisMeningitis_Event_LOS) (required) | [Death Observation](#E_Death_Observation) (required)  [Infection-Type Observation](#E_InfectionType_Observation) (required)  [Inborn/Outborn Observation](#E_InbornOutborn_Observation) (required) |

This template represents the event details of a late onset sepsis report.

Table 61: Infection Details in Late Onset Sepsis Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-30742](#C_3357-30742) |  |
| @root | 1..1 | SHALL |  | [3357-30743](#C_3357-30743) | 2.16.840.1.113883.10.20.5.5.64 |
| @extension | 1..1 | SHALL |  | [3357-30744](#C_3357-30744) | 2018-04-01 |
| code | 1..1 | SHALL |  | [3357-30784](#C_3357-30784) |  |
| @code | 1..1 | SHALL |  | [3357-30785](#C_3357-30785) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [3357-30786](#C_3357-30786) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [3357-30816](#C_3357-30816) |  |
| observation | 1..1 | SHALL |  | [3357-30817](#C_3357-30817) | [Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139](#E_InfectionType_Observation) |
| entry | 1..1 | SHALL |  | [3357-30818](#C_3357-30818) |  |
| observation | 1..1 | SHALL |  | [3357-30819](#C_3357-30819) | [Inborn/Outborn Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01](#E_InbornOutborn_Observation) |
| entry | 1..1 | SHALL |  | [3357-30787](#C_3357-30787) |  |
| observation | 1..1 | SHALL |  | [3357-30788](#C_3357-30788) | [Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120](#E_Death_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-30742) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.64" (CONF:3357-30743).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30744).
3. SHALL contain exactly one [1..1] code (CONF:3357-30784).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:3357-30785).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-30786).
4. SHALL contain exactly one [1..1] entry (CONF:3357-30816) such that it
   1. SHALL contain exactly one [1..1] [Infection-Type Observation](#E_InfectionType_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:3357-30817).
5. SHALL contain exactly one [1..1] entry (CONF:3357-30818) such that it
   1. SHALL contain exactly one [1..1] [Inborn/Outborn Observation](#E_InbornOutborn_Observation) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01) (CONF:3357-30819).
6. SHALL contain exactly one [1..1] entry (CONF:3357-30787) such that it
   1. SHALL contain exactly one [1..1] [Death Observation](#E_Death_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:3357-30788).

Figure 28: Infection Details in Late Onset Sepsis Report Example

<section>

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D3] Infection Details in Late Onset Sepsis Report -->

<templateId root="2.16.840.1.113883.10.20.5.5.64" extension="2018-04-01" />

<code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="51899-3" displayName="Details" />

<title>Details Section</title>

<text>

...

</text>

<entry typeCode="DRIV">

<!-- Late Onset Sepsis/Meningitis Infection Observation -->

<observation classCode="OBS" moodCode="EVN">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- [HAI R3D3] Late Onset Sepsis/Meningitis Infection Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.256" extension="2018-04-01"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<!-- Inborn/Outborn Observation -->

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- [HAI R3D3] Inborn/Outborn Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.257" extension="2018-04-01"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<!-- Death Observation -->

<!-- not negated: this patient died -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Deceased Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.79" />

<!-- Death Observation in an Infection-type -->

<templateId root="2.16.840.1.113883.10.20.5.6.120" />

...

</observation>

</entry>

</section>

Infection Details Section in a BSI Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.38 (closed)]

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Table 62: Infection Details Section in a BSI Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Bloodstream Infection Report (BSI) (V3)](#D_HAI_BSI_Rep_V3) (required) | [Death Observation](#E_Death_Observation) (optional)  [Post-Procedure Observation](#E_PostProcedure_Observation) (optional)  [Infection-Type Observation](#E_InfectionType_Observation) (required) |

This section records the infection type, with details, as well as whether the reported infection occurred during a post-procedure period. If the patient died, NHSN protocol requires that the death be recorded.

Table 63: Infection Details Section in a BSI Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.38) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22310](#C_86-22310) |  |
| @root | 1..1 | SHALL |  | [86-22311](#C_86-22311) | 2.16.840.1.113883.10.20.5.5.38 |
| code | 1..1 | SHALL |  | [86-22312](#C_86-22312) |  |
| @code | 1..1 | SHALL |  | [86-22313](#C_86-22313) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [86-28358](#C_86-28358) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [86-22314](#C_86-22314) |  |
| observation | 1..1 | SHALL |  | [86-22315](#C_86-22315) | [Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139](#E_InfectionType_Observation) |
| entry | 0..1 | MAY |  | [86-22316](#C_86-22316) |  |
| observation | 1..1 | SHALL |  | [86-22317](#C_86-22317) | [Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120](#E_Death_Observation) |
| entry | 0..1 | MAY |  | [86-22318](#C_86-22318) |  |
| observation | 1..1 | SHALL |  | [86-22319](#C_86-22319) | [Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150](#E_PostProcedure_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22310) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.38" (CONF:86-22311).
3. SHALL contain exactly one [1..1] code (CONF:86-22312).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:86-22313).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28358).
4. SHALL contain exactly one [1..1] entry (CONF:86-22314) such that it
   1. SHALL contain exactly one [1..1] [Infection-Type Observation](#E_InfectionType_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:86-22315).
5. MAY contain zero or one [0..1] entry (CONF:86-22316) such that it
   1. SHALL contain exactly one [1..1] [Death Observation](#E_Death_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:86-22317).
6. MAY contain zero or one [0..1] entry (CONF:86-22318) such that it
   1. SHALL contain exactly one [1..1] [Post-Procedure Observation](#E_PostProcedure_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150) (CONF:86-22319).

Figure 29: Infection Details Section in a BSI Report Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Infection Details Section in a BSI report template-->

<templateId root="2.16.840.1.113883.10.20.5.5.38"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Details Section"/>

<title> Details </title>

...

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Infection-Type Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.139"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Deceased Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.79"/>

<!-- Death Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.120"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Post-Procedure Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.150"/>

...

</observation>

</entry>

</section>

Infection Details Section in a UTI Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.40 (closed)]

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Table 64: Infection Details Section in a UTI Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Urinary Tract Infection Numerator Report (UTI)](#D_HAI_Urinary_Tract_Infection_Numerator) (required) | [Death Observation](#E_Death_Observation) (optional)  [Post-Procedure Observation](#E_PostProcedure_Observation) (optional)  [Infection-Type Observation](#E_InfectionType_Observation) (required) |

This section records the infection type, with details. If the patient died, NHSN protocol requires that the death be recorded.

Table 65: Infection Details Section in a UTI Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.40) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22328](#C_86-22328) |  |
| @root | 1..1 | SHALL |  | [86-22329](#C_86-22329) | 2.16.840.1.113883.10.20.5.5.40 |
| code | 1..1 | SHALL |  | [86-22330](#C_86-22330) |  |
| @code | 1..1 | SHALL |  | [86-22331](#C_86-22331) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [86-28359](#C_86-28359) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [86-22332](#C_86-22332) |  |
| observation | 1..1 | SHALL |  | [86-22333](#C_86-22333) | [Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139](#E_InfectionType_Observation) |
| entry | 0..1 | MAY |  | [86-22334](#C_86-22334) |  |
| observation | 1..1 | SHALL |  | [86-22335](#C_86-22335) | [Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150](#E_PostProcedure_Observation) |
| entry | 0..1 | MAY |  | [86-22336](#C_86-22336) |  |
| observation | 1..1 | SHALL |  | [86-22337](#C_86-22337) | [Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120](#E_Death_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22328) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.40" (CONF:86-22329).
3. SHALL contain exactly one [1..1] code (CONF:86-22330).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:86-22331).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28359).
4. SHALL contain exactly one [1..1] entry (CONF:86-22332) such that it
   1. SHALL contain exactly one [1..1] [Infection-Type Observation](#E_InfectionType_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:86-22333).
5. MAY contain zero or one [0..1] entry (CONF:86-22334) such that it
   1. SHALL contain exactly one [1..1] [Post-Procedure Observation](#E_PostProcedure_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150) (CONF:86-22335).
6. MAY contain zero or one [0..1] entry (CONF:86-22336) such that it
   1. SHALL contain exactly one [1..1] [Death Observation](#E_Death_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:86-22337).

Figure 30: Infection Details Section in a UTI Report Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Infection Details Section in a UTI report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.40"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Details Section"/>

<title>Details</title>

...

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Infection-Type Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.139"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Deceased Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.79"/>

<!-- Death Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.120"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Post-Procedure Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.150"/>

...

</observation>

</entry>

</section>

Infection Details Section in a VAE Report

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01 (closed)]

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Table 66: Infection Details Section in a VAE Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [Ventilator Associated Event (VAE) Report](#D_Ventilator_Associated_Event_VAE_Repor) (required) | [Death Observation](#E_Death_Observation) (required)  [Post-Procedure Observation](#E_PostProcedure_Observation) (optional)  [Infection-Type Observation](#E_InfectionType_Observation) (required) |

This section records the infection type, with details, as well as whether the reported infection occurred during a post-procedure period. If the patient died, NHSN protocol requires that the death be recorded.

Table 67: Infection Details Section in a VAE Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3311-125](#C_3311-125) |  |
| @root | 1..1 | SHALL |  | [3311-130](#C_3311-130) | 2.16.840.1.113883.10.20.5.5.59 |
| @extension | 1..1 | SHALL |  | [3311-135](#C_3311-135) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-126](#C_3311-126) |  |
| @code | 1..1 | SHALL |  | [3311-131](#C_3311-131) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [3311-132](#C_3311-132) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [3311-124](#C_3311-124) |  |
| observation | 1..1 | SHALL |  | [3311-129](#C_3311-129) | [Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139](#E_InfectionType_Observation) |
| entry | 1..1 | SHALL |  | [3311-127](#C_3311-127) |  |
| observation | 1..1 | SHALL |  | [3311-133](#C_3311-133) | [Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120](#E_Death_Observation) |
| entry | 0..1 | MAY |  | [3311-128](#C_3311-128) |  |
| observation | 1..1 | SHALL |  | [3311-134](#C_3311-134) | [Post-Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150](#E_PostProcedure_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-125) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.59" (CONF:3311-130).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-135).
3. SHALL contain exactly one [1..1] code (CONF:3311-126).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:3311-131).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-132).
4. SHALL contain exactly one [1..1] entry (CONF:3311-124) such that it
   1. SHALL contain exactly one [1..1] [Infection-Type Observation](#E_InfectionType_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:3311-129).
5. SHALL contain exactly one [1..1] entry (CONF:3311-127) such that it
   1. SHALL contain exactly one [1..1] [Death Observation](#E_Death_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:3311-133).
6. MAY contain zero or one [0..1] entry (CONF:3311-128) such that it
   1. SHALL contain exactly one [1..1] [Post-Procedure Observation](#E_PostProcedure_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150) (CONF:3311-134).

Figure 31: Infection Details Section in a VAE Report Example

<section>

<!-- HAI Section Generic Constraints -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D2] Infection Details Section in a VAE Report -->

<templateId root="2.16.840.1.113883.10.20.5.5.59" extension="2017-04-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Details" />

<title>Details</title>

<text/>

<entry typeCode="DRIV">

<!-- Infection Type Observation -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI] Infection Type Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.139" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<!-- Death Observation -->

<!-- Not negated: this patient died -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Deceased Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.79" />

<!-- Death Observation in an Infection-type -->

<templateId root="2.16.840.1.113883.10.20.5.6.120" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<!-- Post-procedure Observation -->

<!-- negationInd = false: the infection was post-procedure -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI] Post-procedure Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.150" />

...

</observation>

</entry>

</section>

Infection Details Section in an SSI Report (V2)

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.39.2 (closed)]

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Table 68: Infection Details Section in an SSI Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Surgical Site Infection Report (SSI) (V2)](#D_HAI_Surgical_Site_Infection_Report_V2) (required) | [Death Observation](#E_Death_Observation) (optional)  [Infection-Type Observation](#E_InfectionType_Observation) (required)  [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) (required)  [Infection Present at the Time of Surgery Observation](#E_Infection_Present_at_the_Time_of_Surg) (required)  [SSI Detected Using Toolkit Observation](#E_SSI_Detected_Using_Toolkit_Observation) (required) |

This section records the infection type, with details. It records whether the infection was present at the time of surgery and whether the SSI was identified through the use of discharge diagnosis or procedure codes. If the patient died, NHSN protocol requires that the death be recorded.

Table 69: Infection Details Section in an SSI Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.39.2) | | | | | |
| templateId | 1..1 | SHALL |  | [1101-22320](#C_1101-22320) |  |
| @root | 1..1 | SHALL |  | [1101-30273](#C_1101-30273) | 2.16.840.1.113883.10.20.5.5.39.2 |
| code | 1..1 | SHALL |  | [1101-22322](#C_1101-22322) |  |
| @code | 1..1 | SHALL |  | [1101-22323](#C_1101-22323) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [1101-30313](#C_1101-30313) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [1101-22324](#C_1101-22324) |  |
| observation | 1..1 | SHALL |  | [1101-22325](#C_1101-22325) | [Infection-Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139](#E_InfectionType_Observation) |
| entry | 0..1 | MAY |  | [1101-22326](#C_1101-22326) |  |
| observation | 1..1 | SHALL |  | [1101-22327](#C_1101-22327) | [Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120](#E_Death_Observation) |
| entry | 1..1 | SHALL |  | [1101-30274](#C_1101-30274) |  |
| observation | 1..1 | SHALL |  | [1101-30275](#C_1101-30275) | [Infection Present at the Time of Surgery Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.205](#E_Infection_Present_at_the_Time_of_Surg) |
| entry | 1..1 | SHALL |  | [1101-30294](#C_1101-30294) |  |
| observation | 1..1 | SHALL |  | [1101-30295](#C_1101-30295) | [SSI Detected Using Toolkit Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.206](#E_SSI_Detected_Using_Toolkit_Observation) |
| entry | 1..1 | SHALL |  | [1101-30296](#C_1101-30296) |  |
| procedure | 1..1 | SHALL |  | [1101-30297](#C_1101-30297) | [Procedure Details Clinical Statement in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154](#E_Procedure_Details_Clinical_Stmt_IT) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1101-22320) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.39.2" (CONF:1101-30273).
3. SHALL contain exactly one [1..1] code (CONF:1101-22322).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:1101-22323).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1101-30313).
4. SHALL contain exactly one [1..1] entry (CONF:1101-22324) such that it
   1. SHALL contain exactly one [1..1] [Infection-Type Observation](#E_InfectionType_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) (CONF:1101-22325).
5. MAY contain zero or one [0..1] entry (CONF:1101-22326) such that it
   1. SHALL contain exactly one [1..1] [Death Observation](#E_Death_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) (CONF:1101-22327).
6. SHALL contain exactly one [1..1] entry (CONF:1101-30274) such that it
   1. SHALL contain exactly one [1..1] [Infection Present at the Time of Surgery Observation](#E_Infection_Present_at_the_Time_of_Surg) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.205) (CONF:1101-30275).
7. SHALL contain exactly one [1..1] entry (CONF:1101-30294) such that it
   1. SHALL contain exactly one [1..1] [SSI Detected Using Toolkit Observation](#E_SSI_Detected_Using_Toolkit_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.206) (CONF:1101-30295).
8. SHALL contain exactly one [1..1] entry (CONF:1101-30296) such that it
   1. SHALL contain exactly one [1..1] [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154) (CONF:1101-30297).

Figure 32: Infection Details Section in an SSI Report Example

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Infection Details Section in an SSI Report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.39.2"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Details Section"/>

<title>Details</title>

...

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Infection-Type Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.139"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Deceased Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.79"/>

<!-- Death Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.120"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- Infection Present at the Time of Surgery Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.205"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- SSI Detected Using Toolkit Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.206"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure template -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- Procedure Details Clinical Statement in an Infection-Type Report template -->

<templateId root="2.16.840.1.113883.10.20.5.6.154"/>

...

</procedure>

</entry>

</section>

Infection Risk Factors Section in a BSI Report (V3)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01 (closed)]

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Table 70: Infection Risk Factors Section in a BSI Report (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Bloodstream Infection Report (BSI) (V3)](#D_HAI_BSI_Rep_V3) (required) | [Infection Risk Factors Measurement Observation](#E_Infection_Risk_Factors_Measurement_Ob) (optional)  [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation) (required)  [Hemodialysis Catheter Present](#E_Hemodialysis_Catheter_Present) (required)  [Extracorporeal Life Support Present](#E_Extracorporeal_Life_Support_Present) (required)  [Ventricular Assist Device (VAD) Present](#E_Ventricular_Assist_Device_VAD_Present) (required)  [Known or Suspected Munchhausen's By Proxy Observation](#E_Known_or_Suspected_Munchhausens_By_Pr) (required)  [Observed or Suspected Patient Injection into Vascular Line Observation](#E_Observed_or_Suspected_Patient_Injecti) (required)  [Epidermolysis Bullosa Observation](#E_Epidermolysis_Bullosa_Observation) (required)  [Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation](#E_Pus_Present_in_Specimen_Site_and_Matc) (required) |

In a Bloodstream Infection (BSI) Report, the Infection Risk Factors Section contains Infection Risk Factors Observations and optional Infection Risk Factors Measurement Observations depending on the location type, specified by ClinicalDocument/componentOf/encompassingEncounter/location/healthcareFacility/code.

Some information requirements in this template depend on the location reporting the infection: ICU/Other (ICU or any other location except for Specialty Care Areas), SCA (Specialty Care Areas), or NICU (Neonatal Intensive Care Unit).

Table 71: Infection Risk Factors Section in a BSI Report (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-22266](#C_3357-22266) |  |
| @root | 1..1 | SHALL |  | [3357-22267](#C_3357-22267) | 2.16.840.1.113883.10.20.5.5.33 |
| @extension | 1..1 | SHALL |  | [3357-28433](#C_3357-28433) | 2018-04-01 |
| code | 1..1 | SHALL |  | [3357-22268](#C_3357-22268) |  |
| @code | 1..1 | SHALL |  | [3357-22269](#C_3357-22269) | 51898-5 |
| @codeSystem | 1..1 | SHALL |  | [3357-28360](#C_3357-28360) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..2 | SHALL |  | [3357-23203](#C_3357-23203) |  |
| observation | 1..1 | SHALL |  | [3357-23204](#C_3357-23204) | [Infection Risk Factors Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138](#E_Infection_Risk_Factors_Observation) |
| entry | 0..1 | MAY |  | [3357-23208](#C_3357-23208) |  |
| observation | 1..1 | SHALL |  | [3357-23209](#C_3357-23209) | [Infection Risk Factors Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137](#E_Infection_Risk_Factors_Measurement_Ob) |
| entry | 1..1 | SHALL |  | [3357-28361](#C_3357-28361) |  |
| procedure | 1..1 | SHALL |  | [3357-28464](#C_3357-28464) | [Hemodialysis Catheter Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01](#E_Hemodialysis_Catheter_Present) |
| entry | 1..1 | SHALL |  | [3357-28362](#C_3357-28362) |  |
| procedure | 1..1 | SHALL |  | [3357-28465](#C_3357-28465) | [Ventricular Assist Device (VAD) Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01](#E_Ventricular_Assist_Device_VAD_Present) |
| entry | 1..1 | SHALL |  | [3357-28363](#C_3357-28363) |  |
| procedure | 1..1 | SHALL |  | [3357-28466](#C_3357-28466) | [Extracorporeal Life Support Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01](#E_Extracorporeal_Life_Support_Present) |
| entry | 1..1 | SHALL |  | [3357-30668](#C_3357-30668) |  |
| observation | 1..1 | SHALL |  | [3357-30669](#C_3357-30669) | [Known or Suspected Munchhausen's By Proxy Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01](#E_Known_or_Suspected_Munchhausens_By_Pr) |
| entry | 1..1 | SHALL |  | [3357-30670](#C_3357-30670) |  |
| observation | 1..1 | SHALL |  | [3357-30671](#C_3357-30671) | [Epidermolysis Bullosa Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01](#E_Epidermolysis_Bullosa_Observation) |
| entry | 1..1 | SHALL |  | [3357-30672](#C_3357-30672) |  |
| observation | 1..1 | SHALL |  | [3357-30673](#C_3357-30673) | [Observed or Suspected Patient Injection into Vascular Line Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01](#E_Observed_or_Suspected_Patient_Injecti) |
| entry | 1..1 | SHALL |  | [3357-30693](#C_3357-30693) |  |
| observation | 1..1 | SHALL |  | [3357-30694](#C_3357-30694) | [Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01](#E_Pus_Present_in_Specimen_Site_and_Matc) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-22266) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.33" (CONF:3357-22267).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-28433).
3. SHALL contain exactly one [1..1] code (CONF:3357-22268).
   1. This code SHALL contain exactly one [1..1] @code="51898-5" Risk Factors Section (CONF:3357-22269).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-28360).
4. SHALL contain at least one and not more than 2 entry (CONF:3357-23203) such that it
   1. SHALL contain exactly one [1..1] [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138) (CONF:3357-23204).
   2. If the location type represents an ICU/Other location (ICU or any other location except for SCA or NICU), this entry element SHALL be present containing an Infection Risk Factors Observation representing whether a central line was present (CONF:3357-23205).
   3. If the location type represents an SCA location, an entry element SHALL be present containing an Infection Risk Factors Observation representing whether a permanent central line was present, and an entry element containing an Infection Risk Factors Observation representing whether a Temporary Central Line was present (CONF:3357-23206).
   4. If the location type represents an NICU location, an entry element SHALL be present containing an Infection Risk Factors Observation representing whether a central line was present (CONF:3357-23207).
5. MAY contain zero or one [0..1] entry (CONF:3357-23208) such that it
   1. SHALL contain exactly one [1..1] [Infection Risk Factors Measurement Observation](#E_Infection_Risk_Factors_Measurement_Ob) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137) (CONF:3357-23209).
   2. If the location type represents an NICU location, an entry element SHALL be present containing an Infection Risk Factors Measurement Observation representing the birth weight (CONF:3357-23210).
6. SHALL contain exactly one [1..1] entry (CONF:3357-28361) such that it
   1. SHALL contain exactly one [1..1] [Hemodialysis Catheter Present](#E_Hemodialysis_Catheter_Present) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01) (CONF:3357-28464).
7. SHALL contain exactly one [1..1] entry (CONF:3357-28362) such that it
   1. SHALL contain exactly one [1..1] [Ventricular Assist Device (VAD) Present](#E_Ventricular_Assist_Device_VAD_Present) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01) (CONF:3357-28465).
8. SHALL contain exactly one [1..1] entry (CONF:3357-28363) such that it
   1. SHALL contain exactly one [1..1] [Extracorporeal Life Support Present](#E_Extracorporeal_Life_Support_Present) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01) (CONF:3357-28466).
9. SHALL contain exactly one [1..1] entry (CONF:3357-30668) such that it
   1. SHALL contain exactly one [1..1] [Known or Suspected Munchhausen's By Proxy Observation](#E_Known_or_Suspected_Munchhausens_By_Pr) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01) (CONF:3357-30669).
10. SHALL contain exactly one [1..1] entry (CONF:3357-30670) such that it
    1. SHALL contain exactly one [1..1] [Epidermolysis Bullosa Observation](#E_Epidermolysis_Bullosa_Observation) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01) (CONF:3357-30671).
11. SHALL contain exactly one [1..1] entry (CONF:3357-30672) such that it
    1. SHALL contain exactly one [1..1] [Observed or Suspected Patient Injection into Vascular Line Observation](#E_Observed_or_Suspected_Patient_Injecti) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01) (CONF:3357-30673).
12. SHALL contain exactly one [1..1] entry (CONF:3357-30693) such that it
    1. SHALL contain exactly one [1..1] [Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation](#E_Pus_Present_in_Specimen_Site_and_Matc) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01) (CONF:3357-30694).

Figure 33: Infection Risk Factors Section in BSI Report (V3) Example

<section>

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<templateId root="2.16.840.1.113883.10.20.5.5.33" extension="2018-04-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51898-5"

displayName="Risk Factors" />

<title>Risk Factors</title>

<text>...</text>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI] Infection Risk Factors Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.138" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Vital Sign Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.27" />

<!-- [HAI] Infection Risk Factors Measurement Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.137" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<!-- [HAI R3D2] Hemodialysis Catheter Present-->

<templateId root="2.16.840.1.113883.10.20.5.6.245" extension="2017-04-01" />

...

</procedure>

</entry>

<entry typeCode="DRIV">

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<!-- [HAI R3D2] Extracorporeal Life Support Present -->

<templateId root="2.16.840.1.113883.10.20.5.6.246" extension="2017-04-01" />

<code nullFlavor="UNK" />

...

</procedure>

</entry>

<entry typeCode="DRIV">

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<!-- [HAI R3D2] Ventricular Assist Device (VAD) Present -->

<templateId root="2.16.840.1.113883.10.20.5.6.247" extension="2017-04-01" />

...

</procedure>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI R3D3] Known or Suspected Munchhausen's By Proxy Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.250" extension="2018-04-01" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI R3D3] Observed or Suspected Patient Injection into Vascular Line Observation Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.251" extension="2018-04-01" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI R3D3] Epidermolysis Bullosa Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.252" extension="2018-04-01" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI R3D3] Group B Streptococcus in First 6 Days of Life Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.258" extension="2018-04-01" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI R3D3] Pus Present in Specimen Site and Matching Organism in Blood and Specimen -->

<templateId root="2.16.840.1.113883.10.20.5.6.253" extension="2018-04-01" />

...

</observation>

</entry>

</section>

Infection Risk Factors Section in a CLIP Report (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01 (closed)]

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Table 72: Infection Risk Factors Section in a CLIP Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Central-Line Insertion Practice Numerator Report (V2)](#D_HAI_CentralLine_Insertion_Practice_Nu) (required) | [Central-Line Insertion Practice Clinical Statement (V2)](#E_CentralLine_Insertion_Practice_Clinic) (required)  [Antimicrobial Coated Catheter Used Observation](#E_Antimicrobial_Coated_Catheter_Used_Ob) (optional) |

In a CLIP Report, the Infection Risk Factors Section contains a single Central-Line Insertion Practice Clinical Statement, which contains a set of sequenced events. This section also optionally contains an Antimicrobial Coated Catheter Used Observation.

Table 73: Infection Risk Factors Section in a CLIP Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-22277](#C_1129-22277) |  |
| @root | 1..1 | SHALL |  | [1129-28199](#C_1129-28199) | 2.16.840.1.113883.10.20.5.5.34 |
| @extension | 1..1 | SHALL |  | [1129-30288](#C_1129-30288) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-22273](#C_1129-22273) |  |
| @code | 1..1 | SHALL |  | [1129-22274](#C_1129-22274) | 51898-5 |
| @codeSystem | 1..1 | SHALL |  | [1129-28198](#C_1129-28198) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [1129-22275](#C_1129-22275) |  |
| act | 1..1 | SHALL |  | [1129-30430](#C_1129-30430) | [Central-Line Insertion Practice Clinical Statement (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01](#E_CentralLine_Insertion_Practice_Clinic) |
| entry | 0..1 | SHOULD |  | [1129-28213](#C_1129-28213) |  |
| observation | 1..1 | SHALL |  | [1129-28214](#C_1129-28214) | [Antimicrobial Coated Catheter Used Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01](#E_Antimicrobial_Coated_Catheter_Used_Ob) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22277) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.34" (CONF:1129-28199).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30288).
3. SHALL contain exactly one [1..1] code (CONF:1129-22273).
   1. This code SHALL contain exactly one [1..1] @code="51898-5" Risk Factors Section (CONF:1129-22274).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-28198).
4. SHALL contain exactly one [1..1] entry (CONF:1129-22275) such that it
   1. SHALL contain exactly one [1..1] [Central-Line Insertion Practice Clinical Statement (V2)](#E_CentralLine_Insertion_Practice_Clinic) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01) (CONF:1129-30430).
5. SHOULD contain zero or one [0..1] entry (CONF:1129-28213) such that it
   1. SHALL contain exactly one [1..1] [Antimicrobial Coated Catheter Used Observation](#E_Antimicrobial_Coated_Catheter_Used_Ob) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01) (CONF:1129-28214).

Figure 34: Infection Risk Factors Section in a CLIP Report Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Infection Risk Factors Section in a CLIP Report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.34"

extension="2014-12-01"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51898-5"

displayName="Risk Factors Section"/>

<title> Risk Factors </title>

...

<entry typeCode="DRIV">

<act moodCode="EVN" classCode="ACT" negationInd="false">

<!-- C-CDA Procedure Activity Act templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.12" />

<!-- Central-Line Insertion Practice Clinical Statement (V2) template-->

<templateId root="2.16.840.1.113883.10.20.5.6.116"

extension="2014-12-01" />

...

</act>

</entry>

<entry typeCode="DRIV">

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- Antimicrobial Coated Catheter Used Observation template-->

<templateId root="2.16.840.1.113883.10.20.5.6.217"

extension="2014-12-01" />

...

</observation>

</entry>

</section>

Infection Risk Factors Section in a Procedure Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.35 (closed)]

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Table 74: Infection Risk Factors Section in a Procedure Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Procedure Denominator Report (V2)](#D_HAI_Procedure_Denominator_Report_V2) (required) | [ASA Class Observation](#E_ASA_Class_Observation) (optional)  [Weight Observation](#E_Weight_Observation) (required)  [Height Observation](#E_Height_Observation) (required)  [Trauma Observation](#E_Trauma_Observation) (required)  [Diabetes Mellitus Observation](#E_Diabetes_Mellitus_Observation) (required)  [Procedure Risk Factors Clinical Statement in a Procedure Report](#E_Procedure_Risk_Factors_Clinical_State) (required)  [Duration of Labor Observation](#E_Duration_of_Labor_Observation) (optional) |

In an HAI Procedure Denominator Report, the Infection Risk Factors Section contains procedure risk factors, trauma, diabetes mellitus, height, and weight observations. Optionally contained in this section are ASA class (if the patient is an inpatient) and duration of labor (if the procedure was a Cesaerean) observations.

Table 75: Infection Risk Factors Section in a Procedure Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.35) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22279](#C_86-22279) |  |
| @root | 1..1 | SHALL |  | [86-22280](#C_86-22280) | 2.16.840.1.113883.10.20.5.5.35 |
| code | 1..1 | SHALL |  | [86-22281](#C_86-22281) |  |
| @code | 1..1 | SHALL |  | [86-22282](#C_86-22282) | 51898-5 |
| @codeSystem | 1..1 | SHALL |  | [86-28361](#C_86-28361) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [86-22283](#C_86-22283) |  |
| procedure | 1..1 | SHALL |  | [86-22284](#C_86-22284) | [Procedure Risk Factors Clinical Statement in a Procedure Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.156](#E_Procedure_Risk_Factors_Clinical_State) |
| entry | 1..1 | SHALL |  | [86-22285](#C_86-22285) |  |
| observation | 1..1 | SHALL |  | [86-22286](#C_86-22286) | [Trauma Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.170](#E_Trauma_Observation) |
| entry | 1..1 | SHALL |  | [86-22287](#C_86-22287) |  |
| observation | 1..1 | SHALL |  | [86-22288](#C_86-22288) | [Diabetes Mellitus Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.123](#E_Diabetes_Mellitus_Observation) |
| entry | 1..1 | SHALL |  | [86-22289](#C_86-22289) |  |
| observation | 1..1 | SHALL |  | [86-22290](#C_86-22290) | [Height Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.131](#E_Height_Observation) |
| entry | 1..1 | SHALL |  | [86-22291](#C_86-22291) |  |
| observation | 1..1 | SHALL |  | [86-22292](#C_86-22292) | [Weight Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.173](#E_Weight_Observation) |
| entry | 0..1 | MAY |  | [86-23211](#C_86-23211) |  |
| observation | 1..1 | SHALL |  | [86-23212](#C_86-23212) | [ASA Class Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.113](#E_ASA_Class_Observation) |
| entry | 0..1 | MAY |  | [86-23214](#C_86-23214) |  |
| observation | 1..1 | SHALL |  | [86-23215](#C_86-23215) | [Duration of Labor Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.127](#E_Duration_of_Labor_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22279) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.35" (CONF:86-22280).
3. SHALL contain exactly one [1..1] code (CONF:86-22281).
   1. This code SHALL contain exactly one [1..1] @code="51898-5" Risk Factors Section (CONF:86-22282).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28361).
4. SHALL contain exactly one [1..1] entry (CONF:86-22283) such that it
   1. SHALL contain exactly one [1..1] [Procedure Risk Factors Clinical Statement in a Procedure Report](#E_Procedure_Risk_Factors_Clinical_State) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.156) (CONF:86-22284).
5. SHALL contain exactly one [1..1] entry (CONF:86-22285) such that it
   1. SHALL contain exactly one [1..1] [Trauma Observation](#E_Trauma_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.170) (CONF:86-22286).
6. SHALL contain exactly one [1..1] entry (CONF:86-22287) such that it
   1. SHALL contain exactly one [1..1] [Diabetes Mellitus Observation](#E_Diabetes_Mellitus_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.123) (CONF:86-22288).
7. SHALL contain exactly one [1..1] entry (CONF:86-22289) such that it
   1. SHALL contain exactly one [1..1] [Height Observation](#E_Height_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.131) (CONF:86-22290).
8. SHALL contain exactly one [1..1] entry (CONF:86-22291) such that it
   1. SHALL contain exactly one [1..1] [Weight Observation](#E_Weight_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.173) (CONF:86-22292).
9. MAY contain zero or one [0..1] entry (CONF:86-23211) such that it
   1. SHALL contain exactly one [1..1] [ASA Class Observation](#E_ASA_Class_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.113) (CONF:86-23212).
   2. If the patient is an inpatient (componentOf/encompassingEncounter/code/@code="IMP"), an entry element SHALL be present containing an ASA Class Observation (CONF:86-23213).
10. MAY contain zero or one [0..1] entry (CONF:86-23214) such that it
    1. SHALL contain exactly one [1..1] [Duration of Labor Observation](#E_Duration_of_Labor_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.127) (CONF:86-23215).
    2. If the procedure, recorded in the Details Section of the report, was a Cesarean (code/@code is 2115-4), an entry element SHALL be present containing a Duration of Labor Observation (CONF:86-23216).

Figure 35: Infection Risk Factors Section in Procedure Report Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Infection Risk Factors Section in a Procedure Report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.35"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51898-5"

displayName="Risk Factors Section"/>

<title>Risk Factors</title>

...

<entry typeCode="DRIV">

<procedure classCode="PROC" moodCode="EVN">

<!-- Procedure Risk Factors Clinical Statement in a Procedure Report template -->

<templateId root="2.16.840.1.113883.10.20.5.6.156"/>

...

</procedure >

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Trauma Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.170"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Diabetes Mellitus Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.123"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Vital Sign Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.27"/>

<!-- Height Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.131"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Vital Sign Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.27"/>

<!-- Weight Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.173"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- ASA Class Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.113"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN">

<!-- Duration of Labor Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.127"/>

...

</observation>

</entry>

</section>

Infection Risk Factors Section in a UTI Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.36 (closed)]

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Table 76: Infection Risk Factors Section in a UTI Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Urinary Tract Infection Numerator Report (UTI)](#D_HAI_Urinary_Tract_Infection_Numerator) (required) | [Urinary Catheter Observation](#E_Urinary_Catheter_Observation) (required) |

In a UTI Report, the Infection Risk Factors Section contains a single Urinary Catheter Observation.

Table 77: Infection Risk Factors Section in a UTI Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.36) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22300](#C_86-22300) |  |
| @root | 1..1 | SHALL |  | [86-22301](#C_86-22301) | 2.16.840.1.113883.10.20.5.5.36 |
| code | 1..1 | SHALL |  | [86-22296](#C_86-22296) |  |
| @code | 1..1 | SHALL |  | [86-22297](#C_86-22297) | 51898-5 |
| @codeSystem | 1..1 | SHALL |  | [86-28362](#C_86-28362) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [86-22298](#C_86-22298) |  |
| observation | 1..1 | SHALL |  | [86-22299](#C_86-22299) | [Urinary Catheter Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.171](#E_Urinary_Catheter_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22300) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.36" (CONF:86-22301).
3. SHALL contain exactly one [1..1] code (CONF:86-22296).
   1. This code SHALL contain exactly one [1..1] @code="51898-5" Risk Factors Section (CONF:86-22297).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28362).
4. SHALL contain exactly one [1..1] entry (CONF:86-22298).
   1. This entry SHALL contain exactly one [1..1] [Urinary Catheter Observation](#E_Urinary_Catheter_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.171) (CONF:86-22299).

Figure 36: Infection Risk Factors Section in a UTI Report Example

<section>

<!-- HAI Generic section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Infection risk factors section in a UTI report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.36"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51898-5"

displayName="Risk Factors Section"/>

<title>Risk Factors</title>

...

<entry typeCode="DRIV">

observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- C-CDA Problem Observation templateId. -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Urinary Catheter Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.171"/>

...

</observation>

</entry>

</section>

NHSN Comment Section

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 2 - US Realm

Table 78: NHSN Comment Section Contexts

| Contained By: | Contains: |
| --- | --- |
| [Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report](#D_Healthcare_Personnel_Influenza_Vaccin) (optional)  [Ventilator Associated Event (VAE) Report](#D_Ventilator_Associated_Event_VAE_Repor) (optional)  [HAI Bloodstream Infection Report (BSI) (V3)](#D_HAI_BSI_Rep_V3) (optional)  [Late Onset Sepsis/Meningitis Event (LOS) Report](#D_Late_Onset_SepsisMeningitis_Event_LOS) (optional) | [NHSN Comment](#E_NHSN_Comment) (required) |

The NHSN Comment Section contains the NHSN Comment template. This section is not specific to any one report and contains comments that are relevant to the whole report (it is not specific to any section of a report).

Table 79: NHSN Comment Section Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3311-172](#C_3311-172) |  |
| @root | 1..1 | SHALL |  | [3311-180](#C_3311-180) | 2.16.840.1.113883.10.20.5.5.61 |
| @extension | 1..1 | SHALL |  | [3311-181](#C_3311-181) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-173](#C_3311-173) |  |
| @code | 1..1 | SHALL |  | [3311-182](#C_3311-182) | 86468-6 |
| @codeSystem | 1..1 | SHALL |  | [3311-183](#C_3311-183) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [3311-179](#C_3311-179) |  |
| act | 1..1 | SHALL |  | [3311-184](#C_3311-184) | [NHSN Comment (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01](#E_NHSN_Comment) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-172) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.61" (CONF:3311-180).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-181).
3. SHALL contain exactly one [1..1] code (CONF:3311-173).
   1. This code SHALL contain exactly one [1..1] @code="86468-6" Report Comment Section (CONF:3311-182).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-183).
4. SHALL contain exactly one [1..1] entry (CONF:3311-179) such that it
   1. SHALL contain exactly one [1..1] [NHSN Comment](#E_NHSN_Comment) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01) (CONF:3311-184).

Figure 37: NHSN Comment Section Example

<section>

<!-- HAI Section Generic Constraints -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D2] NHSN Comment Section -->

<templateId root="2.16.840.1.113883.10.20.5.5.61" />

<code code="86468-6"

displayName="Report comment section"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC" />

<title>Comment</title>

<text>...</text>

<entry typeCode="DRIV">

<act classCode="ACT" moodCode="EVN">

<!-- [HAI R3D2] Comment -->

<templateId root="2.16.840.1.113883.10.20.5.6.243" extension="2017-04-01" />

...

</act>

</entry>

</section>

Procedure Details Section in a CLIP Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.42 (closed)]

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Table 80: Procedure Details Section in a CLIP Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Central-Line Insertion Practice Numerator Report (V2)](#D_HAI_CentralLine_Insertion_Practice_Nu) (required) | [Procedure Details Clinical Statement in a CLIP Report](#E_Procedure_Details_Clinical_Statement_) (required) |

In a CLIP Report, this section records details of the procedure, including the reason for it.

Table 81: Procedure Details Section in a CLIP Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.42) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22352](#C_86-22352) |  |
| @root | 1..1 | SHALL |  | [86-22353](#C_86-22353) | 2.16.840.1.113883.10.20.5.5.42 |
| code | 1..1 | SHALL |  | [86-22354](#C_86-22354) |  |
| @code | 1..1 | SHALL |  | [86-22355](#C_86-22355) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [86-28363](#C_86-28363) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [86-22356](#C_86-22356) |  |
| procedure | 1..1 | SHALL |  | [86-22357](#C_86-22357) | [Procedure Details Clinical Statement in a CLIP Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.155](#E_Procedure_Details_Clinical_Statement_) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22352) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.42" (CONF:86-22353).
3. SHALL contain exactly one [1..1] code (CONF:86-22354).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:86-22355).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28363).
4. SHALL contain exactly one [1..1] entry (CONF:86-22356).
   1. This entry SHALL contain exactly one [1..1] [Procedure Details Clinical Statement in a CLIP Report](#E_Procedure_Details_Clinical_Statement_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.155) (CONF:86-22357).

Figure 38: Procedure Details Section in a CLIP Report Example

<section>

<!-- HAI Generic section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Procedure details section in a CLIP report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.42"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Details Section"/>

<title>Details</title>

...

<entry typeCode="DRIV">

<!-- Procedure Details Clinical Statement in a CLIP Report -->

<procedure moodCode="EVN" classCode="PROC">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14"/>

<-- HAI Procedure Details Clinical Statement in a CLIP Report templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.155"/>

...

</procedure >

</entry>

</section>

Procedure Details Section in a Procedure Report (V2)

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.43.2 (closed)]

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Table 82: Procedure Details Section in a Procedure Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Procedure Denominator Report (V2)](#D_HAI_Procedure_Denominator_Report_V2) (required) | [Procedure Details Clinical Statement in a Procedure Report (V2)](#Procedure_Details_Clinical_Statement_in) (required) |

This section records details of the procedure.

Table 83: Procedure Details Section in a Procedure Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.43.2) | | | | | |
| templateId | 1..1 | SHALL |  | [1101-22358](#C_1101-22358) |  |
| @root | 1..1 | SHALL |  | [1101-30248](#C_1101-30248) | 2.16.840.1.113883.10.20.5.5.43.2 |
| code | 1..1 | SHALL |  | [1101-22360](#C_1101-22360) |  |
| @code | 1..1 | SHALL |  | [1101-22361](#C_1101-22361) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [1101-30314](#C_1101-30314) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [1101-22362](#C_1101-22362) |  |
| procedure | 1..1 | SHALL |  | [1101-30249](#C_1101-30249) | [Procedure Details Clinical Statement in a Procedure Report (V2) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.153.2](#Procedure_Details_Clinical_Statement_in) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1101-22358) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.43.2" (CONF:1101-30248).
3. SHALL contain exactly one [1..1] code (CONF:1101-22360).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:1101-22361).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1101-30314).
4. SHALL contain exactly one [1..1] entry (CONF:1101-22362).
   1. This entry SHALL contain exactly one [1..1] [Procedure Details Clinical Statement in a Procedure Report (V2)](#Procedure_Details_Clinical_Statement_in) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.153.2) (CONF:1101-30249).

Figure 39: Procedure Details Section in a Procedure Report Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- Procedure Details Section in a Procedure Report (V2) template -->

<templateId root="2.16.840.1.113883.10.20.5.5.43.2"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Details Section"/>

<title>Details</title>

...

<entry typeCode="DRIV">

<!-- Procedure Details Clinical Statement in a Procedure Report (V2) -->

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14"/>

<!-- Procedure Details Clinical Statement in a Procedure Report (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.153.2"/>

...

</procedure>

</entry>

</section>

Report No Events Section

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01 (closed)]

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Table 84: Report No Events Section Contexts

| Contained By: | Contains: |
| --- | --- |
| [Neonatal Intensive Care Unit (NICU) Summary Report (V3)](#D_Neonatal_Intensive_Care_Unit_NICU_V3) (optional)  [Intensive Care Unit (ICU) Summary Report (V3)](#D_Intensive_Care_Unit_ICU_Summary_V3) (optional)  [Specialty Care Area (SCA) Summary Report (V3)](#D_Specialty_Care_Area_SCA_Summary_V3) (optional)  [Prevention Process and Outcome Measures (POM) Summary Report (V3)](#D_Prevention_Process_and_Outcome_V3) (optional)  [Vascular Access Type Report (VAT) Summary Report (V3)](#D_Vascular_Access_Type_Report_VAT_V3) (optional) | [Report No Events](#E_Report_No_Events) (required) |

The Report No Events Section contains the Report No Events template. This section is available for use in any report. If this section is present in a report it must contain at least one entry.

Table 85: Report No Events Section Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-30604](#C_3357-30604) |  |
| @root | 1..1 | SHALL |  | [3357-30608](#C_3357-30608) | 2.16.840.1.113883.10.20.5.5.62 |
| @extension | 1..1 | SHALL |  | [3357-30609](#C_3357-30609) | 2018-04-01 |
| code | 1..1 | SHALL |  | [3357-30605](#C_3357-30605) |  |
| @code | 1..1 | SHALL |  | [3357-30610](#C_3357-30610) | 90252-8 |
| @codeSystem | 1..1 | SHALL |  | [3357-30611](#C_3357-30611) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..\* | SHALL |  | [3357-30606](#C_3357-30606) |  |
| act | 1..1 | SHALL |  | [3357-30910](#C_3357-30910) | [Report No Events (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01](#E_Report_No_Events) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-30604) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.62" (CONF:3357-30608).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30609).
3. SHALL contain exactly one [1..1] code (CONF:3357-30605).
   1. This code SHALL contain exactly one [1..1] @code="90252-8" Report No Events section (CONF:3357-30610).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-30611).
4. SHALL contain at least one [1..\*] entry (CONF:3357-30606) such that it
   1. SHALL contain exactly one [1..1] [Report No Events](#E_Report_No_Events) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01) (CONF:3357-30910).

Figure 40: Report No Events Section Example

<section>

<!-- HAI Section Generic Constraints -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D3] Report No Events Section -->

<templateId root="2.16.840.1.113883.10.20.5.5.62" extension="2018-04-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="90252-8"

displayName="Report No Events Section" />

<title>Report No Events</title>

<text>

<table>

<tbody>

<tr>

<td>Report no infection surveillance events - Methicillin-resistant Staphylococcus aureus</td>

</tr>

</tbody>

</table>

</text>

<entry typeCode="DRIV">

<act classCode="ACT" moodCode="EVN">

<!-- [HAI R3D3] Report No Events-->

<templateId root="2.16.840.1.113883.10.20.5.6.249" extension="2018" />

...

</act>

</entry>

...

</section>

Risk Factors Section (LOS/Men)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2018-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 86: Risk Factors Section (LOS/Men) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Late Onset Sepsis/Meningitis Event (LOS) Report](#D_Late_Onset_SepsisMeningitis_Event_LOS) (required) | [Infection Risk Factors Measurement Observation](#E_Infection_Risk_Factors_Measurement_Ob) (required)  [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation) (optional)  [Gestational Age at Birth Observation](#E_Gestational_Age_at_Birth_Observation) (required) |

This template represents the risk factors section found in a Late Onset Sepsis / Meningitis Event Form.

It contains the following elements:

* Central line present prior to event, including umbilical catheter
* Birth weight (grams)
* Gestational age (days)

Table 87: Risk Factors Section (LOS/Men) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-30753](#C_3357-30753) |  |
| @root | 1..1 | SHALL |  | [3357-30756](#C_3357-30756) | 2.16.840.1.113883.10.20.5.5.65 |
| @extension | 1..1 | SHALL |  | [3357-30757](#C_3357-30757) | 2018-04-01 |
| code | 1..1 | SHALL |  | [3357-30758](#C_3357-30758) |  |
| @code | 1..1 | SHALL |  | [3357-30759](#C_3357-30759) | 51898-5 |
| @codeSystem | 1..1 | SHALL |  | [3357-30760](#C_3357-30760) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 0..1 | MAY |  | [3357-30761](#C_3357-30761) |  |
| observation | 1..1 | SHALL |  | [3357-30762](#C_3357-30762) | [Infection Risk Factors Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138](#E_Infection_Risk_Factors_Observation) |
| entry | 1..1 | SHALL |  | [3357-30754](#C_3357-30754) |  |
| observation | 1..1 | SHALL |  | [3357-30755](#C_3357-30755) | [Infection Risk Factors Measurement Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137](#E_Infection_Risk_Factors_Measurement_Ob) |
| entry | 1..1 | SHALL |  | [3357-30780](#C_3357-30780) |  |
| observation | 1..1 | SHALL |  | [3357-30781](#C_3357-30781) | [Gestational Age at Birth Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2018-04-01](#E_Gestational_Age_at_Birth_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-30753) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.65" (CONF:3357-30756).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30757).
3. SHALL contain exactly one [1..1] code (CONF:3357-30758).
   1. This code SHALL contain exactly one [1..1] @code="51898-5" Risk Factors Section (CONF:3357-30759).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-30760).
4. MAY contain zero or one [0..1] entry (CONF:3357-30761) such that it
   1. SHALL contain exactly one [1..1] [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138) (CONF:3357-30762).
5. SHALL contain exactly one [1..1] entry (CONF:3357-30754) such that it
   1. SHALL contain exactly one [1..1] [Infection Risk Factors Measurement Observation](#E_Infection_Risk_Factors_Measurement_Ob) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137) (CONF:3357-30755).
6. SHALL contain exactly one [1..1] entry (CONF:3357-30780) such that it
   1. SHALL contain exactly one [1..1] [Gestational Age at Birth Observation](#E_Gestational_Age_at_Birth_Observation) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2018-04-01) (CONF:3357-30781).

Figure 41: Risk Factors Section (LOS/Men) Example

<section>

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D3] Risk Factors Section (LOS/Men) -->

<templateId root="2.16.840.1.113883.10.20.5.5.65" extension="2018-04-01" />

<code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC" code="51898-5" displayName="Risk Factors" />

<title>Risk Factors</title>

<text>

...

</text>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI] Infection Risk Factors Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.138" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Vital Sign Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.27" />

<!-- [HAI] Infection Risk Factors Measurement Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.137" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [HAI R3D3] Gestational Age Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.255" extension="2018-04-01"/>

...

</observation>

</entry>

</section>

Risk Factors Section in a VAE Report

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01 (closed)]

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Table 88: Risk Factors Section in a VAE Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [Ventilator Associated Event (VAE) Report](#D_Ventilator_Associated_Event_VAE_Repor) (required) | [Mechanical Ventilation Initiation Act](#E_Mechanical_Ventilation_Initiation_Act) (required)  [APRV or Related at Time of VAE Observation](#E_APRV_or_Related_at_Time_of_VAE_Observ) (optional) |

In a VAE Report, the Risk Factors Section contains a Mechanical Ventilation Initiation Act and an APRV or Related at Time of VAE Observation.

Table 89: Risk Factors Section in a VAE Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3311-140](#C_3311-140) |  |
| @root | 1..1 | SHALL |  | [3311-144](#C_3311-144) | 2.16.840.1.113883.10.20.5.5.60 |
| @extension | 1..1 | SHALL |  | [3311-145](#C_3311-145) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-139](#C_3311-139) |  |
| @code | 1..1 | SHALL |  | [3311-142](#C_3311-142) | 51898-5 |
| @codeSystem | 1..1 | SHALL |  | [3311-143](#C_3311-143) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [3311-138](#C_3311-138) |  |
| act | 1..1 | SHALL |  | [3311-28394](#C_3311-28394) | [Mechanical Ventilation Initiation Act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01](#E_Mechanical_Ventilation_Initiation_Act) |
| entry | 0..1 | MAY |  | [3311-28395](#C_3311-28395) |  |
| observation | 1..1 | SHALL |  | [3311-28410](#C_3311-28410) | [APRV or Related at Time of VAE Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01](#E_APRV_or_Related_at_Time_of_VAE_Observ) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-140) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.60" (CONF:3311-144).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-145).
3. SHALL contain exactly one [1..1] code (CONF:3311-139).
   1. This code SHALL contain exactly one [1..1] @code="51898-5" Risk Factors Section (CONF:3311-142).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-143).
4. SHALL contain exactly one [1..1] entry (CONF:3311-138) such that it
   1. SHALL contain exactly one [1..1] [Mechanical Ventilation Initiation Act](#E_Mechanical_Ventilation_Initiation_Act) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01) (CONF:3311-28394).
5. MAY contain zero or one [0..1] entry (CONF:3311-28395) such that it
   1. SHALL contain exactly one [1..1] [APRV or Related at Time of VAE Observation](#E_APRV_or_Related_at_Time_of_VAE_Observ) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01) (CONF:3311-28410).

Figure 42: Risk Factors Section in a VAE Report Example

<section>

<!-- HAI Section Generic Constraints -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D2] Risk Factors Section in a VAE Report -->

<templateId root="2.16.840.1.113883.10.20.5.5.60" extension="2017-04-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51898-5"

displayName="Risk Factors" />

<title>Risk Factors</title>

<text>...</text>

<entry typeCode="DRIV">

<!-- Contains the mechanical ventilation initiation time and location of where the initiation took place -->

<!-- Mechanical Ventilation Initiation Act -->

<act classCode="ACT" moodCode="EVN">

<!-- [C-CDA R1.1] Procedure Activity Act -->

<templateId root="2.16.840.1.113883.10.20.22.4.12" />

<!-- [HAI] Mechanical Ventilation Initiation Act -->

<templateId root="2.16.840.1.113883.10.20.5.6.244" extension="2017-04-01" />

...

</act>

</entry>

<!-- APRV or Related at Time of VAE Observation is optional -->

<entry typeCode="DRIV">

<!-- Setting negationInd="false" indicates that the Patient on Airway Pressure Release Ventilation (APRV)

or a related mode of mechanical ventilation at the time of VAE -->

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- [HAI R3D2] APRV or Related at Time of VAE Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.248" extension="2017-04-01" />

...

</observation>

</entry>

</section>

Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2015-10-01 (closed)]

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Table 90: Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Evidence of Infection (Dialysis) Report (V5)](#D_HAI_Evidence_of_Infection_Dialysis_Re) (required) | [Vascular Access Type Observation](#E_Vascular_Access_Type_Observation) (required)  [Dialysis Patient Observation](#E_Dialysis_Patient_Observation) (required)  [Dialyzer Reused Observation](#Dialyzer_Reused_Observation) (required) |

In an EOID Report, the Risk Factors Section contains at least one Vascular Access Type Observation for each value in the NHSNVascularAccessTypeCode Value Set. Additional observations record whether a vascular access type other than those listed is present and whether or not the patient's dialyzer is reused.

Table 91: Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2015-10-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1202-22302](#C_1202-22302) |  |
| @root | 1..1 | SHALL |  | [1202-22303](#C_1202-22303) | 2.16.840.1.113883.10.20.5.5.37 |
| code | 1..1 | SHALL |  | [1202-22304](#C_1202-22304) |  |
| @code | 1..1 | SHALL |  | [1202-22305](#C_1202-22305) | 51898-5 |
| @codeSystem | 1..1 | SHALL |  | [1202-28364](#C_1202-28364) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [1202-22306](#C_1202-22306) |  |
| observation | 1..1 | SHALL |  | [1202-22307](#C_1202-22307) | [Dialysis Patient Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.125](#E_Dialysis_Patient_Observation) |
| entry | 1..1 | SHALL |  | [1202-28365](#C_1202-28365) |  |
| observation | 1..1 | SHALL |  | [1202-28366](#C_1202-28366) | [Dialyzer Reused Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01](#Dialyzer_Reused_Observation) |
| entry | 6..6 | SHALL |  | [1202-22308](#C_1202-22308) |  |
| observation | 1..1 | SHALL |  | [1202-22309](#C_1202-22309) | [Vascular Access Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.172](#E_Vascular_Access_Type_Observation) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1202-22302) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.37" (CONF:1202-22303).
3. SHALL contain exactly one [1..1] code (CONF:1202-22304).
   1. This code SHALL contain exactly one [1..1] @code="51898-5" Risk Factors Section (CONF:1202-22305).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1202-28364).
4. SHALL contain exactly one [1..1] entry (CONF:1202-22306) such that it
   1. SHALL contain exactly one [1..1] [Dialysis Patient Observation](#E_Dialysis_Patient_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.125) (CONF:1202-22307).
5. SHALL contain exactly one [1..1] entry (CONF:1202-28365) such that it
   1. SHALL contain exactly one [1..1] [Dialyzer Reused Observation](#Dialyzer_Reused_Observation) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01) (CONF:1202-28366).
6. SHALL contain [6..6] entry (CONF:1202-22308) such that it
   1. SHALL contain exactly one [1..1] [Vascular Access Type Observation](#E_Vascular_Access_Type_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.172) (CONF:1202-22309).

Figure 43: Risk Factors Section in an Evidence of Infection (Dialysis) Report Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Risk Factors Section in an EOID Report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.37" extension="2015-10-01"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51898-5"

displayName=" Risk Factors Section"/>

<title>Risk Factors</title>

...

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Dialysis Patient Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.125"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation Type -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Vascular Access Type Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.172"/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation Type -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Vascular Access Type Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.172"/>

...

</observation>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- Dialyzer Reused Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.231"

extension="2015-10-01"/>

...

</observation>

</entry>

...

</section>

Summary Data Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.47 (closed)]

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Table 92: Summary Data Section Contexts

| Contained By: | Contains: |
| --- | --- |
| [Intensive Care Unit (ICU) Summary Report (V3)](#D_Intensive_Care_Unit_ICU_Summary_V3) (required)  [Specialty Care Area (SCA) Summary Report (V3)](#D_Specialty_Care_Area_SCA_Summary_V3) (required) | [Summary Encounter](#E_Summary_Encounter) (required) |

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The Summary Encounter requires a participant representing the facility or in-facility location to which the data pertain. Most summary reports contain data for a single location. To report data for more than one location, use a separate Summary Encounter element for each. For example, a POM report typically reports data for an in-facility location, but under some circumstances the NHSN protocol also requires facility-wide data. Use one Summary Encounter to report the data for the in-facility location, and a separate Summary Encounter to report the facility-wide data.

If the data in a population summary report are categorized--as, for example, data on a NICU population are categorized by patient birth weight--each category is represented by a separate Summary Encounter element. If there is no categorization, the report concerns a group that has only one category and it therefore will contain only one Summary Data Encounter element. This is the usual case.

Table 93: Summary Data Section Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22386](#C_86-22386) |  |
| @root | 1..1 | SHALL |  | [86-22387](#C_86-22387) | 2.16.840.1.113883.10.20.5.5.47 |
| code | 1..1 | SHALL |  | [86-22388](#C_86-22388) |  |
| @code | 1..1 | SHALL |  | [86-22389](#C_86-22389) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [86-28365](#C_86-28365) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..\* | SHALL |  | [86-22390](#C_86-22390) |  |
| encounter | 1..1 | SHALL |  | [86-22391](#C_86-22391) | [Summary Encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.184](#E_Summary_Encounter) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22386) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.47" (CONF:86-22387).
3. SHALL contain exactly one [1..1] code (CONF:86-22388).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:86-22389).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28365).
4. SHALL contain at least one [1..\*] entry (CONF:86-22390).
   1. Such entries SHALL contain exactly one [1..1] [Summary Encounter](#E_Summary_Encounter) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.184) (CONF:86-22391).

Figure 44: Summary Data Section Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Summary Data Section template -->

<templateId root="2.16.840.1.113883.10.20.5.5.47"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51900-9"

displayName="Summary Data Section"/>

...

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- HAI Summary Encounter template -->

<templateId root="2.16.840.1.113883.10.20.5.5.184"/>

...

</encounter>

</entry>

<entry typeCode="DRIV">

<encounter>

...

</encounter>

</entry>

</section>

Summary Data Section (ARO) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2015-04-01 (closed)]

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Table 94: Summary Data Section (ARO) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Antimicrobial Resistance Option (ARO) Summary Report (V2)](#D_Antimicrobial_Resistance_Option_ARO_S) (required) | [Summary Encounter (ARO) (V2)](#E_Summary_Encounter_ARO_V2) (required) |

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.  
The Summary Data Section (ARO) extends its generic equivalent, but is specific to the Antimicrobial Resistance Option (ARO) Summary Report.

Table 95: Summary Data Section (ARO) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2015-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1181-23070](#C_1181-23070) |  |
| @root | 1..1 | SHALL |  | [1181-23071](#C_1181-23071) | 2.16.840.1.113883.10.20.5.5.52 |
| @extension | 1..1 | SHALL |  | [1181-30566](#C_1181-30566) | 2015-04-01 |
| code | 1..1 | SHALL |  | [1181-23072](#C_1181-23072) |  |
| @code | 1..1 | SHALL |  | [1181-23073](#C_1181-23073) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [1181-28366](#C_1181-28366) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..\* | SHALL |  | [1181-23074](#C_1181-23074) |  |
| encounter | 1..1 | SHALL |  | [1181-23075](#C_1181-23075) | [Summary Encounter (ARO) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2015-04-01](#E_Summary_Encounter_ARO_V2) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1181-23070) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.52" (CONF:1181-23071).
   2. SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30566).
3. SHALL contain exactly one [1..1] code (CONF:1181-23072).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:1181-23073).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1181-28366).
4. SHALL contain at least one [1..\*] entry (CONF:1181-23074).
   1. Such entries SHALL contain exactly one [1..1] [Summary Encounter (ARO) (V2)](#E_Summary_Encounter_ARO_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2015-04-01) (CONF:1181-23075).

Figure 45: Summary Data Section (ARO) (V2) Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Summary Data Section (ARO) template (V2) -->

<templateId root="2.16.840.1.113883.10.20.5.5.52"

extension="2015-04-01"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51900-9"

displayName="Summary Data Section"/>

...

<entry>

<encounter classCode="ENC" moodCode="EVN">

<!-- HAI Summary Encounter (ARO) (V2) template -->

<templateId root="2.16.840.1.113883.10.20.5.6.199"

extension="2015-04-01"/>

...

</encounter>

</entry>

</section>

Summary Data Section (AUP) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01 (closed)]

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Table 96: Summary Data Section (AUP) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Antimicrobial Use (AUP) Summary Report (V2)](#D_Antimicrobial_Use_AUP_Summary_Report_) (required) | [Summary Encounter Patient Presence (AUP) (V2)](#E_Summary_Encounter_Patient_Presence_AU) (required)  [Summary Encounter (AUP) (V2)](#E_Summary_Encounter_AUP_V2) (required) |

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The Summary Data Section (AUP) extends its generic equivalent, but is specific to the Antimicrobial Use (AUP) Summary Report.

Table 97: Summary Data Section (AUP) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1181-23013](#C_1181-23013) |  |
| @root | 1..1 | SHALL |  | [1181-23014](#C_1181-23014) | 2.16.840.1.113883.10.20.5.5.51 |
| @extension | 1..1 | SHALL |  | [1181-30565](#C_1181-30565) | 2015-04-01 |
| code | 1..1 | SHALL |  | [1181-23015](#C_1181-23015) |  |
| @code | 1..1 | SHALL |  | [1181-23016](#C_1181-23016) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [1181-28367](#C_1181-28367) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [1181-23017](#C_1181-23017) |  |
| encounter | 1..1 | SHALL |  | [1181-23018](#C_1181-23018) | [Summary Encounter Patient Presence (AUP) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01](#E_Summary_Encounter_Patient_Presence_AU) |
| entry | 1..\* | SHALL |  | [1181-23046](#C_1181-23046) |  |
| encounter | 1..1 | SHALL |  | [1181-23047](#C_1181-23047) | [Summary Encounter (AUP) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01](#E_Summary_Encounter_AUP_V2) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1181-23013) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.51" (CONF:1181-23014).
   2. SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30565).
3. SHALL contain exactly one [1..1] code (CONF:1181-23015).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:1181-23016).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1181-28367).
4. SHALL contain exactly one [1..1] entry (CONF:1181-23017) such that it
   1. SHALL contain exactly one [1..1] [Summary Encounter Patient Presence (AUP) (V2)](#E_Summary_Encounter_Patient_Presence_AU) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01) (CONF:1181-23018).
5. SHALL contain at least one [1..\*] entry (CONF:1181-23046) such that it
   1. SHALL contain exactly one [1..1] [Summary Encounter (AUP) (V2)](#E_Summary_Encounter_AUP_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01) (CONF:1181-23047).

Figure 46: Summary Data Section (AUP) (V2)

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Summary Data Section (AUP) (V2) template -->

<templateId root="2.16.840.1.113883.10.20.5.5.51"

extension="2015-01-04"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51900-9"

displayName="Summary Data Section"/>

...

<entry>

<encounter classCode="ENC" moodCode="EVN">

<!-- HAI Summary Encounter Patient Presence (AUP) (V2) template -->

<templateId root="2.16.840.1.113883.10.20.5.6.197"

extension="2015-01-04"/>

...

</encounter>

</entry>

<entry>

<encounter classCode="ENC" moodCode="EVN">

<!-- HAI Summary Encounter (AUP) (V2) template -->

<templateId root="2.16.840.1.113883.10.20.5.6.198"

extension="2015-01-04"/>

...

</encounter>

</entry>

<entry>

<encounter>

...

</encounter>

</entry>

</section>

Summary Data Section (HP-FLU)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01 (closed)]

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Table 98: Summary Data Section (HP-FLU) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report](#D_Healthcare_Personnel_Influenza_Vaccin) (required) | [Summary Encounter (HP-FLU)](#E_Summary_Encounter_HPFLU) (required)  [Vaccination Type Observation](#E_Vaccination_Type_Observation) (required) |

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever it is used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The HP-FLU report extends the simple pattern for Summary Encounter. This report is stratified by healthcare personnel (HCP) type. Each type is recorded in a separate Summary Encounter (HP-FLU) within the Summary Data Section (HP-FLU). The HCP type is recorded as a participant in the encounter, in addition to the location participant that is required in all Summary Encounters.

Table 99: Summary Data Section (HP-FLU) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3311-18](#C_3311-18) |  |
| @root | 1..1 | SHALL |  | [3311-21](#C_3311-21) | 2.16.840.1.113883.10.20.5.5.58 |
| @extension | 1..1 | SHALL |  | [3311-24](#C_3311-24) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-19](#C_3311-19) |  |
| @code | 1..1 | SHALL |  | [3311-22](#C_3311-22) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [3311-23](#C_3311-23) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [3311-17](#C_3311-17) |  |
| observation | 1..1 | SHALL |  | [3311-28415](#C_3311-28415) | [Vaccination Type Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01](#E_Vaccination_Type_Observation) |
| entry | 1..\* | SHALL |  | [3311-75](#C_3311-75) |  |
| encounter | 1..1 | SHALL |  | [3311-28413](#C_3311-28413) | [Summary Encounter (HP-FLU) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01](#E_Summary_Encounter_HPFLU) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-18) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.58" (CONF:3311-21).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-24).
3. SHALL contain exactly one [1..1] code (CONF:3311-19).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:3311-22).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-23).
4. SHALL contain exactly one [1..1] entry (CONF:3311-17) such that it
   1. SHALL contain exactly one [1..1] [Vaccination Type Observation](#E_Vaccination_Type_Observation) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01) (CONF:3311-28415).
5. SHALL contain at least one [1..\*] entry (CONF:3311-75) such that it
   1. SHALL contain exactly one [1..1] [Summary Encounter (HP-FLU)](#E_Summary_Encounter_HPFLU) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01) (CONF:3311-28413).

Figure 47: Summary Data Section (HP-FLU) Example

<section>

<!-- HAI Section Generic Constraints -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D2] Summary Data Section (HP-FLU) -->

<templateId root="2.16.840.1.113883.10.20.5.5.58" extension="2017-04-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51900-9"

displayName="Summary Section" />

<title>Summary Data</title>

<text>...</text>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI R3D2] Vaccination Type Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.242" extension="2017-04-01" />

...

</observation>

</entry>

<!-- Employees (staff on facility payroll) -->

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- [HAI R3D2] Summary Encounter (HP-FLU) -->

<templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />

...

</encounter>

</entry>

<!-- Licensed independent practitioners -->

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- [HAI R3D2] Summary Encounter (HP-FLU) -->

<templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />

...

</encounter>

</entry>

<!-- Adult students/trainees & volunteers -->

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- [HAI R3D2] Summary Encounter (HP-FLU) -->

<templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />

...

</encounter>

</entry>

<!-- Other contract personnel -->

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- [HAI R3D2] Summary Encounter (HP-FLU) -->

<templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />

...

</encounter>

</entry>

<entry typeCode="DRIV">

<act classCode="ACT" moodCode="EVN">

<!-- [HAI R3D2] Comment -->

<templateId root="2.16.840.1.113883.10.20.5.6.243" extension="2017-04-01" />

...

</act>

</entry>

</section>

Summary Data Section (HV) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01 (closed)]

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Table 100: Summary Data Section (HV) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Hemovigilance (HV) Summary Report (V2)](#D_Hemovigilance_HV_Summary_Report_V2) (required) | [No Hemovigilance Adverse Reactions Reported This Month Observation](#E_No_Hemovigilance_Adverse_Reactions_Re) (required)  [No Hemovigilance Incidents Reported This Month Observation](#E_No_Hemovigilance_Incidents_Reported_T) (required)  [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) (required) |

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The Summary Data Section (HV) extends its generic equivalent, but is specific to the HAI Hemovigilance (HV) Summary Report.

Table 101: Summary Data Section (HV) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3247-30615](#C_3247-30615) |  |
| @root | 1..1 | SHALL |  | [3247-30619](#C_3247-30619) | 2.16.840.1.113883.10.20.5.5.57 |
| @extension | 1..1 | SHALL |  | [3247-30620](#C_3247-30620) | 2016-08-01 |
| code | 1..1 | SHALL |  | [3247-30616](#C_3247-30616) |  |
| @code | 1..1 | SHALL |  | [3247-30621](#C_3247-30621) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [3247-30622](#C_3247-30622) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [3247-30614](#C_3247-30614) |  |
| observation | 1..1 | SHALL |  | [3247-30685](#C_3247-30685) | [No Hemovigilance Adverse Reactions Reported This Month Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01](#E_No_Hemovigilance_Adverse_Reactions_Re) |
| entry | 1..\* | SHALL |  | [3247-30617](#C_3247-30617) |  |
| observation | 1..1 | SHALL |  | [3247-30686](#C_3247-30686) | [No Hemovigilance Incidents Reported This Month Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01](#E_No_Hemovigilance_Incidents_Reported_T) |
| entry | 1..\* | SHALL |  | [3247-30736](#C_3247-30736) |  |
| encounter | 1..1 | SHALL |  | [3247-30737](#C_3247-30737) | [Summary Encounter (HV) (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01](#E_Summary_Encounter_HV_V2) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3247-30615) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.57" (CONF:3247-30619).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30620).
3. SHALL contain exactly one [1..1] code (CONF:3247-30616).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:3247-30621).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3247-30622).
4. SHALL contain exactly one [1..1] entry (CONF:3247-30614) such that it
   1. SHALL contain exactly one [1..1] [No Hemovigilance Adverse Reactions Reported This Month Observation](#E_No_Hemovigilance_Adverse_Reactions_Re) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01) (CONF:3247-30685).
5. SHALL contain at least one [1..\*] entry (CONF:3247-30617) such that it
   1. SHALL contain exactly one [1..1] [No Hemovigilance Incidents Reported This Month Observation](#E_No_Hemovigilance_Incidents_Reported_T) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01) (CONF:3247-30686).
6. SHALL contain at least one [1..\*] entry (CONF:3247-30736) such that it
   1. SHALL contain exactly one [1..1] [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01) (CONF:3247-30737).

Figure 48: Summary Data Section (HV) (V2) Example

<section>

<!-- [HAI R1] HAI Section Generic Constraints -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- [HAI R3D1.1] Summary Data Section (HV) (V2) -->

<templateId root="2.16.840.1.113883.10.20.5.5.57"

extension="2016-08-01" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC" code="51900-9"

displayName="Summary Data Section" />

<title>Summary Data</title>

<text>...</text>

<entry typeCode="DRIV">

<!-- No Adverse Reactions Reported This Month Observation -->

<observation classCode="OBS" moodCode="EVN"

negationInd="false">

<!-- [HAI R3D1] No Adverse Reactions Reported This Month Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.232"

extension="2015-10-01"

/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<!-- No Incidents Reported This Month Observation -->

<observation classCode="OBS" moodCode="EVN"

negationInd="true">

<!-- [HAI R3D1] No Incidents Reported This Month Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.233"

extension="2015-10-01"

/>

...

</observation>

</entry>

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- [HAI R3D1.1] Summary Encounter (HV) (V2)-->

<templateId root="2.16.840.1.113883.10.20.5.6.234"

extension="2016-08-01" />

...

</encounter>

</entry>

</section>

Summary Data Section (NICU) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01 (closed)]

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Table 102: Summary Data Section (NICU) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Neonatal Intensive Care Unit (NICU) Summary Report (V3)](#D_Neonatal_Intensive_Care_Unit_NICU_V3) (required) | [Summary Encounter (NICU)](#E_Summary_Encounter_NICU) (required) |

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The NICU Report extends the simple pattern for Summary Encounter. This report is stratified by birth weight. Each category is recorded in a separate Summary Encounter (NICU) within the Summary Data Section (NICU). The category is recorded as a participant in the encounter, in addition to the location participant that is required in all Summary Encounters.

Table 103: Summary Data Section (NICU) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3357-22837](#C_3357-22837) |  |
| @root | 1..1 | SHALL |  | [3357-22838](#C_3357-22838) | 2.16.840.1.113883.10.20.5.5.48 |
| @extension | 1..1 | SHALL |  | [3357-30598](#C_3357-30598) | 2018-04-01 |
| code | 1..1 | SHALL |  | [3357-22839](#C_3357-22839) |  |
| @code | 1..1 | SHALL |  | [3357-22840](#C_3357-22840) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [3357-28368](#C_3357-28368) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..\* | SHALL |  | [3357-22841](#C_3357-22841) |  |
| encounter | 1..1 | SHALL |  | [3357-22842](#C_3357-22842) | [Summary Encounter (NICU) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.191](#E_Summary_Encounter_NICU) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-22837) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.48" (CONF:3357-22838).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30598).
3. SHALL contain exactly one [1..1] code (CONF:3357-22839).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:3357-22840).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-28368).
4. SHALL contain at least one [1..\*] entry (CONF:3357-22841) such that it
   1. SHALL contain exactly one [1..1] [Summary Encounter (NICU)](#E_Summary_Encounter_NICU) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.191) (CONF:3357-22842).

Figure 49: Summary Data Section (NICU) Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Summary Data Section (NICU) template -->

<templateId root="2.16.840.1.113883.10.20.5.5.48"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51900-9"

displayName="Summary Data Section"/>

...

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- HAI Summary Encounter (NICU) template -->

<templateId root="2.16.840.1.113883.10.20.5.6.191"/>

...

</encounter>

</entry>

</section>

Summary Data Section (POM) (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2014-12-01 (closed)]

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Table 104: Summary Data Section (POM) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Prevention Process and Outcome Measures (POM) Summary Report (V3)](#D_Prevention_Process_and_Outcome_V3) (required) | [Summary Encounter (POM)](#E_Summary_Encounter_POM) (required)  [Primary C. Difficile Testing Method This Quarter](#E_Primary_C_Difficile_Testing_Method_Th) (optional) |

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.

The POM Summary report typically reports data for an in-facility location, but under some circumstances the NHSN protocol also requires facility-wide data. Use one Summary Encounter (POM) to report the data for the in-facility location and a separate Summary Encounter (POM) to report the facility-wide data. For facility-wide reporting, at the end of each quarter, the NHSN protocol requires the primary C. difficile testing method used most often.

Table 105: Summary Data Section (POM) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-22880](#C_1129-22880) |  |
| @root | 1..1 | SHALL |  | [1129-22881](#C_1129-22881) | 2.16.840.1.113883.10.20.5.5.49 |
| @extension | 1..1 | SHALL |  | [1129-30477](#C_1129-30477) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-22882](#C_1129-22882) |  |
| @code | 1..1 | SHALL |  | [1129-22883](#C_1129-22883) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [1129-30602](#C_1129-30602) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..\* | SHALL |  | [1129-22884](#C_1129-22884) |  |
| encounter | 1..1 | SHALL |  | [1129-22885](#C_1129-22885) | [Summary Encounter (POM) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.193](#E_Summary_Encounter_POM) |
| entry | 0..1 | SHOULD |  | [1129-30333](#C_1129-30333) |  |
| observation | 1..1 | SHALL |  | [1129-30334](#C_1129-30334) | [Primary C. Difficile Testing Method This Quarter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01](#E_Primary_C_Difficile_Testing_Method_Th) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22880) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.49" (CONF:1129-22881).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30477).
3. SHALL contain exactly one [1..1] code (CONF:1129-22882).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:1129-22883).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30602).
4. SHALL contain at least one [1..\*] entry (CONF:1129-22884) such that it
   1. SHALL contain exactly one [1..1] [Summary Encounter (POM)](#E_Summary_Encounter_POM) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.193) (CONF:1129-22885).

Required per NHSN Protocol only if location is facility-wide and month is March, June, September, or December.

1. SHOULD contain zero or one [0..1] entry (CONF:1129-30333) such that it
   1. SHALL contain exactly one [1..1] [Primary C. Difficile Testing Method This Quarter](#E_Primary_C_Difficile_Testing_Method_Th) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01) (CONF:1129-30334).

Figure 50: Summary Data Section (POM) (V2) Example

<section>

<!-- HAI Section Generic Constraints templateId -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- Summary Data Section (POM) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.5.49"

extension="2014-12-01"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51900-9"

displayName="Summary Data Section"/>

<title>Summary Data</title>

<text>

...

</text>

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- Summary Encounter (POM) -->

<templateId root="2.16.840.1.113883.10.20.5.6.193"/>

...

</encounter>

</entry>

<entry typeCode="DRIV">

<observation classCode="OBS" moodCode="EVN">

<!-- Primary C. Difficile Testing Method This Quarter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.221"

extension="2014-12-01"/>

...

</observation>

</entry>

</section>

Summary Data Section (VAT)

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.50 (closed)]

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Table 106: Summary Data Section (VAT) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Vascular Access Type Report (VAT) Summary Report (V3)](#D_Vascular_Access_Type_Report_VAT_V3) (required) | [Summary Encounter (VAT)](#E_Summary_Encounter_VAT) (required) |

The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.  
The Summary Data Section (VAT) extends its generic equivalent but, is specific to the Vascular Access Type Report (VAT) Summary Report.

Table 107: Summary Data Section (VAT) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.50) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22945](#C_86-22945) |  |
| @root | 1..1 | SHALL |  | [86-22946](#C_86-22946) | 2.16.840.1.113883.10.20.5.5.50 |
| code | 1..1 | SHALL |  | [86-22947](#C_86-22947) |  |
| @code | 1..1 | SHALL |  | [86-22948](#C_86-22948) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [86-28369](#C_86-28369) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..\* | SHALL |  | [86-22949](#C_86-22949) |  |
| encounter | 1..1 | SHALL |  | [86-22950](#C_86-22950) | [Summary Encounter (VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.196](#E_Summary_Encounter_VAT) |

1. Conforms to [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) template (identifier: urn:oid:2.16.840.1.113883.10.20.5.4.26).
2. SHALL contain exactly one [1..1] templateId (CONF:86-22945) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.50" (CONF:86-22946).
3. SHALL contain exactly one [1..1] code (CONF:86-22947).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:86-22948).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-28369).
4. SHALL contain at least one [1..\*] entry (CONF:86-22949).
   1. Such entries SHALL contain exactly one [1..1] [Summary Encounter (VAT)](#E_Summary_Encounter_VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.196) (CONF:86-22950).

Figure 51: Summary Data Section (VAT) Example

<section>

<!-- HAI Generic Section template -->

< templateId root="2.16.840.1.113883.10.20.5.4.26"/>

<!-- HAI Summary Data Section (VAT) template -->

<templateId root="2.16.840.1.113883.10.20.5.5.50"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51900-9"

displayName="Summary Data Section"/>

...

<entry typeCode="DRIV">

<encounter classCode="ENC" moodCode="EVN">

<!-- HAI Summary Encounter (VAT) template -->

<templateId root="2.16.840.1.113883.10.20.5.6.196"/>

...

</encounter>

</entry>

</section>

# Entry-Level Templates

Anesthesia Administration Clinical Statement

[substanceAdministration: identifier urn:oid:2.16.840.1.113883.10.20.5.6.112 (closed)]

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Table 108: Anesthesia Administration Clinical Statement Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Clinical Statement in a Procedure Report (V2)](#Procedure_Details_Clinical_Statement_in) (required) |  |

This clinical statement reports whether anesthesia was administered.

If anesthesia was not administered, set the value of @negationInd to true. If anesthesia was administered, set the value of @negationInd to false.

Table 109: Anesthesia Administration Clinical Statement Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| substanceAdministration (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.112) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19560](#C_86-19560) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL |  | [86-19561](#C_86-19561) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19562](#C_86-19562) |  |
| templateId | 1..1 | SHALL |  | [86-28201](#C_86-28201) |  |
| @root | 1..1 | SHALL |  | [86-28202](#C_86-28202) | 2.16.840.1.113883.10.20.22.4.16 |
| templateId | 1..1 | SHALL |  | [86-19570](#C_86-19570) |  |
| @root | 1..1 | SHALL |  | [86-19571](#C_86-19571) | 2.16.840.1.113883.10.20.5.6.112 |
| id | 1..1 | SHALL |  | [86-19572](#C_86-19572) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22720](#C_86-22720) | NA |
| statusCode | 1..1 | SHALL |  | [86-19573](#C_86-19573) |  |
| @code | 1..1 | SHALL |  | [86-19574](#C_86-19574) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | IVL\_TS | [86-28331](#C_86-28331) |  |
| low | 1..1 | SHALL |  | [86-28332](#C_86-28332) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-28335](#C_86-28335) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| high | 1..1 | SHALL |  | [86-28333](#C_86-28333) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-28336](#C_86-28336) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| consumable | 1..1 | SHALL |  | [86-19563](#C_86-19563) |  |
| manufacturedProduct | 1..1 | SHALL |  | [86-19578](#C_86-19578) |  |
| @classCode | 1..1 | SHALL |  | [86-28349](#C_86-28349) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| templateId | 1..1 | SHALL |  | [86-28334](#C_86-28334) |  |
| @root | 1..1 | SHALL |  | [86-28337](#C_86-28337) | 2.16.840.1.113883.10.20.22.4.23 |
| manufacturedMaterial | 1..1 | SHALL |  | [86-19579](#C_86-19579) |  |
| code | 1..1 | SHALL |  | [86-19580](#C_86-19580) |  |
| @code | 1..1 | SHALL |  | [86-19581](#C_86-19581) | 84451006 |
| @codeSystem | 1..1 | SHALL |  | [86-19582](#C_86-19582) | 2.16.840.1.113883.6.96 |

1. Conforms to Medication Activity template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.16).
2. SHALL contain exactly one [1..1] @classCode="SBADM" Substance administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19560).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19561).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-19562).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28201) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.16" (CONF:86-28202).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19570) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.112" (CONF:86-19571).
7. SHALL contain exactly one [1..1] id (CONF:86-19572).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22720).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-19573).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-19574).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:86-28331).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-28332).
      1. This low SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-28335).
   2. This effectiveTime SHALL contain exactly one [1..1] high (CONF:86-28333).
      1. This high SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-28336).
10. SHALL contain exactly one [1..1] consumable (CONF:86-19563).
    1. This consumable SHALL contain exactly one [1..1] manufacturedProduct (CONF:86-19578).
       1. This manufacturedProduct SHALL contain exactly one [1..1] @classCode="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:86-28349).
       2. This manufacturedProduct SHALL contain exactly one [1..1] templateId (CONF:86-28334) such that it
          1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.23" (CONF:86-28337).
       3. This manufacturedProduct SHALL contain exactly one [1..1] manufacturedMaterial (CONF:86-19579).
          1. This manufacturedMaterial SHALL contain exactly one [1..1] code (CONF:86-19580).
             1. This code SHALL contain exactly one [1..1] @code="84451006" General Anesthesia (CONF:86-19581).
             2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CONF:86-19582).

Figure 52: Anesthesia Administration Clinical Statement Example

<substanceAdministration classCode="SBADM" moodCode="EVN"

negationInd="false">

<!-- C-CDA Medication Activity templteId -->

<templateId root="2.16.840.1.113883.10.20.22.4.16" />

<!-- HAI Anesthesia Administration Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.112" />

<id nullFlavor="NA" />

<statusCode code="completed" />

<effectiveTime xsi:type="IVL\_TS">

<low nullFlavor="NA" />

<high nullFlavor="NA" />

</effectiveTime>

<consumable>

<manufacturedProduct classCode="MANU">

<templateId root="2.16.840.1.113883.10.20.22.4.23" />

<manufacturedMaterial>

<code codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="84451006"

displayName="General anesthesia" />

</manufacturedMaterial>

</manufacturedProduct>

</consumable>

</substanceAdministration>

Antimicrobial Coated Catheter Used Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01 (closed)]

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Table 110: Antimicrobial Coated Catheter Used Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a CLIP Report (V2)](#S_Infection_Risk_Factors_Section_in_a_C) (optional) |  |

This clinical statement represents whether an antimicrobial coated catheter was used.

If an antimicrobial coated catheter was used, set the value of @negationInd to false. If an antimicrobial coated catheter was not used, set the value of @negationInd to true.

Table 111: Antimicrobial Coated Catheter Used Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-28205](#C_1129-28205) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-28206](#C_1129-28206) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1129-28207](#C_1129-28207) |  |
| templateId | 1..1 | SHALL |  | [1129-30485](#C_1129-30485) |  |
| @root | 1..1 | SHALL |  | [1129-30486](#C_1129-30486) | 2.16.840.1.113883.10.20.5.6.217 |
| @extension | 1..1 | SHALL |  | [1129-30487](#C_1129-30487) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-28202](#C_1129-28202) |  |
| @code | 1..1 | SHALL | CS | [1129-28210](#C_1129-28210) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1129-30597](#C_1129-30597) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1129-28203](#C_1129-28203) |  |
| @code | 1..1 | SHALL |  | [1129-28211](#C_1129-28211) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1129-28204](#C_1129-28204) |  |
| @code | 1..1 | SHALL |  | [1129-28212](#C_1129-28212) | 6140-8 |
| @codeSystem | 1..1 | SHALL |  | [1129-30607](#C_1129-30607) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-28205).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-28206).

If an antimicrobial coated catheter was used, set the value of @negationInd to false. If an antimicrobial coated catheter was not used set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:1129-28207).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-30485) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.217" (CONF:1129-30486).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30487).
3. SHALL contain exactly one [1..1] code (CONF:1129-28202).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1129-28210).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30597).
4. SHALL contain exactly one [1..1] statusCode (CONF:1129-28203).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-28211).
5. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1129-28204).
   1. This value SHALL contain exactly one [1..1] @code="6140-8" Antimicrobial coated catheter used (CONF:1129-28212).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30607).

Figure 53: Antimicrobial Coated Catheter Used Observation Example

<!-- Setting negationInd="false" indicates that an antimicrobial coated

catheter was used -->

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- Antimicrobial Coated Catheter Used Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.217"

extension="2014-12-01"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" code="6140-8"

displayName="Antimicrobial coated catheter used" />

</observation>

Antimicrobial Susceptibility Antibiotic

[participant: identifier urn:oid:2.16.840.1.113883.10.20.5.6.176 (closed)]

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This clinical statement represents the antimicrobial agent for which susceptibilities are reported against a certain pathogen. The antimicrobial agent is specified in the participant/participantRole/playingEntity/code element.

Table 112: Antimicrobial Susceptibility Antibiotic Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| participant (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.176) | | | | | |
| @typeCode | 1..1 | SHALL |  | [86-27113](#C_86-27113) | SBJ |
| templateId | 1..1 | SHALL |  | [86-21084](#C_86-21084) |  |
| @root | 1..1 | SHALL |  | [86-21085](#C_86-21085) | 2.16.840.1.113883.10.20.5.6.176 |
| participantRole | 1..1 | SHALL |  | [86-27114](#C_86-27114) |  |
| @classCode | 0..1 | MAY |  | [86-27115](#C_86-27115) | MANU |
| playingEntity | 1..1 | SHALL |  | [86-27116](#C_86-27116) |  |
| code | 1..1 | SHALL |  | [86-27117](#C_86-27117) | urn:oid:2.16.840.1.114222.4.11.3360 (NHSNAntimicrobialAgentAURPCode) |

1. SHALL contain exactly one [1..1] @typeCode="SBJ" (CONF:86-27113).
2. SHALL contain exactly one [1..1] templateId (CONF:86-21084) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.176" (CONF:86-21085).
3. SHALL contain exactly one [1..1] participantRole (CONF:86-27114).
   1. This participantRole MAY contain zero or one [0..1] @classCode="MANU" (CONF:86-27115).
   2. This participantRole SHALL contain exactly one [1..1] playingEntity (CONF:86-27116).
      1. This playingEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNAntimicrobialAgentAURPCode](#NHSNAntimicrobialAgentAURPCode) urn:oid:2.16.840.1.114222.4.11.3360 DYNAMIC (CONF:86-27117).

Table 113: NHSNAntimicrobialAgentAURPCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNAntimicrobialAgentAURPCode urn:oid:2.16.840.1.114222.4.11.3360  Code System: RxNorm 2.16.840.1.113883.6.88 or cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package.  Value Set Source: <http://phinvads.cdc.gov> | | | |
| Code | Code System | Code System OID | Print Name |
| 620 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amantadine |
| 641 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amikacin |
| 723 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amoxicillin (only) |
| 19711 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amoxicillin with Clavulanate |
| 732 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amphotericin B |
| 236594 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Amphotericin B Liposomal |
| 733 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Ampicillin (only) |
| 1009148 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Ampicillin with Sulbactam |
| 341018 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Anidulafungin |
| 18631 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Azithromycin |
| 1272 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Aztreonam |
| 140108 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Caspofungin |
| 2176 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Cefaclor |
| 2177 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Cefadroxil |
| 2180 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Cefazolin |
| ... | | | |

Figure 54: Antimicrobial Susceptibility Antibiotic Example

<!-- This participant specifies the antibiotic tested -->

<participant typeCode="SBJ">

<!-- Antimicrobial Susceptibility Antibiotic -->

<templateId root="2.16.840.1.113883.10.20.5.6.176" />

<participantRole classCode="MANU">

<playingEntity>

<code code="21212"

displayName="Clarithromycin"

codeSystemName="RxNorm"

codeSystem="2.16.840.1.113883.6.88"/>

</playingEntity>

</participantRole>

</participant>

Antimicrobial Susceptibility Final Interpretation Result

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.175 (closed)]

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Table 114: Antimicrobial Susceptibility Final Interpretation Result Contexts

| Contained By: | Contains: |
| --- | --- |
| [Antimicrobial Susceptibility Tests Organizer (V3)](#E_Antimicrobial_Susceptibility_Tests_Or) (required) |  |

This clinical statement represents the final susceptibility result of a cluster of antimicrobial susceptibility tests performed on one pathogen-drug combination. Although several tests performed on one pathogen using the same antimicrobial agent may yield conflicting results, this clinical statement provides the final and definitive susceptibility testing result. That result is recorded in the interpretationCode element.

Table 115: Antimicrobial Susceptibility Final Interpretation Result Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.175) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21067](#C_86-21067) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21068](#C_86-21068) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28203](#C_86-28203) |  |
| @root | 1..1 | SHALL |  | [86-28204](#C_86-28204) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [86-21071](#C_86-21071) |  |
| @root | 1..1 | SHALL |  | [86-21072](#C_86-21072) | 2.16.840.1.113883.10.20.5.6.175 |
| id | 1..1 | SHALL |  | [86-21069](#C_86-21069) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-21070](#C_86-21070) | NA |
| code | 1..1 | SHALL |  | [86-21075](#C_86-21075) |  |
| @code | 1..1 | SHALL |  | [86-28099](#C_86-28099) | 365705006 |
| @codeSystem | 1..1 | SHALL |  | [86-28100](#C_86-28100) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL |  | [86-21076](#C_86-21076) |  |
| @code | 1..1 | SHALL |  | [86-21077](#C_86-21077) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-21078](#C_86-21078) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22630](#C_86-22630) | NA |
| value | 1..1 | SHALL | CD | [86-21079](#C_86-21079) | urn:oid:2.16.840.1.113883.13.13 (NHSNDrugSusceptibilityFindingCode) |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-21067).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-21068).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28203) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:86-28204).
5. SHALL contain exactly one [1..1] templateId (CONF:86-21071) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.175" (CONF:86-21072).
6. SHALL contain exactly one [1..1] id (CONF:86-21069).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-21070).
7. SHALL contain exactly one [1..1] code (CONF:86-21075).
   1. This code SHALL contain exactly one [1..1] @code="365705006" Final Interpretation Result (CONF:86-28099).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28100).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-21076).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-21077).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21078).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22630).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNDrugSusceptibilityFindingCode](#NHSNDrugSusceptibilityFindingCode) urn:oid:2.16.840.1.113883.13.13 (CONF:86-21079).

Table 116: NHSNDrugSusceptibilityFindingCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNDrugSusceptibilityFindingCode urn:oid:2.16.840.1.113883.13.13  Code System: HL7ObservationInterpretation 2.16.840.1.113883.5.83  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| I | HL7ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Intermediate |
| R | HL7ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Resistant |
| S | HL7ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Susceptible |
| NS | HL7ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Non-Susceptible |
| S-DD | HL7ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 | Susceptible-dose dependant |

Figure 55: Antimicrobial Susceptibility Final Interpretation Result Example

<!-- This observation specifies the Final Interpretation Result -->

<observation classCode="OBS" moodCode="EVN">

<!-- Antimicrobial Susceptibility Final Interpretation Result -->

<templateId root="2.16.840.1.113883.10.20.5.6.175" />

<!-- Consolidated CDA Result Observation template -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

<id nullFlavor="NA" />

<code code="365705006"

displayName="Final Interpretation Result"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT" />

<statusCode code="completed" />

<effectiveTime nullFlavor="NA" />

<value xsi:type="CD" codeSystem="2.16.840.1.113883.5.83"

codeSystemName="HL7 Observation Interpretation"

code="R"

displayName="Resistant" />

</observation>

Antimicrobial Susceptibility Isolate Participant

[participant: identifier urn:oid:2.16.840.1.113883.10.20.5.6.202 (closed)]

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Table 117: Antimicrobial Susceptibility Isolate Participant Contexts

| Contained By: | Contains: |
| --- | --- |
| [Isolate Susceptibility Tests Organizer (V3)](#E_Isolate_Susceptibility_Tests_Organize) (required) |  |

This template identifies an isolate for the purpose of antimicrobial susceptibility testing.

Table 118: Antimicrobial Susceptibility Isolate Participant Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| participant (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.202) | | | | | |
| @typeCode | 1..1 | SHALL |  | [86-27150](#C_86-27150) | SBJ |
| templateId | 1..1 | SHALL |  | [86-27137](#C_86-27137) |  |
| @root | 1..1 | SHALL |  | [86-27138](#C_86-27138) | 2.16.840.1.113883.10.20.5.6.202 |
| participantRole | 1..1 | SHALL |  | [86-27151](#C_86-27151) |  |
| @classCode | 1..1 | SHALL |  | [86-27152](#C_86-27152) | ISLT |
| id | 1..\* | SHALL |  | [86-27153](#C_86-27153) |  |
| playingEntity | 1..1 | SHALL |  | [86-27154](#C_86-27154) |  |
| code | 1..1 | SHALL |  | [86-27155](#C_86-27155) | urn:oid:2.16.840.1.113883.13.16 (NHSNPathogenCode) |

1. SHALL contain exactly one [1..1] @typeCode="SBJ" (CONF:86-27150).
2. SHALL contain exactly one [1..1] templateId (CONF:86-27137) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.202" (CONF:86-27138).
3. SHALL contain exactly one [1..1] participantRole (CONF:86-27151).
   1. This participantRole SHALL contain exactly one [1..1] @classCode="ISLT" (CONF:86-27152).

This is the unique isolate identifier

* 1. This participantRole SHALL contain at least one [1..\*] id (CONF:86-27153).
  2. This participantRole SHALL contain exactly one [1..1] playingEntity (CONF:86-27154).
     1. This playingEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNPathogenCode](#NHSNPathogenCode) urn:oid:2.16.840.1.113883.13.16 DYNAMIC (CONF:86-27155).

Table 119: NHSNPathogenCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNPathogenCode urn:oid:2.16.840.1.113883.13.16  Code System: SNOMED CT 2.16.840.1.113883.6.96 or cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 115161005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Abiotrophia |
| 113714003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Abiotrophia defectiva |
| 113714003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Streptococcus defectivus |
| 84858009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Acholeplasma |
| 84858009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Sapromyces |
| 89082003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Acholeplasma laidlawii |
| 89082003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Asterococcus laidlawii |
| 89082003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Mycoplasma laidlawii |
| 89082003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Sapromyces laidlawii |
| 86450009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Acholeplasma oculi |
| ... | | | |

Figure 56: Antimicrobial Susceptibility Isolate Participant Example

<participant typeCode="SBJ">

<!-- Antimicrobial Susceptibility Isolate Participant template -->

<templateId root="2.16.840.1.113883.10.20.5.6.202"/>

<participantRole classCode="ISLT">

<!-- Isolate identifier - unique for each isolate in that year –->

<id root="8d7ebcf7-528e-48e8-9e04-350b11b591d1" extension="125698523"/>

<playingEntity>

<code code="3092008"

displayName="Staphylococcus aureus"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"/>

</playingEntity>

</participantRole>

</participant>

Antimicrobial Susceptibility Result Observation (V3)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01 (closed)]

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Table 120: Antimicrobial Susceptibility Result Observation (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Antimicrobial Susceptibility Result Organizer (V3)](#E_Antimicrobial_Susceptibility_Result_O) (required) |  |

This clinical statement represents the result of one discrete susceptibility test. The type of test is recorded in the code element. The test method is recorded in the methodCode. The susceptibility result of that test is recorded in the interpretationCode element. The numeric result of that test is recorded in the value element as an inequality. The numeric component is recorded in the value/.../@value attribute. The unit of measure is recorded in the value/.../@unit attribute. The inequality is recorded in the value/low and value/high and value/center elements. For example:

Greater than 0.5 mg/ul

Greater than or equal to 0.9 mg/ul

Less than 0.7 mg/ul

Less than or equal to 0.4 mg/ul

Exactly equal to 0.2 mg/ul

Table 121: Antimicrobial Susceptibility Result Observation (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-22632](#C_3247-22632) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3247-22633](#C_3247-22633) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3247-22699](#C_3247-22699) |  |
| templateId | 1..1 | SHALL |  | [3247-30551](#C_3247-30551) |  |
| @root | 1..1 | SHALL |  | [3247-30552](#C_3247-30552) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [3247-22634](#C_3247-22634) |  |
| @root | 1..1 | SHALL |  | [3247-22635](#C_3247-22635) | 2.16.840.1.113883.10.20.5.6.186 |
| @extension | 1..1 | SHALL |  | [3247-30553](#C_3247-30553) | 2016-08-01 |
| id | 1..1 | SHALL |  | [3247-22636](#C_3247-22636) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-22637](#C_3247-22637) | NA |
| code | 1..1 | SHALL |  | [3247-22638](#C_3247-22638) | urn:oid:2.16.840.1.113883.13.15 (NHSNDrugSusceptibilityTestsCode) |
| statusCode | 1..1 | SHALL |  | [3247-22639](#C_3247-22639) |  |
| @code | 1..1 | SHALL |  | [3247-22640](#C_3247-22640) | completed |
| effectiveTime | 1..1 | SHALL |  | [3247-22641](#C_3247-22641) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-22642](#C_3247-22642) | NA |
| value | 1..1 | SHALL | IVL\_PQ | [3247-22643](#C_3247-22643) |  |
| low | 0..1 | MAY |  | [3247-22644](#C_3247-22644) |  |
| @value | 0..1 | MAY |  | [3247-23095](#C_3247-23095) |  |
| @unit | 0..1 | MAY |  | [3247-23096](#C_3247-23096) |  |
| @inclusive | 0..1 | MAY | BL | [3247-22645](#C_3247-22645) |  |
| high | 0..1 | MAY |  | [3247-22646](#C_3247-22646) |  |
| @value | 0..1 | MAY |  | [3247-23097](#C_3247-23097) |  |
| @unit | 0..1 | MAY |  | [3247-23098](#C_3247-23098) |  |
| @inclusive | 0..1 | MAY |  | [3247-22647](#C_3247-22647) |  |
| center | 0..1 | MAY |  | [3247-22648](#C_3247-22648) |  |
| @value | 0..1 | MAY |  | [3247-23099](#C_3247-23099) |  |
| @unit | 0..1 | MAY |  | [3247-23100](#C_3247-23100) |  |
| @nullFlavor | 0..1 | MAY |  | [3247-23366](#C_3247-23366) |  |
| interpretationCode | 1..1 | SHALL |  | [3247-23101](#C_3247-23101) | urn:oid:2.16.840.1.113883.13.13 (NHSNDrugSusceptibilityFindingCode) |
| methodCode | 1..1 | SHALL |  | [3247-30599](#C_3247-30599) |  |
| @code | 1..1 | SHALL |  | [3247-30602](#C_3247-30602) | urn:oid:2.16.840.1.113883.10.20.5.9.4 (NHSNDrugSusceptibilityTestMethod) |
| @codeSystem | 1..1 | SHALL |  | [3247-30603](#C_3247-30603) |  |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-22632).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-22633).
4. SHALL contain exactly one [1..1] @negationInd (CONF:3247-22699).
5. SHALL contain exactly one [1..1] templateId (CONF:3247-30551) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:3247-30552).
6. SHALL contain exactly one [1..1] templateId (CONF:3247-22634) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.186" (CONF:3247-22635).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30553).
7. SHALL contain exactly one [1..1] id (CONF:3247-22636).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-22637).
8. SHALL contain exactly one [1..1] code, which SHOULD be selected from ValueSet [NHSNDrugSusceptibilityTestsCode](#NHSNDrugSusceptibilityTestsCode) urn:oid:2.16.840.1.113883.13.15 DYNAMIC (CONF:3247-22638).
9. SHALL contain exactly one [1..1] statusCode (CONF:3247-22639).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CONF:3247-22640).
10. SHALL contain exactly one [1..1] effectiveTime (CONF:3247-22641).
    1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-22642).
11. SHALL contain exactly one [1..1] value with @xsi:type="IVL\_PQ" (CONF:3247-22643).
    1. This value MAY contain zero or one [0..1] low (CONF:3247-22644).
       1. The low, if present, MAY contain zero or one [0..1] @value (CONF:3247-23095).
       2. The low, if present, MAY contain zero or one [0..1] @unit (CONF:3247-23096).
       3. The low, if present, MAY contain zero or one [0..1] @inclusive (CONF:3247-22645).
    2. This value MAY contain zero or one [0..1] high (CONF:3247-22646).
       1. The high, if present, MAY contain zero or one [0..1] @value (CONF:3247-23097).
       2. The high, if present, MAY contain zero or one [0..1] @unit (CONF:3247-23098).
       3. The high, if present, MAY contain zero or one [0..1] @inclusive (CONF:3247-22647).
    3. This value MAY contain zero or one [0..1] center (CONF:3247-22648).
       1. The center, if present, MAY contain zero or one [0..1] @value (CONF:3247-23099).
       2. The center, if present, MAY contain zero or one [0..1] @unit (CONF:3247-23100).
    4. This value MAY contain zero or one [0..1] @nullFlavor (CONF:3247-23366).
12. SHALL contain exactly one [1..1] interpretationCode, which SHOULD be selected from ValueSet [NHSNDrugSusceptibilityFindingCode](#NHSNDrugSusceptibilityFindingCode) urn:oid:2.16.840.1.113883.13.13 (CONF:3247-23101).
13. SHALL contain exactly one [1..1] methodCode (CONF:3247-30599).
    1. This methodCode SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet [NHSNDrugSusceptibilityTestMethod](#NHSNDrugSusceptibilityTestMethod) urn:oid:2.16.840.1.113883.10.20.5.9.4 DYNAMIC (CONF:3247-30602).
    2. This methodCode SHALL contain exactly one [1..1] @codeSystem (CONF:3247-30603).

Table 122: NHSNDrugSusceptibilityTestsCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNDrugSusceptibilityTestsCode urn:oid:2.16.840.1.113883.13.15  Code System: LOINC 2.16.840.1.113883.6.1 or cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 18855-7 | LOINC | urn:oid:2.16.840.1.113883.6.1 | 5-fluorocytosine Susc Islt |
| 18860-7 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Amikacin Susc Islt |
| 18862-3 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Amoxicillin+Clav Susc Islt |
| 18864-9 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Ampicillin Susc Islt |
| 18865-6 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Ampicillin+Sulbac Susc Islt |
| 57095-2 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Anidulafungin Susc Islt |
| 18866-4 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Azithromycin Susc Islt |
| 18868-0 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Aztreonam Susc Islt |
| 32378-2 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Caspofungin Susc Islt |
| 18878-9 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Cefazolin Susc Islt |
| ... | | | |

Table 123: NHSNDrugSusceptibilityTestMethod

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNDrugSusceptibilityTestMethod urn:oid:2.16.840.1.113883.10.20.5.9.4  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 50545-3 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Bacterial susceptibility panel by Minimum inhibitory concentration (MIC) |
| 50546-1 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Bacterial susceptibility panel by Disk diffusion (KB) |
| 49589-5 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Bacterial susceptibility panel by Gradient strip |

Figure 57: Antimicrobial Susceptibility Result Observation (V3)

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Result Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Observation (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.186" extension="2016-08-01" />

<id nullFlavor="NA" />

<code code="18907-6"

displayName="Clarithro Susc Islt"

codeSystemName="LOINC"

codeSystem="2.16.840.1.113883.6.1" />

<statusCode code="completed" />

<effectiveTime nullFlavor="NA" />

<value xsi:type="IVL\_PQ">

<low value="5.0" unit="ug/ml" />

</value>

<interpretationCode codeSystem="2.16.840.1.113883.5.83"

codeSystemName="HL7 Observation Interpretation"

code="R"

displayName="Resistant" />

<methodCode codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="49589-5"

displayName="Bacterial susceptibility panel by Gradient strip (E-test)" />

</observation>

Figure 58: Antimicrobial Susceptibility Result Observation (V3) - Not Done

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- [C-CDA R1.1] Result Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Observation (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.186" extension="2016-08-01" />

<id nullFlavor="NA" />

<code code="18907-6"

displayName="Clarithro Susc Islt"

codeSystemName="LOINC"

codeSystem="2.16.840.1.113883.6.1" />

<statusCode code="completed" />

<effectiveTime nullFlavor="NA" />

<value xsi:type="IVL\_PQ" nullFlavor="NA" />

<interpretationCode nullFlavor="NA" />

<methodCode codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="50546-1"

displayName="Bacterial susceptibility panel by Disk diffusion (KB)" />

</observation>

Antimicrobial Susceptibility Result Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01 (closed)]

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Table 124: Antimicrobial Susceptibility Result Organizer (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Antimicrobial Susceptibility Tests Organizer (V3)](#E_Antimicrobial_Susceptibility_Tests_Or) (required) | [Antimicrobial Susceptibility Result Observation (V3)](#E_Antimicrobial_Susceptibility_Res_Obs) (required) |

This organizer groups a battery of antimicrobial susceptibility tests. Each drug tested must have an observation for each method in the value set NHSNDrugSusceptibilityTestMethod.

Table 125: Antimicrobial Susceptibility Result Organizer (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-27103](#C_3247-27103) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = BATTERY |
| @moodCode | 1..1 | SHALL |  | [3247-27104](#C_3247-27104) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-30554](#C_3247-30554) |  |
| @root | 1..1 | SHALL |  | [3247-28208](#C_3247-28208) | 2.16.840.1.113883.10.20.22.4.1 |
| templateId | 1..1 | SHALL |  | [3247-27105](#C_3247-27105) |  |
| @root | 1..1 | SHALL |  | [3247-27106](#C_3247-27106) | 2.16.840.1.113883.10.20.5.6.200 |
| @extension | 1..1 | SHALL |  | [3247-30555](#C_3247-30555) | 2016-08-01 |
| id | 1..1 | SHALL |  | [3247-27107](#C_3247-27107) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-30591](#C_3247-30591) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| code | 1..1 | SHALL |  | [3247-27108](#C_3247-27108) |  |
| @code | 1..1 | SHALL |  | [3247-28101](#C_3247-28101) | 18725-2 |
| @codeSystem | 1..1 | SHALL |  | [3247-28102](#C_3247-28102) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL |  | [3247-27109](#C_3247-27109) |  |
| @code | 1..1 | SHALL |  | [3247-27110](#C_3247-27110) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..\* | SHALL |  | [3247-27111](#C_3247-27111) |  |
| observation | 1..1 | SHALL |  | [3247-27112](#C_3247-27112) | [Antimicrobial Susceptibility Result Observation (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01](#E_Antimicrobial_Susceptibility_Res_Obs) |

1. Conforms to Result Organizer template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.1).
2. SHALL contain exactly one [1..1] @classCode="BATTERY" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-27103).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-27104).
4. SHALL contain exactly one [1..1] templateId (CONF:3247-30554) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.1" (CONF:3247-28208).
5. SHALL contain exactly one [1..1] templateId (CONF:3247-27105) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.200" (CONF:3247-27106).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30555).
6. SHALL contain exactly one [1..1] id (CONF:3247-27107).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3247-30591).
7. SHALL contain exactly one [1..1] code (CONF:3247-27108).
   1. This code SHALL contain exactly one [1..1] @code="18725-2" Microbiology Studies (CONF:3247-28101).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3247-28102).
8. SHALL contain exactly one [1..1] statusCode (CONF:3247-27109).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-27110).

Each drug tested must have an observation for each method in the value set NHSNDrugSusceptibilityTestMethod.

1. SHALL contain at least one [1..\*] component (CONF:3247-27111).
   1. Such components SHALL contain exactly one [1..1] [Antimicrobial Susceptibility Result Observation (V3)](#E_Antimicrobial_Susceptibility_Res_Obs) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01) (CONF:3247-27112).

Figure 59: Antimicrobial Susceptibility Result Organizer (V3) Example

<organizer classCode="BATTERY" moodCode="EVN">

<!-- [C-CDA R1.1] Result Organizer -->

<templateId root="2.16.840.1.113883.10.20.22.4.1" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Organizer (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.200" extension="2016-08-01" />

<id nullFlavor="NA" />

<code code="18725-2"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

displayName="Microbiology Studies" />

<statusCode code="completed" />

<component>

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Result Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Observation (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.186" extension="2016-08-01" />

...

</observation>

</component>

<!-- This observation specifies the susceptibility test was not done. (NegationInd = true) -->

<component>

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- [C-CDA R1.1] Result Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Observation (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.186" extension="2016-08-01" />

...

</observation>

</component>

...

</organizer>

Antimicrobial Susceptibility Tests Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01 (closed)]

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Table 126: Antimicrobial Susceptibility Tests Organizer (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Isolate Susceptibility Tests Organizer (V3)](#E_Isolate_Susceptibility_Tests_Organize) (required) | [Antimicrobial Susceptibility Final Interpretation Result](#E_Antimicrobial_Susceptibility_Final_In) (required)  [Antimicrobial Susceptibility Result Organizer (V3)](#E_Antimicrobial_Susceptibility_Result_O) (required) |

This organizer identifies a set of antimicrobial susceptibility tests performed on a pathogen along with the final antimicrobial susceptibility result generated by those tests with regard to that pathogen-agent combination.

Table 127: Antimicrobial Susceptibility Tests Organizer (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-21091](#C_3247-21091) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [3247-21092](#C_3247-21092) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-30498](#C_3247-30498) |  |
| @root | 1..1 | SHALL |  | [3247-30499](#C_3247-30499) | 2.16.840.1.113883.10.20.22.4.1 |
| templateId | 1..1 | SHALL |  | [3247-21093](#C_3247-21093) |  |
| @root | 1..1 | SHALL |  | [3247-21094](#C_3247-21094) | 2.16.840.1.113883.10.20.5.6.177 |
| @extension | 1..1 | SHALL |  | [3247-30500](#C_3247-30500) | 2016-08-01 |
| id | 1..\* | SHALL |  | [3247-21097](#C_3247-21097) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-22723](#C_3247-22723) | NA |
| code | 1..1 | SHALL |  | [3247-21098](#C_3247-21098) |  |
| @code | 1..1 | SHALL |  | [3247-21099](#C_3247-21099) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 18725-2 |
| statusCode | 1..1 | SHALL |  | [3247-21100](#C_3247-21100) |  |
| @code | 1..1 | SHALL |  | [3247-21101](#C_3247-21101) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..1 | SHALL |  | [3247-21104](#C_3247-21104) |  |
| organizer | 1..1 | SHALL |  | [3247-27178](#C_3247-27178) | [Antimicrobial Susceptibility Result Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01](#E_Antimicrobial_Susceptibility_Result_O) |
| component | 1..1 | SHALL |  | [3247-21106](#C_3247-21106) |  |
| observation | 1..1 | SHALL |  | [3247-22712](#C_3247-22712) | [Antimicrobial Susceptibility Final Interpretation Result (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.175](#E_Antimicrobial_Susceptibility_Final_In) |

1. Conforms to Result Organizer template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.1).
2. SHALL contain exactly one [1..1] @classCode="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-21091).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-21092).
4. SHALL contain exactly one [1..1] templateId (CONF:3247-30498) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.1" (CONF:3247-30499).
5. SHALL contain exactly one [1..1] templateId (CONF:3247-21093) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.177" (CONF:3247-21094).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30500).
6. SHALL contain at least one [1..\*] id (CONF:3247-21097).
   1. Such ids SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-22723).
7. SHALL contain exactly one [1..1] code (CONF:3247-21098).
   1. This code SHALL contain exactly one [1..1] @code="18725-2" Microbiology studies (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3247-21099).
8. SHALL contain exactly one [1..1] statusCode (CONF:3247-21100).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-21101).
9. SHALL contain exactly one [1..1] component (CONF:3247-21104) such that it
   1. SHALL contain exactly one [1..1] [Antimicrobial Susceptibility Result Organizer (V3)](#E_Antimicrobial_Susceptibility_Result_O) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01) (CONF:3247-27178).
10. SHALL contain exactly one [1..1] component (CONF:3247-21106) such that it
    1. SHALL contain exactly one [1..1] [Antimicrobial Susceptibility Final Interpretation Result](#E_Antimicrobial_Susceptibility_Final_In) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.175) (CONF:3247-22712).

Figure 60: Antimicrobial Susceptibility Tests Organizer (V3) Example

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- [C-CDA R1.1] Result Organizer -->

<templateId root="2.16.840.1.113883.10.20.22.4.1" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Tests Organizer (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.177" extension="2016-08-01" />

<id nullFlavor="NA" />

<code code="18725-2"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

displayName="Microbiology Studies" />

<statusCode code="completed" />

<component>

<organizer classCode="BATTERY" moodCode="EVN">

<!-- [C-CDA R1.1] Result Organizer -->

<templateId root="2.16.840.1.113883.10.20.22.4.1" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Result Organizer (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.200" extension="2016-08-01" />

...

</organizer>

</component>

<component>

<!-- This observation specifies the Final Interpretation result. -->

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI R1] Antimicrobial Susceptibility Final Interpretation Result -->

<templateId root="2.16.840.1.113883.10.20.5.6.175" />

<!-- [C-CDA R1.1] Result Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

...

</observation>

</component>

</organizer>

APRV or Related at Time of VAE Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01 (closed)]

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Table 128: APRV or Related at Time of VAE Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Risk Factors Section in a VAE Report](#S_Risk_Factors_Section_in_a_VAE_Report) (optional) |  |

This clinical statement represents whether or not the patient was on Airway Pressure Release Ventilation (APRV) or a related mode of mechanical ventilation at the time of the Ventilator-Associated Event (VAE).

If the patient was on APRV or related at the time of the VAE, set the value of @negationInd to false. If the patient was not on APRV or related at the time of the VAE, set the value of @negationInd to true.

Table 129: APRV or Related at Time of VAE Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3311-28405](#C_3311-28405) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3311-28406](#C_3311-28406) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3311-28407](#C_3311-28407) |  |
| templateId | 1..1 | SHALL |  | [3311-28399](#C_3311-28399) |  |
| @root | 1..1 | SHALL |  | [3311-28408](#C_3311-28408) | 2.16.840.1.113883.10.20.5.6.248 |
| @extension | 1..1 | SHALL |  | [3311-28409](#C_3311-28409) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-28396](#C_3311-28396) |  |
| @code | 1..1 | SHALL | CS | [3311-28400](#C_3311-28400) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [3311-28401](#C_3311-28401) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [3311-28397](#C_3311-28397) |  |
| @code | 1..1 | SHALL |  | [3311-28402](#C_3311-28402) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [3311-28398](#C_3311-28398) |  |
| @code | 1..1 | SHALL |  | [3311-28403](#C_3311-28403) | 2342-6 |
| @codeSystem | 1..1 | SHALL |  | [3311-28404](#C_3311-28404) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3311-28405).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3311-28406).

If the patient was on APRV or related at the time of the VAE, set the value of @negationInd to false. If the patient was not on APRV or related at the time of the VAE, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3311-28407).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-28399) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.248" (CONF:3311-28408).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28409).
3. SHALL contain exactly one [1..1] code (CONF:3311-28396).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3311-28400).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3311-28401).
4. SHALL contain exactly one [1..1] statusCode (CONF:3311-28397).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3311-28402).
5. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3311-28398).
   1. This value SHALL contain exactly one [1..1] @code="2342-6" Patient on Airway Pressure Release Ventilation (APRV) or a related mode of mechanical ventilation at the time of VAE (CONF:3311-28403).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3311-28404).

Figure 61: APRV or Related at Time of VAE

<!-- Setting negationInd="false" indicates that the Patient on Airway Pressure

Release Ventilation (APRV) or a related mode of mechanical ventilation

at the time of VAE -->

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- [HAI R3D2] APRV or Related at Time of VAE Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.248" extension="2017-04-01" />

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed" />

<value xsi:type="CD" code="2342-6"

displayName="Patient on Airway Pressure Release Ventilation (APRV)

or a related mode of mechanical ventilation at the time of VAE"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</observation>

ARO Staph Aureus Specific Tests Organizer

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.5.6.190 (closed)]

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Table 130: ARO Staph Aureus Specific Tests Organizer Contexts

| Contained By: | Contains: |
| --- | --- |
| [Isolate Susceptibility Tests Organizer (V3)](#E_Isolate_Susceptibility_Tests_Organize) (optional) | [ARO Staph Aureus Specific Tests Result Observation](#E_ARO_Staph_Aureus_Specific_Tests_Resul) (required) |

This organizer represents the set of specific tests conducted on an isolate of Staphylococcus aureus when performing antimicrobial susceptibility testing.

Table 131: ARO Staph Aureus Specific Tests Organizer Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.190) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22700](#C_86-22700) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [86-22701](#C_86-22701) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28209](#C_86-28209) |  |
| @root | 1..1 | SHALL |  | [86-28210](#C_86-28210) | 2.16.840.1.113883.10.20.22.4.1 |
| templateId | 1..1 | SHALL |  | [86-22702](#C_86-22702) |  |
| @root | 1..1 | SHALL |  | [86-22703](#C_86-22703) | 2.16.840.1.113883.10.20.5.6.190 |
| id | 1..1 | SHALL |  | [86-22704](#C_86-22704) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-23365](#C_86-23365) | NA |
| code | 1..1 | SHALL |  | [86-22705](#C_86-22705) |  |
| @code | 1..1 | SHALL |  | [86-22706](#C_86-22706) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 18725-2 |
| statusCode | 1..1 | SHALL |  | [86-22707](#C_86-22707) |  |
| @code | 1..1 | SHALL |  | [86-22708](#C_86-22708) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..\* | SHALL |  | [86-22709](#C_86-22709) |  |
| observation | 1..1 | SHALL |  | [86-22710](#C_86-22710) | [ARO Staph Aureus Specific Tests Result Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.189](#E_ARO_Staph_Aureus_Specific_Tests_Resul) |

1. Conforms to Result Organizer template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.1).
2. SHALL contain exactly one [1..1] @classCode="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-22700).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-22701).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28209) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.1" (CONF:86-28210).
5. SHALL contain exactly one [1..1] templateId (CONF:86-22702) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.190" (CONF:86-22703).
6. SHALL contain exactly one [1..1] id (CONF:86-22704).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-23365).
7. SHALL contain exactly one [1..1] code (CONF:86-22705).
   1. This code SHALL contain exactly one [1..1] @code="18725-2" Microbiology studies (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:86-22706).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-22707).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-22708).
9. SHALL contain at least one [1..\*] component (CONF:86-22709) such that it
   1. SHALL contain exactly one [1..1] [ARO Staph Aureus Specific Tests Result Observation](#E_ARO_Staph_Aureus_Specific_Tests_Resul) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.189) (CONF:86-22710).

Figure 62: ARO Staph Aureus Specific Tests Organizer Example

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- ARO Staph Aureus Specific Tests Organizer -->

<templateId root="2.16.840.1.113883.10.20.5.6.190" />

<!-- Conforms to Consolidated CDA Result Organizer template -->

<templateId root="2.16.840.1.113883.10.20.22.4.1" />

<id nullFlavor="NA" />

<code code="18725-2"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

displayName="Microbiology studies" />

<statusCode code="completed" />

<component>

<observation classCode="OBS" moodCode="EVN">

<!-- ARO Staph Aureus Specific Tests Result Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.189" />

<!-- Conforms to Consolidated CDA Result Observation template -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

...

</observation>

</component>

...

</organizer>

ARO Staph Aureus Specific Tests Result Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.189 (closed)]

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Table 132: ARO Staph Aureus Specific Tests Result Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [ARO Staph Aureus Specific Tests Organizer](#E_ARO_Staph_Aureus_Specific_Tests_Organ) (required) |  |

This clinical statement represents the results of a Staphylococcus aureus-specific test when performing antimicrobial susceptibility testing. The type of test is recorded in the code element; the results of the test are recorded in the value element.

Table 133: ARO Staph Aureus Specific Tests Result Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.189) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22687](#C_86-22687) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22688](#C_86-22688) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28211](#C_86-28211) |  |
| @root | 1..1 | SHALL |  | [86-28212](#C_86-28212) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [86-22689](#C_86-22689) |  |
| @root | 1..1 | SHALL |  | [86-22690](#C_86-22690) | 2.16.840.1.113883.10.20.5.6.189 |
| id | 1..1 | SHALL |  | [86-22691](#C_86-22691) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22692](#C_86-22692) | NA |
| code | 1..1 | SHALL |  | [86-22693](#C_86-22693) | urn:oid:2.16.840.1.114222.4.11.7160 (NHSNStaphAureusSpecificTest) |
| statusCode | 1..1 | SHALL |  | [86-22694](#C_86-22694) |  |
| @code | 1..1 | SHALL |  | [86-22695](#C_86-22695) | completed |
| effectiveTime | 1..1 | SHALL |  | [86-22696](#C_86-22696) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22697](#C_86-22697) | NA |
| value | 1..1 | SHALL | CD | [86-22698](#C_86-22698) | urn:oid:2.16.840.1.114222.4.11.6074 (NHSNStaphAureusTestResults) |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-22687).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-22688).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28211) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:86-28212).
5. SHALL contain exactly one [1..1] templateId (CONF:86-22689) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.189" (CONF:86-22690).
6. SHALL contain exactly one [1..1] id (CONF:86-22691).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22692).
7. SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNStaphAureusSpecificTest](#NHSNStaphAureusSpecificTest) urn:oid:2.16.840.1.114222.4.11.7160 STATIC (CONF:86-22693).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-22694).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CONF:86-22695).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:86-22696).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22697).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNStaphAureusTestResults](#NHSNStaphAureusTestResults) urn:oid:2.16.840.1.114222.4.11.6074 STATIC 2012-09-01 (CONF:86-22698).

Table 134: NHSNStaphAureusSpecificTest

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNStaphAureusSpecificTest urn:oid:2.16.840.1.114222.4.11.7160  Code System: LOINC 2.16.840.1.113883.6.1  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 42721-1 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Oxacillin Resistant Staphylococcus sp isolate [Presence] in Isolate by Latex agglutination |
| 48813-0 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Bacterial methicillin resistance (mecA) gene [Presence] by Probe and target amplification method |

Table 135: NHSNStaphAureusTestResults

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNStaphAureusTestResults urn:oid:2.16.840.1.114222.4.11.6074  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 10828004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Positive |
| 260385009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Negative |
| 261665006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Unknown |

Figure 63: ARO Staph Aureus Specific Tests Result Example

<observation classCode="OBS" moodCode="EVN">

<!-- ARO Staph Aureus Specific Tests Result Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.189"/>

<!-- Conforms to Consolidated CDA Result Observation template -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<id nullFlavor="NA"/>

<code code="42721-1"

displayName="Oxacillin Resistant Staphylococcus sp isolate [Presence]

in Isolate by Latex agglutination"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="CD" codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="260385009"

displayName="Negative"/>

</observation>

ASA Class Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.113 (closed)]

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Table 136: ASA Class Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (optional) |  |

This observation records the patient’s physical status using the American Society of Anesthesiologists (ASA) Class Codes. The SNOMED CT representation of ASA Class Codes includes a sixth value (413500003 ASA physical status class 6 for brain-dead patients taken to the operating room to remove organs for transplant). This sixth value is not part of the value set allowed in a CDA document submitted to NHSN.

Table 137: ASA Class Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.113) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19583](#C_86-19583) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19584](#C_86-19584) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19585](#C_86-19585) | false |
| templateId | 1..1 | SHALL |  | [86-28213](#C_86-28213) |  |
| @root | 1..1 | SHALL |  | [86-28214](#C_86-28214) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19594](#C_86-19594) |  |
| @root | 1..1 | SHALL |  | [86-19595](#C_86-19595) | 2.16.840.1.113883.10.20.5.6.113 |
| id | 1..1 | SHALL |  | [86-19596](#C_86-19596) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22724](#C_86-22724) | NA |
| code | 1..1 | SHALL |  | [86-19586](#C_86-19586) |  |
| @code | 1..1 | SHALL |  | [86-19587](#C_86-19587) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28370](#C_86-28370) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19588](#C_86-19588) |  |
| @code | 1..1 | SHALL |  | [86-19589](#C_86-19589) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-19590](#C_86-19590) | urn:oid:2.16.840.1.113883.13.10 (NHSNASAClassCode) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19583).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19584).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-19585).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28213) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28214).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19594) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.113" (CONF:86-19595).
7. SHALL contain exactly one [1..1] id (CONF:86-19596).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22724).
8. SHALL contain exactly one [1..1] code (CONF:86-19586).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19587).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28370).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19588).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19589).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNASAClassCode](#NHSNASAClassCode) urn:oid:2.16.840.1.113883.13.10 STATIC 2008-01-30 (CONF:86-19590).

Table 138: NHSNASAClassCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNASAClassCode urn:oid:2.16.840.1.113883.13.10  Code System: SNOMED CT 2.16.840.1.113883.6.96  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 413495001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Normally healthy patient |
| 413496000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Patient with mild systemic disease |
| 413497009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Patient with severe systemic disease, not incapacitating |
| 413498004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Patient with incapacitating systemic disease, constant threat to life |
| 413499007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Moribund patient, &lt; 24-hour life expectancy |

Figure 64: ASA Class Observation Example

<!-- ASA Class Observation -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- ASA Class Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.113"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

code="413495001" displayName="Normally healthy patient"/>

</observation>

Bacterial Isolate Tested for Carbapenemase Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01 (closed)]

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Table 139: Bacterial Isolate Tested for Carbapenemase Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Pathogen Identified Observation (LIO) (V2)](#E_Pathogen_Identified_Observation_LIO_V2) (optional) | [Carbapenemase Test Organizer](#E_Carbapenemase_Test_Organizer) (optional)  [Positive Test for Carbapenemase Observation](#E_Positive_Test_for_Carbapenemase_Obser) (optional) |

This template represents whether or not the bacterial isolate was tested for carbapenemase.

When the bacterial isolate was tested, set the value of @negationInd to false. When the bacterial isolate was not tested, set the value of @negationInd to true. When it is unknown whether or not the bacterial isolate was tested, set the value of @nullFlavor to "UNK".

Table 140: Bacterial Isolate Tested for Carbapenemase Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [1129-30360](#C_1129-30360) | UNK |
| @classCode | 1..1 | SHALL |  | [1129-30353](#C_1129-30353) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-30354](#C_1129-30354) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | SHOULD |  | [1129-30355](#C_1129-30355) |  |
| templateId | 1..1 | SHALL |  | [1129-30501](#C_1129-30501) |  |
| @root | 1..1 | SHALL |  | [1129-30502](#C_1129-30502) | 2.16.840.1.113883.10.20.5.6.222 |
| @extension | 1..1 | SHALL |  | [1129-30503](#C_1129-30503) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-30336](#C_1129-30336) |  |
| @code | 1..1 | SHALL |  | [1129-30345](#C_1129-30345) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1129-30603](#C_1129-30603) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1129-30337](#C_1129-30337) |  |
| @code | 1..1 | SHALL |  | [1129-30346](#C_1129-30346) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1129-30338](#C_1129-30338) |  |
| @code | 1..1 | SHALL |  | [1129-30347](#C_1129-30347) | 2037-0 |
| @codeSystem | 1..1 | SHALL |  | [1129-30437](#C_1129-30437) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| entryRelationship | 1..1 | SHOULD |  | [1129-30335](#C_1129-30335) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30356](#C_1129-30356) | COMP |
| organizer | 1..1 | SHALL |  | [1129-30414](#C_1129-30414) | [Carbapenemase Test Organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01](#E_Carbapenemase_Test_Organizer) |
| entryRelationship | 1..1 | SHOULD |  | [1129-30438](#C_1129-30438) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30439](#C_1129-30439) | COMP |
| observation | 1..1 | SHALL |  | [1129-30440](#C_1129-30440) | [Positive Test for Carbapenemase Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01](#E_Positive_Test_for_Carbapenemase_Obser) |

1. MAY contain zero or one [0..1] @nullFlavor="UNK" (CONF:1129-30360).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-30353).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-30354).
4. SHOULD contain zero or one [0..1] @negationInd (CONF:1129-30355).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-30501) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.222" (CONF:1129-30502).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30503).
6. SHALL contain exactly one [1..1] code (CONF:1129-30336).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1129-30345).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30603).
7. SHALL contain exactly one [1..1] statusCode (CONF:1129-30337).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-30346).
8. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1129-30338).
   1. This value SHALL contain exactly one [1..1] @code="2037-0" Bacterial isolate tested for carbapenemase (CONF:1129-30347).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30437).

If the value of @negationInd is "false" this observation is required to contain the following entryRelationship

1. SHOULD contain exactly one [1..1] entryRelationship (CONF:1129-30335) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CONF:1129-30356).
   2. SHALL contain exactly one [1..1] [Carbapenemase Test Organizer](#E_Carbapenemase_Test_Organizer) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01) (CONF:1129-30414).

If any tests were performed this observation is required to contain the following entryRelationship

1. SHOULD contain exactly one [1..1] entryRelationship (CONF:1129-30438) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CONF:1129-30439).
   2. SHALL contain exactly one [1..1] [Positive Test for Carbapenemase Observation](#E_Positive_Test_for_Carbapenemase_Obser) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01) (CONF:1129-30440).

Figure 65: Bacterial Isolate Tested for Carbapenemase Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- Bacterial Isolate Tested for Carbapenemase Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.222"

extension="2014-12-01"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"

codeSystemName="ActCode"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="2037-0"

displayName="Bacterial isolate tested for carbapenemase"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

<!-- If the value of negationInd="false" for the Bacterial

Isolate Tested for Carbapenemase template (meaning it

was tested) then the following entryRelationship is

required -->

<entryRelationship typeCode="COMP">

<!-- Carbapenemase Test Organizer -->

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- C-CDA Result Organizer templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.1"/>

<!-- Carbapenemase Test Organizer templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.223"

extension="2014-12-01"/>

...

</organizer>

</entryRelationship>

<!-- If any tests were performed, this entryRelationship is required -->

<entryRelationship typeCode="COMP">

<!-- Positive Test for Carbapenamase Observation -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

<!-- Positive Test for Carbapenemase Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.225"

extension="2014-12-01"/>

...

</observation>

</entryRelationship>

</observation>

Blood Collection Location

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01 (closed)]

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Table 141: Blood Collection Location Contexts

| Contained By: | Contains: |
| --- | --- |
| [Positive Blood Culture Observation (V2)](#E_Positive_Blood_Culture_Observation_V2) (optional) |  |

If there is a positive blood culture, this template records the location where the blood was collected.

If the blood collection location is other than one specified in the value set NHSNBloodCollectionLocation, use value/@nullFlavor="OTH".

Table 142: Blood Collection Location Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-30299](#C_1129-30299) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-30300](#C_1129-30300) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30504](#C_1129-30504) |  |
| @root | 1..1 | SHALL |  | [1129-30505](#C_1129-30505) | 2.16.840.1.113883.10.20.5.6.219 |
| @extension | 1..1 | SHALL |  | [1129-30506](#C_1129-30506) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-30296](#C_1129-30296) |  |
| @code | 1..1 | SHALL |  | [1129-30304](#C_1129-30304) | 2331-7 |
| @codeSystem | 1..1 | SHALL |  | [1129-30305](#C_1129-30305) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [1129-30297](#C_1129-30297) |  |
| @code | 1..1 | SHALL |  | [1129-30306](#C_1129-30306) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1129-30315](#C_1129-30315) | urn:oid:2.16.840.1.114222.4.11.7237 (NHSNBloodCollectionLocation) |
| @nullFlavor | 0..1 | MAY |  | [1129-30316](#C_1129-30316) | OTH |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1129-30299).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1129-30300).
3. SHALL contain exactly one [1..1] templateId (CONF:1129-30504) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.219" (CONF:1129-30505).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30506).
4. SHALL contain exactly one [1..1] code (CONF:1129-30296).
   1. This code SHALL contain exactly one [1..1] @code="2331-7" Where was the positive blood culture collected (CONF:1129-30304).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30305).
5. SHALL contain exactly one [1..1] statusCode (CONF:1129-30297).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1129-30306).
6. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHOULD be selected from ValueSet [NHSNBloodCollectionLocation](#NHSNBloodCollectionLocation) urn:oid:2.16.840.1.114222.4.11.7237 DYNAMIC (CONF:1129-30315).

If the blood collection location is other than one specified in the value set NHSNBloodCollectionLocation, use nullFlavor="OTH"

* 1. This value MAY contain zero or one [0..1] @nullFlavor="OTH" (CONF:1129-30316).

Table 143: NHSNBloodCollectionLocation

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNBloodCollectionLocation urn:oid:2.16.840.1.114222.4.11.7237  Location where blood was collected.  A full listing of codes can be found in the hai\_voc.xls file provided with this package.  Value Set Source: <http://www.phinvads.com> | | | |
| Code | Code System | Code System OID | Print Name |
| 2333-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Dialysis Clinic |
| 2332-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hospital (on the day of or the day following admission) or Emergency Department |

Figure 66: Blood Collection Location Example

<observation classCode="OBS" moodCode="EVN">

<!-- Blood Collection Location templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.219"

extension="2014-12-01"/>

<code code="2331-7"

displayName="Where was the positive blood culture collected"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

<statusCode code="completed"/>

<value xsi:type="CD" code="2333-3"

displayName="Dialysis Clinic"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</observation>

Figure 67: Blood Collection Location - Other Example

<observation classCode="OBS" moodCode="EVN">

<!-- Blood Collection Location templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.219"

extension="2014-12-01"/>

<code code="2331-7"

displayName="Where was the positive blood culture collected"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

<statusCode code="completed"/>

<value xsi:type="CD" nullFlavor="OTH" />

</observation>

Blood Product Usage Summary Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01 (closed)]

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Table 144: Blood Product Usage Summary Observation (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) (required) | [ISBT Product Code Summary Observation (V2)](#E_ISBT_Product_Code_Summary_ObsV2) (optional) |

This template represents the number of units transfused, aliquots transfused, or total discards for each type of blood product.

If the value = 0 or type of product is one of the following, there *SHALL NOT* be a contained observation:  
Red Blood Cells/Whole Blood Derived/Total (3401-7, 3402-5, 3470-2)  
Red Blood Cells/Apheresis/Total (3409-0, 3410-8, 3477-7)  
Platelets/Whole Blood Derived/Total (3417-3, 3484-3)  
Platelets/Apheresis/Total (3421-5, 3422-3, 3490-0)  
Red Blood Cells/Whole Blood Derived/S-303 and Riboflavin Treated/Total (3544-4, 3545-1, 3546-9)  
Red Blood Cells/Apheresis/S-303 and Riboflavin Treated/Total (3553-5, 3554-3, 3555-0)  
Platelets/Whole Blood Derived/Psoralen and Riboflavin Treated/Total (3502-2, 3504-8)  
Platelets/Apheresis/Psoralen and Riboflavin Treated/Total (3511-3, 3512-1, 3513-9)  
Plasma/Whole Blood Derived/Psoralen and Riboflavin Treated/Total (3520-4, 3521-2, 3522-0)  
Plasma/Apheresis/Psoralen and Riboflavin Treated/Total (3529-5, 3530-3, 3531-1)  
Cryoprecipitate/Psoralen and Riboflavin Treated/Total (3562-6, 3563-4)  
If the value is > 0 and the type of product is not one of those listed above, then each specific subcategory product that is > 0 *SHALL* be listed in a separate contained ISBT Product Code Summary Observation.

Table 145: Blood Product Usage Summary Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-30705](#C_3247-30705) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3247-30706](#C_3247-30706) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-30701](#C_3247-30701) |  |
| @root | 1..1 | SHALL |  | [3247-30707](#C_3247-30707) | 2.16.840.1.113883.10.20.5.6.237 |
| @extension | 1..1 | SHALL |  | [3247-30714](#C_3247-30714) | 2016-08-01 |
| code | 1..1 | SHALL |  | [3247-30702](#C_3247-30702) |  |
| @code | 1..1 | SHALL |  | [3247-30715](#C_3247-30715) | urn:oid:2.16.840.1.114222.4.11.7353 (NHSNSummaryBloodProductUsage) |
| statusCode | 1..1 | SHALL |  | [3247-30703](#C_3247-30703) |  |
| @code | 1..1 | SHALL |  | [3247-30713](#C_3247-30713) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | INT | [3247-30704](#C_3247-30704) |  |
| entryRelationship | 0..\* | SHOULD |  | [3247-30728](#C_3247-30728) |  |
| observation | 1..1 | SHALL |  | [3247-30729](#C_3247-30729) | [ISBT Product Code Summary Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01](#E_ISBT_Product_Code_Summary_ObsV2) |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-30705).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-30706).
3. SHALL contain exactly one [1..1] templateId (CONF:3247-30701) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.237" (CONF:3247-30707).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30714).
4. SHALL contain exactly one [1..1] code (CONF:3247-30702).
   1. This code SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet [NHSNSummaryBloodProductUsage](#NHSNSummaryBloodProductUsage) urn:oid:2.16.840.1.114222.4.11.7353 DYNAMIC (CONF:3247-30715).
5. SHALL contain exactly one [1..1] statusCode (CONF:3247-30703).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-30713).
6. SHALL contain exactly one [1..1] value with @xsi:type="INT" (CONF:3247-30704).
7. SHOULD contain zero or more [0..\*] entryRelationship (CONF:3247-30728).
   1. The entryRelationship, if present, SHALL contain exactly one [1..1] [ISBT Product Code Summary Observation (V2)](#E_ISBT_Product_Code_Summary_ObsV2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01) (CONF:3247-30729).
8. If the value = 0 or type of product is one of the following, there SHALL NOT be a contained observation:

Table 146: NHSNSummaryBloodProductUsage

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSummaryBloodProductUsage urn:oid:2.16.840.1.114222.4.11.7353  These codes specify the usage for each group of blood product by the type, collection method, and modification or pathogen-reduction methodology.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3467-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total number of units transfused - Whole blood |
| 3468-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total number of aliquots transfused - Whole blood |
| 3469-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total number of Discards - Whole blood |
| 3401-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total number of units transfused - Red Blood Cells/Whole Blood Derived |
| 3402-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total number of aliquots transfused - Red Blood Cells/Whole Blood Derived |
| 3470-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total number Discards - Red Blood Cells/Whole Blood Derived |
| 3471-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of units transfused - Red Blood Cells/Whole Blood Derived/Not irradiated or leukocyte reduced |
| 3472-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of aliquots transfused - Red Blood Cells/Whole Blood Derived/Not irradiated or leukocyte reduced |
| 3473-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Discards - Red Blood Cells/Whole Blood Derived/Not irradiated or leukocyte reduced |
| 3403-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of units transfused - Red Blood Cells/Whole Blood Derived/Irradiated |
| ... | | | |

Figure 68: Blood Product Usage Summary Observation (V2) Example

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI R3D1.1] Blood Product Usage Summary Observation (V2) -->

<templateId root="2.16.840.1.113883.10.20.5.6.237" extension="2016-08-01" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3467-8"

displayName="Total number of units transfused - Whole blood" />

<statusCode code="completed" />

<value xsi:type="INT" value="100" />

<!--

If the value = 0 or type of product is one of the following,

there SHALL NOT be a contained observation:

Red Blood Cells/Whole Blood Derived/Total (3401-7, 3402-5, 3470-2)

Red Blood Cells/Apheresis/Total (3409-0, 3410-8, 3477-7)

Platelets/Whole Blood Derived/Total (3417-3, 3484-3)

Platelets/Apheresis/Total (3421-5, 3422-3, 3490-0)

Red Blood Cells/Whole Blood Derived/S-303 and Riboflavin Treated/Total (3544-4, 3545-1, 3546-9)

Red Blood Cells/Apheresis/S-303 and Riboflavin Treated/Total (3553-5, 3554-3, 3555-0)

Platelets/Whole Blood Derived/Psoralen and Riboflavin Treated/Total (3502-2, 3504-8)

Platelets/Apheresis/Psoralen and Riboflavin Treated/Total (3511-3, 3512-1, 3513-9)

Plasma/Whole Blood Derived/Psoralen and Riboflavin Treated/Total (3520-4, 3521-2, 3522-0)

Plasma/Apheresis/Psoralen and Riboflavin Treated/Total (3529-5, 3530-3, 3531-1)

Cryoprecipitate/Psoralen and Riboflavin Treated/Total (3562-6, 3563-4)

If the value is > 0 and the type of product is not one of those listed above,

then each specific subcategory product that is > 0 SHALL be listed in a

separate contained ISBT Product Code Summary Observation.

-->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- ISBT Product Code Summary Observation (V2) -->

<templateId root="2.16.840.1.113883.10.20.5.6.238" extension="2016-08-01" />

..

</observation>

</entryRelationship>

...

</observation>

Blood Sample Collected for Culture Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01 (closed)]

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Table 147: Blood Sample Collected for Culture Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [IV Antibiotic Start Clinical Statement (V3)](#E_IV_Antibiotic_Start_Clinical_Statemen) (optional) |  |

This observation records whether a blood sample was collected for culture when there was a new antimicrobial start. If there was no antimicrobial start then this template will not be included.

When a blood sample was collected for culture when there was a new antimicrobial start, set the value of @negationInd to false. When a blood sample was not collected for culture when there was a new antimicrobial start, set the value of @negationInd to true.

Table 148: Blood Sample Collected for Culture Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-11](#C_3247-11) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3247-12](#C_3247-12) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3247-14](#C_3247-14) |  |
| templateId | 1..1 | SHALL |  | [3247-1](#C_3247-1) |  |
| @root | 1..1 | SHALL |  | [3247-5](#C_3247-5) | 2.16.840.1.113883.10.20.5.6.239 |
| @extension | 1..1 | SHALL |  | [3247-6](#C_3247-6) | 2016-08-01 |
| code | 1..1 | SHALL |  | [3247-2](#C_3247-2) |  |
| @code | 1..1 | SHALL |  | [3247-7](#C_3247-7) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [3247-8](#C_3247-8) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [3247-4](#C_3247-4) |  |
| @code | 1..1 | SHALL |  | [3247-13](#C_3247-13) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [3247-3](#C_3247-3) |  |
| @code | 1..1 | SHALL |  | [3247-9](#C_3247-9) | 2339-0 |
| @codeSystem | 1..1 | SHALL |  | [3247-10](#C_3247-10) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-11).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-12).

When a blood sample was collected for culture when there was a new antimicrobial start, set the value of @negationInd to false. When a blood sample was not collected for culture when there was a new antimicrobial start, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3247-14).
2. SHALL contain exactly one [1..1] templateId (CONF:3247-1) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.239" (CONF:3247-5).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-6).
3. SHALL contain exactly one [1..1] code (CONF:3247-2).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3247-7).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3247-8).
4. SHALL contain exactly one [1..1] statusCode (CONF:3247-4).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-13).
5. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3247-3).
   1. This value SHALL contain exactly one [1..1] @code="2339-0" Blood sample collected for culture (CONF:3247-9).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3247-10).

Figure 69: Blood Sample Collected for Culture Example

<!-- Blood sample was collected so @negationInd="false" -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [HAI R3D1.1] Blood Sample Collected for Culture Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.239" extension="2016-08-01" />

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed" />

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2339-0"

displayName="Blood sample collected for culture" />

</observation>

Bloodstream Infection Evidence Type Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.114 (closed)]

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Table 149: Bloodstream Infection Evidence Type Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection-Type Observation](#E_InfectionType_Observation) (optional) |  |

This observation records whether the bloodstream infection being reported was confirmed by a positive blood culture.

Table 150: Bloodstream Infection Evidence Type Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.114) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19597](#C_86-19597) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19598](#C_86-19598) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19599](#C_86-19599) | false |
| templateId | 1..1 | SHALL |  | [86-28215](#C_86-28215) |  |
| @root | 1..1 | SHALL |  | [86-28216](#C_86-28216) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19608](#C_86-19608) |  |
| @root | 1..1 | SHALL |  | [86-19609](#C_86-19609) | 2.16.840.1.113883.10.20.5.6.114 |
| id | 1..1 | SHALL |  | [86-19610](#C_86-19610) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22725](#C_86-22725) | NA |
| code | 1..1 | SHALL |  | [86-19600](#C_86-19600) |  |
| @code | 1..1 | SHALL |  | [86-19601](#C_86-19601) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28371](#C_86-28371) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19602](#C_86-19602) |  |
| @code | 1..1 | SHALL |  | [86-19603](#C_86-19603) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-19604](#C_86-19604) | urn:oid:2.16.840.1.113883.13.7 (NHSNBloodStreamInfectionEvidenceTypeCode) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19597).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19598).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-19599).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28215) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28216).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19608) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.114" (CONF:86-19609).
7. SHALL contain exactly one [1..1] id (CONF:86-19610).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22725).
8. SHALL contain exactly one [1..1] code (CONF:86-19600).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19601).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28371).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19602).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19603).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNBloodStreamInfectionEvidenceTypeCode](#NHSNBloodStreamInfectionEvidenceTypeCod) urn:oid:2.16.840.1.113883.13.7 DYNAMIC (CONF:86-19604).

Table 151: NHSNBloodStreamInfectionEvidenceTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNBloodStreamInfectionEvidenceTypeCode urn:oid:2.16.840.1.113883.13.7  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1613-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Laboratory-confirmed bloodstream infection |

Figure 70: Bloodstream Infection Evidence Type Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Bloodstream Infection Evidence Type Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.114"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4"

code=”ASSERTION”/>

<statusCode code=”completed”/>

<value xsi:type=”CD”

codeSystem=”2.16.840.1.113883.6.277”

codeSystemName=”cdcNHSN”

value=”1613-9”

displayName=” Laboratory-confirmed bloodstream infection”/>

</observation>

Buttonhole Cannulation Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.115 (closed)]

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Table 152: Buttonhole Cannulation Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Vascular Access Type Observation](#E_Vascular_Access_Type_Observation) (optional) |  |

This observation records whether the patient’s fistula is accessed by buttonhole cannulation. This observation does not record a specific dialysis event but rather the technique in current use with the patient.  
When buttonhole cannulation is used, set the value of @negationInd to false. When the buttonhole cannulation is not used, set the value of @negationInd to true.

Table 153: Buttonhole Cannulation Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.115) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21764](#C_86-21764) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21765](#C_86-21765) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21766](#C_86-21766) |  |
| templateId | 1..1 | SHALL |  | [86-28217](#C_86-28217) |  |
| @root | 1..1 | SHALL |  | [86-28218](#C_86-28218) | 2.16.840.1.113883.10.20.22.4.13 |
| templateId | 1..1 | SHALL |  | [86-21775](#C_86-21775) |  |
| @root | 1..1 | SHALL |  | [86-21776](#C_86-21776) | 2.16.840.1.113883.10.20.5.6.115 |
| id | 1..1 | SHALL |  | [86-21777](#C_86-21777) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22726](#C_86-22726) | NA |
| code | 1..1 | SHALL |  | [86-21767](#C_86-21767) |  |
| @code | 1..1 | SHALL |  | [86-21768](#C_86-21768) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28372](#C_86-28372) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21769](#C_86-21769) |  |
| @code | 1..1 | SHALL |  | [86-21770](#C_86-21770) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21771](#C_86-21771) |  |
| @code | 1..1 | SHALL |  | [86-21772](#C_86-21772) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2308-5 |

1. Conforms to Procedure Activity Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.13).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21764).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21765).

When buttonhole cannulation is used, set the value of @negationInd to false. When the buttonhole cannulation is not used, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:86-21766).
2. SHALL contain exactly one [1..1] templateId (CONF:86-28217) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.13" (CONF:86-28218).
3. SHALL contain exactly one [1..1] templateId (CONF:86-21775) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.115" (CONF:86-21776).
4. SHALL contain exactly one [1..1] id (CONF:86-21777).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22726).
5. SHALL contain exactly one [1..1] code (CONF:86-21767).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21768).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28372).
6. SHALL contain exactly one [1..1] statusCode (CONF:86-21769).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21770).
7. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21771).
   1. This value SHALL contain exactly one [1..1] @code="2308-5" Buttonhole cannulation (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-21772).

Figure 71: Buttonhole Cannulation Observation Example

<!-- Buttonhole cannulation is used -->

<observation classCode="OBS" moodCode="EVN" negationInd=”true">

<!-- C-CDA Procedure Activity Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.13"/>

<!-- HAI Buttonhole Cannulation Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.115"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4"

code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2308-5"

displayName="Buttonhole cannulation"/>

</observation>

Carbapenemase Test Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01 (closed)]

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Table 154: Carbapenemase Test Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Carbapenemase Test Organizer](#E_Carbapenemase_Test_Organizer) (required) |  |

This clinical statement represents a carbapenemase test. The type of test is recorded in the code element.

If the type of test is other than one specified in NHSNCarbaTestMethod, use code/@nullFlavor="OTH" and enter the testing method in code/originalText. If the type of test is unknown, use code/@nullFlavor="UNK".

Table 155: Carbapenemase Test Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-30379](#C_1129-30379) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-30380](#C_1129-30380) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30375](#C_1129-30375) |  |
| @root | 1..1 | SHALL |  | [1129-30381](#C_1129-30381) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [1129-30507](#C_1129-30507) |  |
| @root | 1..1 | SHALL |  | [1129-30508](#C_1129-30508) | 2.16.840.1.113883.10.20.5.6.224 |
| @extension | 1..1 | SHALL |  | [1129-30509](#C_1129-30509) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-30376](#C_1129-30376) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30382](#C_1129-30382) | NA |
| code | 1..1 | SHALL |  | [1129-30383](#C_1129-30383) | urn:oid:2.16.840.1.114222.4.11.7240 (NHSNCarbaTestMethod) |
| @nullFlavor | 0..1 | MAY |  | [1129-30389](#C_1129-30389) | urn:oid:2.16.840.1.113883.10.20.5.9.1 (NullValues\_UNK\_OTH) |
| originalText | 0..1 | MAY |  | [1129-30390](#C_1129-30390) |  |
| statusCode | 1..1 | SHALL |  | [1129-30377](#C_1129-30377) |  |
| @code | 1..1 | SHALL |  | [1129-30384](#C_1129-30384) | completed |
| effectiveTime | 1..1 | SHALL |  | [1129-30378](#C_1129-30378) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30385](#C_1129-30385) | NA |
| value | 1..1 | SHALL | CD | [1129-30386](#C_1129-30386) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30388](#C_1129-30388) | NA |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1129-30379).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1129-30380).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30375) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:1129-30381).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-30507) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.224" (CONF:1129-30508).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30509).
6. SHALL contain exactly one [1..1] id (CONF:1129-30376).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30382).

If the type of test is other than one specified in NHSNCarbaTestMethod, use code/@nullFlavor="OTH" and enter the testing method in code/originalText. If the type of test is unknown, use code/@nullFlavor="UNK".

1. SHALL contain exactly one [1..1] code, which SHOULD be selected from ValueSet [NHSNCarbaTestMethod](#NHSNCarbaTestMethod) urn:oid:2.16.840.1.114222.4.11.7240 STATIC 2014-11-10 (CONF:1129-30383).
   1. This code MAY contain zero or one [0..1] @nullFlavor, which SHALL be selected from ValueSet [NullValues\_UNK\_OTH](#NullValues_UNK_OTH) urn:oid:2.16.840.1.113883.10.20.5.9.1 STATIC 2014-11-01 (CONF:1129-30389).
   2. This code MAY contain zero or one [0..1] originalText (CONF:1129-30390).
2. SHALL contain exactly one [1..1] statusCode (CONF:1129-30377).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CONF:1129-30384).
3. SHALL contain exactly one [1..1] effectiveTime (CONF:1129-30378).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30385).
4. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1129-30386).
   1. This value SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30388).

Table 156: NHSNCarbaTestMethod

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNCarbaTestMethod urn:oid:2.16.840.1.114222.4.11.7240  Tests to check bacterial isolate for carbapenemase.  Value Set Source: <http://www.phinvads.com> | | | |
| Code | Code System | Code System OID | Print Name |
| 2039-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (PCR-KPC) Polymerase chain reaction – Klebsiella pneumoniae carbapenemase |
| 2040-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (PCR-NDM) Polymerase chain reaction – New Delhi metallo-β-lactamase |
| 2041-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (PCR-IMP)Polymerase chain reaction - Imipenemase |
| 2042-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | PCR-VIM) Polymerase chain reaction - Verona Integron-encoded metallo-β-lactamase |
| 2043-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (PCR-OXA-48-like) Polymerase chain reaction – Oxacillinase-48 like |
| 2044-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (MHT) Modified Hodge Test |
| 2045-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (CNP) Carba NP |
| 2046-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (MBLe) Metallo-β-lactamase E-test |
| 2047-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (MBLs) Metallo-β-lactamase screen |

Table 157: NullValues\_UNK\_OTH

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NullValues\_UNK\_OTH urn:oid:2.16.840.1.113883.10.20.5.9.1  Null values of unknown and other. | | | |
| Code | Code System | Code System OID | Print Name |
| UNK | HL7NullFlavor | urn:oid:2.16.840.1.113883.5.1008 | Unknown |
| OTH | HL7NullFlavor | urn:oid:2.16.840.1.113883.5.1008 | Other |

Figure 72: Carbapenemase Test Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Test Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.224"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code code="2039-6"

displayName="(PCR-KPC) Polymerase chain reaction –

Klebsiella pneumoniae carbapenemase"

codeSystem="2.16.840.1.113883.6.277" codeSystemName="cdcNHSN"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="CD" nullFlavor="NA"/>

</observation>

Figure 73: Carbapenemase Test Observation - Other Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Test Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.224"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code nullFlavor="OTH">

<originalText>Other carbapenemase test not in value set</originalText>

</code>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="CD" nullFlavor="NA"/>

</observation>

Carbapenemase Test Organizer

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01 (closed)]

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Table 158: Carbapenemase Test Organizer Contexts

| Contained By: | Contains: |
| --- | --- |
| [Bacterial Isolate Tested for Carbapenemase Observation](#E_Bacterial_Isolate_Tested_for_Carbapen) (optional) | [Carbapenemase Test Observation](#E_Carbapenemase_Test_Observation) (required) |

This organizer represents the set of specific tests conducted on a bacterial isolate to test for carbapenemase.

Table 159: Carbapenemase Test Organizer Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-30367](#C_1129-30367) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [1129-30368](#C_1129-30368) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30362](#C_1129-30362) |  |
| @root | 1..1 | SHALL |  | [1129-30369](#C_1129-30369) | 2.16.840.1.113883.10.20.22.4.1 |
| templateId | 1..1 | SHALL |  | [1129-30510](#C_1129-30510) |  |
| @root | 1..1 | SHALL |  | [1129-30511](#C_1129-30511) | 2.16.840.1.113883.10.20.5.6.223 |
| @extension | 1..1 | SHALL |  | [1129-30512](#C_1129-30512) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-30363](#C_1129-30363) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30370](#C_1129-30370) | NA |
| code | 1..1 | SHALL |  | [1129-30364](#C_1129-30364) |  |
| @code | 1..1 | SHALL |  | [1129-30371](#C_1129-30371) | 18725-2 |
| @codeSystem | 1..1 | SHALL |  | [1129-30374](#C_1129-30374) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL |  | [1129-30365](#C_1129-30365) |  |
| @code | 1..1 | SHALL |  | [1129-30372](#C_1129-30372) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..\* | SHALL |  | [1129-30361](#C_1129-30361) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30391](#C_1129-30391) | COMP |
| observation | 1..1 | SHALL |  | [1129-30366](#C_1129-30366) | [Carbapenemase Test Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01](#E_Carbapenemase_Test_Observation) |

1. Conforms to Result Organizer template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.1).
2. SHALL contain exactly one [1..1] @classCode="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1129-30367).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1129-30368).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30362) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.1" (CONF:1129-30369).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-30510) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.223" (CONF:1129-30511).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30512).
6. SHALL contain exactly one [1..1] id (CONF:1129-30363).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30370).
7. SHALL contain exactly one [1..1] code (CONF:1129-30364).
   1. This code SHALL contain exactly one [1..1] @code="18725-2" Microbiology studies (CONF:1129-30371).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30374).
8. SHALL contain exactly one [1..1] statusCode (CONF:1129-30365).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1129-30372).
9. SHALL contain at least one [1..\*] component (CONF:1129-30361) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CONF:1129-30391).
   2. SHALL contain exactly one [1..1] [Carbapenemase Test Observation](#E_Carbapenemase_Test_Observation) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01) (CONF:1129-30366).

Figure 74: Carbapenemase Test Organizer Example

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- C-CDA Result Organizer templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.1"/>

<!-- Carbapenemase Test Organizer templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.223"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code code="18725-2" displayName="Microbiology Studies"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"/>

<statusCode code="completed"/>

<component typeCode="COMP">

<!-- Carbapenemase Test Observation -->

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Test Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.224"

extension="2014-12-01"/>

...

</observation>

</component>

<component>

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Test Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.224"

extension="2014-12-01"/>

...

</observation>

</component>

<component>

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Test Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.224"

extension="2014-12-01"/>

...

</observation>

</component>

</organizer>

Carbapenemase Type Identified Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01 (closed)]

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Table 160: Carbapenemase Type Identified Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Positive Test for Carbapenemase Observation](#E_Positive_Test_for_Carbapenemase_Obser) (optional) |  |

This template represents a carbapenemase type identified when the bacterial isolate was tested.

If the type of carbapenemase is other than one specified in NHSNCarbaDetectType, use value/@nullFlavor="OTH" and enter the carbapenemase type in value/originalText.

Table 161: Carbapenemase Type Identified Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-30453](#C_1129-30453) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-30454](#C_1129-30454) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30442](#C_1129-30442) |  |
| @root | 1..1 | SHALL |  | [1129-30448](#C_1129-30448) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [1129-30513](#C_1129-30513) |  |
| @root | 1..1 | SHALL |  | [1129-30514](#C_1129-30514) | 2.16.840.1.113883.10.20.5.6.226 |
| @extension | 1..1 | SHALL |  | [1129-30515](#C_1129-30515) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-30443](#C_1129-30443) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30450](#C_1129-30450) | NA |
| code | 1..1 | SHALL |  | [1129-30459](#C_1129-30459) |  |
| @code | 1..1 | SHALL |  | [1129-30460](#C_1129-30460) | 2049-5 |
| @codeSystem | 1..1 | SHALL |  | [1129-30461](#C_1129-30461) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [1129-30444](#C_1129-30444) |  |
| @code | 1..1 | SHALL |  | [1129-30451](#C_1129-30451) | completed |
| effectiveTime | 1..1 | SHALL |  | [1129-30445](#C_1129-30445) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30452](#C_1129-30452) | NA |
| value | 1..1 | SHALL | CD | [1129-30447](#C_1129-30447) | urn:oid:2.16.840.1.114222.4.11.7241 (NHSNCarbaDetectType) |
| @nullFlavor | 0..1 | MAY |  | [1129-30457](#C_1129-30457) | OTH |
| originalText | 0..1 | MAY |  | [1129-30458](#C_1129-30458) |  |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1129-30453).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1129-30454).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30442) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:1129-30448).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-30513) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.226" (CONF:1129-30514).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30515).
6. SHALL contain exactly one [1..1] id (CONF:1129-30443).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30450).
7. SHALL contain exactly one [1..1] code (CONF:1129-30459).
   1. This code SHALL contain exactly one [1..1] @code="2049-5" Carbapenemase Type Identified (CONF:1129-30460).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30461).
8. SHALL contain exactly one [1..1] statusCode (CONF:1129-30444).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CONF:1129-30451).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:1129-30445).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30452).

If the type of carbapenemase is other than one specified in NHSNCarbaDetectType, use value/@nullFlavor="OTH" and enter the carbapenemase type in value/originalText.

1. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHOULD be selected from ValueSet [NHSNCarbaDetectType](#NHSNCarbaDetectType) urn:oid:2.16.840.1.114222.4.11.7241 DYNAMIC (CONF:1129-30447).
   1. This value MAY contain zero or one [0..1] @nullFlavor="OTH" (CONF:1129-30457).
   2. This value MAY contain zero or one [0..1] originalText (CONF:1129-30458).

Table 162: NHSNCarbaDetectType

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNCarbaDetectType urn:oid:2.16.840.1.114222.4.11.7241  Identified carbapenemase  A full listing of codes can be found in the hai\_voc.xls file provided with this package.  Value Set Source: <http://www.phinvads.com> | | | |
| Code | Code System | Code System OID | Print Name |
| 2050-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (KPC) Klebsiella pneumoniae carbapenemase |
| 2051-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (NDM) New Delhi metallo-β-lactamase |
| 2052-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (IMP) Imipenemase |
| 2053-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (VIM) Verona integron-encoded metallo-β-lactamase |
| 2054-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (OXA-48 like) Oxacillinase-48 like |
| 2055-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (NS-Carba) Nonspecific carbapenemase activity (e.g., MHT or Carba NP) |
| 2056-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (NS-MBL) Nonspecific metallo-β-lactamase activity (e.g., MBL Gradient strip or MBL screen) |

Figure 75: Carbapenemase Type Identified Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Type Identified Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.226"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code code="2049-5"

displayName="Carbapenemase Type Identified"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="CD" code="2052-9"

displayName="(IMP) Imipenemase"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

</observation>

Figure 76: Carbapenemase Type Identified Observation - Other Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Type Identified Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.226"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code code="2049-5"

displayName="Carbapenemase Type Identified"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="CD" nullFlavor="OTH">

<originalText>Other carbapenemase type not in value set</originalText>

</value>

</observation>

Central-Line Insertion Practice Clinical Statement (V2)

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01 (closed)]

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Table 163: Central-Line Insertion Practice Clinical Statement (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a CLIP Report (V2)](#S_Infection_Risk_Factors_Section_in_a_C) (required) | [Solutions Dried Observation](#E_Solutions_Dried_Observation) (required)  [Central-Line Insertion Preparation Organizer (V2)](#E_CentralLine_Insertion_Preparation_Org) (required) |

This clinical statement records whether specified infection-prevention actions were performed in a specified sequence.  
Recording sequence is expressed with the CDA entryRelationship/sequenceNumber feature. This follows the RIM modeling for definitions (e.g., of a protocol).  
A @negationInd on each step expresses whether the step did or did not occur in sequence.  
Below are the items, in sequence, to record within the Central-Line Insertion Practice Report:  
• preparation  
• hand hygiene  
• sterile barriers  
• skin solution(s) applied  
• skin solution(s) had dried

Table 164: Central-Line Insertion Practice Clinical Statement (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-22005](#C_1129-22005) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL |  | [1129-22006](#C_1129-22006) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1129-22007](#C_1129-22007) | false |
| templateId | 1..1 | SHALL |  | [1129-30516](#C_1129-30516) |  |
| @root | 1..1 | SHALL |  | [1129-30517](#C_1129-30517) | 2.16.840.1.113883.10.20.22.4.12 |
| templateId | 1..1 | SHALL |  | [1129-22965](#C_1129-22965) |  |
| @root | 1..1 | SHALL |  | [1129-28111](#C_1129-28111) | 2.16.840.1.113883.10.20.5.6.116 |
| @extension | 1..1 | SHALL |  | [1129-30518](#C_1129-30518) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-22966](#C_1129-22966) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-22968](#C_1129-22968) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| code | 1..1 | SHALL |  | [1129-22018](#C_1129-22018) |  |
| @code | 1..1 | SHALL |  | [1129-22019](#C_1129-22019) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3108-8 |
| entryRelationship | 1..1 | SHALL |  | [1129-22008](#C_1129-22008) |  |
| @typeCode | 1..1 | SHALL |  | [1129-22009](#C_1129-22009) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| sequenceNumber | 1..1 | SHALL |  | [1129-22011](#C_1129-22011) |  |
| @value | 1..1 | SHALL |  | [1129-22012](#C_1129-22012) | 1 |
| organizer | 1..1 | SHALL |  | [1129-30425](#C_1129-30425) | [Central-Line Insertion Preparation Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01](#E_CentralLine_Insertion_Preparation_Org) |
| entryRelationship | 1..1 | SHALL |  | [1129-22013](#C_1129-22013) |  |
| @typeCode | 1..1 | SHALL |  | [1129-22014](#C_1129-22014) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| sequenceNumber | 1..1 | SHALL |  | [1129-22016](#C_1129-22016) |  |
| @value | 1..1 | SHALL |  | [1129-22017](#C_1129-22017) | 2 |
| observation | 1..1 | SHALL |  | [1129-22015](#C_1129-22015) | [Solutions Dried Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.163](#E_Solutions_Dried_Observation) |

1. Conforms to Procedure Activity Act template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.12).
2. SHALL contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-22005).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-22006).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:1129-22007).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-30516) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.12" (CONF:1129-30517).
6. SHALL contain exactly one [1..1] templateId (CONF:1129-22965) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.116" (CONF:1129-28111).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30518).
7. SHALL contain exactly one [1..1] id (CONF:1129-22966).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1129-22968).
8. SHALL contain exactly one [1..1] code (CONF:1129-22018).
   1. This code SHALL contain exactly one [1..1] @code="3108-8" Central line insertion practice (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:1129-22019).
9. SHALL contain exactly one [1..1] entryRelationship (CONF:1129-22008) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:1129-22009).
   2. SHALL contain exactly one [1..1] sequenceNumber (CONF:1129-22011).
      1. This sequenceNumber SHALL contain exactly one [1..1] @value="1" (CONF:1129-22012).
   3. SHALL contain exactly one [1..1] [Central-Line Insertion Preparation Organizer (V2)](#E_CentralLine_Insertion_Preparation_Org) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01) (CONF:1129-30425).
10. SHALL contain exactly one [1..1] entryRelationship (CONF:1129-22013) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:1129-22014).
    2. SHALL contain exactly one [1..1] sequenceNumber (CONF:1129-22016).
       1. This sequenceNumber SHALL contain exactly one [1..1] @value="2" (CONF:1129-22017).
    3. SHALL contain exactly one [1..1] [Solutions Dried Observation](#E_Solutions_Dried_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.163) (CONF:1129-22015).

Figure 77: Central-Line Insertion Practice Clinical Statement (V2) Example

<act moodCode="EVN" classCode="ACT" negationInd="false">

<!-- C-CDA Procedure Activity Act templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.12" />

<!-- HAI Central-line Insertion Practice Clinical Statement (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.116"

extension="2014-12-01" />

<id nullFlavor="NA" />

<code code="3108-8"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Central line insertion practice" />

<entryRelationship typeCode="COMP">

<sequenceNumber value="1" />

<organizer moodCode="EVN" classCode="CLUSTER">

<!-- HAI Central-Line Insertion Preparation Organizer (V2) -->

<templateId root="2.16.840.1.113883.10.20.5.6.179"

extension="2014-12-01" />

...

</organizer>

</entryRelationship>

<entryRelationship typeCode="COMP">

<sequenceNumber value="2" />

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- HAI Solutions Dried Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.163" />

...

</observation>

</entryRelationship>

</act>

Central-Line Insertion Preparation Organizer (V2)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01 (closed)]

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Table 165: Central-Line Insertion Preparation Organizer (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Central-Line Insertion Practice Clinical Statement (V2)](#E_CentralLine_Insertion_Practice_Clinic) (required) | [Sterile Barriers Applied Clinical Statement](#E_Sterile_Barriers_Applied_Clinical_Sta) (required)  [Hand Hygiene Performed Clinical Statement](#E_Hand_Hygiene_Performed_Clinical_State) (required)  [Skin-Preparation Solutions Applied Organizer (V2)](#E_SkinPreparation_Solutions_Applied_Org) (required) |

This organizer represents the first step in the central-line insertion practice sequence. It records three types of preparations (which may have occurred in any order): hand hygiene, skin-preparation solutions, and sterile barriers.

Table 166: Central-Line Insertion Preparation Organizer (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-22086](#C_1129-22086) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [1129-22087](#C_1129-22087) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-22088](#C_1129-22088) |  |
| @root | 1..1 | SHALL |  | [1129-22089](#C_1129-22089) | 2.16.840.1.113883.10.20.5.6.179 |
| @extension | 1..1 | SHALL |  | [1129-30279](#C_1129-30279) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-22090](#C_1129-22090) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-22733](#C_1129-22733) | NA |
| statusCode | 1..1 | SHALL |  | [1129-22091](#C_1129-22091) |  |
| @code | 1..1 | SHALL |  | [1129-23060](#C_1129-23060) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..1 | SHALL |  | [1129-22092](#C_1129-22092) |  |
| procedure | 1..1 | SHALL |  | [1129-23057](#C_1129-23057) | [Hand Hygiene Performed Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.130](#E_Hand_Hygiene_Performed_Clinical_State) |
| component | 1..1 | SHALL |  | [1129-22093](#C_1129-22093) |  |
| organizer | 1..1 | SHALL |  | [1129-30426](#C_1129-30426) | [Skin-Preparation Solutions Applied Organizer (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01](#E_SkinPreparation_Solutions_Applied_Org) |
| component | 1..1 | SHALL |  | [1129-22094](#C_1129-22094) |  |
| procedure | 1..1 | SHALL |  | [1129-23059](#C_1129-23059) | [Sterile Barriers Applied Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.167](#E_Sterile_Barriers_Applied_Clinical_Sta) |

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-22086).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-22087).
3. SHALL contain exactly one [1..1] templateId (CONF:1129-22088) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.179" (CONF:1129-22089).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30279).
4. SHALL contain exactly one [1..1] id (CONF:1129-22090).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22733).
5. SHALL contain exactly one [1..1] statusCode (CONF:1129-22091).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1129-23060).
6. SHALL contain exactly one [1..1] component (CONF:1129-22092) such that it
   1. SHALL contain exactly one [1..1] [Hand Hygiene Performed Clinical Statement](#E_Hand_Hygiene_Performed_Clinical_State) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.130) (CONF:1129-23057).
7. SHALL contain exactly one [1..1] component (CONF:1129-22093) such that it
   1. SHALL contain exactly one [1..1] [Skin-Preparation Solutions Applied Organizer (V2)](#E_SkinPreparation_Solutions_Applied_Org) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01) (CONF:1129-30426).
8. SHALL contain exactly one [1..1] component (CONF:1129-22094) such that it
   1. SHALL contain exactly one [1..1] [Sterile Barriers Applied Clinical Statement](#E_Sterile_Barriers_Applied_Clinical_Sta) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.167) (CONF:1129-23059).

Figure 78: Central-Line Insertion Preparation Organizer (V2) Example

<organizer moodCode="EVN" classCode="CLUSTER">

<templateId root="2.16.840.1.113883.10.20.5.6.179"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<statusCode code="completed"/>

<component>

<procedure moodCode="EVN" classCode="PROC" negationInd="false">

<!-- Hand hygiene performed -->

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14"/>

<!-- HAI Hand Hygiene Performed Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.130"/>

...

</procedure>

</component>

<component>

<organizer moodCode="EVN" classCode="CLUSTER">

<!—Skin Preparation Solutions Applied Organizer (V2) -->

<templateId root="2.16.840.1.113883.10.20.5.6.183"

extension="2014-12-01"/>

...

</organizer>

</component>

<component>

<procedure moodCode="EVN" classCode="PROC" negationInd="false">

<!—Sterile Barriers Applied Clinical Statement -->

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14"/>

<!-- HAI Sterile Barriers Applied Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.167"/>

...

</procedure>

</component>

</organizer>

Closure Technique Procedure

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.117 (closed)]

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Table 167: Closure Technique Procedure Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Clinical Statement in a Procedure Report (V2)](#Procedure_Details_Clinical_Statement_in) (required) |  |

This procedure identifies the closure technique used in surgical procedures.

Table 168: Closure Technique Procedure Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.117) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21028](#C_86-21028) | PROC |
| @moodCode | 1..1 | SHALL |  | [86-21029](#C_86-21029) | EVN |
| templateId | 1..1 | SHALL |  | [86-28219](#C_86-28219) |  |
| @root | 1..1 | SHALL |  | [86-28220](#C_86-28220) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [86-21038](#C_86-21038) |  |
| @root | 1..1 | SHALL |  | [86-21039](#C_86-21039) | 2.16.840.1.113883.10.20.5.6.117 |
| id | 1..1 | SHALL |  | [86-21040](#C_86-21040) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22734](#C_86-22734) | NA |
| code | 1..1 | SHALL |  | [86-21032](#C_86-21032) |  |
| @code | 1..1 | SHALL |  | [86-21033](#C_86-21033) | 112695004 |
| @codeSystem | 1..1 | SHALL |  | [86-28352](#C_86-28352) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL |  | [86-21034](#C_86-21034) |  |
| @code | 1..1 | SHALL |  | [86-21035](#C_86-21035) | completed |
| methodCode | 1..1 | SHALL |  | [86-21036](#C_86-21036) | urn:oid:2.16.840.1.114222.4.11.6051 (NHSNClosureTechniqueCode) |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" (CONF:86-21028).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:86-21029).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28219) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28220).
5. SHALL contain exactly one [1..1] templateId (CONF:86-21038) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.117" (CONF:86-21039).
6. SHALL contain exactly one [1..1] id (CONF:86-21040).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22734).
7. SHALL contain exactly one [1..1] code (CONF:86-21032).
   1. This code SHALL contain exactly one [1..1] @code="112695004" Surgical Closure (CONF:86-21033).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28352).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-21034).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CONF:86-21035).
9. SHALL contain exactly one [1..1] methodCode, which SHALL be selected from ValueSet [NHSNClosureTechniqueCode](#NHSNClosureTechniqueCode) urn:oid:2.16.840.1.114222.4.11.6051 STATIC (CONF:86-21036).

Table 169: NHSNClosureTechniqueCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNClosureTechniqueCode urn:oid:2.16.840.1.114222.4.11.6051  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2406-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Primary |
| 2407-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Other than Primary |

Figure 79: Closure Technique Procedure Example

<!-- Closure Technique Procedure -->

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Closure Technique Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.117" />

<id nullFlavor="NA" />

<code code="112695004"

displayName="Surgical Closure"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT" />

<statusCode code="completed" />

<methodCode code="2406-7"

displayName="Primary"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</procedure>

Contraindicated Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01 (closed)]

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Table 170: Contraindicated Observation (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Skin Preparation Clinical Statement (V2)](#E_Skin_Preparation_Clinical_Statement_V2) (optional) | [Contraindication Type Observation](#E_Contraindication_Type_Observation) (optional) |

This observation records whether the target statement was contraindicated.  
If the target statement was contraindicated, set the value of @negationInd to false. If the target statement was not contraindicated (i.e., ok to proceed with the treatment specified by the target statement), set the value of @negationInd to true. If it is not known whether the target statement was contraindicated, set the value of @nullFlavor to "UNK". If the skin preparation choice was not chlorhexidine and there was a contraindication to chlorhexidine, then the contraindication type is required.

Table 171: Contraindicated Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01) | | | | | |
| @nullFlavor | 0..1 | SHOULD |  | [1129-21778](#C_1129-21778) |  |
| @classCode | 1..1 | SHALL |  | [1129-21780](#C_1129-21780) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-21781](#C_1129-21781) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | SHOULD |  | [1129-21782](#C_1129-21782) |  |
| templateId | 1..1 | SHALL |  | [1129-30519](#C_1129-30519) |  |
| @root | 1..1 | SHALL |  | [1129-30520](#C_1129-30520) | 2.16.840.1.113883.10.20.22.4.19 |
| templateId | 1..1 | SHALL |  | [1129-21785](#C_1129-21785) |  |
| @root | 1..1 | SHALL |  | [1129-28109](#C_1129-28109) | 2.16.840.1.113883.10.20.5.6.118 |
| @extension | 1..1 | SHALL |  | [1129-30521](#C_1129-30521) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-21786](#C_1129-21786) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-21793](#C_1129-21793) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| code | 1..1 | SHALL |  | [1129-21787](#C_1129-21787) |  |
| @code | 1..1 | SHALL |  | [1129-21788](#C_1129-21788) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1129-30604](#C_1129-30604) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1129-21789](#C_1129-21789) |  |
| @code | 1..1 | SHALL |  | [1129-21790](#C_1129-21790) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1129-21791](#C_1129-21791) |  |
| @code | 1..1 | SHALL |  | [1129-21792](#C_1129-21792) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 410536001 |
| entryRelationship | 0..\* | MAY |  | [1129-28106](#C_1129-28106) |  |
| @typeCode | 1..1 | SHALL |  | [1129-28107](#C_1129-28107) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL |  | [1129-30427](#C_1129-30427) | [Contraindication Type Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01](#E_Contraindication_Type_Observation) |

1. Conforms to Indication template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.19).
2. SHOULD contain zero or one [0..1] @nullFlavor (CONF:1129-21778).
   1. If it is not known whether the target statement was contraindicated, the value of @nullFlavor SHALL be UNK.If the value of @nullFlavor is set to UNK then the value of @negationInd SHALL NOT be set (CONF:1129-21779).
3. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-21780).
4. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-21781).
5. SHOULD contain zero or one [0..1] @negationInd (CONF:1129-21782).
   1. If the target statement was contraindicated, the value of @negationInd SHALL be false. If the target statement was not contraindicated (i.e., ok to proceed with the treatment specified by the target statement), the value of @negationInd SHALL be true. If the value of @negationInd is set then the value of @nullFlavor SHALL NOT be set (CONF:1129-21783).
6. SHALL contain exactly one [1..1] templateId (CONF:1129-30519) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.19" (CONF:1129-30520).
7. SHALL contain exactly one [1..1] templateId (CONF:1129-21785) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.118" (CONF:1129-28109).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30521).
8. SHALL contain exactly one [1..1] id (CONF:1129-21786).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1129-21793).
9. SHALL contain exactly one [1..1] code (CONF:1129-21787).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1129-21788).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30604).
10. SHALL contain exactly one [1..1] statusCode (CONF:1129-21789).
    1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-21790).
11. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1129-21791).
    1. This value SHALL contain exactly one [1..1] @code="410536001" Contraindicated (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:1129-21792).

If the skin preparation choice was not chlorhexidine and there was a contraindication to chlorhexidine, the following entryRelationship is required.

1. MAY contain zero or more [0..\*] entryRelationship (CONF:1129-28106) such that it
   1. SHALL contain exactly one [1..1] @typeCode="RSON" Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1129-28107).
   2. SHALL contain exactly one [1..1] [Contraindication Type Observation](#E_Contraindication_Type_Observation) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01) (CONF:1129-30427).

Figure 80: Contraindicated Observation (V2) Example - Contraindicated

<!-- It is true (not negated) that the target statement was contraindicated -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Indication templateId-->

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>

<!-- HAI Contraindicated Observation (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.118"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD" code="410536001"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT" displayName="Contraindicated"/>

<entryRelationship typeCode="RSON">

<!-- Contraindication Type Observation -->

<observation moodCode="EVN" classCode="OBS">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Contraindication Type Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.216"

extension="2014-12-01"/>

...

</observation>

</entryRelationship>

</observation>

Figure 81: Contraindicated Observation (V2) Example - Not contraindicated

<!-- It is false (negated) that the target statement was contraindicated -->

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- C-CDA Indication templateId-->

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>

<!-- HAI Contraindicated Observation (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.118"

extension="2014-12-01" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.5.4"

code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="410536001"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

displayName="Contraindicated"/>

</observation>

Contraindication Type Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01 (closed)]

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Table 172: Contraindication Type Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Contraindicated Observation (V2)](#E_Contraindicated_Observation_V2) (optional) |  |

This template represents the type of contraindication.

Table 173: Contraindication Type Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-5](#C_1129-5) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-6](#C_1129-6) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30522](#C_1129-30522) |  |
| @root | 1..1 | SHALL |  | [1129-30523](#C_1129-30523) | 2.16.840.1.113883.10.20.5.6.216 |
| @extension | 1..1 | SHALL |  | [1129-30524](#C_1129-30524) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-2](#C_1129-2) |  |
| @code | 1..1 | SHALL |  | [1129-8](#C_1129-8) | 6130-9 |
| @codeSystem | 1..1 | SHALL |  | [1129-9](#C_1129-9) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [1129-4](#C_1129-4) |  |
| @code | 1..1 | SHALL |  | [1129-12](#C_1129-12) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1129-10](#C_1129-10) | urn:oid:2.16.840.1.114222.4.11.7239 (NHSNContraindicationType) |

1. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-5).
2. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-6).
3. SHALL contain exactly one [1..1] templateId (CONF:1129-30522) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.216" (CONF:1129-30523).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30524).
4. SHALL contain exactly one [1..1] code (CONF:1129-2).
   1. This code SHALL contain exactly one [1..1] @code="6130-9" Contraindication type (CONF:1129-8).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:1129-9).
5. SHALL contain exactly one [1..1] statusCode (CONF:1129-4).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-12).
6. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNContraindicationType](#NHSNContraindicationType) urn:oid:2.16.840.1.114222.4.11.7239 DYNAMIC (CONF:1129-10).

Table 174: NHSNContraindicationType

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNContraindicationType urn:oid:2.16.840.1.114222.4.11.7239  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 6131-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Patient is less than 2 months of age - chlorhexidine is to be used with caution in patients less than 2 months of age. |
| 6132-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Patient has a documented/known allergy/reaction to CHG based products that would preclude its use |
| 6133-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Facility restrictions or safety concerns for CHG use in premature infants precludes its use |

Figure 82: Contraindication Type Observation Example

<observation moodCode="EVN" classCode="OBS">

<!-- Contraindication Type Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.216"

extension="2014-12-01" />

<code code="6130-9"

displayName="Contraindication type"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="6133-3"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Facility restrictions or safety concerns for CHG use in

premature infants precludes its use"/>

</observation>

Criteria of Diagnosis Organizer

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.5.6.180 (closed)]

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Table 175: Criteria of Diagnosis Organizer Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection-Type Observation](#E_InfectionType_Observation) (required)  [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (required)  [Surgical Site Infection Observation (RETIRED)](#E_Surgical_Site_Infection_Observation_R) (required) | [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) (required) |

This organizer groups together the criteria used in the diagnosis of an infection or the identification of an adverse reaction. Each criterion is recorded as a Criterion of Diagnosis Observation.

The Criteria of Diagnosis Organizer is used in several report types. The NHSN protocol specifies which criteria are to be recorded for each report type. Those rules do not form part of this template. The NHSN submission requirement is that, in a given report type, a Criterion of Diagnosis Observation must be present for every datum required by the NHSN protocol for that report type, with an appropriate value for @negationInd.

In an Evidence of Infection (Dialysis) Report, to record that none of the criteria of diagnosis was present, set the value of the observation/@negationInd to true for each criterion required in this report.

Table 176: Criteria of Diagnosis Organizer Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22101](#C_86-22101) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [86-22102](#C_86-22102) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22103](#C_86-22103) |  |
| @root | 1..1 | SHALL |  | [86-22104](#C_86-22104) | 2.16.840.1.113883.10.20.5.6.180 |
| statusCode | 1..1 | SHALL |  | [86-22106](#C_86-22106) |  |
| @code | 1..1 | SHALL |  | [86-23061](#C_86-23061) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..\* | SHALL |  | [86-22107](#C_86-22107) |  |
| observation | 1..1 | SHALL |  | [86-23062](#C_86-23062) | [Criterion of Diagnosis Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.119](#E_Criterion_of_Diagnosis_Observation) |

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22101).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22102).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22103) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.180" (CONF:86-22104).
4. SHALL contain exactly one [1..1] statusCode (CONF:86-22106).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-23061).
5. SHALL contain at least one [1..\*] component (CONF:86-22107).
   1. Such components SHALL contain exactly one [1..1] [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.119) (CONF:86-23062).

Figure 83: Criteria of Diagnosis Organizer Example

<organizer classCode="CLUSTER" moodCode="EVN”>

<templateId root=”2.16.840.1.113883.10.20.5.6.180”/>

<statusCode code="completed"/>

<component>

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Indication templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>

<!-- HAI Criteria of Diagnosis Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.119"/>

...

</observation>

</component>

...

</organizer>

Criterion of Diagnosis Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.119 (closed)]

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Table 177: Criterion of Diagnosis Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) (required) |  |

This observation records a criterion used in the diagnosis of the infection type or the identification of an adverse reaction. It appears within the Criterion of Diagnosis Organizer. In infection-type reports it is used with the Criterion of Diagnosis vocabulary.

If the criterion was present, set the value of @negationInd to false. If the criterion was not present, set the value of @negationInd to true.

The NHSN protocol specifies which Criterion of Diagnosis Observations must appear in each report type for which they are required. Those rules do not form part of this template.

Table 178: Criterion of Diagnosis Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.119) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22126](#C_86-22126) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22127](#C_86-22127) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-22128](#C_86-22128) |  |
| templateId | 1..1 | SHALL |  | [86-28221](#C_86-28221) |  |
| @root | 1..1 | SHALL |  | [86-28222](#C_86-28222) | 2.16.840.1.113883.10.20.22.4.19 |
| templateId | 1..1 | SHALL |  | [86-22129](#C_86-22129) |  |
| @root | 1..1 | SHALL |  | [86-22140](#C_86-22140) | 2.16.840.1.113883.10.20.5.6.119 |
| id | 1..1 | SHALL |  | [86-22130](#C_86-22130) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22736](#C_86-22736) | NA |
| code | 1..1 | SHALL |  | [86-22131](#C_86-22131) |  |
| @code | 1..1 | SHALL |  | [86-22132](#C_86-22132) | ASSERTION |
| @codeSystem | 0..1 | MAY |  | [86-28373](#C_86-28373) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-22133](#C_86-22133) |  |
| @code | 1..1 | SHALL |  | [86-22134](#C_86-22134) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL |  | [86-22135](#C_86-22135) |  |

1. Conforms to Indication template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.19).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22126).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22127).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-22128).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28221) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.19" (CONF:86-28222).
6. SHALL contain exactly one [1..1] templateId (CONF:86-22129) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.119" (CONF:86-22140).
7. SHALL contain exactly one [1..1] id (CONF:86-22130).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22736).
8. SHALL contain exactly one [1..1] code (CONF:86-22131).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-22132).
   2. This code MAY contain zero or one [0..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28373).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-22133).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-22134).
10. SHALL contain exactly one [1..1] value (CONF:86-22135).
    1. In an infection-type report, a criterion is reported as a code. The value of @xsi:type SHALL be CD and the value of @code SHALL be selected from Value Set 2.16.840.1.114222.4.11.3195 NHSNCriterionOfDiagnosisCode DYNAMIC (CONF:86-22136).
    2. In an Evidence of Infection (Dialysis) Report, (CONF:86-22137).
       1. To record a criterion of diagnosis as a code, the value of @xsi:type SHALL be CD and the value of @code SHALL be selected from Value Set 2.16.840.1.114222.4.11.3195 NHSNCriterionOfDiagnosisCode DYNAMIC (CONF:86-22138).
       2. To record a criterion not included in the NHSNCriterionOfDiagnosisCode value set, the value of @xsi:type SHALL be ST and a text value SHALL be present (CONF:86-22139).

Table 179: NHSNCriterionOfDiagnosisCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNCriterionOfDiagnosisCode urn:oid:2.16.840.1.114222.4.11.3195  Code System: SNOMED CT 2.16.840.1.113883.6.96 or cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1901-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Not cultured |
| 1964-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Allo-SCT with Grade > 3 GI GVHD |
| 1965-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Allo- SCT with diarrhea |
| 165517008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Neutropenia |
| 1966-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Positive culture from greater than or equal to two separate tissue or fluid samples from affected joint |
| 1902-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Blood culture not done or no organisms detected in blood |
| 1929-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | &gt;=2 positive cultures with &gt;=10^2 col/ml of same uropathogen from nonvoided specimen |
| 1931-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | &gt;=2 positive urine cultures with &gt;=10^5 col/cc with no more than 2 organisms |
| 1923-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | &gt;=5% BAL cells w/bacteria |
| 1942-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | &gt;15 colonies cultured from IV cannula tip using semiquantitative culture method |
| ... | | | |

Figure 84: Criterion of Diagnosis Observation Examples

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Indication templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>

<!-- HAI Criteria of Diagnosis Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.119"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code=”ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

code="255320000"

displayName="Purulent drainage"/>

</observation>

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- C-CDA Indication templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>

<!-- HAI Criteria of Diagnosis Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.119"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

code="386661006"

displayName="Fever"/>

<!-- In the EOID Report, if there is no applicable

coded value, a text string can be used:

<value xsi:type="ST">An itchy sensation</value>

-->

</observation>

Death Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.120 (closed)]

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Table 180: Death Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Details Section in a BSI Report](#S_Infection_Details_Section_in_a_BSI_Re) (optional)  [Infection Details Section in a UTI Report](#S_Infection_Details_Section_in_a_UTI_Re) (optional)  [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) (optional)  [Infection Details Section in a VAE Report](#S_Infection_Details_Section_in_a_VAE_Re) (required)  [Infection Details in Late Onset Sepsis Report](#S_Infection_Details_in_Late_Onset_Sepsi) (required) | [Infection Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) (optional) |

This observation records whether the patient died and, if so, whether the infection being recorded contributed to that death.

If the patient died, set the value of @negationInd to false. If the patient did not die, set the value of @negationInd to true.

If the patient died, the Death Observation must also indicate whether the infection contributed to the death using an entryRelationship element containing an Infection Contributed to Death Observation. An inversionInd attribute on this entryRelationship element indicates that it should be interpreted as if the roles of the source and target entries were reversed. Thus, the observation reports whether the infection “supported” (contributed to) the death. The CAUS value does not have the force of “cause of death” on a death certificate; it indicates that the infection is causal or contributory to the death.

Table 181: Death Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.120) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19611](#C_86-19611) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19612](#C_86-19612) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19613](#C_86-19613) |  |
| templateId | 1..1 | SHALL |  | [86-28223](#C_86-28223) |  |
| @root | 1..1 | SHALL |  | [86-28224](#C_86-28224) | 2.16.840.1.113883.10.20.22.4.79 |
| templateId | 1..1 | SHALL |  | [86-19623](#C_86-19623) |  |
| @root | 1..1 | SHALL |  | [86-19624](#C_86-19624) | 2.16.840.1.113883.10.20.5.6.120 |
| id | 1..1 | SHALL |  | [86-19625](#C_86-19625) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22739](#C_86-22739) | NA |
| code | 1..1 | SHALL |  | [86-19614](#C_86-19614) |  |
| @code | 1..1 | SHALL |  | [86-19615](#C_86-19615) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28374](#C_86-28374) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19616](#C_86-19616) |  |
| @code | 1..1 | SHALL |  | [86-19617](#C_86-19617) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-19626](#C_86-19626) |  |
| low | 1..1 | SHALL |  | [86-19627](#C_86-19627) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22740](#C_86-22740) | NA |
| value | 1..1 | SHALL | CD | [86-19618](#C_86-19618) |  |
| @code | 1..1 | SHALL |  | [86-19619](#C_86-19619) | 419099009 |
| @codeSystem | 1..1 | SHALL |  | [86-28353](#C_86-28353) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| entryRelationship | 0..1 | MAY |  | [86-23063](#C_86-23063) |  |
| @typeCode | 1..1 | SHALL |  | [86-23064](#C_86-23064) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = CAUS |
| @inversionInd | 1..1 | SHALL |  | [86-23065](#C_86-23065) | true |
| @negationInd | 1..1 | SHALL |  | [86-23066](#C_86-23066) |  |
| observation | 1..1 | SHALL |  | [86-23068](#C_86-23068) | [Infection Contributed to Death Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.136](#E_Infection_Contributed_to_Death_Observ) |

1. Conforms to Deceased Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.79).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19611).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19612).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-19613).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28223) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.79" (CONF:86-28224).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19623) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.120" (CONF:86-19624).
7. SHALL contain exactly one [1..1] id (CONF:86-19625).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22739).
8. SHALL contain exactly one [1..1] code (CONF:86-19614).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19615).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28374).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19616).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19617).
10. SHALL contain exactly one [1..1] effectiveTime (CONF:86-19626).
    1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-19627).
       1. This low SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22740).
11. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-19618).
    1. This value SHALL contain exactly one [1..1] @code="419099009" Dead (CONF:86-19619).
    2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28353).
12. MAY contain zero or one [0..1] entryRelationship (CONF:86-23063).
    1. The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="CAUS" is etiology for (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23064).
    2. The entryRelationship, if present, SHALL contain exactly one [1..1] @inversionInd="true" (CONF:86-23065).
    3. The entryRelationship, if present, SHALL contain exactly one [1..1] @negationInd (CONF:86-23066).
       1. If the infection contributed to death, set the value of @negationInd to false. If the infection did not contribute to the death, set the value of @negationInd to true (CONF:86-23067).
    4. The entryRelationship, if present, SHALL contain exactly one [1..1] [Infection Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.136) (CONF:86-23068).
    5. If the patient died, an entryRelationship element SHALL be present and SHALL contain an Infection Contributed to Death Observation (CONF:86-23069).

Figure 85: Death Observation Example

<!-- "Dead" is not negated = patient died -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Deceased Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.79"/>

<!-- HAI Death Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.120"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4"

code="ASSERTION"/>

<statusCode code="completed"/>

<effectiveTime>

<low nullFlavor="NA"/>

</effectiveTime>

<value xsi:type="CD"

code="419099009"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

displayName="Dead"/>

<!-- The infection did contribute to the death (causality is not negated) -->

<entryRelationship typeCode=”CAUS” inversionInd=”true” negationInd=”false”>

<observation classCode=”OBS” moodCode=”EVN”>

<!-- Infection Contributed to Death Observation templateId -->

<templateId root=”2.16.840.1.113883.10.20.5.6.136”/>

...

</observation>

</entryRelationship>

</observation>

Death Observation in an Evidence of Infection (Dialysis) Report

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.121 (closed)]

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Table 182: Death Observation in an Evidence of Infection (Dialysis) Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (required) |  |

This observation records whether the outpatient died subsequent to the observation of an infection indicator.

When the patient died, set the value of @negationInd to false. When the patient did not die, set the value of @negationInd to true. When it is unknown whether the patient died, set the value of @nullFlavor to NI.

Table 183: Death Observation in an Evidence of Infection (Dialysis) Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.121) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [86-19644](#C_86-19644) |  |
| @classCode | 1..1 | SHALL |  | [86-19628](#C_86-19628) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19629](#C_86-19629) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY |  | [86-19645](#C_86-19645) |  |
| templateId | 1..1 | SHALL |  | [86-28225](#C_86-28225) |  |
| @root | 1..1 | SHALL |  | [86-28226](#C_86-28226) | 2.16.840.1.113883.10.20.22.4.79 |
| templateId | 1..1 | SHALL |  | [86-19639](#C_86-19639) |  |
| @root | 1..1 | SHALL |  | [86-19640](#C_86-19640) | 2.16.840.1.113883.10.20.5.6.121 |
| id | 1..1 | SHALL |  | [86-19641](#C_86-19641) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22742](#C_86-22742) | NA |
| code | 1..1 | SHALL |  | [86-19630](#C_86-19630) |  |
| @code | 1..1 | SHALL |  | [86-19631](#C_86-19631) | ASSERTION |
| @codeSystem | 0..1 | MAY |  | [86-28375](#C_86-28375) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19632](#C_86-19632) |  |
| @code | 1..1 | SHALL |  | [86-19633](#C_86-19633) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-19642](#C_86-19642) |  |
| low | 1..1 | SHALL |  | [86-19643](#C_86-19643) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22743](#C_86-22743) | NA |
| value | 1..1 | SHALL | CD | [86-19634](#C_86-19634) |  |
| @code | 1..1 | SHALL |  | [86-19635](#C_86-19635) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 419099009 |

1. Conforms to Deceased Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.79).
2. MAY contain zero or one [0..1] @nullFlavor (CONF:86-19644).
   1. If @negationInd is present then @nullFlavor SHALL NOT contain a value (CONF:86-19646).
3. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19628).
4. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19629).
5. MAY contain zero or one [0..1] @negationInd (CONF:86-19645).
   1. If @nullFlavor is present then @negationInd SHALL NOT contain a value (CONF:86-19647).
6. SHALL contain exactly one [1..1] templateId (CONF:86-28225) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.79" (CONF:86-28226).
7. SHALL contain exactly one [1..1] templateId (CONF:86-19639) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.121" (CONF:86-19640).
8. SHALL contain exactly one [1..1] id (CONF:86-19641).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22742).
9. SHALL contain exactly one [1..1] code (CONF:86-19630).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19631).
   2. This code MAY contain zero or one [0..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28375).
10. SHALL contain exactly one [1..1] statusCode (CONF:86-19632).
    1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19633).
11. SHALL contain exactly one [1..1] effectiveTime (CONF:86-19642).
    1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-19643).
       1. This low SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22743).
12. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-19634).
    1. This value SHALL contain exactly one [1..1] @code="419099009" Dead (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-19635).
13. *SHALL* contain either @nullFlavor or @negationInd, but SHALL NOT contain both (CONF:86-19648).

Figure 86: Death Observation in an EOID Report Example

<!-- There is no information about whether the patient has died -->

<observation classCode="OBS" moodCode="EVN" nullFlavor="NI">

<!-- C-CDA Deceased Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.79"/>

<!-- HAI Death Observation in an Evidence of Infection (Dialysis) Report -->

<templateId root="2.16.840.1.113883.10.20.5.6.121"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4"

code="ASSERTION"/>

<statusCode code="completed"/>

<effectiveTime>

<low nullFlavor="NA"/>

</effectiveTime>

<value xsi:type="CD"

code="419099009"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

displayName="Dead"/>

</observation>

Device Insertion Time and Location Procedure

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.122 (closed)]

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Table 184: Device Insertion Time and Location Procedure Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation) (optional)  [Urinary Catheter Observation](#E_Urinary_Catheter_Observation) (optional) |  |

This clinical statement records the location of the patient and the time when the device was inserted.

Table 185: Device Insertion Time and Location Procedure Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21041](#C_86-21041) | PROC |
| @moodCode | 1..1 | SHALL |  | [86-21042](#C_86-21042) | EVN |
| templateId | 1..1 | SHALL |  | [86-28227](#C_86-28227) |  |
| @root | 1..1 | SHALL |  | [86-28228](#C_86-28228) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [86-21063](#C_86-21063) |  |
| @root | 1..1 | SHALL |  | [86-21064](#C_86-21064) | 2.16.840.1.113883.10.20.5.6.122 |
| id | 1..1 | SHALL |  | [86-21065](#C_86-21065) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22744](#C_86-22744) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| code | 1..1 | SHALL |  | [86-21044](#C_86-21044) |  |
| @code | 1..1 | SHALL |  | [86-21066](#C_86-21066) | 71861002 |
| @codeSystem | 1..1 | SHALL |  | [86-28103](#C_86-28103) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL |  | [86-21046](#C_86-21046) |  |
| @code | 1..1 | SHALL |  | [86-28106](#C_86-28106) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-21047](#C_86-21047) |  |
| low | 1..1 | SHALL |  | [86-21048](#C_86-21048) |  |
| participant | 0..\* | MAY |  | [86-21049](#C_86-21049) |  |
| @typeCode | 1..1 | SHALL |  | [86-21050](#C_86-21050) | LOC |
| participantRole | 1..1 | SHALL |  | [86-21051](#C_86-21051) |  |
| @classCode | 1..1 | SHALL |  | [86-21052](#C_86-21052) | SDLOC |
| id | 1..1 | SHALL |  | [86-21053](#C_86-21053) |  |
| @root | 1..1 | SHALL |  | [86-21054](#C_86-21054) |  |
| @extension | 1..1 | SHALL |  | [86-21056](#C_86-21056) |  |
| playingEntity | 1..1 | SHALL |  | [86-21057](#C_86-21057) |  |
| @classCode | 1..1 | SHALL |  | [86-21058](#C_86-21058) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC |
| code | 1..1 | SHALL |  | [86-21059](#C_86-21059) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" (CONF:86-21041).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:86-21042).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28227) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28228).
5. SHALL contain exactly one [1..1] templateId (CONF:86-21063) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.122" (CONF:86-21064).
6. SHALL contain exactly one [1..1] id (CONF:86-21065).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-22744).
7. SHALL contain exactly one [1..1] code (CONF:86-21044).
   1. This code SHALL contain exactly one [1..1] @code="71861002" Insertion procedure (CONF:86-21066).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28103).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-21046).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28106).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21047).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-21048).
10. MAY contain zero or more [0..\*] participant (CONF:86-21049).
    1. The participant, if present, SHALL contain exactly one [1..1] @typeCode="LOC" (CONF:86-21050).
    2. The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:86-21051).
       1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" (CONF:86-21052).
       2. This participantRole SHALL contain exactly one [1..1] id (CONF:86-21053).
          1. This id SHALL contain exactly one [1..1] @root (CONF:86-21054).
             1. This id/@root SHALL contain the facility identifier (CONF:86-21055).
          2. This id SHALL contain exactly one [1..1] @extension (CONF:86-21056).
       3. This participantRole SHALL contain exactly one [1..1] playingEntity (CONF:86-21057).
          1. This playingEntity SHALL contain exactly one [1..1] @classCode="PLC" (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:86-21058).
          2. This playingEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC (CONF:86-21059).

Figure 87: Device Insertion Time and Location Procedure Example

<!-- Device Insertion Time and Location Procedure -->

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Device Insertion Time and Location Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.122" />

<id nullFlavor="NA" />

<code code="71861002"

displayName="Insertion procedure"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT" />

<statusCode code="completed" />

<effectiveTime>

<low value="20120808" />

</effectiveTime>

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<!-- root = facility assigned OID; extension = NHSN location ("your code") -->

<id root="2.16.840.1.114222.4.3.2.11" extension="123456" />

<playingEntity classCode="PLC">

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 HealthcareServiceLocation"

code="1029-8"

displayName="Medical/Surgical Critical Care" />

</playingEntity>

</participantRole>

</participant>

</procedure>

Diabetes Mellitus Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.123 (closed)]

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Table 186: Diabetes Mellitus Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (required) |  |

This observation records whether the person had diabetes mellitus.  
If the person did have diabetes, set the value of @negationInd to false. If the person did not have diabetes mellitus, set the value of @negationInd to true.

Table 187: Diabetes Mellitus Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.123) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21000](#C_86-21000) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21001](#C_86-21001) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21002](#C_86-21002) |  |
| templateId | 1..1 | SHALL |  | [86-28229](#C_86-28229) |  |
| @root | 1..1 | SHALL |  | [86-28230](#C_86-28230) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-21005](#C_86-21005) |  |
| @root | 1..1 | SHALL |  | [86-21006](#C_86-21006) | 2.16.840.1.113883.10.20.5.6.123 |
| id | 1..1 | SHALL |  | [86-21007](#C_86-21007) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22745](#C_86-22745) | NA |
| code | 1..1 | SHALL |  | [86-21008](#C_86-21008) |  |
| @code | 1..1 | SHALL |  | [86-21009](#C_86-21009) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28376](#C_86-28376) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21010](#C_86-21010) |  |
| @code | 1..1 | SHALL |  | [86-21011](#C_86-21011) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21012](#C_86-21012) |  |
| @code | 1..1 | SHALL | CS | [86-21013](#C_86-21013) | 73211009 |
| @codeSystem | 1..1 | SHALL |  | [86-28354](#C_86-28354) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21000).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21001).

If the person did have diabetes, set the value of @negationInd to false. If the person did not have diabetes mellitus, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:86-21002).
2. SHALL contain exactly one [1..1] templateId (CONF:86-28229) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28230).
3. SHALL contain exactly one [1..1] templateId (CONF:86-21005) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.123" (CONF:86-21006).
4. SHALL contain exactly one [1..1] id (CONF:86-21007).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22745).
5. SHALL contain exactly one [1..1] code (CONF:86-21008).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21009).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28376).
6. SHALL contain exactly one [1..1] statusCode (CONF:86-21010).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21011).
7. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21012).
   1. This value SHALL contain exactly one [1..1] @code="73211009" Diabetes mellitus (CONF:86-21013).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28354).

Figure 88: Diabetes Mellitus Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Diabetes Mellitus Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.123"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="73211009"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

displayName="Diabetes mellitus"/>

</observation>

Dialysis Clinic Admission Clinical Statement

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.124 (closed)]

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Table 188: Dialysis Clinic Admission Clinical Statement Contexts

| Contained By: | Contains: |
| --- | --- |
| [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (required) |  |

This statement records whether the patient was (re)admitted to the dialysis facility on the same day as, or after, the dialysis event. The infection (dialysis event) observation is specified in the entryRelationship/observation/value element.  
If the infection (dialysis event) began on or after the date the patient was admitted, set the value of entryRelationship/@inversionInd to true. If the infection (dialysis event) began before the date the patient was admitted, set the value of entryRelationship/@inversionInd to false.

Table 189: Dialysis Clinic Admission Clinical Statement Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.124) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-23263](#C_86-23263) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [86-23264](#C_86-23264) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-23265](#C_86-23265) |  |
| @root | 1..1 | SHALL |  | [86-23266](#C_86-23266) | 2.16.840.1.113883.10.20.5.6.124 |
| id | 1..1 | SHALL |  | [86-23267](#C_86-23267) |  |
| entryRelationship | 1..1 | SHALL |  | [86-23269](#C_86-23269) |  |
| @typeCode | 1..1 | SHALL |  | [86-23272](#C_86-23272) | SAS |
| @inversionInd | 1..1 | SHALL |  | [86-23273](#C_86-23273) |  |
| observation | 1..1 | SHALL |  | [86-23275](#C_86-23275) |  |
| @classCode | 1..1 | SHALL |  | [86-23276](#C_86-23276) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-23277](#C_86-23277) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| id | 1..1 | SHALL |  | [86-23278](#C_86-23278) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-27747](#C_86-27747) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| code | 1..1 | SHALL |  | [86-23280](#C_86-23280) |  |
| @code | 1..1 | SHALL |  | [86-23281](#C_86-23281) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-23282](#C_86-23282) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-23283](#C_86-23283) |  |
| @code | 1..1 | SHALL |  | [86-23284](#C_86-23284) | completed |
| value | 1..1 | SHALL | CD | [86-23285](#C_86-23285) |  |
| @code | 1..1 | SHALL |  | [86-27748](#C_86-27748) | 40733004 |
| @codeSystem | 1..1 | SHALL |  | [86-27749](#C_86-27749) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |

1. SHALL contain exactly one [1..1] @classCode="ENC" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-23263).
2. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-23264).
3. SHALL contain exactly one [1..1] templateId (CONF:86-23265) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.124" (CONF:86-23266).
4. SHALL contain exactly one [1..1] id (CONF:86-23267).
   1. This is the id of the encompassing encounter (CONF:86-23268).
5. SHALL contain exactly one [1..1] entryRelationship (CONF:86-23269).
   1. This entryRelationship SHALL contain exactly one [1..1] @typeCode="SAS" (CONF:86-23272).
   2. This entryRelationship SHALL contain exactly one [1..1] @inversionInd (CONF:86-23273).
      1. If the infection (dialysis event) began on or after the date the patient was admitted, set the value of @inversionInd to true. If the infection (dialysis event) began before the date the patient was admitted, set the value of @inversionInd to false (CONF:86-23274).
   3. This entryRelationship SHALL contain exactly one [1..1] observation (CONF:86-23275).
      1. This observation SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-23276).
      2. This observation SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-23277).
      3. This observation SHALL contain exactly one [1..1] id (CONF:86-23278).
         1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-27747).
      4. This observation SHALL contain exactly one [1..1] code (CONF:86-23280).
         1. This code SHALL contain exactly one [1..1] @code="ASSERTION" (CONF:86-23281).
         2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-23282).
      5. This observation SHALL contain exactly one [1..1] statusCode (CONF:86-23283).
         1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CONF:86-23284).
      6. This observation SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-23285).
         1. This value SHALL contain exactly one [1..1] @code="40733004" Infection (CONF:86-27748).
         2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-27749).

Figure 89: Dialysis Clinic Admission Clinical Statement Example

<encounter classCode="ENC" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.124" />

<!-- the id of the encompassingEncounter -->

<!-- Facility-generated Event/Procedure number -->

<id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.3" extension="31" />

<entryRelationship typeCode="SAS" inversionInd="true">

<observation classCode="OBS" moodCode="EVN">

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="40733004"

codeSystem="2.16.840.1.113883.6.96"

displayName="Infection" />

</observation>

</entryRelationship>

</encounter>

Dialysis Patient Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.125 (closed)]

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Table 190: Dialysis Patient Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)](#S_Risk_Factors_Section_in_an_Evidence_o) (required) | [Transient Patient Observation](#E_Transient_Patient_Observation) (required) |

This observation records that the patient is a maintenance hemodialysis patient. It is used in the Evidence of Infection (Dialysis) Report.  
These reports are submitted for outpatients for whom an infection indicator is observed. The encounter is recorded in the CDA header as being an outpatient encounter

Table 191: Dialysis Patient Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.125) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21747](#C_86-21747) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21748](#C_86-21748) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21749](#C_86-21749) | false |
| templateId | 1..1 | SHALL |  | [86-28231](#C_86-28231) |  |
| @root | 1..1 | SHALL |  | [86-28232](#C_86-28232) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-21752](#C_86-21752) |  |
| @root | 1..1 | SHALL |  | [86-21753](#C_86-21753) | 2.16.840.1.113883.10.20.5.6.125 |
| id | 1..1 | SHALL |  | [86-21754](#C_86-21754) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22747](#C_86-22747) | NA |
| code | 1..1 | SHALL |  | [86-21755](#C_86-21755) |  |
| @code | 1..1 | SHALL |  | [86-21756](#C_86-21756) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28377](#C_86-28377) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21757](#C_86-21757) |  |
| @code | 1..1 | SHALL |  | [86-21758](#C_86-21758) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21759](#C_86-21759) |  |
| @code | 1..1 | SHALL |  | [86-21760](#C_86-21760) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 236435004 |
| entryRelationship | 1..1 | SHALL |  | [86-21761](#C_86-21761) |  |
| @typeCode | 1..1 | SHALL |  | [86-21762](#C_86-21762) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-21763](#C_86-21763) | [Transient Patient Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.169](#E_Transient_Patient_Observation) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21747).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21748).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-21749).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28231) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28232).
6. SHALL contain exactly one [1..1] templateId (CONF:86-21752) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.125" (CONF:86-21753).
7. SHALL contain exactly one [1..1] id (CONF:86-21754).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22747).
8. SHALL contain exactly one [1..1] code (CONF:86-21755).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21756).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28377).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21757).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21758).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21759).
    1. This value SHALL contain exactly one [1..1] @code="236435004" End-stage renal failure, on dialysis (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-21760).
11. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21761) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21762).
    2. SHALL contain exactly one [1..1] [Transient Patient Observation](#E_Transient_Patient_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.169) (CONF:86-21763).

Figure 90: Dialysis Patient Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Dialysis Patient Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.125"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="236435004"

displayName="End-stage renal failure, on dialysis"/>

<!-- Transient Patient Observation -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Transient Patient Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.169 "/>

...

</observation>

</entryRelationship>

</observation>

Dialyzer Reused Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01 (closed)]

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Table 192: Dialyzer Reused Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)](#S_Risk_Factors_Section_in_an_Evidence_o) (required) |  |

This observation records whether the patient's dialyzer is reprocessed for reuse or whether a new dialyzer is used for each hemodialysis treatment.

When the patient's dialyzer is reused, set the value of @negationInd to false. When the patient's dialyzer is not reused, set the value of @negationInd to true.

Table 193: Dialyzer Reused Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1202-4](#C_1202-4) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1202-5](#C_1202-5) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1202-30547](#C_1202-30547) |  |
| templateId | 1..1 | SHALL |  | [1202-1](#C_1202-1) |  |
| @root | 1..1 | SHALL |  | [1202-6](#C_1202-6) | 2.16.840.1.113883.10.20.5.6.231 |
| @extension | 1..1 | SHALL |  | [1202-7](#C_1202-7) | 2015-10-01 |
| code | 1..1 | SHALL |  | [1202-2](#C_1202-2) |  |
| @code | 1..1 | SHALL |  | [1202-8](#C_1202-8) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1202-9](#C_1202-9) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1202-12](#C_1202-12) |  |
| @code | 1..1 | SHALL |  | [1202-13](#C_1202-13) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1202-3](#C_1202-3) |  |
| @code | 1..1 | SHALL |  | [1202-10](#C_1202-10) | 2334-1 |
| @codeSystem | 1..1 | SHALL |  | [1202-11](#C_1202-11) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1202-4).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1202-5).

When the patient's dialyzer is reused, set the value of @negationInd to false. When the patient's dialyzer is not reused, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:1202-30547).
2. SHALL contain exactly one [1..1] templateId (CONF:1202-1) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.231" (CONF:1202-6).
   2. SHALL contain exactly one [1..1] @extension="2015-10-01" (CONF:1202-7).
3. SHALL contain exactly one [1..1] code (CONF:1202-2).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1202-8).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1202-9).
4. SHALL contain exactly one [1..1] statusCode (CONF:1202-12).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1202-13).
5. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1202-3).
   1. This value SHALL contain exactly one [1..1] @code="2334-1" Patient's dialyzer is reused (CONF:1202-10).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1202-11).

Figure 91: Dialyzer Reused Observation Example

<!-- When the patient's dialyzer is reused, set the value of @negationInd to false.

When the patient's dialyzer is not reused, set the value of @negationInd to true. -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- Dialyzer Reused Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.231"

extension="2015-10-01"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />

<statusCode code="completed" />

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2334-1"

displayName="Patient's dialyzer is reused" />

</observation>

Drug-Susceptibility Test Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.126 (closed)]

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Table 194: Drug-Susceptibility Test Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Findings Organizer](#E_Findings_Organizer) (optional) |  |

This observation uses two codes: one to identify the drug and the other to record the pathogen’s susceptibility to it. A LOINC code represents a methodless isolate drug-susceptibility test; an HL7 ObservationInterpretation code represents the susceptibility finding.

Table 195: Drug-Susceptibility Test Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.126) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21014](#C_86-21014) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21015](#C_86-21015) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28233](#C_86-28233) |  |
| @root | 1..1 | SHALL |  | [86-28234](#C_86-28234) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [86-21018](#C_86-21018) |  |
| @root | 1..1 | SHALL |  | [86-21019](#C_86-21019) | 2.16.840.1.113883.10.20.5.6.126 |
| id | 1..1 | SHALL |  | [86-21020](#C_86-21020) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22748](#C_86-22748) | NA |
| code | 1..1 | SHALL |  | [86-21021](#C_86-21021) | urn:oid:2.16.840.1.113883.13.15 (NHSNDrugSusceptibilityTestsCode) |
| statusCode | 1..1 | SHALL |  | [86-21023](#C_86-21023) |  |
| @code | 1..1 | SHALL |  | [86-21024](#C_86-21024) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-21025](#C_86-21025) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22749](#C_86-22749) | NA |
| value | 1..1 | SHALL |  | [86-28406](#C_86-28406) |  |
| interpretationCode | 1..1 | SHALL |  | [86-21026](#C_86-21026) |  |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21014).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21015).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28233) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:86-28234).
5. SHALL contain exactly one [1..1] templateId (CONF:86-21018) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.126" (CONF:86-21019).
6. SHALL contain exactly one [1..1] id (CONF:86-21020).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22748).
7. SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNDrugSusceptibilityTestsCode](#NHSNDrugSusceptibilityTestsCode) urn:oid:2.16.840.1.113883.13.15 DYNAMIC (CONF:86-21021).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-21023).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21024).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21025).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22749).
10. SHALL contain exactly one [1..1] value (CONF:86-28406).
11. SHALL contain exactly one [1..1] interpretationCode (CONF:86-21026).
    1. If the interpretation result is known, the value of interpretationCode/@code SHALL be selected from Value Set 2.16.840.1.113883.13.13 NHSNDrugSusceptibilityFindingCode STATIC 20080130. If the drug was not tested, the value of @nullFlavor SHALL be NASK (CONF:86-21027).

Figure 92: Drug-Susceptibility Test Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

<!-- HAI Drug-susceptibility Test Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.126" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="19000-9"

displayName="Vancomycin Susc Islt" />

<statusCode code="completed" />

<effectiveTime nullFlavor="NA" />

<value xsi:type="CD" nullFlavor="NA" />

<interpretationCode codeSystem="2.16.840.1.113883.5.83"

codeSystemName="HL7 Observation Interpretation"

code="S" displayName="susceptible" />

</observation>

Duration of Labor Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.127 (closed)]

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Table 196: Duration of Labor Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (optional) |  |

This observation records the duration of labor in value/width. NHSN protocol requires that the duration be expressed as an integer.

Table 197: Duration of Labor Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.127) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22208](#C_86-22208) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22209](#C_86-22209) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22210](#C_86-22210) |  |
| @root | 1..1 | SHALL |  | [86-22211](#C_86-22211) | 2.16.840.1.113883.10.20.5.6.127 |
| code | 1..1 | SHALL |  | [86-22212](#C_86-22212) |  |
| @code | 1..1 | SHALL |  | [86-22213](#C_86-22213) | 289248003 |
| @codeSystem | 1..1 | SHALL |  | [86-28355](#C_86-28355) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL |  | [86-22214](#C_86-22214) |  |
| @code | 1..1 | SHALL |  | [86-22215](#C_86-22215) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | IVL\_TS | [86-22216](#C_86-22216) |  |
| width | 1..1 | SHALL |  | [86-22217](#C_86-22217) |  |
| @value | 1..1 | SHALL |  | [86-22218](#C_86-22218) |  |
| @unit | 1..1 | SHALL |  | [86-22219](#C_86-22219) |  |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22208).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22209).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22210) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.127" (CONF:86-22211).
4. SHALL contain exactly one [1..1] code (CONF:86-22212).
   1. This code SHALL contain exactly one [1..1] @code="289248003" Duration of labor (CONF:86-22213).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28355).
5. SHALL contain exactly one [1..1] statusCode (CONF:86-22214).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-22215).
6. SHALL contain exactly one [1..1] value with @xsi:type="IVL\_TS" (CONF:86-22216).
   1. This value SHALL contain exactly one [1..1] width (CONF:86-22217).
      1. This width SHALL contain exactly one [1..1] @value (CONF:86-22218).
      2. This width SHALL contain exactly one [1..1] @unit (CONF:86-22219).
7. The value of width/@value SHALL be a non-negative real number representation the duration of labor in terms of the units specified in @unit (CONF:86-22221).

Figure 93: Duration of Labor Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- HAI Duration of Labor Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.127"/>

<code code="289248003"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

displayName="Duration of labor"/>

<statusCode code="completed"/>

<value xsi:type="IVL\_TS">

<width value="8" unit="h"/>

</value>

</observation>

Endoscope Used Clinical Statement

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.128 (closed)]

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Table 198: Endoscope Used Clinical Statement Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Risk Factors Clinical Statement in a Procedure Report](#E_Procedure_Risk_Factors_Clinical_State) (required) |  |

This clinical statement records whether an endoscope was used.

If an endoscope was used, set the value of @negationInd to false. If an endoscope was not used, set the value of @negationInd to true.

Table 199: Endoscope Used Clinical Statement Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.128) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21992](#C_86-21992) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [86-21993](#C_86-21993) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21994](#C_86-21994) |  |
| templateId | 1..1 | SHALL |  | [86-28235](#C_86-28235) |  |
| @root | 1..1 | SHALL |  | [86-28236](#C_86-28236) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [86-22160](#C_86-22160) |  |
| @root | 1..1 | SHALL |  | [86-22161](#C_86-22161) | 2.16.840.1.113883.10.20.5.6.128 |
| id | 1..1 | SHALL |  | [86-22162](#C_86-22162) |  |
| code | 1..1 | SHALL |  | [86-21995](#C_86-21995) |  |
| @code | 1..1 | SHALL |  | [86-21996](#C_86-21996) | 423827005 |
| @codeSystem | 1..1 | SHALL |  | [86-28184](#C_86-28184) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL |  | [86-22163](#C_86-22163) |  |
| @code | 1..1 | SHALL |  | [86-28107](#C_86-28107) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21992).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21993).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-21994).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28235) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28236).
6. SHALL contain exactly one [1..1] templateId (CONF:86-22160) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.128" (CONF:86-22161).
7. SHALL contain exactly one [1..1] id (CONF:86-22162).
8. SHALL contain exactly one [1..1] code (CONF:86-21995).
   1. This code SHALL contain exactly one [1..1] @code="423827005" Endoscopy (CONF:86-21996).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28184).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-22163).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28107).

Figure 94: Endoscope Used Clinical Statement Example

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<!-- C-CDA Procedure Activity Procedure templateId. -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Endoscope Used Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.128" />

<id root="807007ba-c8f0-4842-9c3c-4a4e4c570849" />

<code codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

code="423827005"

displayName="Endoscopy" />

<statusCode code="completed" />

</procedure>

Epidermolysis Bullosa Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 200: Epidermolysis Bullosa Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required) |  |

This observation records whether the person had epidermolysis bullosa.

If the person did have epidermolysis bullosa, set the value of @negationInd to false. If the person did not have epidermolysis bullosa, set the value of @negationInd to true.

Table 201: Epidermolysis Bullosa Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3357-30665](#C_3357-30665) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3357-30666](#C_3357-30666) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3357-30667](#C_3357-30667) |  |
| templateId | 1..1 | SHALL |  | [3357-30650](#C_3357-30650) |  |
| @root | 1..1 | SHALL |  | [3357-30656](#C_3357-30656) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [3357-30655](#C_3357-30655) |  |
| @root | 1..1 | SHALL |  | [3357-30663](#C_3357-30663) | 2.16.840.1.113883.10.20.5.6.252 |
| @extension | 1..1 | SHALL |  | [3357-30664](#C_3357-30664) | 2018-04-01 |
| id | 1..1 | SHALL |  | [3357-30651](#C_3357-30651) |  |
| @nullFlavor | 1..1 | SHALL |  | [3357-30657](#C_3357-30657) | NA |
| code | 1..1 | SHALL |  | [3357-30652](#C_3357-30652) |  |
| @code | 1..1 | SHALL |  | [3357-30658](#C_3357-30658) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [3357-30659](#C_3357-30659) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [3357-30653](#C_3357-30653) |  |
| @code | 1..1 | SHALL |  | [3357-30660](#C_3357-30660) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [3357-30654](#C_3357-30654) |  |
| @code | 1..1 | SHALL | CS | [3357-30661](#C_3357-30661) | 3057-7 |
| @codeSystem | 1..1 | SHALL |  | [3357-30662](#C_3357-30662) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3357-30665).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3357-30666).

If the person did have epidermolysis bullosa, set the value of @negationInd to false. If the person did not have epidermolysis bullosa, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3357-30667).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-30650) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:3357-30656).
3. SHALL contain exactly one [1..1] templateId (CONF:3357-30655) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.252" (CONF:3357-30663).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30664).
4. SHALL contain exactly one [1..1] id (CONF:3357-30651).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3357-30657).
5. SHALL contain exactly one [1..1] code (CONF:3357-30652).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3357-30658).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30659).
6. SHALL contain exactly one [1..1] statusCode (CONF:3357-30653).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3357-30660).
7. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3357-30654).
   1. This value SHALL contain exactly one [1..1] @code="3057-7" Epidermolysis bullosa during current admission  (CONF:3357-30661).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-30662).

Figure 95: Epidermolosis Bullosa Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- [HAI R3D3] Epidermolosis Bullosa Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.252" extension="2018-04-01"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="3057-7"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Epidermolysis bullosa during current admission "/>

</observation>

Extracorporeal Life Support Present

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01 (closed)]

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Table 202: Extracorporeal Life Support Present Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required) |  |

This procedure represents whether or not an extracorporeal life support (ECLS) system is present. The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the ECLS is unknown. The ECLS device is represented by the participant.

If an extracorporeal life support system was present, set the value of @negationInd to false. If an extracorporeal life support system was not present, set the value of @negationInd to true.

Table 203: Extracorporeal Life Support Present Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3311-212](#C_3311-212) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [3311-213](#C_3311-213) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3311-214](#C_3311-214) |  |
| templateId | 1..1 | SHALL |  | [3311-204](#C_3311-204) |  |
| @root | 1..1 | SHALL |  | [3311-210](#C_3311-210) | 2.16.840.1.113883.10.20.5.6.246 |
| @extension | 1..1 | SHALL |  | [3311-211](#C_3311-211) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-201](#C_3311-201) |  |
| @nullFlavor | 1..1 | SHALL |  | [3311-28438](#C_3311-28438) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK |
| statusCode | 1..1 | SHALL |  | [3311-202](#C_3311-202) |  |
| @code | 1..1 | SHALL |  | [3311-207](#C_3311-207) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| participant | 1..1 | SHALL |  | [3311-28434](#C_3311-28434) |  |
| @typeCode | 1..1 | SHALL |  | [3311-28439](#C_3311-28439) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| participantRole | 1..1 | SHALL |  | [3311-28435](#C_3311-28435) |  |
| @classCode | 1..1 | SHALL |  | [3311-28440](#C_3311-28440) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingDevice | 1..1 | SHALL |  | [3311-28436](#C_3311-28436) |  |
| code | 1..1 | SHALL |  | [3311-28437](#C_3311-28437) |  |
| @code | 1..1 | SHALL |  | [3311-28441](#C_3311-28441) | 261258006 |
| @codeSystem | 1..1 | SHALL |  | [3311-28442](#C_3311-28442) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |

1. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3311-212).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3311-213).

If an extracorporeal life support system was present, set the value of @negationInd to false. If an extracorporeal life support system was not present set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3311-214).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-204) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.246" (CONF:3311-210).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-211).

The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the ECLS is unknown.

1. SHALL contain exactly one [1..1] code (CONF:3311-201).
   1. This code SHALL contain exactly one [1..1] @nullFlavor="UNK" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28438).
2. SHALL contain exactly one [1..1] statusCode (CONF:3311-202).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3311-207).

The ECLS device is represented by the participant.

1. SHALL contain exactly one [1..1] participant (CONF:3311-28434).
   1. This participant SHALL contain exactly one [1..1] @typeCode="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-28439).
   2. This participant SHALL contain exactly one [1..1] participantRole (CONF:3311-28435).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="MANU" manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-28440).
      2. This participantRole SHALL contain exactly one [1..1] playingDevice (CONF:3311-28436).
         1. This playingDevice SHALL contain exactly one [1..1] code (CONF:3311-28437).
            1. This code SHALL contain exactly one [1..1] @code="261258006" Extracorporeal membrane oxygenation circuit (CONF:3311-28441).
            2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-28442).

Figure 96: Extracorporeal Life Support Present Example

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<!-- [HAI R3D2] Extracorporeal Life Support Present -->

<templateId root="2.16.840.1.113883.10.20.5.6.246" extension="2017-04-01" />

<code nullFlavor="UNK" />

<statusCode code="completed" />

<participant typeCode="DEV">

<participantRole classCode="MANU">

<playingDevice>

<code code="261258006"

displayName="Extracorporeal membrane oxygenation circuit"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT" />

</playingDevice>

</participantRole>

</participant>

</procedure>

Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01 (closed)]

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Table 204: Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) (required) |  |

This clinical statement represents whether or not the facility transfuses blood products treated with pathogen reduction technology.

If the facility does transfuse blood products treated with pathogen reduction technology, set the value of @negationInd to false. If the facility does not transfuse blood products treated with pathogen reduction technology, set the value of @negationInd to true.

Table 205: Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-30698](#C_3247-30698) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3247-30699](#C_3247-30699) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3247-30700](#C_3247-30700) |  |
| templateId | 1..1 | SHALL |  | [3247-30690](#C_3247-30690) |  |
| @root | 1..1 | SHALL |  | [3247-30696](#C_3247-30696) | 2.16.840.1.113883.10.20.5.6.236 |
| @extension | 1..1 | SHALL |  | [3247-30697](#C_3247-30697) | 2016-08-01 |
| code | 1..1 | SHALL |  | [3247-30687](#C_3247-30687) |  |
| @code | 1..1 | SHALL | CS | [3247-30691](#C_3247-30691) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [3247-30692](#C_3247-30692) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [3247-30688](#C_3247-30688) |  |
| @code | 1..1 | SHALL |  | [3247-30693](#C_3247-30693) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [3247-30689](#C_3247-30689) |  |
| @code | 1..1 | SHALL |  | [3247-30694](#C_3247-30694) | 3542-8 |
| @codeSystem | 1..1 | SHALL |  | [3247-30695](#C_3247-30695) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3247-30698).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3247-30699).

If the facility does transfuse blood products treated with pathogen reduction technology, set the value of @negationInd to false. If the facility does not transfuse blood products treated with pathogen reduction technology, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3247-30700).
2. SHALL contain exactly one [1..1] templateId (CONF:3247-30690) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.236" (CONF:3247-30696).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30697).
3. SHALL contain exactly one [1..1] code (CONF:3247-30687).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3247-30691).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3247-30692).
4. SHALL contain exactly one [1..1] statusCode (CONF:3247-30688).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3247-30693).
5. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3247-30689).
   1. This value SHALL contain exactly one [1..1] @code="3542-8" Facility transfuses blood products treated with pathogen reduction technology (CONF:3247-30694).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3247-30695).

Figure 97: Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2) Example

<!-- Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation -->

<!-- If the facility does transfuse blood products treated with pathogen reduction technology,

set the value of @negationInd to false.

If the facility does not transfuse blood products treated with pathogen reduction technology,

set the value of @negationInd to true. -->

<!-- The facility does transfuse blood products treated with pathogen reduction technology

so negationInd='false' -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [HAI R3D1.1] Facility Transfuses Blood Products Treated with

Pathogen Reduction Technology Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.236" extension="2016-08-01" />

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed" />

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3542-8"

displayName="Facility transfuses blood products treated with pathogen reduction technology" />

</observation>

Findings Organizer

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.5.6.182 (closed)]

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Table 206: Findings Organizer Contexts

| Contained By: | Contains: |
| --- | --- |
| [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (optional)  [Findings Section in an OPC Report (RETIRED)](#S_Findings_Section_in_an_OPC_Report_RET) (optional) | [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) (required)  [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) (required)  [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) (optional) |

Each Findings Organizer represents a set of information concerning a single pathogen identified. The organizer contains two component elements that record the pathogen and its rank in regard to the other pathogens identified, and can contain additional component elements recording drug-susceptibility test findings. For pathogen antibiogram reporting requirements, refer to the NHSN protocol and the Information Data Model (IDM).

Table 207: Findings Organizer Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22239](#C_86-22239) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [86-22240](#C_86-22240) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22241](#C_86-22241) |  |
| @root | 1..1 | SHALL |  | [86-22242](#C_86-22242) | 2.16.840.1.113883.10.20.5.6.182 |
| id | 1..1 | SHALL |  | [86-22243](#C_86-22243) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22770](#C_86-22770) | NA |
| statusCode | 1..1 | SHALL |  | [86-22244](#C_86-22244) |  |
| @code | 1..1 | SHALL |  | [86-22245](#C_86-22245) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..1 | SHALL |  | [86-22246](#C_86-22246) |  |
| observation | 1..1 | SHALL |  | [86-22247](#C_86-22247) | [Pathogen Identified Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145](#E_Pathogen_Identified_Observation) |
| component | 1..1 | SHALL |  | [86-22248](#C_86-22248) |  |
| observation | 1..1 | SHALL |  | [86-22249](#C_86-22249) | [Pathogen Ranking Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.147](#E_Pathogen_Ranking_Observation) |
| component | 0..\* | MAY |  | [86-22250](#C_86-22250) |  |
| observation | 1..1 | SHALL |  | [86-22251](#C_86-22251) | [Drug-Susceptibility Test Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.126](#E_DrugSusceptibility_Test_Observation) |

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22239).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22240).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22241) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.182" (CONF:86-22242).
4. SHALL contain exactly one [1..1] id (CONF:86-22243).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22770).
5. SHALL contain exactly one [1..1] statusCode (CONF:86-22244).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-22245).
6. SHALL contain exactly one [1..1] component (CONF:86-22246) such that it
   1. SHALL contain exactly one [1..1] [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145) (CONF:86-22247).
7. SHALL contain exactly one [1..1] component (CONF:86-22248) such that it
   1. SHALL contain exactly one [1..1] [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.147) (CONF:86-22249).
8. MAY contain zero or more [0..\*] component (CONF:86-22250) such that it
   1. SHALL contain exactly one [1..1] [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.126) (CONF:86-22251).

Figure 98: Findings Organizer Example

<organizer classCode="CLUSTER" moodCode=”EVN”>

<templateId root="2.16.840.1.113883.10.20.5.6.182"/>

<id nullFlavor="NA"/ >

<statusCode code="completed"/>

<component>

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Pathogen Identified Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.145"/>

...

</observation>

</component>

<component>

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Pathogen Ranking Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.147"/>

...

</observation>

</component>

<component>

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- HAI Drug-Susceptibility Test Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.126"/>

...

</observation>

</component>

</organizer>

Gestational Age at Birth Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2018-04-01 (closed)]

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Table 208: Gestational Age at Birth Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Risk Factors Section (LOS/Men)](#S_Risk_Factors_Section_LOSMen) (required) |  |

This template represents gestational age at birth, as measured in days. Although gestational age of an infant is typically recorded in weeks plus days (e.g., 27 weeks and 3 days), the xsi:type PQ does not allow for mixed units. The gestational age must be represented in days. For example, 27 weeks and 3 days would be represented with 192 days.

Table 209: Gestational Age at Birth Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2018-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3357-30769](#C_3357-30769) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3357-30770](#C_3357-30770) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3357-30771](#C_3357-30771) | false |
| templateId | 1..1 | SHALL |  | [3357-30764](#C_3357-30764) |  |
| @root | 1..1 | SHALL |  | [3357-30773](#C_3357-30773) | 2.16.840.1.113883.10.20.5.6.255 |
| @extension | 1..1 | SHALL |  | [3357-30774](#C_3357-30774) | 2018-04-01 |
| code | 1..1 | SHALL |  | [3357-30765](#C_3357-30765) |  |
| @code | 1..1 | SHALL |  | [3357-30775](#C_3357-30775) | 76516-4 |
| @codeSystem | 1..1 | SHALL |  | [3357-30776](#C_3357-30776) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| value | 1..1 | SHALL | PQ | [3357-30768](#C_3357-30768) |  |
| @unit | 1..1 | SHALL |  | [3357-30779](#C_3357-30779) | urn:oid:2.16.840.1.113883.6.8 (UCUM) = d |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3357-30769).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3357-30770).
3. SHALL contain exactly one [1..1] @negationInd="false" (CONF:3357-30771).
4. SHALL contain exactly one [1..1] templateId (CONF:3357-30764) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.255" (CONF:3357-30773).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30774).
5. SHALL contain exactly one [1..1] code (CONF:3357-30765).
   1. This code SHALL contain exactly one [1..1] @code="76516-4" Gestational age at birth (CONF:3357-30775).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3357-30776).
6. SHALL contain exactly one [1..1] value with @xsi:type="PQ" (CONF:3357-30768).
   1. This value SHALL contain exactly one [1..1] @unit="d" Days (CodeSystem: UCUM urn:oid:2.16.840.1.113883.6.8) (CONF:3357-30779).

Figure 99: Gestational Age Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [HAI R3D3] Gestational Age Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.255" extension="2018-04-01"/>

<code code="76516-4" codeSystem="2.16.840.1.113883.6.1" displayName="Gestational age at birth" codeSystemName="LOINC"/>

<value xsi:type="PQ" value="276" unit="d"/>

</observation>

Guidewire Used Clinical Statement

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.129 (closed)]

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Table 210: Guidewire Used Clinical Statement Contexts

| Contained By: | Contains: |
| --- | --- |
| [Reason for Procedure Observation](#E_Reason_for_Procedure_Observation) (optional) |  |

This clinical statement records whether the performance of a central-line exchange used a guidewire.

If the central line was exchanged over a guidewire, set the value of @negationInd to false. If the central line was not exchanged over a guidewire, set the value of @negationInd to true.

Table 211: Guidewire Used Clinical Statement Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.129) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22151](#C_86-22151) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [86-22152](#C_86-22152) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-22153](#C_86-22153) |  |
| templateId | 1..1 | SHALL |  | [86-28237](#C_86-28237) |  |
| @root | 1..1 | SHALL |  | [86-28238](#C_86-28238) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [86-22154](#C_86-22154) |  |
| @root | 1..1 | SHALL |  | [86-22155](#C_86-22155) | 2.16.840.1.113883.10.20.5.6.129 |
| id | 1..1 | SHALL |  | [86-22156](#C_86-22156) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22751](#C_86-22751) | NA |
| code | 1..1 | SHALL |  | [86-22157](#C_86-22157) |  |
| @code | 1..1 | SHALL |  | [86-22158](#C_86-22158) | 3121-1 |
| @codeSystem | 1..1 | SHALL |  | [86-28185](#C_86-28185) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [86-22159](#C_86-22159) |  |
| @code | 1..1 | SHALL |  | [86-28108](#C_86-28108) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22151).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22152).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-22153).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28237) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28238).
6. SHALL contain exactly one [1..1] templateId (CONF:86-22154) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.129" (CONF:86-22155).
7. SHALL contain exactly one [1..1] id (CONF:86-22156).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22751).
8. SHALL contain exactly one [1..1] code (CONF:86-22157).
   1. This code SHALL contain exactly one [1..1] @code="3121-1" Central line exchanged over guidewire (CONF:86-22158).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28185).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-22159).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28108).

Figure 100: Guidewire Used Clinical Statement Example

<procedure moodCode="EVN" classCode="PROC" negationInd="false">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Guidewire Used Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.129" />

<id nullFlavor="NA" />

<code code="3121-1"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Central line exchanged over guidewire" />

<statusCode code="completed" />

</procedure>

Hand Hygiene Performed Clinical Statement

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.130 (closed)]

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Table 212: Hand Hygiene Performed Clinical Statement Contexts

| Contained By: | Contains: |
| --- | --- |
| [Central-Line Insertion Preparation Organizer (V2)](#E_CentralLine_Insertion_Preparation_Org) (required) |  |

This clinical statement reports whether hand hygiene was performed. It is one of the actions recorded in the first, preparatory step of the central-line insertion practice sequence.

If the preparation step included hand hygiene, set the value of @negationInd to false. If the preparation step did not include hand hygiene, set the value of @negationInd to true.

Table 213: Hand Hygiene Performed Clinical Statement Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.130) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22141](#C_86-22141) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [86-22142](#C_86-22142) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-22143](#C_86-22143) |  |
| templateId | 1..1 | SHALL |  | [86-28239](#C_86-28239) |  |
| @root | 1..1 | SHALL |  | [86-28240](#C_86-28240) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [86-22144](#C_86-22144) |  |
| @root | 1..1 | SHALL |  | [86-22145](#C_86-22145) | 2.16.840.1.113883.10.20.5.6.130 |
| id | 1..1 | SHALL |  | [86-22146](#C_86-22146) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22752](#C_86-22752) | NA |
| code | 1..1 | SHALL |  | [86-22147](#C_86-22147) |  |
| @code | 1..1 | SHALL |  | [86-22148](#C_86-22148) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3109-6 |
| statusCode | 1..1 | SHALL |  | [86-22149](#C_86-22149) |  |
| @code | 1..1 | SHALL |  | [86-22150](#C_86-22150) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22141).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22142).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-22143).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28239) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28240).
6. SHALL contain exactly one [1..1] templateId (CONF:86-22144) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.130" (CONF:86-22145).
7. SHALL contain exactly one [1..1] id (CONF:86-22146).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22752).
8. SHALL contain exactly one [1..1] code (CONF:86-22147).
   1. This code SHALL contain exactly one [1..1] @code="3109-6" Hand hygiene (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-22148).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-22149).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-22150).

Figure 101: Hand Hygiene Performed Clinical Statement Example

<component>

<procedure moodCode="EVN" classCode="PROC" negationInd="false">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Hand Hygiene Performed Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.130" />

<id nullFlavor="NA" />

<code code="3109-6"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Hand hygiene" />

<statusCode code="completed"/>

</procedure>

</component>

Height Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.131 (closed)]

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Table 214: Height Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (required) |  |

This observation records a body height.

Table 215: Height Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.131) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19729](#C_86-19729) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19730](#C_86-19730) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19731](#C_86-19731) | false |
| templateId | 1..1 | SHALL |  | [86-28241](#C_86-28241) |  |
| @root | 1..1 | SHALL |  | [86-28242](#C_86-28242) | 2.16.840.1.113883.10.20.22.4.27 |
| templateId | 1..1 | SHALL |  | [86-19746](#C_86-19746) |  |
| @root | 1..1 | SHALL |  | [86-27434](#C_86-27434) | 2.16.840.1.113883.10.20.5.6.131 |
| id | 1..1 | SHALL |  | [86-19748](#C_86-19748) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22753](#C_86-22753) | NA |
| code | 1..1 | SHALL |  | [86-19732](#C_86-19732) |  |
| @code | 1..1 | SHALL |  | [86-19733](#C_86-19733) | 50373000 |
| @codeSystem | 1..1 | SHALL |  | [86-28191](#C_86-28191) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL |  | [86-19734](#C_86-19734) |  |
| @code | 1..1 | SHALL |  | [86-19735](#C_86-19735) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-19749](#C_86-19749) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22754](#C_86-22754) | NA |
| value | 1..1 | SHALL | PQ | [86-19736](#C_86-19736) |  |
| @value | 1..1 | SHALL |  | [86-19750](#C_86-19750) |  |
| @unit | 1..1 | SHALL |  | [86-19752](#C_86-19752) |  |

1. Conforms to Vital Sign Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.27).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19729).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19730).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-19731).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28241) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.27" (CONF:86-28242).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19746) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.131" (CONF:86-27434).
7. SHALL contain exactly one [1..1] id (CONF:86-19748).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22753).
8. SHALL contain exactly one [1..1] code (CONF:86-19732).
   1. This code SHALL contain exactly one [1..1] @code="50373000" Body height (CONF:86-19733).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28191).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19734).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19735).
10. SHALL contain exactly one [1..1] effectiveTime (CONF:86-19749).
    1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22754).
11. SHALL contain exactly one [1..1] value with @xsi:type="PQ" (CONF:86-19736).
    1. This value SHALL contain exactly one [1..1] @value (CONF:86-19750).
       1. The value of @value SHALL be a non-negative real number representing the body height in terms of the units specified in @unit (CONF:86-19751).
    2. This value SHALL contain exactly one [1..1] @unit (CONF:86-19752).

Figure 102: Height Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Vital Sign Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.27"/>

<!-- HAI Height Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.131"/>

<id nullFlavor="NA"/>

<code code="50373000"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

displayName="Body Height"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="PQ" value="1.9" unit="m"/>

</observation>

Hemodialysis Catheter Present

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01 (closed)]

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Table 216: Hemodialysis Catheter Present Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required) |  |

This procedure represents whether or not a hemodialysis catheter is present. The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the hemodialysis catheter is unknown. The hemodialysis catheter device is represented by the participant.

If a hemodialysis catheter was present, set the value of @negationInd to false. If a hemodialysis catheter was not present, set the value of @negationInd to true.

Table 217: Hemodialysis Catheter Present Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3311-196](#C_3311-196) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [3311-197](#C_3311-197) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3311-198](#C_3311-198) |  |
| templateId | 1..1 | SHALL |  | [3311-190](#C_3311-190) |  |
| @root | 1..1 | SHALL |  | [3311-199](#C_3311-199) | 2.16.840.1.113883.10.20.5.6.245 |
| @extension | 1..1 | SHALL |  | [3311-200](#C_3311-200) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-187](#C_3311-187) |  |
| @nullFlavor | 1..1 | SHALL |  | [3311-28444](#C_3311-28444) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK |
| statusCode | 1..1 | SHALL |  | [3311-188](#C_3311-188) |  |
| @code | 1..1 | SHALL |  | [3311-193](#C_3311-193) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| participant | 1..1 | SHALL |  | [3311-28453](#C_3311-28453) |  |
| @typeCode | 1..1 | SHALL |  | [3311-28458](#C_3311-28458) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| participantRole | 1..1 | SHALL |  | [3311-28454](#C_3311-28454) |  |
| @classCode | 1..1 | SHALL |  | [3311-28459](#C_3311-28459) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingDevice | 1..1 | SHALL |  | [3311-28460](#C_3311-28460) |  |
| code | 1..1 | SHALL |  | [3311-28461](#C_3311-28461) |  |
| @code | 1..1 | SHALL |  | [3311-28462](#C_3311-28462) | 450866001 |
| @codeSystem | 1..1 | SHALL |  | [3311-28463](#C_3311-28463) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |

1. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3311-196).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3311-197).

If a hemodialysis catheter was present, set the value of @negationInd to false. If a hemodialysis catheter was not present set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3311-198).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-190) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.245" (CONF:3311-199).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-200).

The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the hemodialysis catheter is unknown.

1. SHALL contain exactly one [1..1] code (CONF:3311-187).
   1. This code SHALL contain exactly one [1..1] @nullFlavor="UNK" Unknown (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28444).
2. SHALL contain exactly one [1..1] statusCode (CONF:3311-188).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3311-193).

The hemodialysis catheter device is represented by the participant.

1. SHALL contain exactly one [1..1] participant (CONF:3311-28453).
   1. This participant SHALL contain exactly one [1..1] @typeCode="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-28458).
   2. This participant SHALL contain exactly one [1..1] participantRole (CONF:3311-28454).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="MANU" Manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-28459).
      2. This participantRole SHALL contain exactly one [1..1] playingDevice (CONF:3311-28460).
         1. This playingDevice SHALL contain exactly one [1..1] code (CONF:3311-28461).
            1. This code SHALL contain exactly one [1..1] @code="450866001" Hemodialysis catheter (CONF:3311-28462).
            2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-28463).

Figure 103: Hemodialysis Catheter Present Example

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<!-- [HAI R3D2] Hemodialysis Catheter Present-->

<templateId root="2.16.840.1.113883.10.20.5.6.245" extension="2017-04-01" />

<code nullFlavor="UNK" />

<statusCode code="completed" />

<participant typeCode="DEV">

<participantRole classCode="MANU">

<playingDevice>

<code code="450866001"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Hemodialysis catheter" />

</playingDevice>

</participantRole>

</participant>

</procedure>

History of Object Presence Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.132 (closed)]

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Table 218: History of Object Presence Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Urinary Catheter Observation](#E_Urinary_Catheter_Observation) (optional) |  |

This observation records a fact about the history of an object's presence. The observation is intended for use within a context that specifies the object.

When used within the Urinary Catheter Observation, if the patient had a urinary catheter removed within 48 hours, set the value of @negationInd to false. If the patient did not have a urinary catheter removed within 48 hours, set the value of @negationInd to true.

Table 219: History of Object Presence Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.132) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22196](#C_86-22196) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22197](#C_86-22197) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-22198](#C_86-22198) |  |
| templateId | 1..1 | SHALL |  | [86-22199](#C_86-22199) |  |
| @root | 1..1 | SHALL |  | [86-22200](#C_86-22200) | 2.16.840.1.113883.10.20.5.6.132 |
| id | 1..1 | SHALL |  | [86-22201](#C_86-22201) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22755](#C_86-22755) | NA |
| code | 1..1 | SHALL |  | [86-22202](#C_86-22202) |  |
| @code | 1..1 | SHALL |  | [86-22203](#C_86-22203) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28378](#C_86-28378) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-22204](#C_86-22204) |  |
| @code | 1..1 | SHALL |  | [86-22205](#C_86-22205) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-22206](#C_86-22206) |  |
| @code | 1..1 | SHALL |  | [86-22207](#C_86-22207) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2404-2 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22196).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22197).
3. SHALL contain exactly one [1..1] @negationInd (CONF:86-22198).
4. SHALL contain exactly one [1..1] templateId (CONF:86-22199) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.132" (CONF:86-22200).
5. SHALL contain exactly one [1..1] id (CONF:86-22201).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22755).
6. SHALL contain exactly one [1..1] code (CONF:86-22202).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-22203).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28378).
7. SHALL contain exactly one [1..1] statusCode (CONF:86-22204).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-22205).
8. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-22206).
   1. This value SHALL contain exactly one [1..1] @code="2404-2" Removed within 48 hours prior (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-22207).

Figure 104: History of Object Presence Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- HAI History of Object Presence Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.132"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4"

code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2404-2"

displayName="Removed within 48 hours prior"/>

</observation>

Hospital Admission Clinical Statement

[act: identifier urn:oid:2.16.840.1.113883.10.20.5.6.133 (closed)]

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Table 220: Hospital Admission Clinical Statement Contexts

| Contained By: | Contains: |
| --- | --- |
| [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (required) |  |

This clinical statement records whether the outpatient was hospitalized. A causal relationship to the infection indicator(s) is not recorded.  
When the outpatient was hospitalized, set the value of act/@negationInd to false. When the outpatient was not hospitalized, set the value of act/@negationInd to true. When it is not known whether the outpatient was hospitalized, set the value of act/@nullFlavor to "UNK".

Table 221: Hospital Admission Clinical Statement Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| act (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.133) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [86-22185](#C_86-22185) | UNK |
| @classCode | 1..1 | SHALL |  | [86-22187](#C_86-22187) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL |  | [86-22188](#C_86-22188) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY |  | [86-22189](#C_86-22189) |  |
| templateId | 1..1 | SHALL |  | [86-22191](#C_86-22191) |  |
| @root | 1..1 | SHALL |  | [86-22192](#C_86-22192) | 2.16.840.1.113883.10.20.5.6.133 |
| id | 1..1 | SHALL |  | [86-22193](#C_86-22193) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22756](#C_86-22756) | NA |
| code | 1..1 | SHALL |  | [86-22194](#C_86-22194) |  |
| @code | 1..1 | SHALL |  | [86-22195](#C_86-22195) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 32485007 |

1. MAY contain zero or one [0..1] @nullFlavor="UNK" (CONF:86-22185).
   1. If it is not known whether the outpatient was hospitalized, the value of act/@nullFlavor SHALL be UNK (CONF:86-22186).
2. SHALL contain exactly one [1..1] @classCode="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22187).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22188).
4. MAY contain zero or one [0..1] @negationInd (CONF:86-22189).
   1. If the outpatient was hospitalized, the value of act/@negationInd SHALL be false. If the outpatient was not hospitalized, the value of act/@negationInd SHALL be true (CONF:86-22190).
5. SHALL contain exactly one [1..1] templateId (CONF:86-22191) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.133" (CONF:86-22192).
6. SHALL contain exactly one [1..1] id (CONF:86-22193).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22756).
7. SHALL contain exactly one [1..1] code (CONF:86-22194).
   1. This code SHALL contain exactly one [1..1] @code="32485007" Hospital Admission (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-22195).

Figure 105: Hospital Admission Clinical Statement Example

<act classCode="ACT" moodCode="EVN" negationInd="false">

<!-- HAI Hospital Admission templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.133" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

code="32485007"

displayName="Hospital Admission" />

</act>

Imputability Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.134 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 1 - US Realm

Table 222: Imputability Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Suspected Source Observation](#E_Suspected_Source_Observation) (required) |  |

This observation records the strength of certainty of a relationship between events. The relationship is recorded in the code element.

Table 223: Imputability Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.134) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21796](#C_86-21796) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21797](#C_86-21797) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21798](#C_86-21798) |  |
| templateId | 1..1 | SHALL |  | [86-28243](#C_86-28243) |  |
| @root | 1..1 | SHALL |  | [86-28244](#C_86-28244) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-21801](#C_86-21801) |  |
| @root | 1..1 | SHALL |  | [86-21802](#C_86-21802) | 2.16.840.1.113883.10.20.5.6.134 |
| id | 1..1 | SHALL |  | [86-21803](#C_86-21803) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22757](#C_86-22757) |  |
| code | 1..1 | SHALL |  | [86-21804](#C_86-21804) |  |
| statusCode | 1..1 | SHALL |  | [86-21806](#C_86-21806) |  |
| @code | 1..1 | SHALL |  | [86-21807](#C_86-21807) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL |  | [86-21808](#C_86-21808) |  |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21796).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21797).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-21798).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28243) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28244).
6. SHALL contain exactly one [1..1] templateId (CONF:86-21801) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.134" (CONF:86-21802).
7. SHALL contain exactly one [1..1] id (CONF:86-21803).
   1. This id SHALL contain exactly one [1..1] @nullFlavor (CONF:86-22757).
8. SHALL contain exactly one [1..1] code (CONF:86-21804).
   1. To record imputability of a positive blood culture to the suspected source of contamination, the value of @code SHALL be 2307-7 Imputability of positive blood culture to the suspected source 2.16.840.1.113883.6.277 cdcNHSN (CONF:86-21805).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21806).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21807).
10. SHALL contain exactly one [1..1] value (CONF:86-21808).
    1. In an Evidence of Infection (Dialysis) Report, (CONF:86-21809).
       1. The value of the observation's @negationInd SHALL be 'false' (CONF:86-21810).
       2. The value of @code SHALL be 60022001 Possible 2.16.840.1.113883.6.96 SNOMED CT (CONF:86-21811).

Figure 106: Imputability Observation Example

<!-- Imputability of positive blood culture to suspected source example -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Imputability Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.134"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2307-7"

displayName="Imputability of positive blood culture to the suspected source"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT" code="60022001"

displayName="Possible"/>

</observation>

Inborn/Outborn Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01 (open)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 224: Inborn/Outborn Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Details in Late Onset Sepsis Report](#S_Infection_Details_in_Late_Onset_Sepsi) (required) |  |

This observation represents whether an infant was born at the reporting hospital or some other location. If the negation indicator is false the infant was outborn (born before arrival at reporting hospital), if the negation indicator is true the infant was inborn (born at the reporting hospital).

Table 225: Inborn/Outborn Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3357-30831](#C_3357-30831) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3357-30832](#C_3357-30832) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3357-30902](#C_3357-30902) |  |
| templateId | 1..1 | SHALL |  | [3357-30837](#C_3357-30837) |  |
| @root | 1..1 | SHALL |  | [3357-30838](#C_3357-30838) | 2.16.840.1.113883.10.20.5.6.257 |
| @extension | 1..1 | SHALL |  | [3357-30839](#C_3357-30839) | 2018-04-01 |
| code | 1..1 | SHALL |  | [3357-30834](#C_3357-30834) |  |
| @code | 1..1 | SHALL |  | [3357-30840](#C_3357-30840) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [3357-30841](#C_3357-30841) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [3357-30835](#C_3357-30835) |  |
| @code | 1..1 | SHALL |  | [3357-30872](#C_3357-30872) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [3357-30836](#C_3357-30836) |  |
| @code | 1..1 | SHALL |  | [3357-30903](#C_3357-30903) | 445087001 |
| @codeSystem | 1..1 | SHALL |  | [3357-30904](#C_3357-30904) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3357-30831).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3357-30832).
3. SHALL contain exactly one [1..1] @negationInd (CONF:3357-30902).
4. SHALL contain exactly one [1..1] templateId (CONF:3357-30837).
   1. This templateId SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.257" (CONF:3357-30838).
   2. This templateId SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30839).
5. SHALL contain exactly one [1..1] code (CONF:3357-30834).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3357-30840).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30841).
6. SHALL contain exactly one [1..1] statusCode (CONF:3357-30835).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3357-30872).
7. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3357-30836).
   1. This value SHALL contain exactly one [1..1] @code="445087001" Born before arrival to hospital (situation) (CONF:3357-30903).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3357-30904).

Figure 107: Inborn/Outborn Observation Example

<!-- If the negation indicator is false the infant was outborn

(born before arrival at reporting hospital),

if the negation indicator is true the infant was inborn (born at the reporting hospital). -->

<!-- This infant was inborn (negationInd="true" -->

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- [HAI R3D3] Inborn/Outborn Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.257" extension="2018-04-01"/>

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed"/>

<value xsi:type="CD" code="445087001"

displayName="Born before arrival to hospital (situation)"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"/>

</observation>

Infection Condition Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.135 (closed)]

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Table 226: Infection Condition Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection-Type Observation](#E_InfectionType_Observation) (optional)  [Surgical Site Infection Observation (RETIRED)](#E_Surgical_Site_Infection_Observation_R) (required) |  |

This observation records the infection condition being reported.

Table 227: Infection Condition Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19883](#C_86-19883) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19884](#C_86-19884) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19885](#C_86-19885) | false |
| templateId | 1..1 | SHALL |  | [86-28245](#C_86-28245) |  |
| @root | 1..1 | SHALL |  | [86-28246](#C_86-28246) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19888](#C_86-19888) |  |
| @root | 1..1 | SHALL |  | [86-19889](#C_86-19889) | 2.16.840.1.113883.10.20.5.6.135 |
| id | 1..1 | SHALL |  | [86-19890](#C_86-19890) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22758](#C_86-22758) | NA |
| code | 1..1 | SHALL |  | [86-19891](#C_86-19891) |  |
| @code | 1..1 | SHALL |  | [86-19892](#C_86-19892) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28379](#C_86-28379) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19893](#C_86-19893) |  |
| @code | 1..1 | SHALL |  | [86-19894](#C_86-19894) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-19895](#C_86-19895) | urn:oid:2.16.840.1.114222.4.11.3196 (NHSNInfectionConditionCode) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19883).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19884).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-19885).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28245) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28246).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19888) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.135" (CONF:86-19889).
7. SHALL contain exactly one [1..1] id (CONF:86-19890).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22758).
8. SHALL contain exactly one [1..1] code (CONF:86-19891).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19892).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28379).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19893).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19894).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNInfectionConditionCode](#NHSNInfectionConditionCode) urn:oid:2.16.840.1.114222.4.11.3196 DYNAMIC (CONF:86-19895).

Table 228: NHSNInfectionConditionCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNInfectionConditionCode urn:oid:2.16.840.1.114222.4.11.3196  Code System: SNOMED CT 2.16.840.1.113883.6.96 or cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2707005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Necrotizing enterocolitis |
| 9826008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Conjunctivitis |
| 12463005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Infectious gastroenteritis |
| 19824006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Skin |
| 25374005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Gastroenteritis |
| 36971009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Sinusitis |
| 47597000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Mediastinitis |
| 56819008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Endocarditis |
| 60168000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Osteomyelitis |
| 78623009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Endometritis |
| ... | | | |

Figure 108: Infection Condition Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Infection Condition Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.135"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1601-4"

displayName="Breast abscess or mastitis"/>

</observation>

Infection Contributed to Death Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.136 (closed)]

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Table 229: Infection Contributed to Death Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Death Observation](#E_Death_Observation) (optional) |  |

In some HAI Reports, this observation is required in a Death Observation if the patient died.

To point to the observation of the infection that contributed to death, the value of the id in this template must be the same as the value of the id element in the Infection-type Observation.

Table 230: Infection Contributed to Death Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.136) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22164](#C_86-22164) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22165](#C_86-22165) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22166](#C_86-22166) |  |
| @root | 1..1 | SHALL |  | [86-22167](#C_86-22167) | 2.16.840.1.113883.10.20.5.6.136 |
| id | 1..1 | SHALL |  | [86-22168](#C_86-22168) |  |
| code | 1..1 | SHALL |  | [86-22170](#C_86-22170) |  |
| @code | 1..1 | SHALL | CS | [86-22174](#C_86-22174) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28380](#C_86-28380) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-22172](#C_86-22172) |  |
| @code | 1..1 | SHALL |  | [86-22173](#C_86-22173) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22164).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22165).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22166) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.136" (CONF:86-22167).
4. SHALL contain exactly one [1..1] id (CONF:86-22168).
   1. The value of the id SHALL be the same as the value of the id element in the Infection-type Observation (templateId 2.16.840.1.113883.10.20.5.6.139) (CONF:86-22169).
5. SHALL contain exactly one [1..1] code (CONF:86-22170).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-22174).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28380).
6. SHALL contain exactly one [1..1] statusCode (CONF:86-22172).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-22173).

Figure 109: Infection Contributed to Death Observation Example

<!-- patient did die -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!--Death Observation template-->

...

<!--Infection did not contribute to death -->

<entryRelationship typeCode="CAUS" inversionInd="true" negationInd="true">

<observation classCode="OBS" moodCode="EVN">

<!-- HAI Infection Contributed to Death Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.136" />

<id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321" />

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />

<statusCode code="completed" />

</observation>

</entryRelationship>

</observation>

Infection Indicator Organizer (V4)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2016-08-01 (closed)]

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Table 231: Infection Indicator Organizer (V4) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (required) | [Pus, Redness, or Increased Swelling Observation](#E_Pus_Redness_or_Increased_Swelling_Obs) (required)  [IV Antifungal Start Clinical Statement](#E_IV_Antifungal_Start_Clinical_Statemen) (required)  [Positive Blood Culture Observation (V2)](#E_Positive_Blood_Culture_Observation_V2) (required)  [IV Antibiotic Start Clinical Statement (V3)](#E_IV_Antibiotic_Start_Clinical_Statemen) (required) |

This organizer groups together four required infection indicators. An Evidence of Infection (Dialysis) Report is submitted when at least one is true. The infection indicators are recorded as facts associated with the patient, but without asserting a causal relationship to an infection.

The organizer’s effectiveTime/low element represents the earliest date at which one of these indicators was observed. The NHSN protocol specifies that this date represents:  
• For pus/redness/swelling, the symptom onset date  
• For IV antibiotic or antifungal start, the first day the substance was administered as an outpatient  
• For positive blood culture, the day the specimen was drawn.

Table 232: Infection Indicator Organizer (V4) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-22222](#C_3247-22222) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [3247-22223](#C_3247-22223) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-22224](#C_3247-22224) |  |
| @root | 1..1 | SHALL |  | [3247-22225](#C_3247-22225) | 2.16.840.1.113883.10.20.5.6.181 |
| @extension | 1..1 | SHALL |  | [3247-30287](#C_3247-30287) | 2016-08-01 |
| id | 1..1 | SHALL |  | [3247-22226](#C_3247-22226) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-22771](#C_3247-22771) | NA |
| statusCode | 1..1 | SHALL |  | [3247-22227](#C_3247-22227) |  |
| @code | 1..1 | SHALL |  | [3247-22228](#C_3247-22228) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [3247-22229](#C_3247-22229) |  |
| low | 1..1 | SHALL |  | [3247-22230](#C_3247-22230) |  |
| component | 1..1 | SHALL |  | [3247-22231](#C_3247-22231) |  |
| observation | 1..1 | SHALL |  | [3247-22232](#C_3247-22232) | [Pus, Redness, or Increased Swelling Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.157](#E_Pus_Redness_or_Increased_Swelling_Obs) |
| component | 1..1 | SHALL |  | [3247-22233](#C_3247-22233) |  |
| substanceAdministration | 1..1 | SHALL |  | [3247-22234](#C_3247-22234) | [IV Antibiotic Start Clinical Statement (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2016-08-01](#E_IV_Antibiotic_Start_Clinical_Statemen) |
| component | 1..1 | SHALL |  | [3247-22235](#C_3247-22235) |  |
| substanceAdministration | 1..1 | SHALL |  | [3247-22236](#C_3247-22236) | [IV Antifungal Start Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.141](#E_IV_Antifungal_Start_Clinical_Statemen) |
| component | 1..1 | SHALL |  | [3247-22237](#C_3247-22237) |  |
| observation | 1..1 | SHALL |  | [3247-30429](#C_3247-30429) | [Positive Blood Culture Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2014-12-01](#E_Positive_Blood_Culture_Observation_V2) |

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3247-22222).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3247-22223).
3. SHALL contain exactly one [1..1] templateId (CONF:3247-22224) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.181" (CONF:3247-22225).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30287).
4. SHALL contain exactly one [1..1] id (CONF:3247-22226).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-22771).
5. SHALL contain exactly one [1..1] statusCode (CONF:3247-22227).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3247-22228).
6. SHALL contain exactly one [1..1] effectiveTime (CONF:3247-22229).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3247-22230).
7. SHALL contain exactly one [1..1] component (CONF:3247-22231) such that it
   1. SHALL contain exactly one [1..1] [Pus, Redness, or Increased Swelling Observation](#E_Pus_Redness_or_Increased_Swelling_Obs) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.157) (CONF:3247-22232).
8. SHALL contain exactly one [1..1] component (CONF:3247-22233) such that it
   1. SHALL contain exactly one [1..1] [IV Antibiotic Start Clinical Statement (V3)](#E_IV_Antibiotic_Start_Clinical_Statemen) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2016-08-01) (CONF:3247-22234).
9. SHALL contain exactly one [1..1] component (CONF:3247-22235) such that it
   1. SHALL contain exactly one [1..1] [IV Antifungal Start Clinical Statement](#E_IV_Antifungal_Start_Clinical_Statemen) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.141) (CONF:3247-22236).
10. SHALL contain exactly one [1..1] component (CONF:3247-22237) such that it
    1. SHALL contain exactly one [1..1] [Positive Blood Culture Observation (V2)](#E_Positive_Blood_Culture_Observation_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2014-12-01) (CONF:3247-30429).

Figure 110: Infection Indicator Organizer (V4) Example

<organizer classCode="CLUSTER" moodCode="EVN”>

<templateId root=”2.16.840.1.113883.10.20.5.6.181”

extension="2016-08-01" />

<id nullFlavor="NA" />

<statusCode code="completed"/>

<effectiveTime>

<low value=”20080404”/>

</effectiveTime>

<component>

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Pus, Redness, or Increased Swelling Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.157"/>

...

</observation>

</component>

<component>

<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">

<!-- C-CDA Medication Activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.16"/>

<!-- HAI IV Antibiotic Start Clinical Statement (V3) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.140"

extension="2016-08-01"/>

...

</substanceAdministration>

</component>

<component>

<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">

<!—- C-CDA Medication Activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.16"/>

<!-- HAI IV Antifungal Start Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.141"/>

...

</substanceAdministration >

</component>

<component>

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Positive Blood Culture Observation (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.149"

extension="2014-12-01" />

...

</observation>

</component>

...

</organizer>

Infection Present at the Time of Surgery Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.205 (closed)]

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Table 233: Infection Present at the Time of Surgery Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) (required) |  |

This template records whether or not an infection was present at the time that a surgical procedure was performed. It is based on the C-CDA Problem Observation template.

When an infection was present at the time that a surgical procedure was performed, set the value of @negationInd to false. When an infection was not present at the time that a surgical procedure was performed, set the value of @negationInd to true.

Table 234: Infection Present at the Time of Surgery Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.205) | | | | | |
| @classCode | 1..1 | SHALL |  | [1101-30257](#C_1101-30257) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1101-30258](#C_1101-30258) | EVN |
| @negationInd | 1..1 | SHALL |  | [1101-30259](#C_1101-30259) |  |
| templateId | 1..1 | SHALL |  | [1101-30299](#C_1101-30299) |  |
| @root | 1..1 | SHALL |  | [1101-30300](#C_1101-30300) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [1101-30261](#C_1101-30261) |  |
| @root | 1..1 | SHALL |  | [1101-30262](#C_1101-30262) | 2.16.840.1.113883.10.20.5.6.205 |
| id | 1..1 | SHALL |  | [1101-30263](#C_1101-30263) |  |
| @nullFlavor | 1..1 | SHALL |  | [1101-30264](#C_1101-30264) | NA |
| code | 1..1 | SHALL |  | [1101-30265](#C_1101-30265) |  |
| @code | 1..1 | SHALL |  | [1101-30266](#C_1101-30266) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1101-30267](#C_1101-30267) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1101-30268](#C_1101-30268) |  |
| @code | 1..1 | SHALL |  | [1101-30269](#C_1101-30269) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1101-30270](#C_1101-30270) |  |
| @code | 1..1 | SHALL |  | [1101-30271](#C_1101-30271) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 1237-7 |
| @codeSystem | 1..1 | SHALL |  | [1101-30272](#C_1101-30272) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1101-30257).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:1101-30258).
4. SHALL contain exactly one [1..1] @negationInd (CONF:1101-30259).
   1. If an infection was present at the time that a surgical procedure was performed, the value of @negationInd SHALL be false. If an infection was not present at the time that a surgical procedure was performed, the value of @negationInd SHALL be true (CONF:1101-30260).
5. SHALL contain exactly one [1..1] templateId (CONF:1101-30299) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1101-30300).
6. SHALL contain exactly one [1..1] templateId (CONF:1101-30261) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.205" (CONF:1101-30262).
7. SHALL contain exactly one [1..1] id (CONF:1101-30263).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1101-30264).
8. SHALL contain exactly one [1..1] code (CONF:1101-30265).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" (CONF:1101-30266).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1101-30267).
9. SHALL contain exactly one [1..1] statusCode (CONF:1101-30268).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1101-30269).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1101-30270).
    1. This value SHALL contain exactly one [1..1] @code="1237-7" Infection present at the time of surgery (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30271).
    2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30272).

Figure 111: Infection Present at Time of Surgery Observation Example

<!--

If an infection was present at the time that a surgical procedure

was performed, the value of @negationInd SHALL be false.

If an infection was not present at the time that a surgical

procedure was performed, the value of @negationInd SHALL be true

-->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- Infection Present at the Time of Surgery Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.205" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />

<statusCode code="completed" />

<value xsi:type="CD"

code="1237-7"

displayName="Infection present at the time of surgery"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</observation>

Infection Risk Factors Measurement Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.137 (closed)]

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Table 235: Infection Risk Factors Measurement Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (optional)  [Risk Factors Section (LOS/Men)](#S_Risk_Factors_Section_LOSMen) (required) |  |

This observation records a risk factor that reports a value, such as birth weight.

The BSI report uses this observation. The NHSN protocol specifies which measurements are required for each report type. Those rules do not form part of the guide. The NHSNInfectionRiskFactorsCode value set table (included with the Infection Risk Factors Observation template) shows requirements at the time of publication.

Table 236: Infection Risk Factors Measurement Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.137) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19769](#C_86-19769) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19770](#C_86-19770) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19771](#C_86-19771) | false |
| templateId | 1..1 | SHALL |  | [86-28247](#C_86-28247) |  |
| @root | 1..1 | SHALL |  | [86-28248](#C_86-28248) | 2.16.840.1.113883.10.20.22.4.27 |
| templateId | 1..1 | SHALL |  | [86-19780](#C_86-19780) |  |
| @root | 1..1 | SHALL |  | [86-19781](#C_86-19781) | 2.16.840.1.113883.10.20.5.6.137 |
| id | 1..1 | SHALL |  | [86-19782](#C_86-19782) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22759](#C_86-22759) | NA |
| code | 1..1 | SHALL |  | [86-19772](#C_86-19772) |  |
| @code | 1..1 | SHALL |  | [86-19773](#C_86-19773) | 364589006 |
| @codeSystem | 1..1 | SHALL |  | [86-28104](#C_86-28104) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL |  | [86-19774](#C_86-19774) |  |
| @code | 1..1 | SHALL |  | [86-19775](#C_86-19775) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-19899](#C_86-19899) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22760](#C_86-22760) | NA |
| value | 1..1 | SHALL | PQ | [86-19776](#C_86-19776) |  |

1. Conforms to Vital Sign Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.27).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19769).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19770).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-19771).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28247) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.27" (CONF:86-28248).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19780) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.137" (CONF:86-19781).
7. SHALL contain exactly one [1..1] id (CONF:86-19782).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22759).
8. SHALL contain exactly one [1..1] code (CONF:86-19772).
   1. This code SHALL contain exactly one [1..1] @code="364589006" Birth weight (CONF:86-19773).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:86-28104).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19774).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19775).
10. SHALL contain exactly one [1..1] effectiveTime (CONF:86-19899).
    1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22760).
11. SHALL contain exactly one [1..1] value with @xsi:type="PQ" (CONF:86-19776).

Figure 112: Infection Risk Factors Measurement Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Vital Sign Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.27"/>

<!-- HAI Infection Risk Factors Measurement Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.137"/>

<id nullFlavor="NA"/>

<code code="364589006"

codeSystem="2.16.840.1.113883.6.96"

displayName="Birth weight"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="PQ" value="700" unit="g"/>

</observation>

Infection Risk Factors Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.138 (closed)]

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Table 237: Infection Risk Factors Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required)  [Risk Factors Section (LOS/Men)](#S_Risk_Factors_Section_LOSMen) (optional) | [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) (optional) |

This observation records the presence of infection risk factors. See also the Infection Risk Factors Measurement Observation.  
The NHSNInfectionRiskFactorsCode value set includes infection risk factors for all reports in this guide. The NHSN protocol specifies which risk factors are to be recorded in each report type. Those rules do not form part of the guide.  
If the risk factor is present, set the value of @negationInd to false. If the risk factor is not present, set the value of @negationInd to true.

Table 238: Infection Risk Factors Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.138) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19800](#C_86-19800) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19801](#C_86-19801) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19802](#C_86-19802) |  |
| templateId | 1..1 | SHALL |  | [86-28249](#C_86-28249) |  |
| @root | 1..1 | SHALL |  | [86-28250](#C_86-28250) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19814](#C_86-19814) |  |
| @root | 1..1 | SHALL |  | [86-19816](#C_86-19816) | 2.16.840.1.113883.10.20.5.6.138 |
| id | 1..1 | SHALL |  | [86-19817](#C_86-19817) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22761](#C_86-22761) | NA |
| code | 1..1 | SHALL |  | [86-19803](#C_86-19803) |  |
| @code | 1..1 | SHALL |  | [86-19804](#C_86-19804) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28381](#C_86-28381) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19805](#C_86-19805) |  |
| @code | 1..1 | SHALL |  | [86-19806](#C_86-19806) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-19807](#C_86-19807) | urn:oid:2.16.840.1.113883.13.6 (NHSNInfectionRiskFactorsCode) |
| entryRelationship | 0..1 | MAY |  | [86-19809](#C_86-19809) |  |
| @typeCode | 1..1 | SHALL |  | [86-19810](#C_86-19810) | REFR |
| @inversionInd | 1..1 | SHALL |  | [86-19811](#C_86-19811) | true |
| procedure | 1..1 | SHALL |  | [86-19812](#C_86-19812) | [Device Insertion Time and Location Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122](#E_Device_Insertion_Time_and_Location_Pr) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19800).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19801).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-19802).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28249) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28250).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19814) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.138" (CONF:86-19816).
7. SHALL contain exactly one [1..1] id (CONF:86-19817).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22761).
8. SHALL contain exactly one [1..1] code (CONF:86-19803).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19804).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28381).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19805).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19806).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNInfectionRiskFactorsCode](#NHSNInfectionRiskFactorsCode) urn:oid:2.16.840.1.113883.13.6 STATIC 2012-08-09 (CONF:86-19807).
11. MAY contain zero or one [0..1] entryRelationship (CONF:86-19809).
    1. The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CONF:86-19810).
    2. The entryRelationship, if present, SHALL contain exactly one [1..1] @inversionInd="true" (CONF:86-19811).
    3. The entryRelationship, if present, SHALL contain exactly one [1..1] [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122) (CONF:86-19812).

Table 239: NHSNInfectionRiskFactorsCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNInfectionRiskFactorsCode urn:oid:2.16.840.1.113883.13.6  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1006-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | central line including umbilical catheter |
| 1002-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | (unspecified) central line |
| 1003-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | permanent central line |
| 1005-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | temporary central line |

Figure 113: Infection Risk Factors Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Infection Risk Factors Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.138"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1003-3"

displayName="permanent central line"/>

<entryRelationship typeCode="REFR" inversionInd="true">

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Device Insertion Time and Location Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.122" />

...

</procedure>

</entryRelationship>

</observation>

Infection-Type Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.139 (closed)]

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Table 240: Infection-Type Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Details Section in a BSI Report](#S_Infection_Details_Section_in_a_BSI_Re) (required)  [Infection Details Section in a UTI Report](#S_Infection_Details_Section_in_a_UTI_Re) (required)  [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) (required)  [Infection Details Section in a VAE Report](#S_Infection_Details_Section_in_a_VAE_Re) (required)  [Infection Details in Late Onset Sepsis Report](#S_Infection_Details_in_Late_Onset_Sepsi) (required) | [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O) (optional)  [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) (optional)  [Infection Condition Observation](#E_Infection_Condition_Observation) (optional)  [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation) (optional)  [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) (required) |

The Infection-Type Observation is used in all infection reports. It is an assertion of the infection type, and contains entryRelationships to record the “criteria”—the information used to arrive at a diagnosis of the infection type.

The value of the id element must be globally unique and need not be an identifier used outside the document. Its function within the document is to identify this infection as being the same as that recorded in the Infection Contributed to Death Observation, if present.

Table 241: Infection-Type Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.139) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21181](#C_86-21181) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21182](#C_86-21182) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21183](#C_86-21183) | false |
| templateId | 1..1 | SHALL |  | [86-28251](#C_86-28251) |  |
| @root | 1..1 | SHALL |  | [86-28252](#C_86-28252) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-21239](#C_86-21239) |  |
| @root | 1..1 | SHALL |  | [86-21240](#C_86-21240) | 2.16.840.1.113883.10.20.5.6.139 |
| id | 1..1 | SHALL |  | [86-21184](#C_86-21184) |  |
| code | 1..1 | SHALL |  | [86-21185](#C_86-21185) |  |
| @code | 1..1 | SHALL |  | [86-21186](#C_86-21186) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28186](#C_86-28186) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21187](#C_86-21187) |  |
| @code | 1..1 | SHALL |  | [86-21188](#C_86-21188) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-21189](#C_86-21189) |  |
| low | 1..1 | SHALL |  | [86-28190](#C_86-28190) |  |
| value | 1..1 | SHALL | CD | [86-21190](#C_86-21190) | urn:oid:2.16.840.1.113883.13.20 (NHSNInfectionTypeCode) |
| entryRelationship | 1..1 | SHALL |  | [86-21192](#C_86-21192) |  |
| @typeCode | 1..1 | SHALL |  | [86-21193](#C_86-21193) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT |
| organizer | 1..1 | SHALL |  | [86-21194](#C_86-21194) | [Criteria of Diagnosis Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180](#E_Criteria_of_Diagnosis_Organizer) |
| entryRelationship | 0..1 | MAY |  | [86-23217](#C_86-23217) |  |
| @typeCode | 1..1 | SHALL |  | [86-23218](#C_86-23218) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL |  | [86-23219](#C_86-23219) | [Infection Condition Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135](#E_Infection_Condition_Observation) |
| entryRelationship | 0..1 | MAY |  | [86-23221](#C_86-23221) |  |
| @typeCode | 1..1 | SHALL |  | [86-23222](#C_86-23222) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL |  | [86-23223](#C_86-23223) | [Secondary Bloodstream Infection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.160](#E_Secondary_Bloodstream_Infection_Obser) |
| entryRelationship | 0..1 | MAY |  | [86-23225](#C_86-23225) |  |
| @typeCode | 1..1 | SHALL |  | [86-23226](#C_86-23226) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-23227](#C_86-23227) | [Bloodstream Infection Evidence Type Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.114](#E_Bloodstream_Infection_Evidence_Type_O) |
| entryRelationship | 0..1 | MAY |  | [86-23229](#C_86-23229) |  |
| @typeCode | 1..1 | SHALL |  | [86-23230](#C_86-23230) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-23231](#C_86-23231) | [Occasion of HAI Detection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.144](#E_Occasion_of_HAI_Detection_Observation) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21181).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21182).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-21183).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28251) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28252).
6. SHALL contain exactly one [1..1] templateId (CONF:86-21239) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.139" (CONF:86-21240).
7. SHALL contain exactly one [1..1] id (CONF:86-21184).
8. SHALL contain exactly one [1..1] code (CONF:86-21185).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21186).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28186).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21187).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21188).
10. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21189).
    1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-28190).
11. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNInfectionTypeCode](#NHSNInfectionTypeCode) urn:oid:2.16.840.1.113883.13.20 DYNAMIC (CONF:86-21190).
12. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21192) such that it
    1. SHALL contain exactly one [1..1] @typeCode="SPRT" Supports (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21193).
    2. SHALL contain exactly one [1..1] [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180) (CONF:86-21194).
13. MAY contain zero or one [0..1] entryRelationship (CONF:86-23217) such that it
    1. SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23218).
    2. SHALL contain exactly one [1..1] [Infection Condition Observation](#E_Infection_Condition_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135) (CONF:86-23219).
    3. If the report is a Ventilator Associated Event (VAE) Report, an HAI Surgical Site Infection Report (SSI), an HAI Urinary Tract Infection Numerator Report (UTI) or a Late Onset Sepsis/Meningitis Event (LOS) Report then an entryRelationship element SHALL be present containing an Infection Condition Observation (CONF:86-23220).
14. MAY contain zero or one [0..1] entryRelationship (CONF:86-23221) such that it
    1. SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23222).
    2. SHALL contain exactly one [1..1] [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.160) (CONF:86-23223).
    3. If the report is a Ventilator Associated Event (VAE) Report, an HAI Surgical Site Infection Report (SSI) or an HAI Urinary Tract Infection Numerator Report (UTI) then, an entryRelationship element SHALL be present containing a Secondary Bloodstream Infection Observation (CONF:86-23224).
15. MAY contain zero or one [0..1] entryRelationship (CONF:86-23225) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23226).
    2. SHALL contain exactly one [1..1] [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.114) (CONF:86-23227).
    3. If the report is a BSI Report, an entryRelationship element SHALL be present containing a Bloodstream Infection Evidence Type Observation (CONF:86-23228).
16. MAY contain zero or one [0..1] entryRelationship (CONF:86-23229) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23230).
    2. SHALL contain exactly one [1..1] [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.144) (CONF:86-23231).
    3. If the report is an SSI Report, an entryRelationship element SHALL be present containing an Occasion of HAI Detection Observation (CONF:86-23232).

Table 242: NHSNInfectionTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNInfectionTypeCode urn:oid:2.16.840.1.113883.13.20  Code System: cdcNHSN 2.16.840.1.113883.6.277 or SNOMED CT 2.16.840.1.113883.6.96  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 19824006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Skin or Soft Tissue Infection |
| 50417007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Lower respiratory Infection |
| 68566005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Urinary Tract Infection |
| 91302008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Systemic Infection |
| 128116006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Infection of the Central Nervous System |
| 128402005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Infection of the cardiovascular system |
| 312158001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Gastrointestinal Infection |
| 431193003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Bloodstream Infection |
| 433202001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Surgical Site Infection |
| 1792-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | MDRO Infection |
| 1795-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | CDAD Infection |
| 1796-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Infection of the Reproduction System |
| 1797-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Infection of the Ear/Eyes/Nose or Throat |
| 1798-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Bone or Joint Infection |
| 2340-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Ventilator Associated Event |
| 765107002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Late-onset neonatal sepsis (disorder) |
| 276674008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Neonatal meningitis |

Figure 114: Infection-Type Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Infection Type Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.139"/>

<!-- UUID for the infection being reported-->

<id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321"/>

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<effectiveTime>

<low value="20080807" />

</effectiveTime>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="431193003"

displayName="Blood Stream Infection"/>

<!-- Criteria of Diagnosis Organizer -->

<entryRelationship typeCode="SPRT">

<organizer classCode="CLUSTER" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.180"/>

...

</organizer>

</entryRelationship>

...

<!-- If infection report is NOT a BSI Report, the following two observations are

required. If an SSI Report, an Occasion of HAI Detection Observation is

ALSO required.

If a BSI Report, a Bloodstream Infection Evidence Type Observation is required. -->

<entryRelationship typeCode="REFR">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Infection Condition Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.135"/>

...

</observation>

</entryRelationship>

<entryRelationship typeCode="REFR">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Secondary Bloodstream Infection Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.160"/>

...

</observation>

</entryRelationship>

</observation>

ISBT Product Code Summary Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01 (closed)]

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Table 243: ISBT Product Code Summary Observation (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Blood Product Usage Summary Observation (V2)](#E_Blood_Product_Usage_Summary_Observati) (optional)  [Pathogen Reduced Apheresis Platelet Usage Summary Observation](#E_Pathogen_Reduced_Apheresis_Platelet_U) (optional) |  |

This observation represents the number of units transfused, aliquots transfused, or total discards for each group of blood product split out by type, collection method, and modification or pathogen-reduction methodology, broken down by ISBT (International Society for Blood Transfusion) Product Code.

Table 244: ISBT Product Code Summary Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-30724](#C_3247-30724) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3247-30725](#C_3247-30725) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-30716](#C_3247-30716) |  |
| @root | 1..1 | SHALL |  | [3247-30719](#C_3247-30719) | 2.16.840.1.113883.10.20.5.6.238 |
| @extension | 1..1 | SHALL |  | [3247-30720](#C_3247-30720) | 2016-08-01 |
| code | 1..1 | SHALL |  | [3247-30717](#C_3247-30717) |  |
| statusCode | 1..1 | SHALL |  | [3247-30718](#C_3247-30718) |  |
| @code | 1..1 | SHALL |  | [3247-30722](#C_3247-30722) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | INT | [3247-30723](#C_3247-30723) |  |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-30724).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-30725).
3. SHALL contain exactly one [1..1] templateId (CONF:3247-30716) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.238" (CONF:3247-30719).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30720).

*The value sets bound to the code element are detailed in the hai[\_]voc.xlsx file provided with this package.*

1. SHALL contain exactly one [1..1] code (CONF:3247-30717).
   1. If the product specified in the containing Blood Product Usage Summary Observation is Whole Blood (3467-8, 3468-6, 3469-4), then valueSet NHSN Whole Blood Total (urn:oid:2.16.840.1.114222.4.11.7292) SHALL be used (CONF:3247-30726).
   2. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Not irradiated or Leukocyte Reduced (3471-0, 3472-8, 3473-6), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7294) SHALL be used (CONF:3247-30727).
   3. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Irradiated (3403-3, 3404-1, 3474-4), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Irradiated (urn:oid:2.16.840.1.114222.4.11.7295) SHALL be used (CONF:3247-30765).
   4. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (3407-4, 3408-2, 3476-9), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7297) SHALL be used (CONF:3247-30766).
   5. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (3478-5, 3479-3, 3480-1), then valueSet NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7299) SHALL be used (CONF:3247-30768).
   6. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Irradiated (3411-6, 3412-4, 3481-9), then valueSet NHSN Red Blood Cells/Apheresis/Irradiated (urn:oid:2.16.840.1.114222.4.11.7300) SHALL be used (CONF:3247-30742).
   7. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Leukocyte Reduced (3413-2, 3414-0, 3482-7), then valueSet NHSN Red Blood Cells/Apheresis/Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7301) SHALL be used (CONF:3247-30743).
   8. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Apheresis/Riboflavin-Treated (3535-2, 3536-0, 3537-8), then valueSet NHSN Plasma/Apheresis/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7327) SHALL be used (CONF:3247-30744).
   9. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Apheresis/Psoralen-Treated (3532-9, 3533-7, 3534-5), then valueSet NHSN Plasma/Apheresis/Psoralen-Treated (urn:oid:2.16.840.1.114222.4.11.7326) SHALL be used (CONF:3247-30745).
   10. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Whole Blood Derived/Riboflavin-Treated (3526-1, 3527-9, 3528-7), then valueSet NHSN Plasma/Whole Blood Derived/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7324) SHALL be used (CONF:3247-30746).
   11. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Whole Blood Derived/Psoralen-Treated (3523-8, 3524-6, 3525-3), then valueSet NHSN Plasma/Whole Blood Derived/Psoralen-Treated (urn:oid:2.16.840.1.114222.4.11.7323) SHALL be used (CONF:3247-30747).
   12. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Riboflavin-Treated (3517-0, 3518-8, 3519-6 ), then valueSet NHSN Platelets/Apheresis/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7321) SHALL be used (CONF:3247-30748).
   13. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Psoralen-Treated (3514-7, 3515-4, 3516-2), then valueSet NHSN Platelets/Apheresis/Psoralen-Treated (urn:oid:2.16.840.1.114222.4.11.7320) SHALL be used (CONF:3247-30749).
   14. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Riboflavin-Treated (3517-0, 3518-8), then valueSet NHSN Platelets/Whole Blood Derived/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7318) SHALL be used (CONF:3247-30750).
   15. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Psoralen-Treated (3505-5, 3507-1), then valueSet NHSN Platelets/Whole Blood Derived/Psoralen-Treated (urn:oid:2.16.840.1.114222.4.11.7317) SHALL be used (CONF:3247-30751).
   16. If the product specified in the containing Blood Product Usage Summary Observation is Cryoprecipitate (3562-6, 3563-4), then valueSet NHSN Cryoprecipitate (urn:oid:2.16.840.1.114222.4.11.7315) SHALL be used (CONF:3247-30752).
   17. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Apheresis/Total (3529-5, 3530-3, 3531-1), then valueSet NHSN Plasma/Apheresis/Total (urn:oid:2.16.840.1.114222.4.11.7314) SHALL be used (CONF:3247-30753).
   18. If the product specified in the containing Blood Product Usage Summary Observation is Plasma/Whole Blood Derived/Total (3520-4, 3521-2, 3522-0), then valueSet NHSN Plasma/Whole Blood Derived/Total (urn:oid:2.16.840.1.114222.4.11.7313) SHALL be used (CONF:3247-30754).
   19. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Irradiated or Leukocyte Reduced (3427-2, 3428-0, 3496-7), then valueSet NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7312) SHALL be used (CONF:3247-30755).
   20. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Leukocyte Reduced (3425-6, 3426-4, 3495-9), then valueSet NHSN Platelets/Apheresis/Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7311) SHALL be used (CONF:3247-30756).
   21. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Irradiated (3423-1, 3424-9, 3494-2), then valueSet NHSN Platelets/Apheresis/Irradiated (urn:oid:2.16.840.1.114222.4.11.7310) SHALL be used (CONF:3247-30757).
   22. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (3491-8, 3492-6, 3493-4), then valueSet NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7309) SHALL be used (CONF:3247-30758).
   23. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (3420-7, 3489-2), then valueSet NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7307) SHALL be used (CONF:3247-30759).
   24. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Leukocyte Reduced (3419-9, 3488-4), then valueSet NHSN Platelets/Whole Blood Derived/Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7306) SHALL be used (CONF:3247-30760).
   25. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Irradiated (3418-1, 3487-6), then valueSet NHSN Platelets/Whole Blood Derived/Irradiated (urn:oid:2.16.840.1.114222.4.11.7305) SHALL be used (CONF:3247-30761).
   26. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (3485-0, 3486-8), then valueSet NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7304) SHALL be used (CONF:3247-30762).
   27. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (3415-7, 3416-5, 3483-5), then valueSet NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7302) SHALL be used (CONF:3247-30763).
   28. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (3405-8, 3406-6, 3475-1), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (urn:oid:2.16.840.1.114222.4.11.7296) SHALL be used (CONF:3247-30767).
   29. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/S-303-Treated (3547-7, 3548-5, 3549-3), then valueSet NHSN Red Blood Cells/Whole Blood Derived/S-303-Treated (urn:oid:2.16.840.1.114222.4.11.7498) SHALL be used (CONF:3247-30769).
   30. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Whole Blood Derived/Riboflavin-Treated (3550-1, 3551-9, 3552-7), then valueSet NHSN Red Blood Cells/Whole Blood Derived/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7499) SHALL be used (CONF:3247-30770).
   31. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/S-303-Treated (3556-8, 3557-6, 3558-4), then valueSet NHSN Red Blood Cells/Apheresis/S-303-Treated (urn:oid:2.16.840.1.114222.4.11.7500) SHALL be used (CONF:3247-30771).
   32. If the product specified in the containing Blood Product Usage Summary Observation is Red Blood Cells/Apheresis/Riboflavin-Treated (3559-2, 3560-0, 3561-8), then valueSet NHSN Red Blood Cells/Apheresis/Riboflavin-Treated (urn:oid:2.16.840.1.114222.4.11.7501) SHALL be used (CONF:3247-30772).
   33. If the product specified in the containing Blood Product Usage Summary Observation is Cryoprecipitate/Psoralen-Treated (3564-2, 3565-9), then valueSet NHSN Cryoprecipitate/Psoralen-Treated (urn:oid:2.16.840.1.114222.4.11.7502) SHALL be used (CONF:3247-30773).
   34. If the product specified in the containing Blood Product Usage Summary Observation is Cryoprecipitate/Psoralen-Treated (3566-7, 3567-5), then valueSet NHSN Cryoprecipitate/Psoralen-Treated (urn:oid:2.16.840.1.114222.4.11.7502) SHALL be used (CONF:3247-30774).
   35. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Psoralen-Treated and In Plasma (3568-3, 3569-1, 3570-9), then valueSet NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma (urn:oid:2.16.840.1.114222.4.11.7504) SHALL be used (CONF:3247-30775).
   36. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Psoralen-Treated and In Platelet Additive Solution (3571-7, 3572-5, 3573-3), then valueSet NHSN Platelets/Apheresis/Psoralen-Treated (urn:oid:2.16.840.1.114222.4.11.7320) SHALL be used (CONF:3247-30776).
   37. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Riboflavin-Treated and In Plasma (3574-1, 3575-8, 3576-6), then valueSet NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma (urn:oid:2.16.840.1.114222.4.11.7506) SHALL be used (CONF:3247-30777).
   38. If the product specified in the containing Blood Product Usage Summary Observation is Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (3577-4, 3578-2, 3579-0), then valueSet NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (urn:oid:2.16.840.1.114222.4.11.7507) SHALL be used (CONF:3247-30778).
2. SHALL contain exactly one [1..1] statusCode (CONF:3247-30718).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-30722).
3. SHALL contain exactly one [1..1] value with @xsi:type="INT" (CONF:3247-30723).

Table 245: NHSN Whole Blood Total (1)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Whole Blood Total (1) urn:oid:2.16.840.1.114222.4.11.7292  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for Whole Blood Total reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0009 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg |
| E0013 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|Open |
| E0014 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|Open|Irradiated |
| E0015 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|Open|Irradiated|ResLeu:<5E6 |
| E0016 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|Open|ResLeu:<5E6 |
| E0017 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|Irradiated |
| E0018 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|Irradiated|ResLeu:<5E6 |
| E0019 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|ResLeu:<5E6 |
| E0020 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|Cryo reduced |
| E0021 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | WHOLE BLOOD|CPD/450mL/refg|Plts reduced |
| ... | | | |

Table 246: NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (3)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (3) urn:oid:2.16.840.1.114222.4.11.7294  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0142 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|ACD-A/450mL/refg |
| E0146 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|ACD-B/450mL/refg |
| E0150 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg |
| E0154 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Open |
| E0159 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Open|Albumin added |
| E0160 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Open|Plasma added |
| E0165 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Albumin added |
| E0166 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Plasma added |
| E0167 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg |
| E0171 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|Open |
| ... | | | |

Table 247: NHSN Red Blood Cells/Whole Blood Derived/Irradiated (4)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Red Blood Cells/Whole Blood Derived/Irradiated (4) urn:oid:2.16.840.1.114222.4.11.7295  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Irradiated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0155 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Open|Irradiated |
| E0157 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Open|Irradiated|Plasma added |
| E0161 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Irradiated |
| E0163 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Irradiated|Plasma added |
| E0172 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|Open|Irradiated |
| E0174 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|Open|Irradiated|Plasma added |
| E0178 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|Irradiated |
| E0180 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|Irradiated|Plasma added |
| E0188 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/250mL/refg|Irradiated |
| E0200 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/450mL/refg|Open|Irradiated |
| ... | | | |

Table 248: NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (6)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (6) urn:oid:2.16.840.1.114222.4.11.7297  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0156 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Open|Irradiated|ResLeu:<5E6 |
| E0162 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Irradiated|ResLeu:<5E6 |
| E0173 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|Open|Irradiated|ResLeu:<5E6 |
| E0179 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|Irradiated|ResLeu:<5E6 |
| E0189 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/250mL/refg|Irradiated|ResLeu:<5E6 |
| E0201 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/450mL/refg|Open|Irradiated|ResLeu:<5E6 |
| E0207 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/450mL/refg|Irradiated|ResLeu:<5E6 |
| E0218 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/500mL/refg|Open|Irradiated|ResLeu:<5E6 |
| E0224 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/500mL/refg|Irradiated|ResLeu:<5E6 |
| E0235 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/250mL/refg|Open|Irradiated|ResLeu:<5E6 |
| ... | | | |

Table 249: NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (5)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (5) urn:oid:2.16.840.1.114222.4.11.7296  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0158 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|Open|ResLeu:<5E6 |
| E0164 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/450mL/refg|ResLeu:<5E6 |
| E0175 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|Open|ResLeu:<5E6 |
| E0181 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/500mL/refg|ResLeu:<5E6 |
| E0190 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPD/250mL/refg|ResLeu:<5E6 |
| E0203 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/450mL/refg|Open|ResLeu:<5E6 |
| E0209 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/450mL/refg|ResLeu:<5E6 |
| E0220 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/500mL/refg|Open|ResLeu:<5E6 |
| E0226 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/500mL/refg|ResLeu:<5E6 |
| E0236 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | RED BLOOD CELLS|CPDA-1/250mL/refg|Open|ResLeu:<5E6 |
| ... | | | |

Table 250: NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (8)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (8) urn:oid:2.16.840.1.114222.4.11.7299  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0605 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg |
| E0624 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open |
| E0652 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Supernat rem |
| E0653 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Supernat rem|1st container |
| E0654 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Supernat rem|2nd container |
| E0655 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Supernat rem/Plasma added |
| E0656 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Supernat rem/Plasma added|1st container |
| E0657 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Supernat rem/Plasma added|2nd container |
| E0658 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|1st container |
| E0659 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|2nd container |
| ... | | | |

Table 251: NHSN Red Blood Cells/Apheresis/Irradiated (9)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Red Blood Cells/Apheresis/Irradiated (9) urn:oid:2.16.840.1.114222.4.11.7300  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Irradiated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0625 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated |
| E0635 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|Supernat rem |
| E0636 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|Supernat rem|1st container |
| E0637 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|Supernat rem|2nd container |
| E0638 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|Supernat rem/Plasma added |
| E0639 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|Supernat rem/Plasma added|1st container |
| E0640 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|Supernat rem/Plasma added|2nd container |
| E0641 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|1st container |
| E0642 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|2nd container |
| E0660 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Irradiated |
| ... | | | |

Table 252: NHSN Red Blood Cells/Apheresis/Leukocyte Reduced (10)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Red Blood Cells/Apheresis/Leukocyte Reduced (10) urn:oid:2.16.840.1.114222.4.11.7301  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0643 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6 |
| E0644 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6|Supernat rem |
| E0645 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6|Supernat rem|1st container |
| E0646 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6|Supernat rem|2nd container |
| E0647 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6|Supernat rem/Plasma added |
| E0648 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6|Supernat rem/Plasma added|1st container |
| E0649 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6|Supernat rem/Plasma added|2nd container |
| E0650 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6|1st container |
| E0651 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|ResLeu:<5E6|2nd container |
| E0678 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|ResLeu:<5E6 |
| ... | | | |

Table 253: NHSN Plasma/Apheresis/Riboflavin-Treated (36)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Plasma/Apheresis/Riboflavin-Treated (36) urn:oid:2.16.840.1.114222.4.11.7327  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Plasma/Apheresis/Riboflavin-Treated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E6544 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-A/XX/<-25C|Riboflavin-treated |
| E6545 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|NaCitrate/XX/<-25C|Frozen <=6h|Riboflavin-treated |
| E7040 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|NaCitrate/XX/<-30C|ResLeu:<5E6|Riboflavin-treated |
| E7041 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|NaCitrate/XX/<-30C|ResLeu:<5E6|50mL|Riboflavin-treated |
| E7360 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Thawed Apheresis FRESH FROZEN PLASMA|NaCitrate/XX/refg|Riboflavin-treated |
| E7363 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Thawed Apheresis FRESH FROZEN PLASMA|ACD-A/XX/refg|Riboflavin-treated |
| E8282 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-A/XX/<-30C|Riboflavin-treated |
| E8283 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|CPD-50/XX/<-30C|Riboflavin-treated |

Table 254: NHSN Plasma/Apheresis/Psoralen-Treated (35)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Plasma/Apheresis/Psoralen-Treated (35) urn:oid:2.16.840.1.114222.4.11.7326  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Plasma/Apheresis/Psoralen-Treated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E4984 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|CPD-50/XX/<-30C|Psoralen-treated |
| E5732 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|CPD-50/XX/<-25 C|1st container|Psoralen-treated |
| E5733 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|CPD-50/XX/<-25 C|2nd container|Psoralen-treated |
| ... | | | |

Table 255: NHSN Plasma/Whole Blood Derived/Riboflavin-Treated (33)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Plasma/Whole Blood Derived/Riboflavin-Treated (33) urn:oid:2.16.840.1.114222.4.11.7324  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Plasma/Whole Blood Derived/Riboflavin-Treated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E6542 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPDA-1/XX/<-25C|Riboflavin-treated |
| E6543 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLASMA|CPDA-1/XX/<-25C|Cryo reduced|Riboflavin-treated |
| E6547 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/450mL/<-25C|Frozen <=8h|Riboflavin-treated |
| E7042 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/XX/<-30C|ResLeu:<5E6|50mL|Riboflavin-treated |
| E7043 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/XX/<-30C|ResLeu:<5E6|Riboflavin-treated |
| E7060 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/450mL/<-25C|Frozen <=15h|Riboflavin-treated |
| E7076 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLASMA|CPD/450mL/<-25C|Cryo reduced|Riboflavin-treated |
| E7077 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLASMA|CPDA-1/450mL/<-25C|Cryo reduced|Riboflavin-treated |
| E7343 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPDA-1/XX/<-25C|Frozen <=15h|Riboflavin-treated |
| E7344 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/XX/<-25C|Frozen <=15h|Riboflavin-treated |
| ... | | | |

Table 256: NHSN Plasma/Whole Blood Derived/Psoralen-Treated (32)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Plasma/Whole Blood Derived/Psoralen-Treated (32) urn:oid:2.16.840.1.114222.4.11.7323  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Plasma/Whole Blood Derived/Psoralen-Treated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E4983 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLASMA|CPD/450mL/<-30C|2 units|Psoralen-treated |
| E5735 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Liquid POOLED PLASMA|CPD/450mL/refg|2 units|Psoralen-treated |
| E5881 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED FRESH FROZEN PLASMA|CPD/XX/<-30C|ResLeu:<1E6|>=600mL|3 units|Psoralen-treated |
| E6438 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED FRESH FROZEN PLASMA|CPD/XX/<-30C|ResLeu:<1E6|>=600mL|5 units|Psoralen-treated |
| E6536 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED FRESH FROZEN PLASMA|CPD/XX/<-25C|Frozen <=8h|2 units|Psoralen-treated |
| E8218 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED FRESH FROZEN PLASMA|CPD/XX/<-25C|Psoralen-treated|From 5 donors |
| E8368 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED FRESH FROZEN PLASMA|CP2D/XX/<=-18C|2 units|Psoralen-treated |
| E8369 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED FRESH FROZEN PLASMA|CP2D/XX/<=-18C|3 units|Psoralen-treated |
| E8370 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED FRESH FROZEN PLASMA|CP2D/XX/<=-18C|Psoralen-treated |
| E8371 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLASMA|CPD/XX/<=-18C|2 units|Psoralen-treated |
| ... | | | |

Table 257: NHSN Platelets/Apheresis/Riboflavin-Treated (30)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Riboflavin-Treated (30) urn:oid:2.16.840.1.114222.4.11.7321  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Riboflavin-Treated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E5748 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|Riboflavin-treated |
| E5749 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|1st container|Riboflavin-treated |
| E5750 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|2nd container|Riboflavin-treated |
| E5751 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|3rd container|Riboflavin-treated |
| E5752 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<1E6|Riboflavin-treated |
| E5753 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<1E6|1st container|Riboflavin-treated |
| E5754 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<1E6|2nd container|Riboflavin-treated |
| E5755 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<1E6|3rd container|Riboflavin-treated |
| E5756 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Irradiated|ResLeu:<5E6|Riboflavin-treated |
| E5757 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Irradiated|ResLeu:<5E6|1st container|Riboflavin-treated |
| ... | | | |

Table 258: NHSN Platelets/Apheresis/Psoralen-Treated (29)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Psoralen-Treated (29) urn:oid:2.16.840.1.114222.4.11.7320  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Psoralen-Treated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E4977 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|1st container|Approx 240 E9 plts|Psoralen-treated |
| E4979 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|2nd container|Approx 240 E9 plts|Psoralen-treated |
| E4981 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|3rd container|Approx 240 E9 plts|Psoralen-treated |
| E5295 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A>PAS-C/XX/20-24C|ResLeu:<1E6|1st container|Psoralen-treated |
| E5296 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A>PAS-C/XX/20-24C|ResLeu:<1E6|2nd container|Psoralen-treated |
| E5862 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|1st container|Psoralen-treated |
| E5863 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|2nd container|Psoralen-treated |
| E5864 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|3rd container|Psoralen-treated |
| E5865 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|4th container|Psoralen-treated |
| E5866 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|Supernat reduced|1st container|Psoralen-treated |
| ... | | | |

Table 259: NHSN Platelets/Whole Blood Derived/Riboflavin-Treated (27)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Whole Blood Derived/Riboflavin-Treated (27) urn:oid:2.16.840.1.114222.4.11.7318  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Riboflavin-Treated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E5772 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPD/XX/20-24C|ResLeu:<1E6|Riboflavin-treated |
| E5773 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPD/XX/20-24C|Irradiated|ResLeu:<1E6|Riboflavin-treated |
| E5774 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPD/XX/20-24C|ResLeu:<5E6|Riboflavin-treated |
| E5775 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPD/XX/20-24C|Irradiated|ResLeu:<5E6|Riboflavin-treated |
| E5776 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPD/XX/20-24C|Riboflavin-treated |
| E5777 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPD/XX/20-24C|Irradiated|Riboflavin-treated |
| E6559 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPDA-1/XX/20-24C|Buffy coat plts prep|Riboflavin-treated |
| E6560 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPDA-1/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Riboflavin-treated |
| E6643 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|PAS-E/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Riboflavin-treated |
| E6646 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|PAS-D/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Riboflavin-treated |
| ... | | | |

Table 260: NHSN Platelets/Whole Blood Derived/Psoralen-Treated (26)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Whole Blood Derived/Psoralen-Treated (26) urn:oid:2.16.840.1.114222.4.11.7317  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Psoralen-Treated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E4975 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Approx 240 E9 plts|Psoralen-treated |
| E5297 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|CPD>PAS-C/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Approx 240 E9 plts|Psoralen-treated |
| E5854 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Psoralen-treated |
| E5855 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|Supernat reduced|Buffy coat plts prep|Psoralen-treated |
| E5856 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed POOLED PLATELETS|None/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Psoralen-treated |
| E5857 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed POOLED PLATELETS|PAS-C/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Psoralen-treated |
| E6021 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Frozen POOLED PLATELETS|DMSO/XX/<-30C|Open|ResLeu:<1E6|Buffy coat plts prep|Psoralen-treated |
| E6642 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|PAS-E/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Psoralen-treated |
| E7773 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed POOLED PLATELETS|PAS-E/XX/20-24C|ResLeu:<1E6|Buffy coat plts prep|Psoralen-treated |
| E8247 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | POOLED PLATELETS|PAS-E/XX/20-24C|ResLeu:<1E6|Psoralen-treated |
| ... | | | |

Table 261: NHSN Cryoprecipitate (24)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Cryoprecipitate (24) urn:oid:2.16.840.1.114222.4.11.7315  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Cryoprecipitate reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E3571 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | CRYOPRECIPITATE|None/450mL/<=-18C |
| E3572 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | CRYOPRECIPITATE|None/450mL/<=-18C|Irradiated |
| E3573 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | CRYOPRECIPITATE|None/500mL/<=-18C |
| E3574 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | CRYOPRECIPITATE|None/500mL/<=-18C|Irradiated |
| E3575 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | CRYOPRECIPITATE|None/XX/<-30C |
| E3576 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | CRYOPRECIPITATE|None/XX/<-30C|Irradiated |
| E3577 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Thawed CRYOPRECIPITATE|None/450mL/rt |
| E3578 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Thawed CRYOPRECIPITATE|None/450mL/rt|Irradiated |
| E3579 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Thawed CRYOPRECIPITATE|None/500mL/rt |
| E3580 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Thawed CRYOPRECIPITATE|None/500mL/rt|Irradiated |
| ... | | | |

Table 262: NHSN Plasma/Apheresis/Total (23)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Plasma/Apheresis/Total (23) urn:oid:2.16.840.1.114222.4.11.7314  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Plasma/Apheresis/Total reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0829 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C |
| E0838 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated |
| E0839 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|Fin Con:NS |
| E0840 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|Fin Con:NS|Aphr not automated |
| E0841 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|Fin Con:NS|Aphr not automated|Quar:>=6m/retested |
| E0842 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|Fin Con:NS|Quar:>=6m/retested |
| E0843 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|<200 mL |
| E0844 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|<200 mL|Quar:>=6m/retested |
| E0845 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|>=200mL<400mL |
| E0846 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|>=200mL<400mL|Quar:>=6m/retested |
| ... | | | |

Table 263: NHSN Plasma/Whole Blood Derived/Total (22)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Plasma/Whole Blood Derived/Total (22) urn:oid:2.16.840.1.114222.4.11.7313  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Plasma/Whole Blood Derived/Total reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0695 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|ACD-B/XX/<=-18C |
| E0698 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated |
| E0699 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Irradiated|Quar:>=6m/retested |
| E0700 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|ACD-B/XX/<=-18C|Quar:>=6m/retested |
| E0701 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/XX/<=-18C |
| E0704 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/XX/<=-18C|Irradiated |
| E0705 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/XX/<=-18C|Irradiated|Quar:>=6m/retested |
| E0706 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPD/XX/<=-18C|Quar:>=6m/retested |
| E0707 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPDA-1/XX/<=-18C |
| E0710 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | FRESH FROZEN PLASMA|CPDA-1/XX/<=-18C|Irradiated |
| ... | | | |

Table 264: NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced (21)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced (21) urn:oid:2.16.840.1.114222.4.11.7312  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E2983 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6 |
| E2984 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Plasma reduced |
| E2985 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Plasma reduced|Aphr not automated |
| E2986 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Plasma reduced|1st container |
| E2987 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Plasma reduced|2nd container |
| E2988 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Plasma reduced|3rd container |
| E2989 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Plasma reduced|4th container |
| E2990 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Plasma reduced|1st container:not auto |
| E2991 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Plasma reduced|2nd container:not auto |
| E2992 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|ResLeu:<5E6|Aphr not automated |
| ... | | | |

Table 265: NHSN Platelets/Apheresis/Leukocyte Reduced (20)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Leukocyte Reduced (20) urn:oid:2.16.840.1.114222.4.11.7311  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E3014 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6 |
| E3015 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Plasma reduced |
| E3016 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Plasma reduced|Aphr not automated |
| E3017 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Plasma reduced|1st container |
| E3018 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Plasma reduced|2nd container |
| E3019 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Plasma reduced|3rd container |
| E3020 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Plasma reduced|4th container |
| E3021 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Plasma reduced|1st container:not auto |
| E3022 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Plasma reduced|2nd container:not auto |
| E3023 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|ResLeu:<5E6|Aphr not automated |
| ... | | | |

Table 266: NHSN Platelets/Apheresis/Irradiated (19)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Irradiated (19) urn:oid:2.16.840.1.114222.4.11.7310  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Irradiated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E2982 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated |
| E2999 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Plasma reduced |
| E3000 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Plasma reduced|Aphr not automated |
| E3001 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Plasma reduced|1st container |
| E3002 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Plasma reduced|2nd container |
| E3003 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Plasma reduced|3rd container |
| E3004 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Plasma reduced|4th container |
| E3005 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Plasma reduced|1st container:not auto |
| E3006 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Plasma reduced|2nd container:not auto |
| E3007 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Irradiated|Aphr not automated |
| ... | | | |

Table 267: NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (18)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (18) urn:oid:2.16.840.1.114222.4.11.7309  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E2922 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-B/XX/refg |
| E2926 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/refg |
| E2930 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|NaCitrate/XX/refg |
| E2940 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C |
| E2981 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open |
| E3030 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Plasma reduced |
| E3031 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Plasma reduced|Aphr not automated |
| E3032 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Plasma reduced|1st container |
| E3033 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Plasma reduced|2nd container |
| E3034 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Open|Plasma reduced|3rd container |
| ... | | | |

Table 268: NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (16)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (16) urn:oid:2.16.840.1.114222.4.11.7307  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E2810 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Irradiated|ResLeu:<8.3E5 |
| E2811 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Irradiated|ResLeu:<8.3E5|Plasma reduced |
| E2812 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Irradiated|ResLeu:<8.3E5|Plasma reduced|Buffy coat plts prep |
| E2813 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Irradiated|ResLeu:<8.3E5|Buffy coat plts prep |
| E2827 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/500mL/20-24C|Irradiated|ResLeu:<8.3E5 |
| E2828 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/500mL/20-24C|Irradiated|ResLeu:<8.3E5|Plasma reduced |
| E2836 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/20-24C|Irradiated|ResLeu:<8.3E5 |
| E2837 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/20-24C|Irradiated|ResLeu:<8.3E5|Plasma reduced |
| E2845 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/500mL/20-24C|Irradiated|ResLeu:<8.3E5 |
| E2846 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/500mL/20-24C|Irradiated|ResLeu:<8.3E5|Plasma reduced |
| ... | | | |

Table 269: NHSN Platelets/Whole Blood Derived/Leukocyte Reduced (15)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Whole Blood Derived/Leukocyte Reduced (15) urn:oid:2.16.840.1.114222.4.11.7306  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E2817 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|ResLeu:<8.3E5 |
| E2818 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|ResLeu:<8.3E5|Plasma reduced |
| E2819 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|ResLeu:<8.3E5|Plasma reduced|Buffy coat plts prep |
| E2820 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|ResLeu:<8.3E5|Buffy coat plts prep |
| E2830 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/500mL/20-24C|ResLeu:<8.3E5 |
| E2831 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/500mL/20-24C|ResLeu:<8.3E5|Plasma reduced |
| E2839 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/20-24C|ResLeu:<8.3E5 |
| E2840 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/20-24C|ResLeu:<8.3E5|Plasma reduced |
| E2848 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/500mL/20-24C|ResLeu:<8.3E5 |
| E2849 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/500mL/20-24C|ResLeu:<8.3E5|Plasma reduced |
| ... | | | |

Table 270: NHSN Platelets/Whole Blood Derived/Irradiated (14)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Whole Blood Derived/Irradiated (14) urn:oid:2.16.840.1.114222.4.11.7305  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Irradiated reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E2809 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Irradiated |
| E2814 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Irradiated|Plasma reduced |
| E2815 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Irradiated|Plasma reduced|Buffy coat plts prep |
| E2816 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Irradiated|Buffy coat plts prep |
| E2826 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/500mL/20-24C|Irradiated |
| E2829 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/500mL/20-24C|Irradiated|Plasma reduced |
| E2835 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/20-24C|Irradiated |
| E2838 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/20-24C|Irradiated|Plasma reduced |
| E2844 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/500mL/20-24C|Irradiated |
| E2847 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/500mL/20-24C|Irradiated|Plasma reduced |
| ... | | | |

Table 271: NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (13)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (13) urn:oid:2.16.840.1.114222.4.11.7304  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E2790 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/refg |
| E2794 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/refg |
| E2807 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C |
| E2821 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Plasma reduced |
| E2822 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Plasma reduced|Buffy coat plts prep |
| E2823 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/450mL/20-24C|Buffy coat plts prep |
| E2824 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/500mL/20-24C |
| E2832 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPD/500mL/20-24C|Plasma reduced |
| E2833 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/20-24C |
| E2841 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | PLATELETS|CPDA-1/450mL/20-24C|Plasma reduced |
| ... | | | |

Table 272: NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (11)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (11) urn:oid:2.16.840.1.114222.4.11.7302  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E0626 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6 |
| E0627 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6|Supernat rem |
| E0628 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6|Supernat rem|1st container |
| E0629 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6|Supernat rem|2nd container |
| E0630 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6|Supernat rem/Plasma added |
| E0631 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6|Supernat rem/Plasma added|1st container |
| E0632 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6|Supernat rem/Plasma added|2nd container |
| E0633 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6|1st container |
| E0634 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Open|Irradiated|ResLeu:<5E6|2nd container |
| E0661 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis RED BLOOD CELLS|CP2D>AS3/XX/refg|Irradiated|ResLeu:<5E6 |
| ... | | | |

Table 273: NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma (46)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma (46) urn:oid:2.16.840.1.114222.4.11.7504  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E5870 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed Apheresis PLATELETS|None/XX/20-24C|ResLeu:<1E6|1st container|Psoralen-treated |
| E5871 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed Apheresis PLATELETS|None/XX/20-24C|ResLeu:<1E6|2nd container|Psoralen-treated |
| E5872 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed Apheresis PLATELETS|None/XX/20-24C|ResLeu:<1E6|3rd container|Psoralen-treated |
| E5873 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed Apheresis PLATELETS|None/XX/20-24C|ResLeu:<1E6|4th container|Psoralen-treated |
| E6019 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Frozen Apheresis PLATELETS|DMSO/XX/<-30C|Open|ResLeu:<1E6|1st container|Psoralen-treated |
| E6020 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Frozen Apheresis PLATELETS|DMSO/XX/<-30C|Open|ResLeu:<1E6|2nd container|Psoralen-treated |
| E7742 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Frozen Apheresis PLATELETS|DMSO/XX/<-80C|Open|ResLeu:<1E6|Psoralen-treated |
| E8331 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|Psoralen-treated |
| E8332 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|1st container|Psoralen-treated |
| E8333 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|2nd container|Psoralen-treated |
| ... | | | |

Table 274: NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma (48)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma (48) urn:oid:2.16.840.1.114222.4.11.7506  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E5748 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|Riboflavin-treated |
| E5749 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|1st container|Riboflavin-treated |
| E5750 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|2nd container|Riboflavin-treated |
| E5751 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<5E6|3rd container|Riboflavin-treated |
| E5752 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<1E6|Riboflavin-treated |
| E5753 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<1E6|1st container|Riboflavin-treated |
| E5754 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<1E6|2nd container|Riboflavin-treated |
| E5755 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|ResLeu:<1E6|3rd container|Riboflavin-treated |
| E5756 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Irradiated|ResLeu:<5E6|Riboflavin-treated |
| E5757 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|ACD-A/XX/20-24C|Irradiated|ResLeu:<5E6|1st container|Riboflavin-treated |
| ... | | | |

Table 275: NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (49)

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (49) urn:oid:2.16.840.1.114222.4.11.7507  NHSN Protocol specifies which ISBT Blood Product codes to use for each blood product type.  The ISBT blood product codes for NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution reporting, at the time of publication, are contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| E6641 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-E/XX/20-24C|ResLeu:<1E6|Riboflavin-treated |
| E7039 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Apheresis PLATELETS|PAS-E/XX/20-24C|ResLeu:<1E6|Supernat reduced|1st container|Riboflavin-treated |
| E7357 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed Apheresis PLATELETS|PAS-E/XX/20-24C|ResLeu:<1E6|Riboflavin-treated |
| E7532 | ISBT-128 | urn:oid:2.16.840.1.113883.6.18 | Washed Apheresis PLATELETS|PAS-E/XX/20-24C|Irradiated|ResLeu:<1E6|Riboflavin-treated |

Figure 115: ISBT Product Code Summary Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- ISBT Product Code Summary Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.238"

extension="2015-10-01" />

<code codeSystem="2.16.840.1.113883.6.18"

codeSystemName="ISBT-128" code="E0009"

displayName="WHOLE BLOOD|CPD/450mL/refg" />

<statusCode code="completed" />

<value xsi:type="INT" value="2" />

</observation>

Isolate Susceptibility Tests Organizer (V3)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2016-08-01 (closed)]

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Table 276: Isolate Susceptibility Tests Organizer (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Specimen Collection Procedure (ARO) (V3)](#E_Specimen_Collection_Procedure_ARO_V3) (required) | [ARO Staph Aureus Specific Tests Organizer](#E_ARO_Staph_Aureus_Specific_Tests_Organ) (optional)  [Antimicrobial Susceptibility Isolate Participant](#E_Antimicrobial_Susceptibility_Isolate_) (required)  [Antimicrobial Susceptibility Tests Organizer (V3)](#E_Antimicrobial_Susceptibility_Tests_Or) (required) |

This organizer records a laboratory-identified microorganism isolate and details of the antimicrobial susceptibility tests performed on that isolate.  
Additionally, it records the unique isolate identifier for purposes of laboratory tracking. Special tests done on isolates of Staphylococcus aureus are also recorded here. The ARO Staph Aureus Specific Tests Organizer is omitted from this clinical statement if Staph. aureus is NOT the identified pathogen (i.e., the participant subject).

Table 277: Isolate Susceptibility Tests Organizer (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-27120](#C_3247-27120) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [3247-27121](#C_3247-27121) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-27122](#C_3247-27122) |  |
| @root | 1..1 | SHALL |  | [3247-27123](#C_3247-27123) | 2.16.840.1.113883.10.20.5.6.201 |
| @extension | 1..1 | SHALL |  | [3247-30470](#C_3247-30470) | 2016-08-01 |
| id | 1..\* | SHALL |  | [3247-27124](#C_3247-27124) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-27125](#C_3247-27125) | NA |
| code | 1..1 | SHALL |  | [3247-27126](#C_3247-27126) |  |
| @code | 1..1 | SHALL |  | [3247-27127](#C_3247-27127) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 18725-2 |
| statusCode | 1..1 | SHALL |  | [3247-27128](#C_3247-27128) |  |
| @code | 1..1 | SHALL |  | [3247-27129](#C_3247-27129) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| participant | 1..1 | SHALL |  | [3247-27130](#C_3247-27130) | [Antimicrobial Susceptibility Isolate Participant (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.202](#E_Antimicrobial_Susceptibility_Isolate_) |
| component | 0..1 | MAY |  | [3247-27156](#C_3247-27156) |  |
| organizer | 1..1 | SHALL |  | [3247-27157](#C_3247-27157) | [ARO Staph Aureus Specific Tests Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.190](#E_ARO_Staph_Aureus_Specific_Tests_Organ) |
| component | 1..\* | SHALL |  | [3247-27158](#C_3247-27158) |  |
| organizer | 1..1 | SHALL |  | [3247-30469](#C_3247-30469) | [Antimicrobial Susceptibility Tests Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01](#E_Antimicrobial_Susceptibility_Tests_Or) |

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-27120).
2. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-27121).
3. SHALL contain exactly one [1..1] templateId (CONF:3247-27122) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.201" (CONF:3247-27123).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30470).
4. SHALL contain at least one [1..\*] id (CONF:3247-27124).
   1. Such ids SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-27125).
5. SHALL contain exactly one [1..1] code (CONF:3247-27126).
   1. This code SHALL contain exactly one [1..1] @code="18725-2" Microbiology studies (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3247-27127).
6. SHALL contain exactly one [1..1] statusCode (CONF:3247-27128).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-27129).
7. SHALL contain exactly one [1..1] [Antimicrobial Susceptibility Isolate Participant](#E_Antimicrobial_Susceptibility_Isolate_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.202) (CONF:3247-27130).

This component is included only if the isolate is Staphylococcus aureus.

1. MAY contain zero or one [0..1] component (CONF:3247-27156) such that it
   1. SHALL contain exactly one [1..1] [ARO Staph Aureus Specific Tests Organizer](#E_ARO_Staph_Aureus_Specific_Tests_Organ) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.190) (CONF:3247-27157).
2. SHALL contain at least one [1..\*] component (CONF:3247-27158) such that it
   1. SHALL contain exactly one [1..1] [Antimicrobial Susceptibility Tests Organizer (V3)](#E_Antimicrobial_Susceptibility_Tests_Or) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01) (CONF:3247-30469).

Figure 116: Isolate Susceptibility Tests Organizer (V3) Example

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- [HAI R3D1.1] Isolate Susceptibility Tests Organizer (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.201" extension="2016-08-01" />

<id nullFlavor="NA" />

<code code="18725-2"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

displayName="Microbiology Studies" />

<statusCode code="completed" />

<participant typeCode="SBJ">

<!-- [HAI R1] Antimicrobial Susceptibility Isolate Participant (R1) -->

<templateId root="2.16.840.1.113883.10.20.5.6.202" />

...

</participant>

<!-- This component is included only if the pathogen identified is Staph. aureus -->

<component>

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- [C-CDA R1.1] Result Organizer -->

<templateId root="2.16.840.1.113883.10.20.22.4.1" />

<!-- [HAI R1] ARO Staph Aureus Specific Tests Organizer -->

<templateId root="2.16.840.1.113883.10.20.5.6.190" />

...

</organizer>

</component>

<!-- Clarithromycin Susceptibility Testing -->

<component>

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- [C-CDA R1.1] Result Organizer -->

<templateId root="2.16.840.1.113883.10.20.22.4.1" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Tests Organizer (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.177" extension="2016-08-01" />

...

</organizer>

</component>

<!-- Vancomycin susceptibility testing -->

<component>

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- [C-CDA R1.1] Result Organizer -->

<templateId root="2.16.840.1.113883.10.20.22.4.1" />

<!-- [HAI R3D1.1] Antimicrobial Susceptibility Tests Organizer (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.177" extension="2016-08-01" />

...

</organizer>

</component>

</organizer>

IV Antibiotic Start Clinical Statement (V3)

[substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2016-08-01 (closed)]

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Table 278: IV Antibiotic Start Clinical Statement (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) (required) | [Type of Antimicrobial Start Observation](#E_Type_of_Antimicrobial_Start_Observati) (optional)  [Blood Sample Collected for Culture Observation](#E_Blood_Sample_Collected_for_Culture_Ob) (optional) |

This clinical statement records whether an IV antibiotic was started. It also contains entries detailing the type of antimicrobial start (new or a continuation) and, if the type was new, whether a blood sample was collected for culture. It is used in an Evidence of Infection (Dialysis) Report.

When the IV antibiotic was started, set the value of @negationInd to false. When the IV antibiotic was not started, set the value of @negationInd to true.

Table 279: IV Antibiotic Start Clinical Statement (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-21171](#C_3247-21171) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL |  | [3247-21172](#C_3247-21172) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3247-21173](#C_3247-21173) |  |
| templateId | 1..1 | SHALL |  | [3247-28253](#C_3247-28253) |  |
| @root | 1..1 | SHALL |  | [3247-28254](#C_3247-28254) | 2.16.840.1.113883.10.20.22.4.16 |
| templateId | 1..1 | SHALL |  | [3247-21426](#C_3247-21426) |  |
| @root | 1..1 | SHALL |  | [3247-21427](#C_3247-21427) | 2.16.840.1.113883.10.20.5.6.140 |
| @extension | 1..1 | SHALL |  | [3247-30564](#C_3247-30564) | 2016-08-01 |
| id | 1..1 | SHALL |  | [3247-21428](#C_3247-21428) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-22766](#C_3247-22766) | NA |
| code | 1..1 | SHALL |  | [3247-21174](#C_3247-21174) |  |
| @code | 1..1 | SHALL |  | [3247-21175](#C_3247-21175) | 281790008 |
| @codeSystem | 1..1 | SHALL |  | [3247-28187](#C_3247-28187) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| statusCode | 1..1 | SHALL |  | [3247-21429](#C_3247-21429) |  |
| @code | 1..1 | SHALL |  | [3247-28109](#C_3247-28109) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | IVL\_TS | [3247-21496](#C_3247-21496) |  |
| low | 1..1 | SHALL |  | [3247-21497](#C_3247-21497) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-22767](#C_3247-22767) | NA |
| high | 1..1 | SHALL |  | [3247-21498](#C_3247-21498) |  |
| @nullFlavor | 1..1 | SHALL |  | [3247-22768](#C_3247-22768) | NA |
| consumable | 1..1 | SHALL |  | [3247-21176](#C_3247-21176) |  |
| manufacturedProduct | 1..1 | SHALL |  | [3247-21177](#C_3247-21177) |  |
| @classCode | 1..1 | SHALL |  | [3247-28348](#C_3247-28348) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| templateId | 1..1 | SHALL |  | [3247-28338](#C_3247-28338) |  |
| @root | 1..1 | SHALL |  | [3247-28339](#C_3247-28339) | 2.16.840.1.113883.10.20.22.4.23 |
| manufacturedMaterial | 1..1 | SHALL |  | [3247-21178](#C_3247-21178) |  |
| code | 1..1 | SHALL |  | [3247-21179](#C_3247-21179) |  |
| entryRelationship | 0..1 | SHOULD |  | [3247-30561](#C_3247-30561) |  |
| @typeCode | 1..1 | SHALL |  | [3247-30562](#C_3247-30562) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL |  | [3247-30563](#C_3247-30563) | [Type of Antimicrobial Start Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01](#E_Type_of_Antimicrobial_Start_Observati) |
| entryRelationship | 0..1 | SHOULD |  | [3247-30565](#C_3247-30565) |  |
| @typeCode | 1..1 | SHALL |  | [3247-30566](#C_3247-30566) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL |  | [3247-30567](#C_3247-30567) | [Blood Sample Collected for Culture Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01](#E_Blood_Sample_Collected_for_Culture_Ob) |

1. Conforms to Medication Activity template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.16).
2. SHALL contain exactly one [1..1] @classCode="SBADM" Substance Administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3247-21171).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3247-21172).
4. SHALL contain exactly one [1..1] @negationInd (CONF:3247-21173).
5. SHALL contain exactly one [1..1] templateId (CONF:3247-28253) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.16" (CONF:3247-28254).
6. SHALL contain exactly one [1..1] templateId (CONF:3247-21426) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.140" (CONF:3247-21427).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30564).
7. SHALL contain exactly one [1..1] id (CONF:3247-21428).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-22766).
8. SHALL contain exactly one [1..1] code (CONF:3247-21174).
   1. This code SHALL contain exactly one [1..1] @code="281790008" Intravenous antibiotic therapy (CONF:3247-21175).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3247-28187).
9. SHALL contain exactly one [1..1] statusCode (CONF:3247-21429).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-28109).
10. SHALL contain exactly one [1..1] effectiveTime (CONF:3247-21496).
    1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3247-21497).
       1. This low SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-22767).
    2. This effectiveTime SHALL contain exactly one [1..1] high (CONF:3247-21498).
       1. This high SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3247-22768).
11. SHALL contain exactly one [1..1] consumable (CONF:3247-21176).
    1. This consumable SHALL contain exactly one [1..1] manufacturedProduct (CONF:3247-21177).
       1. This manufacturedProduct SHALL contain exactly one [1..1] @classCode="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3247-28348).
       2. This manufacturedProduct SHALL contain exactly one [1..1] templateId (CONF:3247-28338) such that it
          1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.23" (CONF:3247-28339).
       3. This manufacturedProduct SHALL contain exactly one [1..1] manufacturedMaterial (CONF:3247-21178).
          1. This manufacturedMaterial SHALL contain exactly one [1..1] code (CONF:3247-21179).
             1. In an Evidence of Infection (Dialysis) Report, if the antimicrobial started was Vancomycin, the value of @code SHALL be '11124' Vancomycin [[]CodeSystem: 2.16.840.1.113883.6.88 RxNorm]. Otherwise, the value of @nullFlavor SHALL be 'NI' (CONF:3247-21180).
12. SHOULD contain zero or one [0..1] entryRelationship (CONF:3247-30561) such that it
    1. SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3247-30562).
    2. SHALL contain exactly one [1..1] [Type of Antimicrobial Start Observation](#E_Type_of_Antimicrobial_Start_Observati) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01) (CONF:3247-30563).

If the type of antimicrobial start in the Type of Antimicrobial Start Observation was "New antimicrobial start" (2336-6) then the following template *SHALL* be present.

1. SHOULD contain zero or one [0..1] entryRelationship (CONF:3247-30565) such that it
   1. SHALL contain exactly one [1..1] @typeCode="REFR" Refers to (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3247-30566).
   2. SHALL contain exactly one [1..1] [Blood Sample Collected for Culture Observation](#E_Blood_Sample_Collected_for_Culture_Ob) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01) (CONF:3247-30567).

Figure 117: IV Antibiotic Start Clinical Statement (V3) Example

<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Medication Activity -->

<templateId root="2.16.840.1.113883.10.20.22.4.16" />

<!-- [HAI R3D1.1] Antibiotic Start Clinical Statement (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.140" extension="2016-08-01" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="281790008"

displayName="Intravenous antibiotic therapy" />

<statusCode code="completed" />

<effectiveTime xsi:type="IVL\_TS">

<low nullFlavor="NA" />

<high nullFlavor="NA" />

</effectiveTime>

<!-- The antibiotic started was IV Vancomycin -->

<consumable>

<manufacturedProduct classCode="MANU">

<templateId root="2.16.840.1.113883.10.20.22.4.23" />

<manufacturedMaterial>

<code codeSystem="2.16.840.1.113883.6.88"

codeSystemName="RxNorm"

code="11124"

displayName="Vancomycin" />

</manufacturedMaterial>

</manufacturedProduct>

</consumable>

<entryRelationship typeCode="REFR">

<!-- Type of Antimicrobial Start Observation -->

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI R3D1] Type of Antimicrobial Start Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.230" extension="2015-10-01" />

...

</observation>

</entryRelationship>

<!-- If type of antimicrobial start is "new antimicrobial start" 2336-6 then specify

whether or not blood sample collected for culture -->

<!-- Blood Sample Collected for Culture Observation -->

<entryRelationship typeCode="REFR">

<!-- Blood sample was collected so @negationInd="false" -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [HAI R3D1.1] Blood Sample Collected for Culture Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.239" extension="2016-08-01" />

...

</observation>

</entryRelationship>

</substanceAdministration>

IV Antifungal Start Clinical Statement

[substanceAdministration: identifier urn:oid:2.16.840.1.113883.10.20.5.6.141 (closed)]

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Table 280: IV Antifungal Start Clinical Statement Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) (required) |  |

This clinical statement records whether an IV antifungal was started. It is used in an Evidence of Infection (Dialysis) Report.

When the IV antifungal was started, set the value of @negationInd to false. When the IV antifungal was not started, set the value of @negationInd to true.

Table 281: IV Antifungal Start Clinical Statement Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| substanceAdministration (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.141) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21166](#C_86-21166) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL |  | [86-21167](#C_86-21167) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21168](#C_86-21168) |  |
| templateId | 1..1 | SHALL |  | [86-28255](#C_86-28255) |  |
| @root | 1..1 | SHALL |  | [86-28256](#C_86-28256) | 2.16.840.1.113883.10.20.22.4.16 |
| templateId | 1..1 | SHALL |  | [86-21501](#C_86-21501) |  |
| @root | 1..1 | SHALL |  | [86-21502](#C_86-21502) | 2.16.840.1.113883.10.20.5.6.141 |
| id | 1..1 | SHALL |  | [86-21503](#C_86-21503) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22763](#C_86-22763) | NA |
| code | 1..1 | SHALL |  | [86-21169](#C_86-21169) |  |
| @code | 1..1 | SHALL |  | [86-21170](#C_86-21170) | 2306-9 |
| @codeSystem | 0..1 | MAY |  | [86-28188](#C_86-28188) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [86-21504](#C_86-21504) |  |
| @code | 1..1 | SHALL |  | [86-28110](#C_86-28110) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | IVL\_TS | [86-21505](#C_86-21505) |  |
| low | 1..1 | SHALL |  | [86-21506](#C_86-21506) |  |
| @nullFlavor | 0..1 | SHOULD |  | [86-22764](#C_86-22764) | NA |
| high | 1..1 | SHALL |  | [86-21507](#C_86-21507) |  |
| @nullFlavor | 0..1 | SHOULD |  | [86-22765](#C_86-22765) | NA |
| consumable | 1..1 | SHALL |  | [86-28340](#C_86-28340) |  |
| manufacturedProduct | 1..1 | SHALL |  | [86-28341](#C_86-28341) |  |
| @classCode | 1..1 | SHALL |  | [86-28347](#C_86-28347) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| templateId | 1..1 | SHALL |  | [86-28342](#C_86-28342) |  |
| @root | 1..1 | SHALL |  | [86-28345](#C_86-28345) | 2.16.840.1.113883.10.20.22.4.23 |
| manufacturedMaterial | 1..1 | SHALL |  | [86-28343](#C_86-28343) |  |
| code | 1..1 | SHALL |  | [86-28344](#C_86-28344) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-28346](#C_86-28346) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NI |

1. Conforms to Medication Activity template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.16).
2. SHALL contain exactly one [1..1] @classCode="SBADM" Substance Administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21166).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21167).

When the IV antifungal was started, set the value of @negationInd to false. When the IV antifungal was not started, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:86-21168).
2. SHALL contain exactly one [1..1] templateId (CONF:86-28255) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.16" (CONF:86-28256).
3. SHALL contain exactly one [1..1] templateId (CONF:86-21501) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.141" (CONF:86-21502).
4. SHALL contain exactly one [1..1] id (CONF:86-21503).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22763).
5. SHALL contain exactly one [1..1] code (CONF:86-21169).
   1. This code SHALL contain exactly one [1..1] @code="2306-9" Intravenous injection of antifungal substance (CONF:86-21170).
   2. This code MAY contain zero or one [0..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28188).
6. SHALL contain exactly one [1..1] statusCode (CONF:86-21504).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28110).
7. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21505).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-21506).
      1. This low SHOULD contain zero or one [0..1] @nullFlavor="NA" (CONF:86-22764).
   2. This effectiveTime SHALL contain exactly one [1..1] high (CONF:86-21507).
      1. This high SHOULD contain zero or one [0..1] @nullFlavor="NA" (CONF:86-22765).

C-CDA (and CDA) require the consumable element, however NHSN does not collect further information about the antifungal.

1. SHALL contain exactly one [1..1] consumable (CONF:86-28340).
   1. This consumable SHALL contain exactly one [1..1] manufacturedProduct (CONF:86-28341).
      1. This manufacturedProduct SHALL contain exactly one [1..1] @classCode="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:86-28347).
      2. This manufacturedProduct SHALL contain exactly one [1..1] templateId (CONF:86-28342) such that it
         1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.23" (CONF:86-28345).
      3. This manufacturedProduct SHALL contain exactly one [1..1] manufacturedMaterial (CONF:86-28343).
         1. This manufacturedMaterial SHALL contain exactly one [1..1] code (CONF:86-28344).
            1. This code SHALL contain exactly one [1..1] @nullFlavor="NI" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:86-28346).

Figure 118: IV Antifungal Start Clinical Statement Example

<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">

<!—- C-CDA Medication Activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.16"/>

<!-- HAI IV antifungal start clinical statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.141"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2306-9"

displayName="Intravenous injection of antifungal substance"/>

<statusCode code="completed"/>

<effectiveTime xsi:type="IVL\_TS">

<low nullFlavor="NA" />

<high nullFlavor="NA" />

</effectiveTime>

<!-- CDA requires the consumable element, however NHSN does not

collect further information the antifungal -->

<consumable>

<manufacturedProduct classCode="MANU">

<templateId root="2.16.840.1.113883.10.20.22.4.23" />

<manufacturedMaterial>

<code nullFlavor="NI"/>

</manufacturedMaterial>

</manufacturedProduct>

</consumable>

</substanceAdministration>

Known or Suspected Munchhausen's By Proxy Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01 (closed)]

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Table 282: Known or Suspected Munchhausen's By Proxy Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required) |  |

This observation records whether the person had known or suspected Munchhausen's By Proxy.

If the person did have known or suspected Munchhausen's by proxy, set the value of @negationInd to false. If the person did not have known or suspected Munchhausen's by proxy, set the value of @negationInd to true.

Table 283: Known or Suspected Munchhausen's By Proxy Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3357-30620](#C_3357-30620) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3357-30621](#C_3357-30621) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3357-30622](#C_3357-30622) |  |
| templateId | 1..1 | SHALL |  | [3357-30614](#C_3357-30614) |  |
| @root | 1..1 | SHALL |  | [3357-30623](#C_3357-30623) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [3357-30619](#C_3357-30619) |  |
| @root | 1..1 | SHALL |  | [3357-30630](#C_3357-30630) | 2.16.840.1.113883.10.20.5.6.250 |
| @extension | 1..1 | SHALL |  | [3357-30631](#C_3357-30631) | 2018-04-01 |
| id | 1..1 | SHALL |  | [3357-30615](#C_3357-30615) |  |
| @nullFlavor | 1..1 | SHALL |  | [3357-30624](#C_3357-30624) | NA |
| code | 1..1 | SHALL |  | [3357-30616](#C_3357-30616) |  |
| @code | 1..1 | SHALL |  | [3357-30625](#C_3357-30625) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [3357-30626](#C_3357-30626) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [3357-30617](#C_3357-30617) |  |
| @code | 1..1 | SHALL |  | [3357-30627](#C_3357-30627) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [3357-30618](#C_3357-30618) |  |
| @code | 1..1 | SHALL | CS | [3357-30628](#C_3357-30628) | 3055-1 |
| @codeSystem | 1..1 | SHALL |  | [3357-30629](#C_3357-30629) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3357-30620).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3357-30621).

If the person did have known or suspected Munchhausen's by proxy, set the value of @negationInd to false. If the person did not have known or suspected Munchhausen's by proxy, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3357-30622).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-30614) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:3357-30623).
3. SHALL contain exactly one [1..1] templateId (CONF:3357-30619) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.250" (CONF:3357-30630).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30631).
4. SHALL contain exactly one [1..1] id (CONF:3357-30615).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3357-30624).
5. SHALL contain exactly one [1..1] code (CONF:3357-30616).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3357-30625).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30626).
6. SHALL contain exactly one [1..1] statusCode (CONF:3357-30617).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3357-30627).
7. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3357-30618).
   1. This value SHALL contain exactly one [1..1] @code="3055-1" Known or suspected Munchausen Syndrome by Proxy during current admission  (CONF:3357-30628).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-30629).

Figure 119: Known or Suspected Munchhausen's by Proxy Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- [HAI R3D3] Known or Suspected Munchhausen's By Proxy Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.250" extension="2018-04-01"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="3055-1"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Known or suspected Munchausen Syndrome by Proxy during current admission "/>

</observation>

Last Physical Overnight Location Act

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01 (closed)]

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Table 284: Last Physical Overnight Location Act Contexts

| Contained By: | Contains: |
| --- | --- |
| [Encounters Section in a LIO Report (V2)](#S_Encounters_Section_in_a_LIO_Report_V2) (required) | [Last Physical Overnight Location Encounter](#E_Last_Physical_Overnight_Location_Enco) (optional) |

This act template is a wrapper around the Last Physical Overnight Location Encounter template. The act identifies that the contained encounter represents the last physical overnight location of the patient, while the encounter template records the type of encounter and the type of location.

Table 285: Last Physical Overnight Location Act Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [1129-30558](#C_1129-30558) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| @classCode | 1..1 | SHALL |  | [1129-30564](#C_1129-30564) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL |  | [1129-30565](#C_1129-30565) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30560](#C_1129-30560) |  |
| @root | 1..1 | SHALL |  | [1129-30567](#C_1129-30567) | 2.16.840.1.113883.10.20.5.6.227 |
| @extension | 1..1 | SHALL |  | [1129-30570](#C_1129-30570) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-30562](#C_1129-30562) |  |
| @code | 1..1 | SHALL |  | [1129-30569](#C_1129-30569) | 3002-3 |
| @codeSystem | 1..1 | SHALL |  | [1129-30571](#C_1129-30571) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| entryRelationship | 0..1 | SHOULD |  | [1129-30572](#C_1129-30572) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30573](#C_1129-30573) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| encounter | 1..1 | SHALL |  | [1129-30574](#C_1129-30574) | [Last Physical Overnight Location Encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01](#E_Last_Physical_Overnight_Location_Enco) |

Use nullFlavor="NA" where the last physical overnight location is not applicable.

1. MAY contain zero or one [0..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008 STATIC) (CONF:1129-30558).
2. SHALL contain exactly one [1..1] @classCode="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-30564).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-30565).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30560) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.227" (CONF:1129-30567).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30570).
5. SHALL contain exactly one [1..1] code (CONF:1129-30562).
   1. This code SHALL contain exactly one [1..1] @code="3002-3" Last physical overnight location of patient immediately prior to arrival into facility (CONF:1129-30569).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30571).

Where the last physical overnight location is not applicable, this entryRelationship will not be present.

1. SHOULD contain zero or one [0..1] entryRelationship (CONF:1129-30572).
   1. The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1129-30573).
   2. The entryRelationship, if present, SHALL contain exactly one [1..1] [Last Physical Overnight Location Encounter](#E_Last_Physical_Overnight_Location_Enco) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01) (CONF:1129-30574).

Figure 120: Last Physical Overnight Location Act Example

<act classCode="ACT" moodCode="EVN">

<!-- Last Physical Overnight Location Act templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.227"

extension="2014-12-01" />

<code code="3002-3"

displayName="Last physical overnight location of patient immediately prior to

arrival into facility"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

<entryRelationship typeCode="COMP">

<!-- Last Physical Overnight Location Encounter -->

<encounter classCode="ENC" moodCode="EVN">

<!-- CCD Encounter activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- Last Physical Overnight Location Encounter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.220"

extension="2014-12-01" />

...

</encounter>

</entryRelationship>

</act>

Figure 121: Last Physical Overnight Location Act - Not Applicable Example

<act classCode="ACT" moodCode="EVN" nullFlavor="NA">

<!-- Last Physical Overnight Location Act templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.227"

extension="2014-12-01" />

<code code="3002-3"

displayName="Last physical overnight location of patient immediately prior to

arrival into facility"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</act>

Last Physical Overnight Location Encounter

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01 (closed)]

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Table 286: Last Physical Overnight Location Encounter Contexts

| Contained By: | Contains: |
| --- | --- |
| [Last Physical Overnight Location Act](#E_Last_Physical_Overnight_Location_Act) (optional) |  |

This template represents an encounter at the last physical overnight location of the patient immediately prior to his or her arrival into the facility. The type of encounter can be either "IMP" (inpatient encounter) or "HH" (home health) depending on the last location; the location participant records the type of the last overnight location. If the last physical overnight location is unknown code will be nullFlavor="UNK".

Table 287: Last Physical Overnight Location Encounter Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-30271](#C_1129-30271) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [1129-30272](#C_1129-30272) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30493](#C_1129-30493) |  |
| @root | 1..1 | SHALL |  | [1129-30494](#C_1129-30494) | 2.16.840.1.113883.10.20.22.4.49 |
| templateId | 1..1 | SHALL |  | [1129-30495](#C_1129-30495) |  |
| @root | 0..1 | SHALL |  | [1129-30496](#C_1129-30496) | 2.16.840.1.113883.10.20.5.6.220 |
| @extension | 1..1 | SHALL |  | [1129-30497](#C_1129-30497) | 2014-12-01 |
| id | 1..\* | SHALL |  | [1129-30256](#C_1129-30256) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30263](#C_1129-30263) | NA |
| code | 1..1 | SHALL |  | [1129-30257](#C_1129-30257) | urn:oid:2.16.840.1.113883.10.20.5.9.3 (NHSNLastLocationEncounterTypeCode) |
| @nullFlavor | 0..1 | MAY |  | [1129-30593](#C_1129-30593) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK |
| effectiveTime | 1..1 | SHALL |  | [1129-30258](#C_1129-30258) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30265](#C_1129-30265) | NA |
| participant | 0..1 | SHOULD |  | [1129-30260](#C_1129-30260) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30270](#C_1129-30270) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [1129-30261](#C_1129-30261) |  |
| @classCode | 1..1 | SHALL |  | [1129-30269](#C_1129-30269) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| code | 1..1 | SHALL |  | [1129-30262](#C_1129-30262) |  |
| @code | 1..1 | SHALL |  | [1129-30482](#C_1129-30482) | urn:oid:2.16.840.1.114222.4.11.7233 (NHSNPreviousPatientLocation) |

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-30271).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-30272).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30493) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.49" (CONF:1129-30494).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-30495) such that it
   1. SHALL contain zero or one [0..1] @root="2.16.840.1.113883.10.20.5.6.220" (CONF:1129-30496).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30497).
6. SHALL contain at least one [1..\*] id (CONF:1129-30256).
   1. Such ids SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30263).

If the last physical overnight location was a nursing home/skilled nursing facility or other inpatient healthcare setting, the encounter code will be "IMP". If the last physical overnight location is a personal residence/residential care, then the encounter code will be "HH". If the last physical overnight location is unknown use nullFlavor="UNK".

1. SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNLastLocationEncounterTypeCode](#NHSNLastLocationEncounterTypeCode) urn:oid:2.16.840.1.113883.10.20.5.9.3 STATIC 2014-11-01 (CONF:1129-30257).
   1. This code MAY contain zero or one [0..1] @nullFlavor="UNK" Unknown (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1129-30593).
2. SHALL contain exactly one [1..1] effectiveTime (CONF:1129-30258).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30265).

If the last physical overnight location is unknown, this participant will not be present.

1. SHOULD contain zero or one [0..1] participant (CONF:1129-30260).
   1. The participant, if present, SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1129-30270).
   2. The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:1129-30261).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:1129-30269).
      2. This participantRole SHALL contain exactly one [1..1] code (CONF:1129-30262).
         1. This code SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet [NHSNPreviousPatientLocation](#NHSNPreviousPatientLocation) urn:oid:2.16.840.1.114222.4.11.7233 DYNAMIC (CONF:1129-30482).

Table 288: NHSNLastLocationEncounterTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNLastLocationEncounterTypeCode urn:oid:2.16.840.1.113883.10.20.5.9.3  These codes describe the type of encounter of the last physical overnight location of the patient.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| HH | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | home health |
| IMP | HL7ActCode | urn:oid:2.16.840.1.113883.5.4 | inpatient encounter |

Table 289: NHSNPreviousPatientLocation

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNPreviousPatientLocation urn:oid:2.16.840.1.114222.4.11.7233  Previous location of the patient.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3005-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Nursing Home/Skilled Nursing Facility |
| 3006-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Other Inpatient Healthcare Setting (e.g., Acute Care Hospital, LTAC, Rehabilitation, etc.) |
| 3007-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Personal Residence/Residential Care |

Figure 122: Last Physical Overnight Location Encounter Example

<encounter classCode="ENC" moodCode="EVN">

<!-- CCD Encounter activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- Last Physical Overnight Location Encounter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.220"

extension="2014-12-01" />

<id nullFlavor="NA" />

<!-- If the last physical overnight location was a nursing home/skilled nursing

facility or other inpatient healthcare setting, the encounter code will be

"IMP". If the last physical overnight location is a personal

residence/residential care then the encounter code will be "HH". -->

<code code="HH"

displayName="home health"

codeSystem="2.16.840.1.113883.5.4"

codeSystemName="ActCode" />

<effectiveTime nullFlavor="NA" />

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<code code="3007-2"

displayName="Personal Residence/Residential Care"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</participantRole>

</participant>

</encounter>

Figure 123: Last Physical Overnight Location Encounter - Unknown Example

<encounter classCode="ENC" moodCode="EVN">

<!-- C-CDA Encounter Activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- Last Physical Overnight Location Encounter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.220"

extension="2014-12-01" />

<id nullFlavor="NA" />

<!-- The last physical overnight location is unknown -->

<code nullFlavor="UNK" />

<effectiveTime nullFlavor="NA" />

</encounter>

Loss of Vascular Access Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.203 (closed)]

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Table 290: Loss of Vascular Access Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (required) |  |

This template records whether or not a patient on dialysis lost vascular access as a result of the infection (dialysis event). It is based on the C-CDA Problem Observation template.

When the patient had loss of vascular access, set the value of @negationInd to false. When the patient did not have loss of vascular access, set the value of @negationInd to true. When it is not known if the patient had loss of vascular access, set the value of @nullFlavor to "UNK".

Table 291: Loss of Vascular Access Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.203) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [1101-30214](#C_1101-30214) | UNK |
| @classCode | 1..1 | SHALL |  | [1101-30205](#C_1101-30205) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1101-30206](#C_1101-30206) | EVN |
| @negationInd | 0..1 | SHOULD |  | [1101-30216](#C_1101-30216) |  |
| templateId | 1..1 | SHALL |  | [1101-30301](#C_1101-30301) |  |
| @root | 1..1 | SHALL |  | [1101-30302](#C_1101-30302) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [1101-30207](#C_1101-30207) |  |
| @root | 1..1 | SHALL |  | [1101-30208](#C_1101-30208) | 2.16.840.1.113883.10.20.5.6.203 |
| id | 1..1 | SHALL |  | [1101-30209](#C_1101-30209) |  |
| @nullFlavor | 1..1 | SHALL |  | [1101-30224](#C_1101-30224) | NA |
| code | 1..1 | SHALL |  | [1101-30210](#C_1101-30210) |  |
| @code | 1..1 | SHALL |  | [1101-30218](#C_1101-30218) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1101-30219](#C_1101-30219) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1101-30211](#C_1101-30211) |  |
| @code | 1..1 | SHALL |  | [1101-30212](#C_1101-30212) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1101-30213](#C_1101-30213) |  |
| @code | 1..1 | SHALL |  | [1101-30220](#C_1101-30220) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2325-9 |
| @codeSystem | 1..1 | SHALL |  | [1101-30221](#C_1101-30221) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. MAY contain zero or one [0..1] @nullFlavor="UNK" (CONF:1101-30214).
   1. If it is not known whether the patient had loss of vascular access, the value of @nullFlavor SHALL be UNK. If the value of @nullFlavor is set to UNK then the value of @negationInd SHALL NOT be set (CONF:1101-30215).
3. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1101-30205).
4. SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:1101-30206).
5. SHOULD contain zero or one [0..1] @negationInd (CONF:1101-30216).
   1. If the patient had loss of vascular access, the value of @negationInd SHALL be false. If the patient did not have loss of vascular access, the value of @negationInd SHALL be true. If the value of @negationInd is set then the value of @nullFlavor SHALL NOT be set (CONF:1101-30217).
6. SHALL contain exactly one [1..1] templateId (CONF:1101-30301) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1101-30302).
7. SHALL contain exactly one [1..1] templateId (CONF:1101-30207) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.203" (CONF:1101-30208).
8. SHALL contain exactly one [1..1] id (CONF:1101-30209).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1101-30224).
9. SHALL contain exactly one [1..1] code (CONF:1101-30210).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1101-30218).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1101-30219).
10. SHALL contain exactly one [1..1] statusCode (CONF:1101-30211).
    1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1101-30212).
11. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1101-30213).
    1. This value SHALL contain exactly one [1..1] @code="2325-9" Loss of vascular access (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30220).
    2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30221).

Figure 124: Loss of Vascular Access Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!--

If the patient had loss of vascular access,

the value of @negationInd SHALL be false.

If the patient did not have loss of vascular access,

the value of @negationInd SHALL be true.

If the value of @negationInd is set then the value of

@nullFlavor SHALL NOT be set.

If it is not known whether the patient had loss of vascular access,

the value of @nullFlavor SHALL be "UNK" as follows:

<observation classCode="OBS" moodCode="EVN" nullFlavor="UNK">

If the value of @nullFlavor is set to "UNK" then the value of

@negationInd SHALL NOT be set.

-->

<!-- C-CDA Problem Observation Type -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- Loss of Vascular Access Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.203" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />

<statusCode code="completed" />

<value xsi:type="CD"

code="2325-9"

displayName="Loss of vascular access"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</observation>

MDRO/CDI Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.142 (closed)]

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Table 292: MDRO/CDI Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (optional) |  |

This observation records whether the primary infection being reported was caused by a multi-drug-resistant organism (MDRO). It is a general or summary observation not associated with any individual pathogen in the Findings Section.

If the infection organism was multi-drug resistant, set the value of @negationInd to false. If the infection organism was not multi-drug resistant, set the value of @negationInd to true.

Table 293: MDRO/CDI Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.142) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21157](#C_86-21157) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21158](#C_86-21158) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21159](#C_86-21159) |  |
| templateId | 1..1 | SHALL |  | [86-28257](#C_86-28257) |  |
| @root | 1..1 | SHALL |  | [86-28258](#C_86-28258) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-21234](#C_86-21234) |  |
| @root | 1..1 | SHALL |  | [86-21235](#C_86-21235) | 2.16.840.1.113883.10.20.5.6.142 |
| id | 1..1 | SHALL |  | [86-21236](#C_86-21236) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22769](#C_86-22769) | NA |
| code | 1..1 | SHALL |  | [86-21160](#C_86-21160) |  |
| @code | 1..1 | SHALL |  | [86-21161](#C_86-21161) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28382](#C_86-28382) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21162](#C_86-21162) |  |
| @code | 1..1 | SHALL |  | [86-21163](#C_86-21163) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21164](#C_86-21164) |  |
| @code | 1..1 | SHALL |  | [86-21165](#C_86-21165) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2318-4 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21157).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21158).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-21159).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28257) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28258).
6. SHALL contain exactly one [1..1] templateId (CONF:86-21234) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.142" (CONF:86-21235).
7. SHALL contain exactly one [1..1] id (CONF:86-21236).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22769).
8. SHALL contain exactly one [1..1] code (CONF:86-21160).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21161).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28382).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21162).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21163).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21164).
    1. This value SHALL contain exactly one [1..1] @code="2318-4" MDRO Infection or C.difficile infection (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-21165).

Figure 125: MDRO Observation Example

< !-- The observation is negated, i.e. the infection was MDRO or CDI -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI MDRO/CDI Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.142"/>

<id nullFlavor="NA"/>

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2318-4"

displayName="MDRO Infection or C.difficile infection"/>

</observation>

Mechanical Ventilation Initiation Act

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 2 - US Realm

Table 294: Mechanical Ventilation Initiation Act Contexts

| Contained By: | Contains: |
| --- | --- |
| [Risk Factors Section in a VAE Report](#S_Risk_Factors_Section_in_a_VAE_Report) (required) |  |

This clinical statement records the location of the patient and the date when mechanical ventilation was initiated.

Table 295: Mechanical Ventilation Initiation Act Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3311-28378](#C_3311-28378) | ACT |
| @moodCode | 1..1 | SHALL |  | [3311-28379](#C_3311-28379) | EVN |
| templateId | 1..1 | SHALL |  | [3311-28375](#C_3311-28375) |  |
| @root | 1..1 | SHALL |  | [3311-28390](#C_3311-28390) | 2.16.840.1.113883.10.20.22.4.12 |
| templateId | 1..1 | SHALL |  | [3311-28377](#C_3311-28377) |  |
| @root | 1..1 | SHALL |  | [3311-28392](#C_3311-28392) | 2.16.840.1.113883.10.20.5.6.244 |
| @extension | 1..1 | SHALL |  | [3311-28393](#C_3311-28393) | 2017-04-01 |
| id | 1..1 | SHALL |  | [3311-28376](#C_3311-28376) |  |
| @nullFlavor | 1..1 | SHALL |  | [3311-28391](#C_3311-28391) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| code | 1..1 | SHALL |  | [3311-28367](#C_3311-28367) |  |
| @code | 1..1 | SHALL |  | [3311-28380](#C_3311-28380) | 2341-2 |
| @codeSystem | 1..1 | SHALL |  | [3311-28381](#C_3311-28381) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [3311-28368](#C_3311-28368) |  |
| @code | 1..1 | SHALL |  | [3311-28382](#C_3311-28382) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [3311-28369](#C_3311-28369) |  |
| low | 1..1 | SHALL |  | [3311-28383](#C_3311-28383) |  |
| participant | 1..1 | SHALL |  | [3311-28370](#C_3311-28370) |  |
| @typeCode | 1..1 | SHALL |  | [3311-28384](#C_3311-28384) | LOC |
| participantRole | 1..1 | SHALL |  | [3311-28371](#C_3311-28371) |  |
| @classCode | 1..1 | SHALL |  | [3311-28385](#C_3311-28385) | SDLOC |
| id | 1..1 | SHALL |  | [3311-28372](#C_3311-28372) |  |
| @root | 1..1 | SHALL |  | [3311-28373](#C_3311-28373) |  |
| @extension | 1..1 | SHALL |  | [3311-28387](#C_3311-28387) |  |
| playingEntity | 1..1 | SHALL |  | [3311-28374](#C_3311-28374) |  |
| @classCode | 1..1 | SHALL |  | [3311-28388](#C_3311-28388) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC |
| code | 1..1 | SHALL |  | [3311-28389](#C_3311-28389) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |

1. Conforms to Procedure Activity Act template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.12).
2. SHALL contain exactly one [1..1] @classCode="ACT" (CONF:3311-28378).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:3311-28379).
4. SHALL contain exactly one [1..1] templateId (CONF:3311-28375) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.12" (CONF:3311-28390).
5. SHALL contain exactly one [1..1] templateId (CONF:3311-28377) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.244" (CONF:3311-28392).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28393).
6. SHALL contain exactly one [1..1] id (CONF:3311-28376).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28391).
7. SHALL contain exactly one [1..1] code (CONF:3311-28367).
   1. This code SHALL contain exactly one [1..1] @code="2341-2" Mechanical ventilation initiation (CONF:3311-28380).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3311-28381).
8. SHALL contain exactly one [1..1] statusCode (CONF:3311-28368).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3311-28382).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:3311-28369).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3311-28383).
10. SHALL contain exactly one [1..1] participant (CONF:3311-28370).
    1. This participant SHALL contain exactly one [1..1] @typeCode="LOC" (CONF:3311-28384).
    2. This participant SHALL contain exactly one [1..1] participantRole (CONF:3311-28371).
       1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" (CONF:3311-28385).
       2. This participantRole SHALL contain exactly one [1..1] id (CONF:3311-28372).
          1. This id SHALL contain exactly one [1..1] @root (CONF:3311-28373).
             1. This id/@root SHALL contain the facility identifier (CONF:3311-28386).
          2. This id SHALL contain exactly one [1..1] @extension (CONF:3311-28387).
       3. This participantRole SHALL contain exactly one [1..1] playingEntity (CONF:3311-28374).
          1. This playingEntity SHALL contain exactly one [1..1] @classCode="PLC" (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:3311-28388).
          2. This playingEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC (CONF:3311-28389).

Figure 126: Mechanical Ventilation Initiation Example

<act classCode="ACT" moodCode="EVN">

<!-- [C-CDA R1.1] Procedure Activity Act -->

<templateId root="2.16.840.1.113883.10.20.22.4.12" />

<!-- [HAI] Mechanical Ventilation Initiation Act -->

<templateId root="2.16.840.1.113883.10.20.5.6.244" extension="2017-04-01" />

<id nullFlavor="NA" />

<code code="2341-2"

displayName="Mechanical ventilation initiation"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

<statusCode code="completed" />

<effectiveTime>

<low value="20170112" />

</effectiveTime>

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<!-- root = facility assigned OID;

extension = NHSN location ("your code") -->

<id root="2.16.840.1.114222.4.3.2.11" extension="123456" />

<playingEntity classCode="PLC">

<code code="1029-8"

displayName="Medical/Surgical Critical Care"

codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 HealthCareServiceLocation" />

</playingEntity>

</participantRole>

</participant>

</act>

NHSN Comment

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01 (closed)]

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Table 296: NHSN Comment Contexts

| Contained By: | Contains: |
| --- | --- |
| [NHSN Comment Section](#S_NHSN_Comment_Section) (required) |  |

A comment is free text information of less than 2000 characters. A comment can contain information that is relevant to the whole report (it is not specific to any section of a report).

Table 297: NHSN Comment Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3311-87](#C_3311-87) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL |  | [3311-88](#C_3311-88) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3311-79](#C_3311-79) |  |
| @root | 1..1 | SHALL |  | [3311-89](#C_3311-89) | 2.16.840.1.113883.10.20.5.6.243 |
| @extension | 1..1 | SHALL |  | [3311-92](#C_3311-92) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-80](#C_3311-80) |  |
| @code | 1..1 | SHALL |  | [3311-90](#C_3311-90) | 86467-8 |
| @codeSystem | 1..1 | SHALL |  | [3311-91](#C_3311-91) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| text | 1..1 | SHALL |  | [3311-81](#C_3311-81) |  |

1. SHALL contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3311-87).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3311-88).
3. SHALL contain exactly one [1..1] templateId (CONF:3311-79) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.243" (CONF:3311-89).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-92).
4. SHALL contain exactly one [1..1] code (CONF:3311-80).
   1. This code SHALL contain exactly one [1..1] @code="86467-8" Report comment Narrative (CONF:3311-90).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-91).
5. SHALL contain exactly one [1..1] text (CONF:3311-81).
   1. The length of the free text comment SHALL be less than 2000 characters (CONF:3311-93).

Figure 127: NHSN Comment Example

<act classCode="ACT" moodCode="EVN">

<!-- [HAI R3D2] NHSN Comment -->

<templateId root="2.16.840.1.113883.10.20.5.6.243" extension="2017-04-01" />

<code code="86467-8"

displayName="Report comment Narrative"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC" />

<!-- Less than 2000 characters -->

<text>NHSN text comment that is less than 2000 characters.</text>

</act>

No Hemovigilance Adverse Reactions Reported This Month Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01 (closed)]

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Table 298: No Hemovigilance Adverse Reactions Reported This Month Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (HV) (V2)](#S_Summary_Data_Section_HV_V2) (required) |  |

This clinical statement represents whether or not there were no hemovigilance adverse reactions reported this month.

If there were no hemovigilance adverse reactions reported this month, set the value of @negationInd to false, otherwise, set the value of @negationInd to true.

On the form from which this template is modeled, this datum is reported as a check box stating that there were no hemovigilance adverse reactions reported this month. Thus, this template reports a "negative" finding. To report that this check box was not checked is to say that it is not the case that no hemovigilance adverse reactions were reported this month, which is subtly different from stating that there were hemovigilance adverse reactions reported this month. Because we are reporting a "negative" finding, negating the statement necessitates some seemingly counter-intuitive logic as follows:

* No hemovigilance adverse reactions reported this month = ASSERTION + negationInd="false" (the assertion that there were no HV adverse reactions is not negated)
* Otherwise = ASSERTION + negationInd="true" (the assertion that there were no HV adverse reactions is negated).

Table 299: No Hemovigilance Adverse Reactions Reported This Month Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1202-30632](#C_1202-30632) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1202-30633](#C_1202-30633) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1202-30634](#C_1202-30634) |  |
| templateId | 1..1 | SHALL |  | [1202-30627](#C_1202-30627) |  |
| @root | 1..1 | SHALL |  | [1202-30635](#C_1202-30635) | 2.16.840.1.113883.10.20.5.6.232 |
| @extension | 1..1 | SHALL |  | [1202-30636](#C_1202-30636) | 2015-10-01 |
| code | 1..1 | SHALL |  | [1202-30624](#C_1202-30624) |  |
| @code | 1..1 | SHALL | CS | [1202-30628](#C_1202-30628) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1202-30629](#C_1202-30629) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1202-30625](#C_1202-30625) |  |
| @code | 1..1 | SHALL |  | [1202-30630](#C_1202-30630) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1202-30626](#C_1202-30626) |  |
| @code | 1..1 | SHALL |  | [1202-30631](#C_1202-30631) | 3540-2 |
| @codeSystem | 1..1 | SHALL |  | [1202-30651](#C_1202-30651) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1202-30632).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1202-30633).

If there were no hemovigilance adverse reactions reported this month, set the value of @negationInd to false. If there were hemovigilance adverse reactions reported this month, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:1202-30634).
2. SHALL contain exactly one [1..1] templateId (CONF:1202-30627) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.232" (CONF:1202-30635).
   2. SHALL contain exactly one [1..1] @extension="2015-10-01" (CONF:1202-30636).
3. SHALL contain exactly one [1..1] code (CONF:1202-30624).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1202-30628).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1202-30629).
4. SHALL contain exactly one [1..1] statusCode (CONF:1202-30625).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1202-30630).
5. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1202-30626).
   1. This value SHALL contain exactly one [1..1] @code="3540-2" No hemovigilance adverse reactions reported this month (CONF:1202-30631).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1202-30651).

Figure 128: No Hemovigilance Adverse Reactions Reported This Month Observation Example

<!-- If there were no hemovigilance adverse reactions reported this month,

set the value of @negationInd to false.

If there were hemovigilance adverse reactions reported this month,

set the value of @negationInd to true. -->

<!-- There were no hemovigilance adverse reactions reported this month so negationInd='false' -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- No Hemovigilance Adverse Reactions Reported This Month Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.232"

extension="2015-10-01" />

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3540-2"

displayName="No hemovigilance adverse reactions reported this month" />

</observation>

No Hemovigilance Incidents Reported This Month Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01 (closed)]

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Table 300: No Hemovigilance Incidents Reported This Month Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (HV) (V2)](#S_Summary_Data_Section_HV_V2) (required) |  |

This clinical statement represents whether or not there were no hemovigilance incidents reported this month.

If there were no hemovigilance incidents reported this month, set the value of @negationInd to false, otherwise, set the value of @negationInd to true.

On the form from which this template is modeled, this datum is reported as a check box stating that there were no incidents reported this month. Thus, this template reports a "negative" finding. To report that this check box was not checked is to say that it is not the case that no hemovigilance incidents were reported this month, which is subtly different from stating that there were hemovigilance incidents reported this month. Because we are reporting a "negative" finding, negating the statement necessitates some seemingly counter-intuitive logic as follows:

* No hemovigilance incidents reported this month = ASSERTION + negationInd="false" (the assertion that there were no HV incidents is not negated)
* Otherwise = ASSERTION + negationInd="true" (the assertion that there were no HV incidents is negated).

Table 301: No Hemovigilance Incidents Reported This Month Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1202-30647](#C_1202-30647) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1202-30648](#C_1202-30648) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1202-30649](#C_1202-30649) |  |
| templateId | 1..1 | SHALL |  | [1202-30640](#C_1202-30640) |  |
| @root | 1..1 | SHALL |  | [1202-30645](#C_1202-30645) | 2.16.840.1.113883.10.20.5.6.233 |
| @extension | 1..1 | SHALL |  | [1202-30646](#C_1202-30646) | 2015-10-01 |
| code | 1..1 | SHALL |  | [1202-30637](#C_1202-30637) |  |
| @code | 1..1 | SHALL | CS | [1202-30641](#C_1202-30641) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1202-30642](#C_1202-30642) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1202-30638](#C_1202-30638) |  |
| @code | 1..1 | SHALL |  | [1202-30643](#C_1202-30643) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1202-30639](#C_1202-30639) |  |
| @code | 1..1 | SHALL |  | [1202-30644](#C_1202-30644) | 3541-0 |
| @codeSystem | 1..1 | SHALL |  | [1202-30650](#C_1202-30650) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1202-30647).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1202-30648).

If there were no hemovigilance incidents reported this month, set the value of @negationInd to false. If there were hemovigilance incidents reported this month, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:1202-30649).
2. SHALL contain exactly one [1..1] templateId (CONF:1202-30640) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.233" (CONF:1202-30645).
   2. SHALL contain exactly one [1..1] @extension="2015-10-01" (CONF:1202-30646).
3. SHALL contain exactly one [1..1] code (CONF:1202-30637).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1202-30641).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1202-30642).
4. SHALL contain exactly one [1..1] statusCode (CONF:1202-30638).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1202-30643).
5. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1202-30639).
   1. This value SHALL contain exactly one [1..1] @code="3541-0" No hemovigilance incidents reported this month (CONF:1202-30644).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1202-30650).

Figure 129: No Hemovigilance Incidents Reported This Month Observation

<!-- No Hemovigilance Incidents Reported This Month Observation -->

<!-- If there were no hemovigilance incidents reported this month,

set the value of @negationInd to false.

If there were hemovigilance incidents reported this month,

set the value of @negationInd to true. -->

<!-- There were hemovigilance incidents reported this month so negationInd='true' -->

<observation classCode="OBS" moodCode="EVN" negationInd="true">

<!-- No Hemovigilance Incidents Reported This Month Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.233"

extension="2015-10-01" />

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" code="3541-0"

displayName="No hemovigilance incidents reported this month" />

</observation>

Observed or Suspected Patient Injection into Vascular Line Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 302: Observed or Suspected Patient Injection into Vascular Line Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required) |  |

This observation records whether there was observed or suspected patient injection into vascular line(s) within the BSI infection window period.

If there was observed or suspected patient injection into vascular line(s) within the BSI infection window period, set the value of @negationInd to false. If there was not observed or suspected patient injection into vascular line(s) within the BSI infection window period, set the value of @negationInd to true.

Table 303: Observed or Suspected Patient Injection into Vascular Line Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3357-30647](#C_3357-30647) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3357-30648](#C_3357-30648) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3357-30649](#C_3357-30649) |  |
| templateId | 1..1 | SHALL |  | [3357-30632](#C_3357-30632) |  |
| @root | 1..1 | SHALL |  | [3357-30638](#C_3357-30638) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [3357-30637](#C_3357-30637) |  |
| @root | 1..1 | SHALL |  | [3357-30645](#C_3357-30645) | 2.16.840.1.113883.10.20.5.6.251 |
| @extension | 1..1 | SHALL |  | [3357-30646](#C_3357-30646) | 2018-04-01 |
| id | 1..1 | SHALL |  | [3357-30633](#C_3357-30633) |  |
| @nullFlavor | 1..1 | SHALL |  | [3357-30639](#C_3357-30639) | NA |
| code | 1..1 | SHALL |  | [3357-30634](#C_3357-30634) |  |
| @code | 1..1 | SHALL |  | [3357-30640](#C_3357-30640) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [3357-30641](#C_3357-30641) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [3357-30635](#C_3357-30635) |  |
| @code | 1..1 | SHALL |  | [3357-30642](#C_3357-30642) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [3357-30636](#C_3357-30636) |  |
| @code | 1..1 | SHALL | CS | [3357-30643](#C_3357-30643) | 3056-9 |
| @codeSystem | 1..1 | SHALL |  | [3357-30644](#C_3357-30644) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3357-30647).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3357-30648).

If there was observed or suspected patient injection into vascular line(s) within the BSI infection window period, set the value of @negationInd to false. If there was not observed or suspected patient injection into vascular line(s) within the BSI infection window period, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3357-30649).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-30632) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:3357-30638).
3. SHALL contain exactly one [1..1] templateId (CONF:3357-30637) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.251" (CONF:3357-30645).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30646).
4. SHALL contain exactly one [1..1] id (CONF:3357-30633).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3357-30639).
5. SHALL contain exactly one [1..1] code (CONF:3357-30634).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3357-30640).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30641).
6. SHALL contain exactly one [1..1] statusCode (CONF:3357-30635).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3357-30642).
7. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3357-30636).
   1. This value SHALL contain exactly one [1..1] @code="3056-9" Observed or suspected patient injection into vascular line(s) within the BSI infection window (CONF:3357-30643).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-30644).

Figure 130: Observed or Suspected Patient Injection into Vascular Line Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- [HAI R3D3] Observed or Suspected Patient Injection into Vascular Line Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.251" extension="2018-04-01"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="3056-9"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Observed or suspected patient injection into vascular line(s)

within the BSI infection window period"/>

</observation>

Occasion of HAI Detection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.144 (closed)]

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Table 304: Occasion of HAI Detection Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection-Type Observation](#E_InfectionType_Observation) (optional) |  |

This observation records when, in relation to an admission (a surgery stay), an HAI was detected.

Table 305: Occasion of HAI Detection Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.144) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21716](#C_86-21716) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21717](#C_86-21717) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21718](#C_86-21718) | false |
| templateId | 1..1 | SHALL |  | [86-28259](#C_86-28259) |  |
| @root | 1..1 | SHALL |  | [86-28260](#C_86-28260) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-21721](#C_86-21721) |  |
| @root | 1..1 | SHALL |  | [86-21722](#C_86-21722) | 2.16.840.1.113883.10.20.5.6.144 |
| id | 1..1 | SHALL |  | [86-21723](#C_86-21723) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22773](#C_86-22773) | NA |
| code | 1..1 | SHALL |  | [86-21724](#C_86-21724) |  |
| @code | 1..1 | SHALL |  | [86-21725](#C_86-21725) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28383](#C_86-28383) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21726](#C_86-21726) |  |
| @code | 1..1 | SHALL |  | [86-21727](#C_86-21727) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21728](#C_86-21728) | urn:oid:2.16.840.1.113883.13.12 (NHSNOccasionOfDetectionCode) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21716).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21717).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-21718).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28259) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28260).
6. SHALL contain exactly one [1..1] templateId (CONF:86-21721) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.144" (CONF:86-21722).
7. SHALL contain exactly one [1..1] id (CONF:86-21723).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22773).
8. SHALL contain exactly one [1..1] code (CONF:86-21724).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21725).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28383).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21726).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21727).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNOccasionOfDetectionCode](#NHSNOccasionOfDetectionCode) urn:oid:2.16.840.1.113883.13.12 DYNAMIC (CONF:86-21728).

Table 306: NHSNOccasionOfDetectionCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNOccasionOfDetectionCode urn:oid:2.16.840.1.113883.13.12  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1505-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Post Discharge Surveillance |
| 1510-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Admission (during the stay in which the surgery was performed) |
| 1516-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Readmission to facility where associated procedure performed |
| 1517-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Readmission to facility other than where the associated procedure was performed |

Figure 131: Occasion of HAI Detection Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Occasion of HAI Detection Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.144"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1510-7"

displayName="Admission (during the stay in which the surgery was performed)"/>

</observation>

Other Facility Discharge Act

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01 (closed)]

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Table 307: Other Facility Discharge Act Contexts

| Contained By: | Contains: |
| --- | --- |
| [Encounters Section in a LIO Report (V2)](#S_Encounters_Section_in_a_LIO_Report_V2) (required) | [Other Facility Discharge Encounter](#E_Other_Facility_Discharge_Encounter) (optional) |

This act template is a wrapper around the Other Facility Discharge Encounter template. The act identifies that the contained encounter represents an encounter at a facility from which the patient has been discharged in the past four weeks, while the encounter template records the type of encounter and the type of facility. Multiple discharge encounters can be recorded. Use nullFlavor="NA" where the other facility discharge is not applicable (i.e., the patient has not been discharged from another facility in the past four weeks). Use nullFlavor="UNK" when it is unknown whether or not the patient has been discharged from another facility in the past four weeks.

Table 308: Other Facility Discharge Act Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [1129-30580](#C_1129-30580) | urn:oid:2.16.840.1.113883.10.20.5.9.2 (NullValues\_UNK\_NA) |
| @classCode | 1..1 | SHALL |  | [1129-30585](#C_1129-30585) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL |  | [1129-30586](#C_1129-30586) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30577](#C_1129-30577) |  |
| @root | 1..1 | SHALL |  | [1129-30581](#C_1129-30581) | 2.16.840.1.113883.10.20.5.6.228 |
| @extension | 1..1 | SHALL |  | [1129-30582](#C_1129-30582) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-30578](#C_1129-30578) |  |
| @code | 1..1 | SHALL |  | [1129-30583](#C_1129-30583) | 3004-9 |
| @codeSystem | 1..1 | SHALL |  | [1129-30584](#C_1129-30584) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| entryRelationship | 0..\* | SHOULD |  | [1129-30576](#C_1129-30576) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30587](#C_1129-30587) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| encounter | 1..1 | SHALL |  | [1129-30579](#C_1129-30579) | [Other Facility Discharge Encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01](#E_Other_Facility_Discharge_Encounter) |

Use nullFlavor="NA" where the other facility discharge is not applicable (i.e. the patient has not been discharged from another facility in the past four weeks). Use nullFlavor="UNK" when it is unknown whether or not the patient has been discharged from another facility in the past four weeks.

1. MAY contain zero or one [0..1] @nullFlavor, which SHALL be selected from ValueSet [NullValues\_UNK\_NA](#NullValues_UNK_NA) urn:oid:2.16.840.1.113883.10.20.5.9.2 STATIC 2014-11-01 (CONF:1129-30580).
2. SHALL contain exactly one [1..1] @classCode="ACT" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-30585).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-30586).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30577) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.228" (CONF:1129-30581).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30582).
5. SHALL contain exactly one [1..1] code (CONF:1129-30578).
   1. This code SHALL contain exactly one [1..1] @code="3004-9" Patient discharged from another facility in the past four weeks (CONF:1129-30583).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30584).

Where the other facility discharge is not applicable or unknown, this entryRelationship will not be present.

Multiple discharges from different facilities in the past four weeks can be recorded.

1. SHOULD contain zero or more [0..\*] entryRelationship (CONF:1129-30576).
   1. The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="COMP" Component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1129-30587).
   2. The entryRelationship, if present, SHALL contain exactly one [1..1] [Other Facility Discharge Encounter](#E_Other_Facility_Discharge_Encounter) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01) (CONF:1129-30579).

Table 309: NullValues\_UNK\_NA

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NullValues\_UNK\_NA urn:oid:2.16.840.1.113883.10.20.5.9.2  Null values of unknown and not applicable. | | | |
| Code | Code System | Code System OID | Print Name |
| UNK | HL7NullFlavor | urn:oid:2.16.840.1.113883.5.1008 | Unknown |
| NA | HL7NullFlavor | urn:oid:2.16.840.1.113883.5.1008 | Not applicable |

Figure 132: Other Facility Discharge Act Example

<act classCode="ACT" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.228"

extension="2014-12-01" />

<code code="3004-9"

displayName="Patient discharged from another facility in the past four weeks"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

<!-- Can have more than one discharge from different facilities in the past four weeks

each represented by a different encounter -->

<!-- First encounter -->

<entryRelationship typeCode="COMP">

<!-- Other Facility Discharge Encounter -->

<encounter classCode="ENC" moodCode="EVN">

<!-- CCD Encounter activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- Other Facility Discharge Encounter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.218"

extension="2014-12-01" />

...

</encounter>

</entryRelationship>

<!-- Second encounter -->

<entryRelationship typeCode="COMP">

<!-- Other Facility Discharge Encounter -->

<encounter classCode="ENC" moodCode="EVN">

<!-- CCD Encounter activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- Other Facility Discharge Encounter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.218"

extension="2014-12-01" />

...

</encounter>

</entryRelationship>

</act>

Figure 133: Other Facility Discharge Act - Not Applicable Example

<act classCode="ACT" moodCode="EVN" nullFlavor="NA">

<templateId root="2.16.840.1.113883.10.20.5.6.228"

extension="2014-12-01" />

<code code="3004-9"

displayName="Patient discharged from another facility in the past four weeks"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</act>

Figure 134: Other Facility Discharge Act - Unknown Example

<act classCode="ACT" moodCode="EVN" nullFlavor="UNK">

<templateId root="2.16.840.1.113883.10.20.5.6.228"

extension="2014-12-01" />

<code code="3004-9"

displayName="Patient discharged from another facility in the past four weeks"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</act>

Other Facility Discharge Encounter

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01 (closed)]

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Table 310: Other Facility Discharge Encounter Contexts

| Contained By: | Contains: |
| --- | --- |
| [Other Facility Discharge Act](#E_Other_Facility_Discharge_Act) (optional) |  |

This encounter template represents an encounter at another facility from which the patient was discharged in the past four weeks. The type of encounter is set to "IMP" (inpatient encounter) and the location participant records the type of facility.

Table 311: Other Facility Discharge Encounter Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-28234](#C_1129-28234) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [1129-28235](#C_1129-28235) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30491](#C_1129-30491) |  |
| @root | 1..1 | SHALL |  | [1129-30492](#C_1129-30492) | 2.16.840.1.113883.10.20.22.4.49 |
| templateId | 1..1 | SHALL |  | [1129-28226](#C_1129-28226) |  |
| @root | 1..1 | SHALL |  | [1129-28233](#C_1129-28233) | 2.16.840.1.113883.10.20.5.6.218 |
| @extension | 1..1 | SHALL |  | [1129-30290](#C_1129-30290) | 2014-12-01 |
| id | 1..\* | SHALL |  | [1129-28222](#C_1129-28222) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-28230](#C_1129-28230) | NA |
| code | 1..1 | SHALL |  | [1129-28223](#C_1129-28223) |  |
| @code | 1..1 | SHALL |  | [1129-28231](#C_1129-28231) | IMP |
| @codeSystem | 1..1 | SHALL |  | [1129-30464](#C_1129-30464) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| effectiveTime | 1..1 | SHALL |  | [1129-28224](#C_1129-28224) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30255](#C_1129-30255) | NA |
| participant | 1..1 | SHALL |  | [1129-28227](#C_1129-28227) |  |
| @typeCode | 1..1 | SHALL |  | [1129-28239](#C_1129-28239) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [1129-28228](#C_1129-28228) |  |
| @classCode | 1..1 | SHALL |  | [1129-28236](#C_1129-28236) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| code | 1..1 | SHALL |  | [1129-28229](#C_1129-28229) |  |
| @code | 1..1 | SHALL |  | [1129-28238](#C_1129-28238) | urn:oid:2.16.840.1.114222.4.11.7238 (NHSNPreviousFacility) |

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-28234).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-28235).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30491) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.49" (CONF:1129-30492).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-28226) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.218" (CONF:1129-28233).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30290).
6. SHALL contain at least one [1..\*] id (CONF:1129-28222).
   1. Such ids SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-28230).
7. SHALL contain exactly one [1..1] code (CONF:1129-28223).
   1. This code SHALL contain exactly one [1..1] @code="IMP" inpatient encounter (CONF:1129-28231).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30464).
8. SHALL contain exactly one [1..1] effectiveTime (CONF:1129-28224).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30255).
9. SHALL contain exactly one [1..1] participant (CONF:1129-28227).
   1. This participant SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1129-28239).
   2. This participant SHALL contain exactly one [1..1] participantRole (CONF:1129-28228).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:1129-28236).
      2. This participantRole SHALL contain exactly one [1..1] code (CONF:1129-28229).
         1. This code SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet [NHSNPreviousFacility](#NHSNPreviousFacility) urn:oid:2.16.840.1.114222.4.11.7238 DYNAMIC (CONF:1129-28238).

Table 312: NHSNPreviousFacility

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNPreviousFacility urn:oid:2.16.840.1.114222.4.11.7238  Previous facility from which the patient has been discharged.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3005-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Nursing Home/Skilled Nursing Facility |
| 3006-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Other Inpatient Healthcare Setting (e.g., Acute Care Hospital, LTAC, Rehabilitation, etc.) |

Figure 135: Other Facility Discharge Encounter Example

<encounter classCode="ENC" moodCode="EVN">

<!-- C-CDA Encounter activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- Other Facility Discharge Encounter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.218"

extension="2014-12-01" />

<id nullFlavor="NA" />

<code code="IMP"

displayName="inpatient encounter"

codeSystem="2.16.840.1.113883.5.4"

codeSystemName="ActCode" />

<effectiveTime nullFlavor="NA" />

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<code code="3005-6"

displayName="Nursing Home/Skilled Nursing Facility"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</participantRole>

</participant>

</encounter>

Pathogen Identified Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.145 (closed)]

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Table 313: Pathogen Identified Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Findings Organizer](#E_Findings_Organizer) (required)  [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) (optional)  [Findings Section in an OPC Report (RETIRED)](#S_Findings_Section_in_an_OPC_Report_RET) (optional) |  |

This template either represents a pathogen identified or, using a code from the NHSN Pathogens Code value set, records that no pathogens were identified.  
The value set table provides codes for several unspecified species—for example "Acidaminococcus species" (SNOMED CT 131202007, NHSN ACISP)—for use when a more precise code is not available. The code for an unspecified species is preferred to a genus-level code.

Table 314: Pathogen Identified Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-20909](#C_86-20909) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-20910](#C_86-20910) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28261](#C_86-28261) |  |
| @root | 1..1 | SHALL |  | [86-28262](#C_86-28262) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [86-20913](#C_86-20913) |  |
| @root | 1..1 | SHALL |  | [86-20914](#C_86-20914) | 2.16.840.1.113883.10.20.5.6.145 |
| id | 1..1 | SHALL |  | [86-20915](#C_86-20915) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22777](#C_86-22777) | NA |
| code | 1..1 | SHALL |  | [86-20916](#C_86-20916) |  |
| @code | 1..1 | SHALL |  | [86-20917](#C_86-20917) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 41852-5 |
| statusCode | 1..1 | SHALL |  | [86-20918](#C_86-20918) |  |
| @code | 1..1 | SHALL |  | [86-20919](#C_86-20919) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-22716](#C_86-22716) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22778](#C_86-22778) | NA |
| value | 1..1 | SHALL | CD | [86-20920](#C_86-20920) | urn:oid:2.16.840.1.113883.13.16 (NHSNPathogenCode) |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-20909).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-20910).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28261) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:86-28262).
5. SHALL contain exactly one [1..1] templateId (CONF:86-20913) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.145" (CONF:86-20914).
6. SHALL contain exactly one [1..1] id (CONF:86-20915).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22777).
7. SHALL contain exactly one [1..1] code (CONF:86-20916).
   1. This code SHALL contain exactly one [1..1] @code="41852-5" Microorganism identified (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1 STATIC) (CONF:86-20917).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-20918).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-20919).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:86-22716).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22778).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNPathogenCode](#NHSNPathogenCode) urn:oid:2.16.840.1.113883.13.16 DYNAMIC (CONF:86-20920).

Figure 136: Pathogen Identified Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- HAI Pathogen Identified Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.145"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="41852-5"

displayName="Microorganism identified"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

code="116197008"

displayName="Staphylococcus, coagulase negative (organism)"/>

</observation>

Pathogen Identified Observation (LIO) (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01 (closed)]

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Table 315: Pathogen Identified Observation (LIO) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Findings Section in a LIO Report (V2)](#S_Findings_Section_in_a_LIO_Report_V2) (required) | [Specimen Collection Procedure (LIO)](#E_Specimen_Collection_Procedure_LIO) (required)  [Bacterial Isolate Tested for Carbapenemase Observation](#E_Bacterial_Isolate_Tested_for_Carbapen) (optional) |

This template records a laboratory-identified microorganism and details of the specimen collection.  
The microorganism is recorded in the same way as in the Findings Organizer in infection reports. If the bacterial isolate was one of CRE-Klebsiella (CREKLEB), CRE-Ecoli (CREECOLI), or CRE-Enterobacter (CREENTERO) any tests for carbapenemase are recorded, along with any carbapenemases identified.

Table 316: Pathogen Identified Observation (LIO) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-19867](#C_1129-19867) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-19868](#C_1129-19868) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30525](#C_1129-30525) |  |
| @root | 1..1 | SHALL |  | [1129-30526](#C_1129-30526) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [1129-19879](#C_1129-19879) |  |
| @root | 1..1 | SHALL |  | [1129-19880](#C_1129-19880) | 2.16.840.1.113883.10.20.5.6.146 |
| @extension | 1..1 | SHALL |  | [1129-30527](#C_1129-30527) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-19881](#C_1129-19881) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-22774](#C_1129-22774) | NA |
| code | 1..1 | SHALL |  | [1129-19869](#C_1129-19869) |  |
| @code | 1..1 | SHALL |  | [1129-19870](#C_1129-19870) | 41852-5 |
| @codeSystem | 1..1 | SHALL |  | [1129-30436](#C_1129-30436) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| statusCode | 1..1 | SHALL |  | [1129-19871](#C_1129-19871) |  |
| @code | 1..1 | SHALL |  | [1129-19872](#C_1129-19872) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [1129-22732](#C_1129-22732) |  |
| value | 1..1 | SHALL | CD | [1129-19873](#C_1129-19873) | urn:oid:2.16.840.1.114222.4.11.3194 (NHSNSignificantPathogenCode) |
| entryRelationship | 1..1 | SHALL |  | [1129-19875](#C_1129-19875) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30434](#C_1129-30434) | COMP |
| procedure | 1..1 | SHALL |  | [1129-19876](#C_1129-19876) | [Specimen Collection Procedure (LIO) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.165](#E_Specimen_Collection_Procedure_LIO) |
| entryRelationship | 0..1 | MAY |  | [1129-30416](#C_1129-30416) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30435](#C_1129-30435) | COMP |
| observation | 1..1 | SHALL |  | [1129-30417](#C_1129-30417) | [Bacterial Isolate Tested for Carbapenemase Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01](#E_Bacterial_Isolate_Tested_for_Carbapen) |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-19867).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-19868).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30525) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:1129-30526).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-19879) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.146" (CONF:1129-19880).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30527).
6. SHALL contain exactly one [1..1] id (CONF:1129-19881).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22774).
7. SHALL contain exactly one [1..1] code (CONF:1129-19869).
   1. This code SHALL contain exactly one [1..1] @code="41852-5" Microorganism identified (CONF:1129-19870).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:1129-30436).
8. SHALL contain exactly one [1..1] statusCode (CONF:1129-19871).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-19872).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:1129-22732).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNSignificantPathogenCode](#NHSNSignificantPathogenCode) urn:oid:2.16.840.1.114222.4.11.3194 DYNAMIC (CONF:1129-19873).
11. SHALL contain exactly one [1..1] entryRelationship (CONF:1129-19875) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" (CONF:1129-30434).
    2. SHALL contain exactly one [1..1] [Specimen Collection Procedure (LIO)](#E_Specimen_Collection_Procedure_LIO) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.165) (CONF:1129-19876).

If value is CRE-Klebsiella (CREKLEB), CRE-Ecoli (CREECOLI), or CRE-Enterobacter (CREENTERO), then this entryRelationship is required.

1. MAY contain zero or one [0..1] entryRelationship (CONF:1129-30416) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CONF:1129-30435).
   2. SHALL contain exactly one [1..1] [Bacterial Isolate Tested for Carbapenemase Observation](#E_Bacterial_Isolate_Tested_for_Carbapen) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01) (CONF:1129-30417).

Table 317: NHSNSignificantPathogenCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSignificantPathogenCode urn:oid:2.16.840.1.114222.4.11.3194  Code System: SNOMED CT 2.16.840.1.113883.6.96 or cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package.  NHSN's value set for the observation recording the significant pathogen identified. | | | |
| Code | Code System | Code System OID | Print Name |
| 5933001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Clostridium difficile (organism) |
| 115329001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Methicillin resistant Staphylococcus aureus (organism) |
| 417943000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Methicillin susceptible Staphylococcus aureus (organism) |
| 2010-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Multidrug Resistant - Acinetobacter baumannii (Organism) |
| 113727004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Vancomycin resistant enterococcus (organism) |
| 2016-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | CephR-Klebsiella (CEPHRKLEB) |
| 2017-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | CRE-Klebsiella (CREKLEB) |
| 2018-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | CRE-Ecoli (CREECOLI) |
| 2019-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | CRE-Enterobacter |

Figure 137: Pathogen Identified Observation (LIO) Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateID -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- HAI Pathogen Identified Observation (LIO) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.146"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.6.1" codeSystemName="LOINC"

code="41852-5" displayName="Microorganism Identified"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="CD" codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="5933001"

displayName="Clostridium difficile (organism)"/>

<!-- Specimen collection procedure contains specimen collection encounter -->

<entryRelationship typeCode="COMP">

<procedure classCode="PROC" moodCode="EVN">

<!-- Specimen Collection Procedure (LIO) -->

<templateId root="2.16.840.1.113883.10.20.5.6.165" />

...

</procedure>

</entryRelationship>

<!-- If value is CRE-Klebsiella (CREKLEB), CRE-Ecoli (CREECOLI), or CRE-Enterobacter

(CREENTERO), then this entryRelationship is required -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Bacterial Isolate Tested for Carbapenemase Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.222"

extension="2014-12-01"/>

...

</observation>

</entryRelationship>

<observation/>

Pathogen Ranking Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.147 (closed)]

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Table 318: Pathogen Ranking Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Findings Organizer](#E_Findings_Organizer) (required) |  |

The NHSN pathogen findings record up to three pathogens. This observation records the relative importance of a pathogen in that set with respect to its role in the infection.  
The value is a coded ordinal, where the value of @code is the number 1 or 2 or 3; where 1 represents the highest-ranked pathogen of up to three pathogens recorded.

Table 319: Pathogen Ranking Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.147) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19787](#C_86-19787) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19788](#C_86-19788) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28263](#C_86-28263) |  |
| @root | 1..1 | SHALL |  | [86-28264](#C_86-28264) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19797](#C_86-19797) |  |
| @root | 1..1 | SHALL |  | [86-19798](#C_86-19798) | 2.16.840.1.113883.10.20.5.6.147 |
| id | 1..1 | SHALL |  | [86-19799](#C_86-19799) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22780](#C_86-22780) | NA |
| code | 1..1 | SHALL |  | [86-19789](#C_86-19789) |  |
| @code | 1..1 | SHALL |  | [86-19790](#C_86-19790) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28384](#C_86-28384) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19791](#C_86-19791) |  |
| @code | 1..1 | SHALL |  | [86-19792](#C_86-19792) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CO | [86-19793](#C_86-19793) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19787).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19788).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28263) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28264).
5. SHALL contain exactly one [1..1] templateId (CONF:86-19797) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.147" (CONF:86-19798).
6. SHALL contain exactly one [1..1] id (CONF:86-19799).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22780).
7. SHALL contain exactly one [1..1] code (CONF:86-19789).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19790).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28384).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-19791).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19792).
9. SHALL contain exactly one [1..1] value with @xsi:type="CO" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-19793).
   1. The value of value/@codeSystem SHALL be 2.16.840.1.113883.6.277 cdcNHSN, and the value of value/@code SHALL be the number 1 or 2 or 3, where 1 represents the highest-ranked pathogen of up to three pathogens recorded (CONF:86-19794).

Figure 138: Pathogen Ranking Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Pathogen Ranking Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.147"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4"

codeSystemName="HL7"

code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CO"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1"

displayName="Pathogen ranking 1"/>

</observation>

Pathogen Reduced Apheresis Platelet Usage Summary Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01 (closed)]

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Table 320: Pathogen Reduced Apheresis Platelet Usage Summary Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) (optional) | [ISBT Product Code Summary Observation (V2)](#E_ISBT_Product_Code_Summary_ObsV2) (optional) |

This template represents the number of units transfused, aliquots transfused, or total discards for pathogen reduced apheresis platelets.

If the value = 0, there *SHALL NOT* be a contained observation. If the value is > 0 then each specific subcategory product that is > 0 *SHALL* be listed in a separate contained ISBT Product Code Summary Observation.

Table 321: Pathogen Reduced Apheresis Platelet Usage Summary Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-30789](#C_3247-30789) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3247-30790](#C_3247-30790) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-30780](#C_3247-30780) |  |
| @root | 1..1 | SHALL |  | [3247-30784](#C_3247-30784) | 2.16.840.1.113883.10.20.5.6.240 |
| @extension | 1..1 | SHALL |  | [3247-30785](#C_3247-30785) | 2016-08-01 |
| code | 1..1 | SHALL |  | [3247-30781](#C_3247-30781) |  |
| @code | 1..1 | SHALL |  | [3247-30786](#C_3247-30786) | urn:oid:2.16.840.1.113883.10.20.5.9.5 (NHSN Pathogen Reduced Apheresis Platelet Usage) |
| statusCode | 1..1 | SHALL |  | [3247-30782](#C_3247-30782) |  |
| @code | 1..1 | SHALL |  | [3247-30787](#C_3247-30787) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | INT | [3247-30788](#C_3247-30788) |  |
| entryRelationship | 0..\* | SHOULD |  | [3247-30779](#C_3247-30779) |  |
| observation | 1..1 | SHALL |  | [3247-30783](#C_3247-30783) | [ISBT Product Code Summary Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01](#E_ISBT_Product_Code_Summary_ObsV2) |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3247-30789).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3247-30790).
3. SHALL contain exactly one [1..1] templateId (CONF:3247-30780) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.240" (CONF:3247-30784).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30785).
4. SHALL contain exactly one [1..1] code (CONF:3247-30781).
   1. This code SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet [NHSN Pathogen Reduced Apheresis Platelet Usage](#NHSN_Pathogen_Reduced_Apheresis_Platele) urn:oid:2.16.840.1.113883.10.20.5.9.5 DYNAMIC (CONF:3247-30786).
5. SHALL contain exactly one [1..1] statusCode (CONF:3247-30782).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:3247-30787).
6. SHALL contain exactly one [1..1] value with @xsi:type="INT" (CONF:3247-30788).
7. SHOULD contain zero or more [0..\*] entryRelationship (CONF:3247-30779).
   1. The entryRelationship, if present, SHALL contain exactly one [1..1] [ISBT Product Code Summary Observation (V2)](#E_ISBT_Product_Code_Summary_ObsV2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01) (CONF:3247-30783).
8. If the value = 0 there SHALL NOT be a contained observation. If the value is > 0 then each specific subcategory product that is > 0 SHALL be listed in a separate contained ISBT Product Code Summary Observation (CONF:3247-30791).

Table 322: NHSN Pathogen Reduced Apheresis Platelet Usage

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Pathogen Reduced Apheresis Platelet Usage urn:oid:2.16.840.1.113883.10.20.5.9.5 | | | |
| Code | Code System | Code System OID | Print Name |
| 3568-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of units transfused - Platelets/Apheresis/Psoralen-Treated and in Plasma |
| 3569-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of aliquots transfused - Platelets/Apheresis/Psoralen-Treated and in Plasma |
| 3570-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Discards -Platelets - Platelets/Apheresis/Psoralen-Treated and in Plasma |
| 3571-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of units transfused - Platelets/Apheresis/Psoralen-Treated and in Platelet Additive Solution |
| 3572-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of aliquots transfused - Platelets/Apheresis/Psoralen-Treated and in Platelet Additive Solution |
| 3573-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Discards - Platelets/Apheresis/Psoralen-Treated and in Platelet Additive Solution |
| 3574-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of units transfused - Platelets/Apheresis/Riboflavin-Treated and in Plasma |
| 3575-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of aliquots transfused - Platelets/Apheresis/Riboflavin-Treated and in Plasma |
| 3576-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Discards - Platelets/Apheresis/Riboflavin-Treated and in Plasma |
| 3577-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of units transfused - Platelets/Apheresis/Riboflavin-Treated and in Platelet Additive Solution |
| ... | | | |

Figure 139: Pathogen Reduced Apheresis Platelet Usage Summary Example

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI R3D1.1] Pathogen Reduced Apheresis Platelet Usage Summary Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.240" extension="2016-08-01" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3571-7"

displayName="Number of units transfused - Platelets/Apheresis/Psoralen-Treated and in Platelet Additive Solution" />

<statusCode code="completed" />

<value xsi:type="INT" value="75" />

<!--

If the value = 0, there SHALL NOT be a contained observation.

If the value is > 0 then each specific subcategory product that is > 0

SHALL be listed in a separate contained ISBT Product Code Summary Observation.

-->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- ISBT Product Code Summary Observation (V2) -->

<templateId root="2.16.840.1.113883.10.20.5.6.238" extension="2016-08-01" />

...

</observation>

</entryRelationship>

...

</observation>

PICC/IV Team

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.148 (closed)]

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Table 323: PICC/IV Team Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Clinical Statement in a CLIP Report](#E_Procedure_Details_Clinical_Statement_) (required) |  |

This observation records whether the person who performed the central line insertion was a member of the PICC/IV team. It is used in the Central-Line Insertion Practice Report.

If the performer was a member of the PICC/IV team, set the value of @negationInd to false. If the performer was not a member of the PICC/IV team, set the value of @negationInd to true.

Table 324: PICC/IV Team Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.148) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21214](#C_86-21214) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21215](#C_86-21215) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21216](#C_86-21216) |  |
| templateId | 1..1 | SHALL |  | [86-22002](#C_86-22002) |  |
| @root | 1..1 | SHALL |  | [86-22003](#C_86-22003) | 2.16.840.1.113883.10.20.5.6.148 |
| id | 1..1 | SHALL |  | [86-22004](#C_86-22004) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22779](#C_86-22779) | NA |
| code | 1..1 | SHALL |  | [86-21217](#C_86-21217) |  |
| @code | 1..1 | SHALL |  | [86-21218](#C_86-21218) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28385](#C_86-28385) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21219](#C_86-21219) |  |
| @code | 1..1 | SHALL |  | [86-21220](#C_86-21220) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = completed |
| value | 1..1 | SHALL | CD | [86-21221](#C_86-21221) |  |
| @code | 1..1 | SHALL |  | [86-21222](#C_86-21222) | 2213-7 |
| @codeSystem | 1..1 | SHALL |  | [86-28404](#C_86-28404) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21214).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21215).
3. SHALL contain exactly one [1..1] @negationInd (CONF:86-21216).
4. SHALL contain exactly one [1..1] templateId (CONF:86-22002) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.148" (CONF:86-22003).
5. SHALL contain exactly one [1..1] id (CONF:86-22004).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22779).
6. SHALL contain exactly one [1..1] code (CONF:86-21217).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21218).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28385).
7. SHALL contain exactly one [1..1] statusCode (CONF:86-21219).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" COMPLETED (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4 STATIC) (CONF:86-21220).
8. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21221).
   1. This value SHALL contain exactly one [1..1] @code="2213-7" Performer was a member of PICC/IV Team (CONF:86-21222).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28404).

Figure 140: PICC/IV Team Example

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<templateId root="2.16.840.1.113883.10.20.5.6.148"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2213-7"

displayName="Performer was a member of PICC/IV Team"/>

</observation>

Positive Blood Culture Observation (V2)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2014-12-01 (closed)]

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Table 325: Positive Blood Culture Observation (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) (required) | [Suspected Source Observation](#E_Suspected_Source_Observation) (optional)  [Blood Collection Location](#Blood_Collection_Location) (optional) |

This clinical statement is an infection indicator. It is used in an Evidence of Infection (Dialysis) Report.  
When the positive blood culture was present, set the value of @negationInd to false. When the positive blood culture was not present, set the value of @negationInd to true.

Table 326: Positive Blood Culture Observation (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-19818](#C_1129-19818) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-19819](#C_1129-19819) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1129-19820](#C_1129-19820) |  |
| templateId | 1..1 | SHALL |  | [1129-30528](#C_1129-30528) |  |
| @root | 1..1 | SHALL |  | [1129-30529](#C_1129-30529) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [1129-19837](#C_1129-19837) |  |
| @root | 1..1 | SHALL |  | [1129-19838](#C_1129-19838) | 2.16.840.1.113883.10.20.5.6.149 |
| @extension | 1..1 | SHALL |  | [1129-30530](#C_1129-30530) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-19839](#C_1129-19839) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-22781](#C_1129-22781) | NA |
| code | 1..1 | SHALL |  | [1129-19821](#C_1129-19821) |  |
| @code | 1..1 | SHALL |  | [1129-19822](#C_1129-19822) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1129-30605](#C_1129-30605) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1129-19823](#C_1129-19823) |  |
| @code | 1..1 | SHALL |  | [1129-19824](#C_1129-19824) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1129-19825](#C_1129-19825) |  |
| @code | 1..1 | SHALL |  | [1129-19826](#C_1129-19826) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 1955-4 |
| entryRelationship | 1..1 | SHOULD |  | [1129-30308](#C_1129-30308) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30309](#C_1129-30309) | CAUS |
| @inversionInd | 1..1 | SHALL |  | [1129-30310](#C_1129-30310) | true |
| observation | 1..1 | SHALL |  | [1129-30311](#C_1129-30311) | [Suspected Source Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.168](#E_Suspected_Source_Observation) |
| entryRelationship | 1..1 | SHOULD |  | [1129-30312](#C_1129-30312) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30313](#C_1129-30313) | COMP |
| observation | 1..1 | SHALL |  | [1129-30314](#C_1129-30314) | [Blood Collection Location (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01](#Blood_Collection_Location) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-19818).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-19819).
4. SHALL contain exactly one [1..1] @negationInd (CONF:1129-19820).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-30528) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1129-30529).
6. SHALL contain exactly one [1..1] templateId (CONF:1129-19837) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.149" (CONF:1129-19838).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30530).
7. SHALL contain exactly one [1..1] id (CONF:1129-19839).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22781).
8. SHALL contain exactly one [1..1] code (CONF:1129-19821).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1129-19822).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30605).
9. SHALL contain exactly one [1..1] statusCode (CONF:1129-19823).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-19824).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1129-19825).
    1. This value SHALL contain exactly one [1..1] @code="1955-4" Positive blood culture (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:1129-19826).

If the value of @negationInd is "false" this observation is required to contain the following entryRelationship

1. SHOULD contain exactly one [1..1] entryRelationship (CONF:1129-30308) such that it
   1. SHALL contain exactly one [1..1] @typeCode="CAUS" (CONF:1129-30309).
   2. SHALL contain exactly one [1..1] @inversionInd="true" (CONF:1129-30310).
   3. SHALL contain exactly one [1..1] [Suspected Source Observation](#E_Suspected_Source_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.168) (CONF:1129-30311).

If the value of @negationInd is "false" this observation is required to contain the following entryRelationship

1. SHOULD contain exactly one [1..1] entryRelationship (CONF:1129-30312) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CONF:1129-30313).
   2. SHALL contain exactly one [1..1] [Blood Collection Location](#Blood_Collection_Location) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01) (CONF:1129-30314).
2. If the value of @negationInd is 'false' (CONF:1129-19827).
   1. The report *SHALL* contain a Findings Section (CONF:1129-19832).
3. If the value of @negationInd is ‘true’ (CONF:1129-19833).
   1. The report *SHALL NOT* contain a Findings Section (CONF:1129-19834).

Figure 141: Positive Blood Culture Observation (V2) Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Positive Blood Culture Observation (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.149"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1955-4"

displayName="Positive blood culture"/>

<!-- Suspected Source of Pathogen -->

<entryRelationship typeCode="CAUS" inversionInd="true">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Suspected Source of Pathogen templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.168"/>

...

</observation>

</entryRelationship>

<!-- Blood Collection Location -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.219"

extension="2014-12-01"/>

...

</observation>

</entryRelationship>

</observation>

Positive Test for Carbapenemase Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01 (closed)]

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Table 327: Positive Test for Carbapenemase Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Bacterial Isolate Tested for Carbapenemase Observation](#E_Bacterial_Isolate_Tested_for_Carbapen) (optional) | [Carbapenemase Type Identified Observation](#E_Carbapenemase_Type_Identified_Observa) (optional) |

This template represents whether or not the bacterial isolate tested positive for carbapenemase.

When the bacterial isolate tested positive, set the value of @negationInd to false. When the bacterial isolate did not test positive, set the value of @negationInd to true. When it is unknown whether or not the bacterial isolate tested positive, set the value of @nullFlavor to "UNK".

Table 328: Positive Test for Carbapenemase Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [1129-30413](#C_1129-30413) | UNK |
| @classCode | 1..1 | SHALL |  | [1129-30410](#C_1129-30410) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-30411](#C_1129-30411) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | SHOULD |  | [1129-30412](#C_1129-30412) |  |
| templateId | 1..1 | SHALL |  | [1129-30396](#C_1129-30396) |  |
| @root | 1..1 | SHALL |  | [1129-30405](#C_1129-30405) | 2.16.840.1.113883.10.20.22.4.2 |
| templateId | 1..1 | SHALL |  | [1129-30531](#C_1129-30531) |  |
| @root | 1..1 | SHALL |  | [1129-30532](#C_1129-30532) | 2.16.840.1.113883.10.20.5.6.225 |
| @extension | 1..1 | SHALL |  | [1129-30533](#C_1129-30533) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-30397](#C_1129-30397) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30407](#C_1129-30407) | NA |
| code | 1..1 | SHALL |  | [1129-30393](#C_1129-30393) |  |
| @code | 1..1 | SHALL |  | [1129-30402](#C_1129-30402) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1129-30606](#C_1129-30606) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1129-30394](#C_1129-30394) |  |
| @code | 1..1 | SHALL |  | [1129-30403](#C_1129-30403) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [1129-30589](#C_1129-30589) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-30590](#C_1129-30590) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = NA |
| value | 1..1 | SHALL | CD | [1129-30395](#C_1129-30395) |  |
| @code | 1..1 | SHALL |  | [1129-30404](#C_1129-30404) | 2048-7 |
| @codeSystem | 1..1 | SHALL |  | [1129-30441](#C_1129-30441) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| entryRelationship | 0..\* | SHOULD |  | [1129-30392](#C_1129-30392) |  |
| @typeCode | 1..1 | SHALL |  | [1129-30400](#C_1129-30400) | COMP |
| observation | 1..1 | SHALL |  | [1129-30462](#C_1129-30462) | [Carbapenemase Type Identified Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01](#E_Carbapenemase_Type_Identified_Observa) |

1. Conforms to Result Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.2).

When it is unknown whether or not the bacterial isolate tested positive, set the value of @nullFlavor to "UNK".

1. MAY contain zero or one [0..1] @nullFlavor="UNK" (CONF:1129-30413).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-30410).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-30411).

When the bacterial isolate tested positive, set the value of @negationInd to false. When the bacterial isolate did not test positive, set the value of @negationInd to true.

1. SHOULD contain zero or one [0..1] @negationInd (CONF:1129-30412).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-30396) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.2" (CONF:1129-30405).
3. SHALL contain exactly one [1..1] templateId (CONF:1129-30531) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.225" (CONF:1129-30532).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30533).
4. SHALL contain exactly one [1..1] id (CONF:1129-30397).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-30407).
5. SHALL contain exactly one [1..1] code (CONF:1129-30393).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1129-30402).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1129-30606).
6. SHALL contain exactly one [1..1] statusCode (CONF:1129-30394).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-30403).
7. SHALL contain exactly one [1..1] effectiveTime (CONF:1129-30589).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:1129-30590).
8. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1129-30395).
   1. This value SHALL contain exactly one [1..1] @code="2048-7" Isolate tested positive for carbapenemase (CONF:1129-30404).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1129-30441).

If the value of @negationInd is "false" this observation is required to contain at least one of the following entryRelationships.

1. SHOULD contain zero or more [0..\*] entryRelationship (CONF:1129-30392) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CONF:1129-30400).
   2. SHALL contain exactly one [1..1] [Carbapenemase Type Identified Observation](#E_Carbapenemase_Type_Identified_Observa) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01) (CONF:1129-30462).

Figure 142: Positive Test for Carbapenemase Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2" />

<!-- Positive Test for Carbapenemase Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.225"

extension="2014-12-01"/>

<id nullFlavor="NA"/>

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"

codeSystemName="ActCode"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="CD" code="2048-7"

displayName="Isolate tested positive for carbapenemase"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

<entryRelationship typeCode="COMP">

<!-- Carbapenemase Type Identified Observation -->

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Type Identified Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.226"

extension="2014-12-01"/>

...

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<!-- Carbapenemase Type Identified Observation -->

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Result Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.2"/>

<!-- Carbapenemase Type Identified Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.226"

extension="2014-12-01"/>

...

</observation>

</entryRelationship>

</observation>

Post-Procedure Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.150 (closed)]

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Table 329: Post-Procedure Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Details Section in a BSI Report](#S_Infection_Details_Section_in_a_BSI_Re) (optional)  [Infection Details Section in a UTI Report](#S_Infection_Details_Section_in_a_UTI_Re) (optional)  [Infection Details Section in a VAE Report](#S_Infection_Details_Section_in_a_VAE_Re) (optional) | [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) (optional) |

This clinical statement represents a post procedure. In the context in which it is used in the HAI IG, this observation records whether the reported infection occurred during a post-procedure period. If the infection was post-procedure, then a date of the procedure and a procedure code are required.

If the infection was post-procedure, set the value of @negationInd to false. If the infection was not post-procedure, set the value of @negationInd to true.

Table 330: Post-Procedure Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.150) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19715](#C_86-19715) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19716](#C_86-19716) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19717](#C_86-19717) |  |
| templateId | 1..1 | SHALL |  | [86-28265](#C_86-28265) |  |
| @root | 1..1 | SHALL |  | [86-28266](#C_86-28266) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19742](#C_86-19742) |  |
| @root | 1..1 | SHALL |  | [86-19743](#C_86-19743) | 2.16.840.1.113883.10.20.5.6.150 |
| id | 1..1 | SHALL |  | [86-19882](#C_86-19882) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22782](#C_86-22782) | NA |
| code | 1..1 | SHALL |  | [86-19719](#C_86-19719) |  |
| @code | 1..1 | SHALL |  | [86-19720](#C_86-19720) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28397](#C_86-28397) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19721](#C_86-19721) |  |
| @code | 1..1 | SHALL |  | [86-19722](#C_86-19722) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-19784](#C_86-19784) |  |
| @code | 1..1 | SHALL |  | [86-19785](#C_86-19785) | 3188-0 |
| @codeSystem | 1..1 | SHALL |  | [86-19786](#C_86-19786) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| entryRelationship | 0..1 | SHOULD |  | [86-19725](#C_86-19725) |  |
| @typeCode | 1..1 | SHALL |  | [86-19726](#C_86-19726) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| procedure | 1..1 | SHALL |  | [86-19727](#C_86-19727) | [Procedure Details Clinical Statement in an Infection-Type Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154](#E_Procedure_Details_Clinical_Stmt_IT) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19715).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19716).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-19717).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28265) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28266).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19742) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.150" (CONF:86-19743).
7. SHALL contain exactly one [1..1] id (CONF:86-19882).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22782).
8. SHALL contain exactly one [1..1] code (CONF:86-19719).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19720).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28397).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19721).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19722).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-19784).
    1. This value SHALL contain exactly one [1..1] @code="3188-0" Infection occurred post-procedure (CONF:86-19785).
    2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-19786).
11. SHOULD contain zero or one [0..1] entryRelationship (CONF:86-19725).
    1. The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-19726).
    2. The entryRelationship, if present, SHALL contain exactly one [1..1] [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154) (CONF:86-19727).
    3. If the value of @negationInd is false this entryRelationship SHALL be present (CONF:86-19728).

Figure 143: Post-Procedure Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Post-procedure Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.150"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4"

code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3188-0"

displayName="Infection occurred post-procedure"/>

...

<entryRelationship typeCode="REFR">

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure template -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Procedure Details CS in an infection-type report template -->

<templateId root="2.16.840.1.113883.10.20.5.6.154" />

...

</procedure>

</entryRelationship>

</observation>

Primary C. Difficile Testing Method This Quarter

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01 (closed)]

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Table 331: Primary C. Difficile Testing Method This Quarter Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (POM) (V2)](#S_Summary_Data_Section_POM_V2) (optional) |  |

This template represents the primary testing method for C. difficile that is used most often for this quarter by the facility's laboratory or by the outside laboratory where the facility's testing is performed.

If the testing method is other than one specified in NHSNCdiffTestMethod value set, use value/@nullFlavor="OTH" and enter the testing method in value/originalText.

Table 332: Primary C. Difficile Testing Method This Quarter Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-30327](#C_1129-30327) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1129-30328](#C_1129-30328) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30534](#C_1129-30534) |  |
| @root | 1..1 | SHALL |  | [1129-30535](#C_1129-30535) | 2.16.840.1.113883.10.20.5.6.221 |
| @extension | 1..1 | SHALL |  | [1129-30536](#C_1129-30536) | 2014-12-01 |
| code | 1..1 | SHALL |  | [1129-30318](#C_1129-30318) |  |
| @code | 1..1 | SHALL |  | [1129-30323](#C_1129-30323) | 2029-7 |
| @codeSystem | 1..1 | SHALL |  | [1129-30324](#C_1129-30324) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [1129-30320](#C_1129-30320) |  |
| @code | 1..1 | SHALL |  | [1129-30326](#C_1129-30326) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1129-30329](#C_1129-30329) | urn:oid:2.16.840.1.114222.4.11.7242 (NHSNCdiffTestMethod) |
| @nullFlavor | 0..1 | MAY |  | [1129-30331](#C_1129-30331) | OTH |
| originalText | 0..1 | MAY |  | [1129-30332](#C_1129-30332) |  |

1. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-30327).
2. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-30328).
3. SHALL contain exactly one [1..1] templateId (CONF:1129-30534) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.221" (CONF:1129-30535).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30536).
4. SHALL contain exactly one [1..1] code (CONF:1129-30318).
   1. This code SHALL contain exactly one [1..1] @code="2029-7" C. difficile primary testing method used most often for this quarter (CONF:1129-30323).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:1129-30324).
5. SHALL contain exactly one [1..1] statusCode (CONF:1129-30320).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-30326).
6. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHOULD be selected from ValueSet [NHSNCdiffTestMethod](#NHSNCdiffTestMethod) urn:oid:2.16.840.1.114222.4.11.7242 DYNAMIC (CONF:1129-30329).

If the testing method is other than one specified in NHSN, use nullFlavor="OTH" and enter testing method in originalText.

* 1. This value MAY contain zero or one [0..1] @nullFlavor="OTH" (CONF:1129-30331).

If nullFlavor="OTH" then the testing method is to be entered in originalText.

* 1. This value MAY contain zero or one [0..1] originalText (CONF:1129-30332).

Table 333: NHSNCdiffTestMethod

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNCdiffTestMethod urn:oid:2.16.840.1.114222.4.11.7242  Testing method for C. difficile.  A full listing of codes can be found in the hai\_voc.xls file provided with this package.  Value Set Source: <http://www.phinvads.com> | | | |
| Code | Code System | Code System OID | Print Name |
| 2030-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | EIA - Enzyme immunoassay (EIA) for toxin |
| 2031-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Cyto - Cell cytotoxicity neutralization assay |
| 2032-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | NAAT - Nucleic acid amplification test (NAAT) |
| 2033-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | GDH - Glutamate dehydrogenase (GDH) antigen plus EIA for toxin |
| 2034-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | GDHNAAT - GDH plus NAAT |
| 2035-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | GDHEIA - GDH plus EIA for toxin, followed by NAAT for discrepant results |
| 2036-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | ToxiCul - Toxigenic culture |
| 2057-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | NAAT plus EIA, if NAAT positive (2-step algorithm) |
| ... | | | |

Figure 144: Primary C. Difficile Testing Method This Quarter Example

<observation classCode="OBS" moodCode="EVN">

<!-- Primary C. Difficile Testing Method This Quarter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.221"

extension="2014-12-01"/>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2029-7"

displayName="C. difficile primary testing method used most often for this

quarter"/>

<statusCode code="completed"/>

<value xsi:type="CD" codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2034-7"

displayName="GDHNAAT - GDH plus NAAT"/>

</observation>

Figure 145: Primary C. Difficile Testing Method This Quarter - Other Example

<observation classCode="OBS" moodCode="EVN">

<!-- Primary C. Difficile Testing Method This Quarter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.221"

extension="2014-12-01" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2029-7"

displayName="C. difficile primary testing method used most often for this quarter" />

<statusCode code="completed" />

<value xsi:type="CD" nullFlavor="OTH">

<originalText>

Testing method other than one specified in NHSN value set

</originalText>

</value>

</observation>

Prior Discharge Encounter (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01 (closed)]

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Table 334: Prior Discharge Encounter (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Encounters Section in a LIO Report (V2)](#S_Encounters_Section_in_a_LIO_Report_V2) (required) |  |

This template records the date of a prior discharge from the facility. It is used in a LIO Report to record a past discharge within the past four weeks. If the Prior Discharge Encounter is not applicable, use nullFlavor="NA".

Table 335: Prior Discharge Encounter (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [1129-30478](#C_1129-30478) | NA |
| @classCode | 1..1 | SHALL |  | [1129-21703](#C_1129-21703) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [1129-21704](#C_1129-21704) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-30488](#C_1129-30488) |  |
| @root | 1..1 | SHALL |  | [1129-30489](#C_1129-30489) | 2.16.840.1.113883.10.20.22.4.49 |
| templateId | 1..1 | SHALL |  | [1129-21714](#C_1129-21714) |  |
| @root | 1..1 | SHALL |  | [1129-21715](#C_1129-21715) | 2.16.840.1.113883.10.20.5.6.151 |
| @extension | 1..1 | SHALL |  | [1129-30275](#C_1129-30275) | 2014-12-01 |
| id | 1..\* | SHALL |  | [1129-21705](#C_1129-21705) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-21706](#C_1129-21706) | NA |
| code | 1..1 | SHALL |  | [1129-21707](#C_1129-21707) |  |
| @code | 1..1 | SHALL |  | [1129-21708](#C_1129-21708) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = IMP |
| effectiveTime | 1..1 | SHALL |  | [1129-21709](#C_1129-21709) |  |
| @nullFlavor | 0..1 | MAY |  | [1129-30490](#C_1129-30490) | NA |
| high | 0..1 | SHOULD |  | [1129-30423](#C_1129-30423) |  |
| @value | 1..1 | SHALL |  | [1129-21711](#C_1129-21711) |  |

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).

Use nullFlavor="NA" where the prior discharge encounter is not applicable.

1. MAY contain zero or one [0..1] @nullFlavor="NA" (CONF:1129-30478).
2. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-21703).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-21704).
4. SHALL contain exactly one [1..1] templateId (CONF:1129-30488) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.49" (CONF:1129-30489).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-21714) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.151" (CONF:1129-21715).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30275).
6. SHALL contain at least one [1..\*] id (CONF:1129-21705).
   1. Such ids SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-21706).
7. SHALL contain exactly one [1..1] code (CONF:1129-21707).
   1. This code SHALL contain exactly one [1..1] @code="IMP" Inpatient encounter (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4 STATIC) (CONF:1129-21708).
8. SHALL contain exactly one [1..1] effectiveTime (CONF:1129-21709).

Use nullFlavor="NA" where the prior discharge encounter is not applicable.

* 1. This effectiveTime MAY contain zero or one [0..1] @nullFlavor="NA" (CONF:1129-30490).
  2. This effectiveTime SHOULD contain zero or one [0..1] high (CONF:1129-30423).

This date must be within the past four weeks.

* + 1. The high, if present, SHALL contain exactly one [1..1] @value (CONF:1129-21711).

Figure 146: Prior Discharge Encounter (V2) Example

<encounter classCode="ENC" moodCode="EVN">

<!-- C-CDA Encounter activity template -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- HAI Prior Discharge Encounter (V2) template -->

<templateId root="2.16.840.1.113883.10.20.5.6.151"

extension="2014-12-01"/>

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.5.4"

code="IMP"

displayName="Inpatient encounter" />

<effectiveTime>

<high value="20081205"/>

</effectiveTime>

</encounter>

Figure 147: Prior Discharge Encounter (V2) - Not Applicable Example

<encounter classCode="ENC" moodCode="EVN" nullFlavor="NA">

<!-- CCD Encounter activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- HAI Prior Discharge Encounter (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.151"

extension="2014-12-01" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.5.4"

code="IMP"

displayName="Inpatient encounter" />

<effectiveTime nullFlavor="NA" />

</encounter>

Procedure Details Clinical Statement in a CLIP Report

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.155 (closed)]

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Table 336: Procedure Details Clinical Statement in a CLIP Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Section in a CLIP Report](#S_Procedure_Details_Section_in_a_CLIP_R) (required) | [PICC/IV Team](#E_PICCIV_Team) (required)  [Recorder Observation](#E_Recorder_Observation) (required)  [Reason for Procedure Observation](#E_Reason_for_Procedure_Observation) (required) |

This clinical statement records the detail required in a CLIP Report about the central-line insertion procedure.  
If the procedure resulted in a successful central-line insertion, set the value of statusCode/@code to "completed". If the procedure did not result in a successful central-line insertion, set the value of statusCode/@code to "aborted".  
The performer element records the identifier and role of the person who performed the procedure.  
The participant element identifies the catheter type.

Table 337: Procedure Details Clinical Statement in a CLIP Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.155) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21605](#C_86-21605) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [86-21606](#C_86-21606) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28267](#C_86-28267) |  |
| @root | 1..1 | SHALL |  | [86-28268](#C_86-28268) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [86-21637](#C_86-21637) |  |
| @root | 1..1 | SHALL |  | [86-21638](#C_86-21638) | 2.16.840.1.113883.10.20.5.6.155 |
| id | 1..1 | SHALL |  | [86-21639](#C_86-21639) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22784](#C_86-22784) | NA |
| code | 1..1 | SHALL |  | [86-21607](#C_86-21607) |  |
| @code | 1..1 | SHALL |  | [86-21608](#C_86-21608) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 233527006 |
| statusCode | 1..1 | SHALL |  | [86-21609](#C_86-21609) | urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode) |
| effectiveTime | 1..1 | SHALL |  | [86-21610](#C_86-21610) |  |
| targetSiteCode | 1..1 | SHALL |  | [86-21611](#C_86-21611) | urn:oid:2.16.840.1.114222.4.11.3180 (NHSNInsertionSiteCode) |
| performer | 1..1 | SHALL |  | [86-21613](#C_86-21613) |  |
| assignedEntity | 1..1 | SHALL |  | [86-21614](#C_86-21614) |  |
| id | 1..1 | SHALL |  | [86-21615](#C_86-21615) |  |
| code | 1..1 | SHALL |  | [86-21617](#C_86-21617) |  |
| participant | 1..1 | SHALL |  | [86-21619](#C_86-21619) |  |
| @typeCode | 1..1 | SHALL |  | [86-21620](#C_86-21620) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| participantRole | 1..1 | SHALL |  | [86-21621](#C_86-21621) |  |
| @classCode | 1..1 | SHALL |  | [86-21622](#C_86-21622) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingDevice | 1..1 | SHALL |  | [86-21623](#C_86-21623) |  |
| code | 1..1 | SHALL |  | [86-21624](#C_86-21624) |  |
| entryRelationship | 1..1 | SHALL |  | [86-21626](#C_86-21626) |  |
| @typeCode | 1..1 | SHALL |  | [86-21627](#C_86-21627) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-21628](#C_86-21628) | [Recorder Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.159](#E_Recorder_Observation) |
| entryRelationship | 1..1 | SHALL |  | [86-21629](#C_86-21629) |  |
| @typeCode | 1..1 | SHALL |  | [86-21630](#C_86-21630) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL |  | [86-21631](#C_86-21631) | [Reason for Procedure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.158](#E_Reason_for_Procedure_Observation) |
| entryRelationship | 1..1 | SHALL |  | [86-21632](#C_86-21632) |  |
| @typeCode | 1..1 | SHALL |  | [86-21633](#C_86-21633) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-21634](#C_86-21634) | [PICC/IV Team (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.148](#E_PICCIV_Team) |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21605).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21606).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28267) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28268).
5. SHALL contain exactly one [1..1] templateId (CONF:86-21637) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.155" (CONF:86-21638).
6. SHALL contain exactly one [1..1] id (CONF:86-21639).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22784).
7. SHALL contain exactly one [1..1] code (CONF:86-21607).
   1. This code SHALL contain exactly one [1..1] @code="233527006" Central-line insertion (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-21608).
8. SHALL contain exactly one [1..1] statusCode, which SHALL be selected from ValueSet [ProcedureAct statusCode](#ProcedureAct_statusCode) urn:oid:2.16.840.1.113883.11.20.9.22 DYNAMIC (CONF:86-21609).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21610).
10. SHALL contain exactly one [1..1] targetSiteCode, which SHALL be selected from ValueSet [NHSNInsertionSiteCode](#NHSNInsertionSiteCode) urn:oid:2.16.840.1.114222.4.11.3180 DYNAMIC (CONF:86-21611).
11. SHALL contain exactly one [1..1] performer (CONF:86-21613).
    1. This performer SHALL contain exactly one [1..1] assignedEntity (CONF:86-21614).
       1. This assignedEntity SHALL contain exactly one [1..1] id (CONF:86-21615).
          1. If the performer ID is not known, the value of performer/assignedEntity/id/@nullFlavor SHALL be UNK (CONF:86-21616).
       2. This assignedEntity SHALL contain exactly one [1..1] code (CONF:86-21617).
          1. If the occupation is recorded as a code, the value of @xsi:type SHALL be CD and the value of @code SHALL be selected from ValueSet 2.16.840.1.114222.4.11.3181 NHSNRoleOfPerformerCode DYNAMIC. If the occupation is recorded as text, the value of @nullFlavor SHALL be OTH and the code element SHALL contain an originalText element recording the occupation of the performer (CONF:86-21618).
12. SHALL contain exactly one [1..1] participant (CONF:86-21619).
    1. This participant SHALL contain exactly one [1..1] @typeCode="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-21620).
    2. This participant SHALL contain exactly one [1..1] participantRole (CONF:86-21621).
       1. This participantRole SHALL contain exactly one [1..1] @classCode="MANU" Manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 STATIC) (CONF:86-21622).
       2. This participantRole SHALL contain exactly one [1..1] playingDevice (CONF:86-21623).
          1. This playingDevice SHALL contain exactly one [1..1] code (CONF:86-21624).
             1. To record the catheter type as a code, the value of @code SHALL be selected from ValueSet 2.16.840.1.114222.4.11.3185 NHSNCatheterTypeCode STATIC 20090625. Or, to record the catheter type as text, the value of @nullFlavor SHALL be OTH and an originalText element SHALL be present (CONF:86-21625).
13. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21626) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21627).
    2. SHALL contain exactly one [1..1] [Recorder Observation](#E_Recorder_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.159) (CONF:86-21628).
14. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21629) such that it
    1. SHALL contain exactly one [1..1] @typeCode="RSON" Has reason (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21630).
    2. SHALL contain exactly one [1..1] [Reason for Procedure Observation](#E_Reason_for_Procedure_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.158) (CONF:86-21631).
15. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21632) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21633).
    2. SHALL contain exactly one [1..1] [PICC/IV Team](#E_PICCIV_Team) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.148) (CONF:86-21634).

Table 338: ProcedureAct statusCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: ProcedureAct statusCode urn:oid:2.16.840.1.113883.11.20.9.22  A ValueSet of HL7 actStatus codes for use with a procedure activity  Value Set Source: <https://vsac.nlm.nih.gov/> | | | |
| Code | Code System | Code System OID | Print Name |
| completed | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Completed |
| active | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Active |
| aborted | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Aborted |
| cancelled | HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 | Cancelled |

Table 339: NHSNInsertionSiteCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNInsertionSiteCode urn:oid:2.16.840.1.114222.4.11.3180  Code System: SNOMED CT 2.16.840.1.113883.6.96  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 9454009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Subclavian vein |
| 63190004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Jugular vein |
| 83419000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Femoral vein |
| 122774002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Vein of lower extremity |
| 122775001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Vein of upper extremity |
| 307054003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Vein of scalp |
| 408728001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Umbilical vein or artery |

Table 340: NHSNRoleOfPerformerCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNRoleOfPerformerCode urn:oid:2.16.840.1.114222.4.11.3181  Code System: SNOMED CT 2.16.840.1.113883.6.96 or cdcNHSN 2.16.840.1.113883.6.277 or NUCC 2.16.840.1.113883.6.101  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 65853000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Student (not medical) |
| 398130009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Student (medical) |
| 405277009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Intern/resident |
| 405279007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Attending physician |
| 2212-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | PICC Team |
| 4100-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | IV Team |
| 4101-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Physician assistant |
| 4102-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Medical staff not otherwise specified |
| 4103-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Fellow |
| 363L00000X | Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 | Nurse Practitioner |
| ... | | | |

Table 341: NHSNCatheterTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNCatheterTypeCode urn:oid:2.16.840.1.114222.4.11.3185  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1116-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Umbilical |
| 1117-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Tunneled, dialysis |
| 1118-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Tunneled, other than dialysis |
| 1119-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Non-tunneled, dialysis |
| 1120-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Non-tunneled, other than dialysis |
| 3115-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | PICC |

Figure 148: Procedure Details Clinical Statement in a CLIP Report Example

<procedure moodCode="EVN" classCode="PROC">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Procedure Details Clinical Statement in a CLIP Report templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.155" />

<id nullFlavor="NA" />

<code code="233527006"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Central-line Insertion" />

<statusCode code="completed" />

<effectiveTime value="20080805" />

<targetSiteCode code="83419000"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Femoral vein" />

<performer>

<assignedEntity>

<id nullFlavor="UNK" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="4101-2"

displayName="Physician assistant" />

</assignedEntity>

</performer>

<participant typeCode="DEV">

<participantRole classCode="MANU">

<playingDevice>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1119-7"

displayName="Non-tunneled central line, dialysis" />

</playingDevice>

</participantRole>

</participant>

<entryRelationship typeCode="COMP">

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- Recorder Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.159"/>

...

</observation>

</entryRelationship>

<entryRelationship typeCode="RSON">

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- C-CDA Indication templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>

<!-- Reason for Procedure Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.158"/>

...

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- PICC/IV Team templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.148"/>

...

</observation>

</entryRelationship>

</procedure>

Procedure Details Clinical Statement in a Procedure Report (V2)

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.153.2 (closed)]

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Table 342: Procedure Details Clinical Statement in a Procedure Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Section in a Procedure Report (V2)](#Procedure_Details_Section_in_a_Procedur) (required) | [Anesthesia Administration Clinical Statement](#E_Anesthesia_Administration_Clinical_St) (required)  [Closure Technique Procedure](#E_Closure_Technique_Procedure) (required)  [Spinal Fusion Level Observation](#E_Spinal_Fusion_Level_Observation) (optional)  [Revision Associated with Prior Infection Observation](#Revision_Associated_with_Prior_Infectio) (optional) |

This clinical statement records the detail required in a Procedure Report about a procedure.  
NHSN uses the procedure id, along with other data, to establish a link between a Procedure Report and an SSI Report; the value of the procedure id must be the same in both the report of a procedure and the report of a surgical-site infection resulting from that procedure. In this template, the priority code represents the main or primary procedure for the patient in the context of this report.

Table 343: Procedure Details Clinical Statement in a Procedure Report (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.153.2) | | | | | |
| @classCode | 1..1 | SHALL |  | [1101-21654](#C_1101-21654) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [1101-21655](#C_1101-21655) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1101-30303](#C_1101-30303) |  |
| @root | 1..1 | SHALL |  | [1101-30304](#C_1101-30304) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [1101-21695](#C_1101-21695) |  |
| @root | 1..1 | SHALL |  | [1101-30250](#C_1101-30250) | 2.16.840.1.113883.10.20.5.6.153.2 |
| id | 1..1 | SHALL |  | [1101-21656](#C_1101-21656) |  |
| code | 1..1 | SHALL |  | [1101-21657](#C_1101-21657) | urn:oid:2.16.840.1.113883.13.17 (NHSNProcedureCategoryCode) |
| translation | 0..1 | MAY |  | [1101-21698](#C_1101-21698) |  |
| statusCode | 1..1 | SHALL |  | [1101-21700](#C_1101-21700) | urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode) |
| effectiveTime | 1..1 | SHALL |  | [1101-21661](#C_1101-21661) |  |
| low | 1..1 | SHALL |  | [1101-21662](#C_1101-21662) |  |
| width | 1..1 | SHALL |  | [1101-21663](#C_1101-21663) |  |
| priorityCode | 0..1 | MAY |  | [1101-21664](#C_1101-21664) |  |
| @nullFlavor | 0..1 | MAY |  | [1101-21665](#C_1101-21665) | NA |
| @code | 0..1 | MAY |  | [1101-21666](#C_1101-21666) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 63161005 |
| methodCode | 0..1 | MAY |  | [1101-21667](#C_1101-21667) |  |
| @code | 1..1 | SHOULD |  | [1101-21668](#C_1101-21668) |  |
| approachSiteCode | 0..1 | MAY |  | [1101-21671](#C_1101-21671) |  |
| @nullFlavor | 0..1 | MAY |  | [1101-21672](#C_1101-21672) | NI |
| @code | 0..1 | MAY |  | [1101-21673](#C_1101-21673) | urn:oid:2.16.840.1.113883.13.2 (NHSNSpinalFusionApproachCode) |
| performer | 0..1 | MAY |  | [1101-21675](#C_1101-21675) |  |
| @typeCode | 1..1 | SHALL |  | [1101-21676](#C_1101-21676) | PRF |
| assignedEntity | 1..1 | SHALL |  | [1101-21677](#C_1101-21677) |  |
| id | 1..\* | SHALL |  | [1101-21678](#C_1101-21678) |  |
| @root | 1..1 | SHALL |  | [1101-21679](#C_1101-21679) |  |
| @extension | 1..1 | SHALL |  | [1101-21681](#C_1101-21681) |  |
| entryRelationship | 1..1 | SHALL |  | [1101-21683](#C_1101-21683) |  |
| @typeCode | 1..1 | SHALL |  | [1101-21684](#C_1101-21684) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| substanceAdministration | 1..1 | SHALL |  | [1101-21685](#C_1101-21685) | [Anesthesia Administration Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.112](#E_Anesthesia_Administration_Clinical_St) |
| entryRelationship | 0..1 | MAY |  | [1101-21686](#C_1101-21686) |  |
| @typeCode | 1..1 | SHALL |  | [1101-21687](#C_1101-21687) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [1101-21688](#C_1101-21688) | [Spinal Fusion Level Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.166](#E_Spinal_Fusion_Level_Observation) |
| entryRelationship | 0..1 | SHALL |  | [1101-21690](#C_1101-21690) |  |
| @typeCode | 1..1 | SHALL |  | [1101-21691](#C_1101-21691) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| procedure | 1..1 | SHALL |  | [1101-21692](#C_1101-21692) | [Closure Technique Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.117](#E_Closure_Technique_Procedure) |
| entryRelationship | 0..1 | MAY |  | [1101-30241](#C_1101-30241) |  |
| @typeCode | 1..1 | SHALL |  | [1101-30242](#C_1101-30242) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [1101-30243](#C_1101-30243) | [Revision Associated with Prior Infection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.204](#Revision_Associated_with_Prior_Infectio) |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1101-21654).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1101-21655).
4. SHALL contain exactly one [1..1] templateId (CONF:1101-30303) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:1101-30304).
5. SHALL contain exactly one [1..1] templateId (CONF:1101-21695) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.153.2" (CONF:1101-30250).
6. SHALL contain exactly one [1..1] id (CONF:1101-21656).
7. SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNProcedureCategoryCode](#NHSNProcedureCategoryCode) urn:oid:2.16.840.1.113883.13.17 (CONF:1101-21657).
   1. This code MAY contain zero or one [0..1] translation (CONF:1101-21698).
      1. This code/translation MAY be used for sending an ICD-10 or CPT code (CONF:1101-21699).
8. SHALL contain exactly one [1..1] statusCode, which SHALL be selected from ValueSet [ProcedureAct statusCode](#ProcedureAct_statusCode) urn:oid:2.16.840.1.113883.11.20.9.22 DYNAMIC (CONF:1101-21700).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:1101-21661).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:1101-21662).
   2. This effectiveTime SHALL contain exactly one [1..1] width (CONF:1101-21663).
10. MAY contain zero or one [0..1] priorityCode (CONF:1101-21664).
    1. The priorityCode, if present, MAY contain zero or one [0..1] @nullFlavor="NA" (CONF:1101-21665).
    2. The priorityCode, if present, MAY contain zero or one [0..1] @code="63161005" Principal (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:1101-21666).
11. MAY contain zero or one [0..1] methodCode (CONF:1101-21667).
    1. The methodCode, if present, SHOULD contain exactly one [1..1] @code (CONF:1101-21668).
    2. If the procedure category code represents a hip replacement, a methodCode element SHALL be present where the value of @code is selected from Value Set 2.16.840.1.113883.13.3 NHSNHipReplacementCode STATIC 20090625 (CONF:1101-21669).
    3. If the procedure category code represents a knee replacement, a methodCode element SHALL be present where the value of @code is selected from Value Set 2.16.840.1.113883.13.4 NHSNKneeReplacementCode STATIC 20090625 (CONF:1101-21670).
12. MAY contain zero or one [0..1] approachSiteCode (CONF:1101-21671).
    1. The approachSiteCode, if present, MAY contain zero or one [0..1] @nullFlavor="NI" (CONF:1101-21672).
    2. The approachSiteCode, if present, MAY contain zero or one [0..1] @code, which SHALL be selected from ValueSet [NHSNSpinalFusionApproachCode](#NHSNSpinalFusionApproachCode) urn:oid:2.16.840.1.113883.13.2 STATIC 2012-08-08 (CONF:1101-21673).
    3. If the procedure is a fusion or refusion (code/@code is either 2137-8 or 2135-2), an approachSiteCode element SHALL be present. If the approach site is known, the value of @code SHALL be selected from Value Set 2.16.840.1.113883.13.2 NHSNSpinalFusionApproachCode STATIC 20120808. If the approach site is not specified, the value of code@nullFlavor SHALL be NI (CONF:1101-21674).
13. MAY contain zero or one [0..1] performer (CONF:1101-21675).
    1. The performer, if present, SHALL contain exactly one [1..1] @typeCode="PRF" (CONF:1101-21676).
    2. The performer, if present, SHALL contain exactly one [1..1] assignedEntity (CONF:1101-21677).
       1. This assignedEntity SHALL contain at least one [1..\*] id (CONF:1101-21678).
          1. Such ids SHALL contain exactly one [1..1] @root (CONF:1101-21679).
             1. This @root SHALL be the facility's identifier (CONF:1101-21680).
          2. Such ids SHALL contain exactly one [1..1] @extension (CONF:1101-21681).
             1. This @extension SHALL be the surgeon's identifier (CONF:1101-21682).
14. SHALL contain exactly one [1..1] entryRelationship (CONF:1101-21683) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:1101-21684).
    2. SHALL contain exactly one [1..1] [Anesthesia Administration Clinical Statement](#E_Anesthesia_Administration_Clinical_St) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.112) (CONF:1101-21685).
15. MAY contain zero or one [0..1] entryRelationship (CONF:1101-21686) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:1101-21687).
    2. SHALL contain exactly one [1..1] [Spinal Fusion Level Observation](#E_Spinal_Fusion_Level_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.166) (CONF:1101-21688).
    3. If the procedure is a fusion or refusion, this entryRelationship SHALL be present (CONF:1101-21689).
16. SHALL contain zero or one [0..1] entryRelationship (CONF:1101-21690) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:1101-21691).
    2. SHALL contain exactly one [1..1] [Closure Technique Procedure](#E_Closure_Technique_Procedure) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.117) (CONF:1101-21692).
17. MAY contain zero or one [0..1] entryRelationship (CONF:1101-30241) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1101-30242).
    2. SHALL contain exactly one [1..1] [Revision Associated with Prior Infection Observation](#Revision_Associated_with_Prior_Infectio) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.204) (CONF:1101-30243).
    3. If the procedure is a total revision or a partial revision of an HPRO or KPRO, this entryRelationship SHALL be present (CONF:1101-30251).

Table 344: NHSNProcedureCategoryCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNProcedureCategoryCode urn:oid:2.16.840.1.113883.13.17  Code System: cdcNHSN 2.16.840.1.113883.6.277    NHSN's value set for the clinical statement recording procedure details in SSI, CLIP, and Procedure Reports.                                                    The full table is shown in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2105-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Abdominal aortic aneurysm repair |
| 2107-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Abdominal hysterectomy |
| 2108-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Appendix surgery |
| 2102-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | AV shunt for dialysis |
| 2109-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Bile duct, liver or pancreatic surgery |
| 2110-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Breast surgery |
| 2111-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Cardiac Surgery |
| 2114-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Carotid endarterectomy |
| 2115-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Cesarean section |
| 2116-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Colon surgery |
| ... | | | |

Table 345: NHSNHipReplacementCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNHipReplacementCode urn:oid:2.16.840.1.113883.13.3  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1413-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total: Total Primary Hip Replacement |
| 1414-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total: Total Revision Hip Replacement |
| 1415-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total: Partial Revision Hip Replacement |
| 1416-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hemi: Partial Primary Hip Replacement |
| 1417-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hemi: Total Revision Hip Replacement |
| 1418-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hemi: Partial Revision Hip Replacement |
| 1419-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Resurfacing: Total Primary Hip Replacement |
| 1420-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Resurfacing: Total Revision Hip Replacement |
| 1421-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Resurfacing: Partial Primary Hip Replacement |
| 1422-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Resurfacing: Partial Revision Hip Replacement |

Table 346: NHSNKneeReplacementCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNKneeReplacementCode urn:oid:2.16.840.1.113883.13.4  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1406-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total: Total Primary Knee Replacement |
| 1407-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total: Total Revision Knee Replacement |
| 1408-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total: Partial Revision Knee Replacement |
| 1409-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hemi: Partial Primary Knee Replacement |
| 1411-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hemi: Total Revision Knee Replacement |
| 1412-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hemi: Partial Revision Knee Replacement |

Table 347: NHSNSpinalFusionApproachCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSpinalFusionApproachCode urn:oid:2.16.840.1.113883.13.2  Code System: cdcNHSN 2.16.840.1.113883.6.277 or SNOMED CT 2.16.840.1.113883.6.96  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 255549009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Anterior |
| 255551008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Posterior |
| 1205-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | anterior posterior |
| 118438002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Transoral Approach |

Figure 149: Code Translation Example—Procedure Report

<code code="2105-5"

displayName="Abdominal aortic aneurysm repair"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN">

<translation code="34800"

codeSystem="2.16.840.1.113883.6.2"

displayName="ENDOVASCULAR REPAIR OF ABDOMINAL AORTIC ANEURYSM"

codeSystemName="ICD9CM"/>

</code>

Figure 150: Spinal Fusion Approach Example

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- Procedure Details Clinical Statement in a Procedure Report (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.153.2" />

<id root="807007ba-c8f0-4842-9c3c-4a4e4c570849" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2137-8"

displayName="Spinal Fusion" />

<statusCode code="completed" />

<!-- The procedure date -->

<effectiveTime>

<low value="20061223" />

<width value="3" unit="h" />

</effectiveTime>

<!-- MAY contain -->

<priorityCode code="63161005"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Principal"/>

<!-- Spinal fusion approach site -->

<approachSiteCode codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1205-4"

displayName="anterior posterior" />

<!-- Surgeon who performed the procedure -->

<performer typeCode="PRF">

<assignedEntity classCode="ASSIGNED">

<id root="2.16.840.1.113883.3.117.1.1.5.1.1.1" extension="987654" />

</assignedEntity>

</performer>

<entryRelationship typeCode="COMP">

<!-- Anesthesia Administration Clinical Statement -->

<substanceAdministration classCode="SBADM" moodCode="EVN" negationInd="false">

<!-- C-CDA Medication Activity templteId -->

<templateId root="2.16.840.1.113883.10.20.22.4.16" />

<!-- HAI Anesthesia Administration Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.112" />

...

</substanceAdministration>

</entryRelationship>

<entryRelationship typeCode="COMP">

<!-- Spinal Fusion Level Observation -->

<observation classCode="OBS" moodCode="EVN">

<!-- Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- HAI Spinal Fusion Level Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.166" />

...

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<!-- Closure Technique Procedure -->

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Closure Technique Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.117" />

...

</procedure>

</entryRelationship>

</procedure>

Figure 151: Hip Replacement methodCode Example

<procedure>

...

<methodCode codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1413-4"

displayName="Total: Total Primary Hip Replacement"/>

<procedure/>

Figure 152: Knee Replacement methodCode Example

<procedure>

...

<methodCode codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1406-8"

displayName="Total: Total Primary Knee Replacement"/>

</procedure>

Procedure Details Clinical Statement in an Infection-Type Report

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.154 (closed)]

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Table 348: Procedure Details Clinical Statement in an Infection-Type Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [Post-Procedure Observation](#E_PostProcedure_Observation) (optional)  [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) (required) |  |

This clinical statement records the detail required in an infection-type report about a procedure.

Table 349: Procedure Details Clinical Statement in an Infection-Type Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21640](#C_86-21640) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [86-21641](#C_86-21641) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28269](#C_86-28269) |  |
| @root | 1..1 | SHALL |  | [86-28270](#C_86-28270) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [86-21651](#C_86-21651) |  |
| @root | 1..1 | SHALL |  | [86-21652](#C_86-21652) | 2.16.840.1.113883.10.20.5.6.154 |
| id | 1..1 | SHALL |  | [86-21642](#C_86-21642) |  |
| code | 1..1 | SHALL |  | [86-21643](#C_86-21643) | urn:oid:2.16.840.1.113883.13.17 (NHSNProcedureCategoryCode) |
| translation | 0..\* | MAY |  | [86-21645](#C_86-21645) |  |
| statusCode | 1..1 | SHALL |  | [86-21653](#C_86-21653) | urn:oid:2.16.840.1.113883.11.20.9.22 (ProcedureAct statusCode) |
| effectiveTime | 1..1 | SHALL |  | [86-21647](#C_86-21647) |  |
| low | 1..1 | SHALL |  | [86-21648](#C_86-21648) |  |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21640).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21641).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28269) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28270).
5. SHALL contain exactly one [1..1] templateId (CONF:86-21651) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.154" (CONF:86-21652).
6. SHALL contain exactly one [1..1] id (CONF:86-21642).
7. SHALL contain exactly one [1..1] code (ValueSet: [NHSNProcedureCategoryCode](#NHSNProcedureCategoryCode) urn:oid:2.16.840.1.113883.13.17 DYNAMIC) (CONF:86-21643).
   1. This code MAY contain zero or more [0..\*] translation (CONF:86-21645).
      1. This code/translation MAY be used for sending an ICD-10 or CPT code (CONF:86-21646).
8. SHALL contain exactly one [1..1] statusCode (ValueSet: [ProcedureAct statusCode](#ProcedureAct_statusCode) urn:oid:2.16.840.1.113883.11.20.9.22 DYNAMIC) (CONF:86-21653).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21647).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-21648).

Figure 153: Code Translation Example—Infection-Type Report

<code code="2105-5"

displayName="Abdominal aortic aneurysm repair"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN">

<translation code="34800"

codeSystem="2.16.840.1.113883.6.2"

displayName="ENDOVASCULAR REPAIR OF ABDOMINAL AORTIC ANEURYSM"

codeSystemName="ICD9CM"/>

</code>

Figure 154: Procedure Details Clinical Statement in an Infection-Type Report

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure template -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Procedure Details CS in an infection-type report template -->

<templateId root="2.16.840.1.113883.10.20.5.6.154" />

<id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.5" extension="21987654321" />

<code code="2108-9"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Appendix surgery" />

<statusCode code="completed" />

<effectiveTime>

<low value="20080805"/>

</effectiveTime>

</procedure>

Procedure Risk Factors Clinical Statement in a Procedure Report

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.156 (closed)]

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Table 350: Procedure Risk Factors Clinical Statement in a Procedure Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (required) | [Wound Class Observation](#E_Wound_Class_Observation) (required)  [Endoscope Used Clinical Statement](#E_Endoscope_Used_Clinical_Statement) (required) |

This clinical statement records the detail required in a Procedure Report about the circumstances in which a procedure was performed.

The value of the id element must be globally unique and in general need not be an identifier used outside the document. Its function is to identify this procedure as being the same as the one documented in the Details Section of the same report.

Table 351: Procedure Risk Factors Clinical Statement in a Procedure Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.156) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21319](#C_86-21319) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [86-21320](#C_86-21320) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-21990](#C_86-21990) |  |
| @root | 1..1 | SHALL |  | [86-21991](#C_86-21991) | 2.16.840.1.113883.10.20.5.6.156 |
| id | 1..1 | SHALL |  | [86-21321](#C_86-21321) |  |
| entryRelationship | 1..1 | SHALL |  | [86-21323](#C_86-21323) |  |
| @typeCode | 1..1 | SHALL |  | [86-21324](#C_86-21324) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-21325](#C_86-21325) | [Wound Class Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.174](#E_Wound_Class_Observation) |
| entryRelationship | 1..1 | SHALL |  | [86-21327](#C_86-21327) |  |
| @typeCode | 1..1 | SHALL |  | [86-21328](#C_86-21328) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| procedure | 1..1 | SHALL |  | [86-21329](#C_86-21329) | [Endoscope Used Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.128](#E_Endoscope_Used_Clinical_Statement) |

1. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21319).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21320).
3. SHALL contain exactly one [1..1] templateId (CONF:86-21990) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.156" (CONF:86-21991).
4. SHALL contain exactly one [1..1] id (CONF:86-21321).
   1. The value of the id element SHALL be the same as the value of the corresponding procedure/id element in the Details Section of the report (CONF:86-21322).
5. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21323) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21324).
   2. SHALL contain exactly one [1..1] [Wound Class Observation](#E_Wound_Class_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.174) (CONF:86-21325).
6. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21327) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21328).
   2. SHALL contain exactly one [1..1] [Endoscope Used Clinical Statement](#E_Endoscope_Used_Clinical_Statement) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.128) (CONF:86-21329).
7. If the procedure was an emergency, the procedure element SHALL contain a methodCode element where the value of @code is 373110003 Emergency procedure 2.16.840.1.113883.6.96 SNOMED CT STATIC (CONF:86-21331).

Figure 155: Procedure Risk Factors Clinical Statement in a Procedure Report

<procedure classCode="PROC" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.156"/>

<id root="2.16.840.1.113883.3.117.1.1.5.2.1.1.4" extension="92"/>

<!-- Emergency procedure-->

<methodCode codeSystem="2.16.840.1.113883.6.96"

code="373110003" displayName="Emergency procedure"/>

<!-- Wound Class Observation -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.174"/>

...

</entryRelationship>

<!-- Endoscope (not negated = was used) -->

<entryRelationship typeCode="COMP">

<!-- Endoscope Used Clinical Statement -->

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<templateId root="2.16.840.1.113883.10.20.5.6.128"/>

...

</procedure>

</entryRelationship>

</procedure>

Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 352: Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required) |  |

This observation records whether a matching organism is identified both in blood and from a site-specific specimen, both collected within the infection window period, and pus is present at the vascular site from which the specimen was collected.

If there was pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s), set the value of @negationInd to false. If there was not pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s), set the value of @negationInd to true.

Table 353: Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3357-30689](#C_3357-30689) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3357-30690](#C_3357-30690) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3357-30691](#C_3357-30691) |  |
| templateId | 1..1 | SHALL |  | [3357-30674](#C_3357-30674) |  |
| @root | 1..1 | SHALL |  | [3357-30680](#C_3357-30680) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [3357-30679](#C_3357-30679) |  |
| @root | 1..1 | SHALL |  | [3357-30687](#C_3357-30687) | 2.16.840.1.113883.10.20.5.6.253 |
| @extension | 1..1 | SHALL |  | [3357-30688](#C_3357-30688) | 2018-04-01 |
| id | 1..1 | SHALL |  | [3357-30675](#C_3357-30675) |  |
| @nullFlavor | 1..1 | SHALL |  | [3357-30681](#C_3357-30681) | NA |
| code | 1..1 | SHALL |  | [3357-30676](#C_3357-30676) |  |
| @code | 1..1 | SHALL |  | [3357-30682](#C_3357-30682) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [3357-30683](#C_3357-30683) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [3357-30677](#C_3357-30677) |  |
| @code | 1..1 | SHALL |  | [3357-30684](#C_3357-30684) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [3357-30678](#C_3357-30678) |  |
| @code | 1..1 | SHALL | CS | [3357-30685](#C_3357-30685) | 3059-3 |
| @codeSystem | 1..1 | SHALL |  | [3357-30686](#C_3357-30686) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| participant | 0..1 | MAY |  | [3357-30695](#C_3357-30695) |  |
| @typeCode | 1..1 | SHALL |  | [3357-30698](#C_3357-30698) | DEV |
| participantRole | 1..1 | SHALL |  | [3357-30696](#C_3357-30696) |  |
| @classCode | 1..1 | SHALL |  | [3357-30871](#C_3357-30871) | MANU |
| playingDevice | 1..1 | SHALL |  | [3357-30697](#C_3357-30697) |  |
| code | 1..1 | SHALL |  | [3357-30700](#C_3357-30700) | urn:oid:2.16.840.1.113883.10.20.5.9.24 (NHSNVascularSpecimenCollectionSite) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3357-30689).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3357-30690).

If there was pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s), set the value of @negationInd to false. If there was not pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s), set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3357-30691).
2. SHALL contain exactly one [1..1] templateId (CONF:3357-30674) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:3357-30680).
3. SHALL contain exactly one [1..1] templateId (CONF:3357-30679) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.253" (CONF:3357-30687).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30688).
4. SHALL contain exactly one [1..1] id (CONF:3357-30675).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:3357-30681).
5. SHALL contain exactly one [1..1] code (CONF:3357-30676).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:3357-30682).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:3357-30683).
6. SHALL contain exactly one [1..1] statusCode (CONF:3357-30677).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3357-30684).
7. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3357-30678).
   1. This value SHALL contain exactly one [1..1] @code="3059-3" Pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s) (CONF:3357-30685).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:3357-30686).

If the value of @negationInd is 'false', this observation SHALL contain exactly one [[]1..1] participant element representing the vascular specimen collection site where pus was present.

1. MAY contain zero or one [0..1] participant (CONF:3357-30695).
   1. The participant, if present, SHALL contain exactly one [1..1] @typeCode="DEV" Device (CONF:3357-30698).
   2. The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:3357-30696).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="MANU" Manufactured device (CONF:3357-30871).
      2. This participantRole SHALL contain exactly one [1..1] playingDevice (CONF:3357-30697).
         1. This playingDevice SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNVascularSpecimenCollectionSite](#NHSNVascularSpecimenCollectionSite) urn:oid:2.16.840.1.113883.10.20.5.9.24 DYNAMIC (CONF:3357-30700).

Table 354: NHSNVascularSpecimenCollectionSite

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNVascularSpecimenCollectionSite urn:oid:2.16.840.1.113883.10.20.5.9.24  Site of vascular specimen collection.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3060-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Peripheral IV or midline catheter |
| 303727009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Arterial catheter (physical object) |
| 439784005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Surgically constructed arteriovenous fistula (finding) |
| 439218000 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Surgically constructed arteriovenous graft (finding) |
| 3064-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Non-accessed central line (not accessed nor inserted during the hospitalization) |
| 3062-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hemodialysis reliable outflow (HERO) catheter |
| 3063-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Intra-aortic ballon pump (IABP) device |
| 3061-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Atrial lines (Right and Left) |

Figure 156: Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [C-CDA R1.1] Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- [HAI R3D3] Pus Present in Specimen Site and Matching Organism in Blood and Specimen -->

<templateId root="2.16.840.1.113883.10.20.5.6.253" extension="2018-04-01" />

<id nullFlavor="NA" />

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed" />

<value xsi:type="CD"

code="3059-3"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Pus present at vascular specimen collection site and matching organism identified in blood and from site specific specimen(s)" />

<participant typeCode="DEV">

<participantRole classCode="MANU">

<playingDevice>

<code code="3060-1"

displayName="Peripheral IV or midline catheter"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

</playingDevice>

</participantRole>

</participant>

</observation>

Pus, Redness, or Increased Swelling Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.157 (closed)]

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Table 355: Pus, Redness, or Increased Swelling Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) (required) |  |

This observation records whether pus, redness, or increased swelling was observed. It is used in an Evidence of Infection (Dialysis) Report to record whether this was observed at a vascular access site.  
If the infection indicator was present, set the value of @negationInd to false. If the infection indicator was not present, set the value of @negationInd to true.

Table 356: Pus, Redness, or Increased Swelling Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.157) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19900](#C_86-19900) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19901](#C_86-19901) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19902](#C_86-19902) |  |
| templateId | 1..1 | SHALL |  | [86-28271](#C_86-28271) |  |
| @root | 1..1 | SHALL |  | [86-28272](#C_86-28272) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19905](#C_86-19905) |  |
| @root | 1..1 | SHALL |  | [86-19906](#C_86-19906) | 2.16.840.1.113883.10.20.5.6.157 |
| id | 1..1 | SHALL |  | [86-19907](#C_86-19907) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22788](#C_86-22788) | NA |
| code | 1..1 | SHALL |  | [86-19908](#C_86-19908) |  |
| @code | 1..1 | SHALL |  | [86-19909](#C_86-19909) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28396](#C_86-28396) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19910](#C_86-19910) |  |
| @code | 1..1 | SHALL |  | [86-19911](#C_86-19911) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-19912](#C_86-19912) |  |
| @code | 1..1 | SHALL |  | [86-19913](#C_86-19913) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2305-1 |
| participant | 0..\* | MAY |  | [86-20937](#C_86-20937) |  |
| @typeCode | 1..1 | SHALL |  | [86-19915](#C_86-19915) | DEV |
| participantRole | 1..1 | SHALL |  | [86-19916](#C_86-19916) |  |
| playingDevice | 1..1 | SHALL |  | [86-19917](#C_86-19917) |  |
| code | 1..1 | SHALL |  | [86-19918](#C_86-19918) |  |
| @classCode | 1..1 | SHALL |  | [86-19921](#C_86-19921) | MANU |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19900).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19901).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-19902).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28271) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28272).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19905) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.157" (CONF:86-19906).
7. SHALL contain exactly one [1..1] id (CONF:86-19907).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22788).
8. SHALL contain exactly one [1..1] code (CONF:86-19908).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19909).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28396).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19910).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19911).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-19912).
    1. This value SHALL contain exactly one [1..1] @code="2305-1" Pus, redness, or increased swelling (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-19913).
11. MAY contain zero or more [0..\*] participant (CONF:86-20937).

In an Evidence of Infection (Dialysis) Report, when this infection indicator is present, the following participant element is required by NHSN protocol to record the vascular access site at which the infection indicator was observed.

1. If the value of @negationInd is 'false', this observation SHALL contain one or more [[]1..[\*][]] participant elements representing the access site which displayed this infection indicator (CONF:86-19914).
   1. SHALL contain exactly one [1..1] @typeCode="DEV" Device (CONF:86-19915).
   2. SHALL contain exactly one [1..1] participantRole (CONF:86-19916).
      1. This participantRole SHALL contain exactly one [1..1] playingDevice (CONF:86-19917).
         1. This playingDevice SHALL contain exactly one [1..1] code (CONF:86-19918).
            1. To record a vascular access site as a code, the value of @code SHALL be selected from ValueSet 2.16.840.1.114222.4.11.6042 NHSNVascularAccessSiteCode STATIC 20120808 (CONF:86-19919).
            2. To represent a site of vascular access that is not listed in the NHSNVascularAccessSiteCode value set, set the value of @nullFlavor to OTH (other) (CONF:86-19920).
      2. This participantRole SHALL contain exactly one [1..1] @classCode="MANU" (CONF:86-19921).

Table 357: NHSNVascularAccessSiteCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNVascularAccessSiteCode urn:oid:2.16.840.1.114222.4.11.6042  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2323-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Vascular site fistula |
| 2324-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Vascular site graft |
| 2321-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Site of non-tunneled central line, dialysis |
| 2322-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Site of tunneled central line, dialysis |

Figure 157: Pus, Redness, or Increased Swelling Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Pus, Redness, or Increased Swelling Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.157"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2305-1"

displayName="Pus, redness, or increased swelling"/>

<!-- If this infection indicator was observed, at which

vascular access site(s)? -->

<participant typeCode="DEV">

<participantRole classCode="MANU">

<playingDevice>

<code code="2321-8"

codeSystem="2.16.840.1.113883.6.277"

displayName="Vascular site fistula"/>

</playingDevice>

</participantRole>

</participant>

</observation>

Reason for Procedure Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.158 (closed)]

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Table 358: Reason for Procedure Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Clinical Statement in a CLIP Report](#E_Procedure_Details_Clinical_Statement_) (required) | [Guidewire Used Clinical Statement](#E_Guidewire_Used_Clinical_Statement) (optional) |

This observation records the reason a procedure was performed. It is used in the CLIP Report to record the reason a central-line insertion procedure was performed.

Table 359: Reason for Procedure Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.158) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21589](#C_86-21589) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21590](#C_86-21590) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21591](#C_86-21591) | false |
| templateId | 1..1 | SHALL |  | [86-28273](#C_86-28273) |  |
| @root | 1..1 | SHALL |  | [86-28274](#C_86-28274) | 2.16.840.1.113883.10.20.22.4.19 |
| templateId | 1..1 | SHALL |  | [86-21593](#C_86-21593) |  |
| @root | 1..1 | SHALL |  | [86-21603](#C_86-21603) | 2.16.840.1.113883.10.20.5.6.158 |
| id | 1..1 | SHALL |  | [86-21594](#C_86-21594) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22789](#C_86-22789) | NA |
| code | 1..1 | SHALL |  | [86-21595](#C_86-21595) |  |
| @code | 1..1 | SHALL |  | [86-21596](#C_86-21596) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28386](#C_86-28386) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21597](#C_86-21597) |  |
| @code | 1..1 | SHALL |  | [86-21598](#C_86-21598) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL |  | [86-21599](#C_86-21599) |  |
| entryRelationship | 0..1 | MAY |  | [86-23286](#C_86-23286) |  |
| @typeCode | 1..1 | SHALL |  | [86-23287](#C_86-23287) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| @inversionInd | 1..1 | SHALL |  | [86-23288](#C_86-23288) | true |
| procedure | 1..1 | SHALL |  | [86-23289](#C_86-23289) | [Guidewire Used Clinical Statement (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.129](#E_Guidewire_Used_Clinical_Statement) |

1. Conforms to Indication template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.19).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21589).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21590).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-21591).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28273) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.19" (CONF:86-28274).
6. SHALL contain exactly one [1..1] templateId (CONF:86-21593) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.158" (CONF:86-21603).
7. SHALL contain exactly one [1..1] id (CONF:86-21594).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22789).
8. SHALL contain exactly one [1..1] code (CONF:86-21595).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21596).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28386).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21597).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21598).
10. SHALL contain exactly one [1..1] value (CONF:86-21599).
    1. In a CLIP Report, to record the reason as a code, the value of @xsi:type SHALL be CD and the value of @code SHALL be selected from ValueSet 2.16.840.1.114222.4.11.3182 ReasonForInsertionCode STATIC 20090625. Or, to record the reason as text, the value of @xsi:type SHALL be ST and a text value SHALL be present (CONF:86-21600).
11. MAY contain zero or one [0..1] entryRelationship (CONF:86-23286).
    1. The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-23287).
    2. The entryRelationship, if present, SHALL contain exactly one [1..1] @inversionInd="true" (CONF:86-23288).
    3. The entryRelationship, if present, SHALL contain exactly one [1..1] [Guidewire Used Clinical Statement](#E_Guidewire_Used_Clinical_Statement) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.129) (CONF:86-23289).
    4. In a CLIP Report, if the coded reason is [[]To replace] An existing central line where infection was suspected (5107-8), an entryRelationship element *SHALL* be present containing Guidewire Used Clinical Statement (CONF:86-23290).

Table 360: NHSNReasonForInsertionCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNReasonForInsertionCode urn:oid:2.16.840.1.114222.4.11.3182  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 5105-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | [To address] A new indication for a central line. |
| 5106-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | [To replace] An existing, malfunctioning central line. |
| 5107-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | [To replace] An existing central line where infection was suspected. |

Figure 158: Reason for Procedure Observation Example

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- C-CDA Indication templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>

<!-- HAI Reason for Procedure Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.158"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed"/>

<value xsi:type="CD" codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="5106-0"

displayName="[To replace] An existing, malfunctioning central line"/>

</observation>

...

<!-- Or, if the reason is [To replace] An existing central line where infection

was suspected:

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Indication templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.19"/>

<!-- HAI Reason for Procedure Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.158"/>

<code codeSystem="2.16.840.1.113883.5.4"

code="ASSERTION" />

<statusCode code="completed"/>

<value xsi:type="CD" code="5107-8"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="[To replace] An existing central line where infection

was suspected."/>

<entryRelationship typeCode="RSON" inversionInd="true">

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Guidewire Used Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.129" />

...

</procedure>

</entryRelationship>

</observation>

-->

Recorder Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.159 (closed)]

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Table 361: Recorder Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Clinical Statement in a CLIP Report](#E_Procedure_Details_Clinical_Statement_) (required) |  |

This observation records whether the person who recorded the sequence of steps in a practice was also the performer of those steps. It is used in the Central-Line Insertion Practice Report.

If the recorder was the performer, set the value of @negationInd to false. If the recorder was not the performer (i.e., was an observer), set the value of @negationInd to true.

Table 362: Recorder Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.159) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21342](#C_86-21342) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21343](#C_86-21343) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21344](#C_86-21344) |  |
| templateId | 1..1 | SHALL |  | [86-21987](#C_86-21987) |  |
| @root | 1..1 | SHALL |  | [86-21988](#C_86-21988) | 2.16.840.1.113883.10.20.5.6.159 |
| id | 1..1 | SHALL |  | [86-21989](#C_86-21989) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22790](#C_86-22790) | NA |
| code | 1..1 | SHALL |  | [86-21345](#C_86-21345) |  |
| @code | 1..1 | SHALL |  | [86-21346](#C_86-21346) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28387](#C_86-28387) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21347](#C_86-21347) |  |
| @code | 1..1 | SHALL |  | [86-21348](#C_86-21348) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21349](#C_86-21349) |  |
| @code | 1..1 | SHALL |  | [86-21350](#C_86-21350) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3104-7 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21342).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21343).
3. SHALL contain exactly one [1..1] @negationInd (CONF:86-21344).
4. SHALL contain exactly one [1..1] templateId (CONF:86-21987) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.159" (CONF:86-21988).
5. SHALL contain exactly one [1..1] id (CONF:86-21989).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22790).
6. SHALL contain exactly one [1..1] code (CONF:86-21345).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21346).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28387).
7. SHALL contain exactly one [1..1] statusCode (CONF:86-21347).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21348).
8. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21349).
   1. This value SHALL contain exactly one [1..1] @code="3104-7" Recorder was performer (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-21350).

Figure 159: Recorder Observation Example

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- Recorder Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.159"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3104-7"

displayName="Recorder was performer"/>

</observation>

Report No Events

[act: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01 (closed)]

Draft as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, STU 3 - US Realm

Table 363: Report No Events Contexts

| Contained By: | Contains: |
| --- | --- |
| [Report No Events Section](#S_Report_No_Events_Section) (required) |  |

This template represents the statement that there are no events to report for a particular type of event.

Table 364: Report No Events Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| act (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3357-30599](#C_3357-30599) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ACT |
| @moodCode | 1..1 | SHALL |  | [3357-30600](#C_3357-30600) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3357-28468](#C_3357-28468) |  |
| @root | 1..1 | SHALL |  | [3357-28470](#C_3357-28470) | 2.16.840.1.113883.10.20.5.6.249 |
| @extension | 1..1 | SHALL |  | [3357-28471](#C_3357-28471) | 2018-04-01 |
| code | 1..1 | SHALL |  | [3357-28469](#C_3357-28469) |  |

1. SHALL contain exactly one [1..1] @classCode="ACT" Act (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3357-30599).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3357-30600).
3. SHALL contain exactly one [1..1] templateId (CONF:3357-28468) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.249" (CONF:3357-28470).
   2. SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-28471).
4. SHALL contain exactly one [1..1] code (CONF:3357-28469).
   1. If this is a Neonatal Intensive Care Unit (NICU) Summary Report then the code *SHALL* be selected from ValueSet NHSNReportNoEventsNICU urn:oid:2.16.840.1.113883.10.20.5.9.19 DYNAMIC (CONF:3357-30905).
   2. If this is an Intensive Care Unit (ICU) Summary Report then the code *SHALL* be selected from ValueSet NHSNReportNoEventsICU urn:oid:2.16.840.1.113883.10.20.5.9.18 DYNAMIC (CONF:3357-30906).
   3. If this is a Vascular Access Type Report (VAT) Summary Report then the code *SHALL* be selected from ValueSet NHSNReportNoEventsDialysis urn:oid:2.16.840.1.113883.10.20.5.9.22 DYNAMIC (CONF:3357-30907).
   4. If this is a Prevention Process and Outcome Measures (POM) Summary Report then the code *SHALL* be selected from ValueSet NHSNReportNoEventsMDRO urn:oid:2.16.840.1.113883.10.20.5.9.21 DYNAMIC (CONF:3357-30908).
   5. If this is a Specialty Care Area (SCA) Summary Report then the code *SHALL* be selected from ValueSet NHSNReportNoEventsSCA urn:oid:2.16.840.1.113883.10.20.5.9.20 DYNAMIC (CONF:3357-30909).

Table 365: NHSNReportNoEventsNICU

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNReportNoEventsNICU urn:oid:2.16.840.1.113883.10.20.5.9.19  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3014-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Central Line Associated Blood Stream Infection (CLABSI) - birthweight <=750g |
| 3015-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Central Line Associated Blood Stream Infection (CLABSI) - birthweight 751-1000g |
| 3016-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Central Line Associated Blood Stream Infection (CLABSI) - birthweight 1001-1500g |
| 3017-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Central Line Associated Blood Stream Infection (CLABSI) - birthweight 1501-2500g |
| 3018-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Central Line Associated Blood Stream Infection (CLABSI) - birthweight >2500g |
| 3019-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Pediatric Ventilator-Associated Pneumonia (PedVAP) - birthweight <=750g |
| 3020-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Pediatric Ventilator-Associated Pneumonia (PedVAP) - birthweight 751-1000g |
| 3021-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Pediatric Ventilator-Associated Pneumonia (PedVAP) - birthweight 1001-1500g |
| 3022-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Pediatric Ventilator-Associated Pneumonia (PedVAP) - birthweight 1501-2500g |
| 3023-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for NICU Pediatric Ventilator-Associated Pneumonia (PedVAP) - birthweight >2500g |

Table 366: NHSNReportNoEventsICU

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNReportNoEventsICU urn:oid:2.16.840.1.113883.10.20.5.9.18  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3010-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for ICU Central Line Associated Blood Stream Infection (CLABSI) |
| 3011-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for ICU Catheter Associated Urinary Tract Infection (CAUTI) |
| 3012-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for ICU Ventilator Associated Event (VAE) |
| 3013-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for ICU Pediatric Ventilator-Associated Pneumonia (PedVAP) |

Table 367: NHSNReportNoEventsDialysis

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNReportNoEventsDialysis urn:oid:2.16.840.1.113883.10.20.5.9.22  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3052-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for IV antimicrobial start |
| 3053-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for Positive blood culture |
| 3054-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for pus, redness, or increased swelling at vascular access site |

Table 368: NHSNReportNoEventsMDRO

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNReportNoEventsMDRO urn:oid:2.16.840.1.113883.10.20.5.9.21  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3029-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no infection surveillance events - Methicillin-resistant Staphylococcus aureus |
| 3030-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no labID event - All specimens - Methicillin-resistant Staphylococcus aureus |
| 3031-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no labID event - Blood Specimens only - Methicillin-resistant Staphylococcus aureus |
| 3032-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no infection surveillance events - Vancomycin resistant Enterococcus |
| 3033-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no labID event - All specimens - Vancomycin resistant Enterococcus |
| 3034-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no labID event - Blood Specimens only - Vancomycin resistant Enterococcus |
| 3035-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no infection surveillance events - CephR Klebsiella |
| 3036-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no labID event - All specimens - CephR Klebsiella |
| 3037-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no labID event - Blood Specimens only - CephR Klebsiella |
| 3038-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no infection surveillance events -CRE E. coli |
| ... | | | |

Table 369: NHSNReportNoEventsSCA

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNReportNoEventsSCA urn:oid:2.16.840.1.113883.10.20.5.9.20  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3024-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for SCA Temporary Central Line Days (TCLAB) |
| 3025-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for SCA Permanent Central Line Days (PCLAB) |
| 3026-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for SCA Catheter Associated Urinary Tract Infection (CAUTI) |
| 3027-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for SCA Ventilator Associated Event (VAE) |
| 3028-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Report no events for SCA Pediatric Ventilator-Associated Pneumonia (PedVAP) |

Figure 160: Report No Events Example

<act classCode="ACT" moodCode="EVN">

<!-- [HAI R3D3] Report No Events -->

<templateId root="2.16.840.1.113883.10.20.5.6.249" extension="2018-04-01" />

<code code="3029-6"

displayName="Report no infection surveillance events - Methicillin-resistant Staphylococcus aureus"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</act>

Revision Associated with Prior Infection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.204 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 1 - US Realm

Table 370: Revision Associated with Prior Infection Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Clinical Statement in a Procedure Report (V2)](#Procedure_Details_Clinical_Statement_in) (optional) |  |

This template records whether or not a surgical procedure was performed as a result of a previous infection. In the NHSN context, this observation only applies to arthroplasty procedures. It is based on the C-CDA Problem Observation template.

When the revision was associated with prior infection at the index joint, set the value of @negationInd to false. When the revision was not associated with prior infection at the index joint, set the value of @negationInd to true.

Table 371: Revision Associated with Prior Infection Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.204) | | | | | |
| @classCode | 1..1 | SHALL |  | [1101-30225](#C_1101-30225) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1101-30226](#C_1101-30226) | EVN |
| @negationInd | 1..1 | SHALL |  | [1101-30227](#C_1101-30227) |  |
| templateId | 1..1 | SHALL |  | [1101-30305](#C_1101-30305) |  |
| @root | 1..1 | SHALL |  | [1101-30306](#C_1101-30306) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [1101-30229](#C_1101-30229) |  |
| @root | 1..1 | SHALL |  | [1101-30230](#C_1101-30230) | 2.16.840.1.113883.10.20.5.6.204 |
| id | 1..1 | SHALL |  | [1101-30231](#C_1101-30231) |  |
| @nullFlavor | 1..1 | SHALL |  | [1101-30232](#C_1101-30232) | NA |
| code | 1..1 | SHALL |  | [1101-30233](#C_1101-30233) |  |
| @code | 1..1 | SHALL |  | [1101-30234](#C_1101-30234) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1101-30235](#C_1101-30235) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1101-30236](#C_1101-30236) |  |
| @code | 1..1 | SHALL |  | [1101-30237](#C_1101-30237) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1101-30238](#C_1101-30238) |  |
| @code | 1..1 | SHALL |  | [1101-30239](#C_1101-30239) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 1239-3 |
| @codeSystem | 1..1 | SHALL |  | [1101-30240](#C_1101-30240) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1101-30225).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:1101-30226).
4. SHALL contain exactly one [1..1] @negationInd (CONF:1101-30227).
   1. If the revision was associated with prior infection at the index joint, the value of @negationInd SHALL be false. If the revision was not associated with prior infection at the index joint, the value of @negationInd SHALL be true (CONF:1101-30228).
5. SHALL contain exactly one [1..1] templateId (CONF:1101-30305) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1101-30306).
6. SHALL contain exactly one [1..1] templateId (CONF:1101-30229) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.204" (CONF:1101-30230).
7. SHALL contain exactly one [1..1] id (CONF:1101-30231).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1101-30232).
8. SHALL contain exactly one [1..1] code (CONF:1101-30233).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" (CONF:1101-30234).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1101-30235).
9. SHALL contain exactly one [1..1] statusCode (CONF:1101-30236).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1101-30237).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1101-30238).
    1. This value SHALL contain exactly one [1..1] @code="1239-3" Revision associated with prior infection at index joint (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30239).
    2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30240).

Figure 161: Revision Associated with Prior Infection Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!--

If the revision was associated with prior infection at the index joint,

the value of @negationInd SHALL be false.

If the revision was not associated with prior infection at

the index joint, the value of @negationInd SHALL be true.

-->

<!-- C-CDA Problem Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- Revision Associated with Prior Infection Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.204" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />

<statusCode code="completed" />

<value xsi:type="CD" code="1239-3"

displayName="Revision associated with prior infection at index joint"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN" />

</observation>

Secondary Bloodstream Infection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.160 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 1 - US Realm

Table 372: Secondary Bloodstream Infection Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection-Type Observation](#E_InfectionType_Observation) (optional) |  |

This observation records whether a secondary bloodstream infection was present.  
If a secondary bloodstream infection was present, set the value of observation/@negationInd to false. If a secondary bloodstream infection was not present, set the value of observation/@negationInd to true.

Table 373: Secondary Bloodstream Infection Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.160) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19840](#C_86-19840) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19841](#C_86-19841) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19842](#C_86-19842) |  |
| templateId | 1..1 | SHALL |  | [86-28275](#C_86-28275) |  |
| @root | 1..1 | SHALL |  | [86-28276](#C_86-28276) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19851](#C_86-19851) |  |
| @root | 1..1 | SHALL |  | [86-19852](#C_86-19852) | 2.16.840.1.113883.10.20.5.6.160 |
| id | 1..1 | SHALL |  | [86-23363](#C_86-23363) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-23364](#C_86-23364) | NA |
| code | 1..1 | SHALL |  | [86-19843](#C_86-19843) |  |
| @code | 1..1 | SHALL |  | [86-19844](#C_86-19844) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28388](#C_86-28388) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-19845](#C_86-19845) |  |
| @code | 1..1 | SHALL |  | [86-19846](#C_86-19846) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-19847](#C_86-19847) |  |
| @code | 1..1 | SHALL |  | [86-19848](#C_86-19848) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3111-2 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19840).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19841).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-19842).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28275) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28276).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19851) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.160" (CONF:86-19852).
7. SHALL contain exactly one [1..1] id (CONF:86-23363).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-23364).
8. SHALL contain exactly one [1..1] code (CONF:86-19843).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-19844).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28388).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19845).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19846).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-19847).
    1. This value SHALL contain exactly one [1..1] @code="3111-2" Secondary bloodstream infection (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-19848).

Figure 162: Secondary Bloodstream Infection Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Secondary Bloodstream Infection Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.160"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value

xsi:type="CD"

code="3111-2"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Secondary bloodstream infection"/>

</observation>

Skin Preparation Clinical Statement (V2)

[substanceAdministration: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01 (closed)]

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Table 374: Skin Preparation Clinical Statement (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Skin-Preparation Solutions Applied Organizer (V2)](#E_SkinPreparation_Solutions_Applied_Org) (required) | [Contraindicated Observation (V2)](#E_Contraindicated_Observation_V2) (optional) |

This observation records a skin-preparation solution. It is used in the Skin-Preparation Solutions Applied clinical statement in the Central-Line Insertion Practice Report.

If the preparation step included application of the solution specified, set the value of @negationInd to false. If the preparation step did not include application of the solution specified, set the value of @negationInd to true.

Table 375: Skin Preparation Clinical Statement (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| substanceAdministration (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-21359](#C_1129-21359) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = SBADM |
| @moodCode | 1..1 | SHALL |  | [1129-21360](#C_1129-21360) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1129-21361](#C_1129-21361) |  |
| templateId | 1..1 | SHALL |  | [1129-30537](#C_1129-30537) |  |
| @root | 1..1 | SHALL |  | [1129-30538](#C_1129-30538) | 2.16.840.1.113883.10.20.22.4.16 |
| templateId | 1..1 | SHALL |  | [1129-22118](#C_1129-22118) |  |
| @root | 1..1 | SHALL |  | [1129-22124](#C_1129-22124) | 2.16.840.1.113883.10.20.5.6.162 |
| @extension | 1..1 | SHALL |  | [1129-30539](#C_1129-30539) | 2014-12-01 |
| id | 1..1 | SHALL |  | [1129-22119](#C_1129-22119) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-22785](#C_1129-22785) | NA |
| statusCode | 1..1 | SHALL |  | [1129-22120](#C_1129-22120) |  |
| @code | 1..1 | SHALL |  | [1129-28105](#C_1129-28105) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL | IVL\_TS | [1129-22121](#C_1129-22121) |  |
| low | 1..1 | SHALL |  | [1129-22122](#C_1129-22122) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-22786](#C_1129-22786) | NA |
| high | 1..1 | SHALL |  | [1129-22123](#C_1129-22123) |  |
| @nullFlavor | 1..1 | SHALL |  | [1129-22787](#C_1129-22787) | NA |
| consumable | 1..1 | SHALL |  | [1129-21362](#C_1129-21362) |  |
| manufacturedProduct | 1..1 | SHALL |  | [1129-21363](#C_1129-21363) |  |
| @classCode | 1..1 | SHALL |  | [1129-21364](#C_1129-21364) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| templateId | 1..1 | SHALL |  | [1129-30556](#C_1129-30556) |  |
| @root | 1..1 | SHALL |  | [1129-30557](#C_1129-30557) | 2.16.840.1.113883.10.20.22.4.23 |
| manufacturedMaterial | 1..1 | SHALL |  | [1129-21365](#C_1129-21365) |  |
| @classCode | 1..1 | SHALL |  | [1129-21366](#C_1129-21366) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = MMAT |
| code | 1..1 | SHALL |  | [1129-21367](#C_1129-21367) |  |
| entryRelationship | 0..1 | MAY |  | [1129-23291](#C_1129-23291) |  |
| @typeCode | 1..1 | SHALL |  | [1129-23292](#C_1129-23292) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = RSON |
| observation | 1..1 | SHALL |  | [1129-30431](#C_1129-30431) | [Contraindicated Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01](#E_Contraindicated_Observation_V2) |

1. Conforms to Medication Activity template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.16).
2. SHALL contain exactly one [1..1] @classCode="SBADM" Substance administration (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-21359).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-21360).
4. SHALL contain exactly one [1..1] @negationInd (CONF:1129-21361).
5. SHALL contain exactly one [1..1] templateId (CONF:1129-30537) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.16" (CONF:1129-30538).
6. SHALL contain exactly one [1..1] templateId (CONF:1129-22118) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.162" (CONF:1129-22124).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30539).
7. SHALL contain exactly one [1..1] id (CONF:1129-22119).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22785).
8. SHALL contain exactly one [1..1] statusCode (CONF:1129-22120).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1129-28105).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:1129-22121).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:1129-22122).
      1. This low SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22786).
   2. This effectiveTime SHALL contain exactly one [1..1] high (CONF:1129-22123).
      1. This high SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1129-22787).
10. SHALL contain exactly one [1..1] consumable (CONF:1129-21362).
    1. This consumable SHALL contain exactly one [1..1] manufacturedProduct (CONF:1129-21363).
       1. This manufacturedProduct SHALL contain exactly one [1..1] @classCode="MANU" Manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 STATIC) (CONF:1129-21364).
       2. This manufacturedProduct SHALL contain exactly one [1..1] templateId (CONF:1129-30556) such that it
          1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.23" (CONF:1129-30557).
       3. This manufacturedProduct SHALL contain exactly one [1..1] manufacturedMaterial (CONF:1129-21365).
          1. This manufacturedMaterial SHALL contain exactly one [1..1] @classCode="MMAT" Manufactured material (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:1129-21366).
          2. This manufacturedMaterial SHALL contain exactly one [1..1] code (CONF:1129-21367).
             1. To record a skin-preparation solution as a code, the value of @code SHALL be selected from ValueSet 2.16.840.1.114222.4.11.3183 NHSNSkinPreparationCode DYNAMIC. Or, to record a skin-preparation solution as text, the value of @nullFlavor SHALL be OTH and an originalText element SHALL be present recording the skin-preparation solution (CONF:1129-21368).

When recording whether chlorhexidine gluconate was applied, if it was not applied, NHSN protocol requires that it be recorded whether there was a contraindication to it.

1. MAY contain zero or one [0..1] entryRelationship (CONF:1129-23291) such that it
   1. SHALL contain exactly one [1..1] @typeCode="RSON" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1129-23292).
   2. SHALL contain exactly one [1..1] [Contraindicated Observation (V2)](#E_Contraindicated_Observation_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01) (CONF:1129-30431).
      1. When recording whether chlorhexidine gluconate was applied, if it was not applied, and was contraindicated, the value of @negationInd on the Contraindicated Observation SHALL be false. If it was not contraindicated, the value of @negationInd on the Contraindicated Observation SHALL be true. If it is not known whether it was contraindicated, the value of @nullFlavor on the Contraindicated Observation SHALL be UNK. For examples and further explanation, see the Contraindicated Observation template (CONF:1129-23294).
   3. If chlorhexidine gluconate was NOT applied, SHALL contain an entryRelationship containing a Contraindicated Observation (CONF:1129-23295).

Table 376: NHSNSkinPreparationCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSkinPreparationCode urn:oid:2.16.840.1.114222.4.11.3183  Code System: RxNorm 2.16.840.1.113883.6.88  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 6052 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Alcohol |
| 8611 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Povidone iodine |
| 20791 | RxNorm | urn:oid:2.16.840.1.113883.6.88 | Chlorhexidine gluconate |

Figure 163: Skin Preparation Clinical Statement (V2) Example

<substanceAdministration moodCode="EVN" classCode="SBADM" negationInd="false">

<!-- C-CDA Medication Activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.16"/>

<!-- HAI Skin preparation Clinical Statement (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.162"

extension="2014-12-01" />

<id nullFlavor="NA"/>

<statusCode code="completed"/>

<effectiveTime xsi:type="IVL\_TS">

<low nullFlavor="NA"/>

<high nullFlavor="NA"/>

</effectiveTime>

<consumable>

<manufacturedProduct classCode="MANU">

<templateId root="2.16.840.1.113883.10.20.22.4.23" />

<manufacturedMaterial classCode="MMAT">

<code codeSystem="2.16.840.1.113883.6.88"

codeSystemName="RxNorm"

code="6052"

displayName="Alcohol"/>

</manufacturedMaterial>

</manufacturedProduct>

</consumable>

...

</substanceAdministration>

Figure 164: Skin Preparation Clinical Statement (V2) - Chlorhexidine Not Applied Example

<substanceAdministration moodCode="EVN" classCode="SBADM" negationInd="true">

<!-- C-CDA Medication Activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.16" />

<!-- HAI Skin preparation Clinical Statement (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.162"

extension="2014-12-01"/>

<id nullFlavor="NA" />

<statusCode code="completed" />

<effectiveTime xsi:type="IVL\_TS">

<low nullFlavor="NA" />

<high nullFlavor="NA" />

</effectiveTime>

<consumable>

<manufacturedProduct classCode="MANU">

<!-- C-CDA Medication Information templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.23"/>

<manufacturedMaterial classCode="MMAT">

<code codeSystem="2.16.840.1.113883.6.88"

codeSystemName="RxNorm"

code="20791"

displayName="Chlorhexidine gluconate" />

</manufacturedMaterial>

</manufacturedProduct>

</consumable>

<!-- if chlorhexidine was not applied, record here whether it was contraindicated -->

<entryRelationship typeCode="RSON">

<!-- Contraindicated Observation -->

<!-- It is true (not-negated) that the target statement was contraindicated -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Indication templateId-->

<templateId root="2.16.840.1.113883.10.20.22.4.19" />

<!-- HAI Contraindicated Observation (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.118"

extension="2014-12-01" />

...

</observation>

</entryRelationship>

</substanceAdministration>

Skin-Preparation Solutions Applied Organizer (V2)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01 (closed)]

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Table 377: Skin-Preparation Solutions Applied Organizer (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Central-Line Insertion Preparation Organizer (V2)](#E_CentralLine_Insertion_Preparation_Org) (required) | [Skin Preparation Clinical Statement (V2)](#E_Skin_Preparation_Clinical_Statement_V2) (required) |

This organizer reports what skin-preparation solutions were applied. It is one of the actions recorded in the first, preparatory step in the central-line insertion practice sequence.

The Skin Preparation Clinical Statement provides the list of skin preparation solutions to record.

Table 378: Skin-Preparation Solutions Applied Organizer (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| organizer (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1129-22252](#C_1129-22252) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [1129-22253](#C_1129-22253) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1129-22254](#C_1129-22254) |  |
| @root | 1..1 | SHALL |  | [1129-28110](#C_1129-28110) | 2.16.840.1.113883.10.20.5.6.183 |
| @extension | 1..1 | SHALL |  | [1129-30293](#C_1129-30293) | 2014-12-01 |
| statusCode | 1..1 | SHALL |  | [1129-22257](#C_1129-22257) |  |
| @code | 1..1 | SHALL |  | [1129-22258](#C_1129-22258) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..\* | SHALL |  | [1129-22260](#C_1129-22260) |  |
| substanceAdministration | 1..1 | SHALL |  | [1129-30432](#C_1129-30432) | [Skin Preparation Clinical Statement (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01](#E_Skin_Preparation_Clinical_Statement_V2) |

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1129-22252).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1129-22253).
3. SHALL contain exactly one [1..1] templateId (CONF:1129-22254) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.183" (CONF:1129-28110).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30293).
4. SHALL contain exactly one [1..1] statusCode (CONF:1129-22257).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:1129-22258).
5. SHALL contain at least one [1..\*] component (CONF:1129-22260).
   1. Such components SHALL contain exactly one [1..1] [Skin Preparation Clinical Statement (V2)](#E_Skin_Preparation_Clinical_Statement_V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01) (CONF:1129-30432).
   2. A component containing a Skin Preparation Clinical Statement SHALL be present for each skin-preparation solution required by the NHSN protocol. One additional such component element MAY be present recording an uncoded (text) skin-preparation solution (CONF:1129-22262).

Figure 165: Skin-Preparation Solutions Applied Organizer (V2) Example

<organizer moodCode="EVN" classCode="CLUSTER">

<!-- Skin-Preparation Solutions Applied Organizer (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.183"

extension="2014-12-01" />

<statusCode code="completed"/>

<component>

<substanceAdministration>

<!-- C-CDA Medication Activity templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.16"/>

<!-- HAI Skin Preparation Clinical Statement (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.162"

extension="2014-12-01" />

...

</substanceAdministration>

</component>

...

</organizer>

Solutions Dried Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.163 (closed)]

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Table 379: Solutions Dried Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Central-Line Insertion Practice Clinical Statement (V2)](#E_CentralLine_Insertion_Practice_Clinic) (required) |  |

This clinical statement represents the second step in the central-line insertion practice sequence: whether the skin-preparation solution(s) applied had dried before the next step, which is the central-line insertion itself.  
If the step was completed at this place in the sequence, set the value of @negationInd to false. If this step was not completed at this place in the sequence, set the value of @negationInd to true.

Table 380: Solutions Dried Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.163) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-20938](#C_86-20938) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-20939](#C_86-20939) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-20940](#C_86-20940) |  |
| templateId | 1..1 | SHALL |  | [86-28277](#C_86-28277) |  |
| @root | 1..1 | SHALL |  | [86-28278](#C_86-28278) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-20943](#C_86-20943) |  |
| @root | 1..1 | SHALL |  | [86-20944](#C_86-20944) | 2.16.840.1.113883.10.20.5.6.163 |
| id | 1..1 | SHALL |  | [86-20945](#C_86-20945) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22783](#C_86-22783) | NA |
| code | 1..1 | SHALL |  | [86-20946](#C_86-20946) |  |
| @code | 1..1 | SHALL | CS | [86-20947](#C_86-20947) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28389](#C_86-28389) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-20948](#C_86-20948) |  |
| @code | 1..1 | SHALL |  | [86-20949](#C_86-20949) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-20950](#C_86-20950) |  |
| @code | 1..1 | SHALL |  | [86-20952](#C_86-20952) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 3114-6 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-20938).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-20939).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-20940).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28277) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28278).
6. SHALL contain exactly one [1..1] templateId (CONF:86-20943) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.163" (CONF:86-20944).
7. SHALL contain exactly one [1..1] id (CONF:86-20945).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22783).
8. SHALL contain exactly one [1..1] code (CONF:86-20946).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-20947).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28389).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-20948).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-20949).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-20950).
    1. This value SHALL contain exactly one [1..1] @code="3114-6" Solution(s) had dried (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-20952).

Figure 166: Solutions Dried Observation Example

<sequenceNumber value="2"/>

<observation moodCode="EVN" classCode="OBS" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Solutions Dried Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.163"/>

<id nullFlavor="NA" />

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed"/>

<value xsi:type="CD"

code="3114-6"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Solution(s) had dried"/>

</observation>

Specimen Collection Encounter (ARO)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.187 (closed)]

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Table 381: Specimen Collection Encounter (ARO) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Specimen Collection Procedure (ARO) (V3)](#E_Specimen_Collection_Procedure_ARO_V3) (required) |  |

The Specimen Collection Encounter (ARO) records the in-facility location where a specimen was collected.

This template conforms to the C-CDA Encounter Activities template. That template requires an id; in the NHSN ARO Report, the id of the encounter is not reported, therefore a "NA" nullFlavor is used for the required id.

The participant element represents the in-facility location where the specimen was collected. The value of participantRole/id/@root will be the same as the healthCareFacility in the encompassingEncounter, but here it is scoping the in-facility location where the specimen was collected, represented in the @extension.

Table 382: Specimen Collection Encounter (ARO) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.187) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22649](#C_86-22649) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [86-22650](#C_86-22650) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28279](#C_86-28279) |  |
| @root | 1..1 | SHALL |  | [86-28280](#C_86-28280) | 2.16.840.1.113883.10.20.22.4.49 |
| templateId | 1..1 | SHALL |  | [86-22651](#C_86-22651) |  |
| @root | 1..1 | SHALL |  | [86-22652](#C_86-22652) | 2.16.840.1.113883.10.20.5.6.187 |
| id | 1..1 | SHALL |  | [86-22653](#C_86-22653) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22654](#C_86-22654) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = NA |
| effectiveTime | 1..1 | SHALL |  | [86-22655](#C_86-22655) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22656](#C_86-22656) | NA |
| participant | 1..1 | SHALL |  | [86-22657](#C_86-22657) |  |
| @typeCode | 1..1 | SHALL |  | [86-22658](#C_86-22658) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [86-22659](#C_86-22659) |  |
| @classCode | 1..1 | SHALL |  | [86-22660](#C_86-22660) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC |
| id | 1..1 | SHALL |  | [86-22661](#C_86-22661) |  |
| @root | 1..1 | SHALL |  | [86-22662](#C_86-22662) |  |
| @extension | 1..1 | SHALL |  | [86-22663](#C_86-22663) |  |
| playingEntity | 1..1 | SHALL |  | [86-22664](#C_86-22664) |  |
| @classCode | 1..1 | SHALL |  | [86-22665](#C_86-22665) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC |
| code | 1..1 | SHALL |  | [86-22666](#C_86-22666) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22649).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22650).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28279) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.49" (CONF:86-28280).
5. SHALL contain exactly one [1..1] templateId (CONF:86-22651) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.187" (CONF:86-22652).
6. SHALL contain exactly one [1..1] id (CONF:86-22653).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-22654).
7. SHALL contain exactly one [1..1] effectiveTime (CONF:86-22655).
   1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22656).
8. SHALL contain exactly one [1..1] participant (CONF:86-22657).
   1. This participant SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-22658).
   2. This participant SHALL contain exactly one [1..1] participantRole (CONF:86-22659).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 STATIC) (CONF:86-22660).
      2. This participantRole SHALL contain exactly one [1..1] id (CONF:86-22661).

The value of @root must be the NHSN assigned Facility OID.

* + - 1. This id SHALL contain exactly one [1..1] @root (CONF:86-22662).

The value of @extension must be a value registered with NHSN.

* + - 1. This id SHALL contain exactly one [1..1] @extension (CONF:86-22663).
    1. This participantRole SHALL contain exactly one [1..1] playingEntity (CONF:86-22664).
       1. This playingEntity SHALL contain exactly one [1..1] @classCode="PLC" Place (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:86-22665).
       2. This playingEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC (CONF:86-22666).

Figure 167: Specimen Collection Encounter (ARO) Example

<encounter classCode="ENC" moodCode="EVN">

<!--Specimen Collection Encounter (ARO) -->

<templateId root="2.16.840.1.113883.10.20.5.6.187"/>

<!-- Conforms to Consolidated CDA Encounter Activities template -->

<templateId root="2.16.840.1.113883.10.20.22.4.49"/>

<id nullFlavor="NA"/>

<effectiveTime nullFlavor="NA"/>

<!-- The in-facility location where the specimen was collected -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />

<playingEntity classCode="PLC">

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 HealthcareServiceLocation"

code="1029-8"

displayName="Medical/Surgical Critical Care" />

</playingEntity>

</participantRole>

</participant>

</encounter>

Specimen Collection Encounter (LIO)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.164 (closed)]

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Table 383: Specimen Collection Encounter (LIO) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Specimen Collection Procedure (LIO)](#E_Specimen_Collection_Procedure_LIO) (required) |  |

The Specimen Collection Encounter (LIO) records the facility location where a specimen was collected and, if the patient was an inpatient, the date the patient was admitted or transferred to that in-facility location.

This template conforms to the C-CDA Encounter Activities template. That template requires an id; in the NHSN LIO Report, the id of the encounter is not reported, therefore a "NA" nullFlavor is used for the required id.

The participant element represents the facility location where the specimen was collected. The value of participantRole/id/@root will be the same as the healthCareFacility in the encompassingEncounter, but here it is scoping the facility location where the specimen was collected, represented in the @extension.

Table 384: Specimen Collection Encounter (LIO) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.164) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21563](#C_86-21563) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [86-21564](#C_86-21564) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28281](#C_86-28281) |  |
| @root | 1..1 | SHALL |  | [86-28282](#C_86-28282) | 2.16.840.1.113883.10.20.22.4.49 |
| templateId | 1..1 | SHALL |  | [86-21567](#C_86-21567) |  |
| @root | 1..1 | SHALL |  | [86-21568](#C_86-21568) | 2.16.840.1.113883.10.20.5.6.164 |
| id | 1..1 | SHALL |  | [86-21569](#C_86-21569) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-21583](#C_86-21583) | NA |
| effectiveTime | 1..1 | SHALL |  | [86-21584](#C_86-21584) |  |
| participant | 1..1 | SHALL |  | [86-21571](#C_86-21571) |  |
| @typeCode | 1..1 | SHALL |  | [86-21572](#C_86-21572) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [86-21573](#C_86-21573) |  |
| @classCode | 1..1 | SHALL |  | [86-21574](#C_86-21574) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SDLOC |
| id | 1..1 | SHALL |  | [86-21575](#C_86-21575) |  |
| @root | 1..1 | SHALL |  | [86-21576](#C_86-21576) |  |
| @extension | 1..1 | SHALL |  | [86-21577](#C_86-21577) |  |
| playingEntity | 1..1 | SHALL |  | [86-21578](#C_86-21578) |  |
| @classCode | 1..1 | SHALL |  | [86-21579](#C_86-21579) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PLC |
| code | 1..1 | SHALL |  | [86-21580](#C_86-21580) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |

1. Conforms to Encounter Activities template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.49).
2. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21563).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21564).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28281) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.49" (CONF:86-28282).
5. SHALL contain exactly one [1..1] templateId (CONF:86-21567) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.164" (CONF:86-21568).
6. SHALL contain exactly one [1..1] id (CONF:86-21569).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-21583).
7. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21584).
   1. If the patient was an inpatient, an effectiveTime/low element SHALL be present representing the date the patient was admitted or transferred to that location (CONF:86-21585).
   2. If the patient was not an inpatient and the encounter DataTime is not known or not available, an appropriate nullFlavor SHALL be used on effectiveTime element (CONF:86-21604).
8. SHALL contain exactly one [1..1] participant (CONF:86-21571).
   1. This participant SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-21572).
   2. This participant SHALL contain exactly one [1..1] participantRole (CONF:86-21573).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service delivery location (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 STATIC) (CONF:86-21574).
      2. This participantRole SHALL contain exactly one [1..1] id (CONF:86-21575).

The value of @root must be the NHSN assigned Facility OID.

* + - 1. This id SHALL contain exactly one [1..1] @root (CONF:86-21576).

The value of @extension must be a value registered with NHSN.

* + - 1. This id SHALL contain exactly one [1..1] @extension (CONF:86-21577).
    1. This participantRole SHALL contain exactly one [1..1] playingEntity (CONF:86-21578).
       1. This playingEntity SHALL contain exactly one [1..1] @classCode="PLC" Place (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:86-21579).
       2. This playingEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) urn:oid:2.16.840.1.113883.13.19 DYNAMIC (CONF:86-21580).

Figure 168: Specimen Collection Location and Admission Date (LIO) Example

<!-- Location and admission date -->

<encounter classCode="ENC" moodCode="EVN">

<!-- C-CDA Encounter Activities templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- HAI Specimen Collection Encounter (LIO) -->

<templateId root="2.16.840.1.113883.10.20.5.6.164" />

<id nullFlavor="NA" />

<!-- If person was an inpatient at the in-facility location

where the specimen was taken:

date admitted/transferred there -->

<effectiveTime>

<low value="20090117" />

</effectiveTime>

<!-- The in-facility location where the specimen was taken -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />

<playingEntity classCode="PLC">

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 HealthcareServiceLocation"

code="1029-8"

displayName="Medical/Surgical Critical Care" />

</playingEntity>

</participantRole>

</participant>

</encounter>

Specimen Collection Procedure (ARO) (V3)

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2016-08-01 (closed)]

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Table 385: Specimen Collection Procedure (ARO) (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Findings Section in an ARO Report (V3)](#S_Findings_Section_in_an_ARO_Report_V3) (required) | [Specimen Collection Encounter (ARO)](#E_Specimen_Collection_Encounter_ARO) (required)  [Isolate Susceptibility Tests Organizer (V3)](#E_Isolate_Susceptibility_Tests_Organize) (required) |

The Specimen Collection Procedure (ARO) records the date a specimen was collected and the type of specimen. It includes a Specimen Collection Encounter (ARO), which records the in-facility location where the specimen was collected. The template is derived from the Specimen Collection Procedure template from Public Health Case Reports.

In the ARO Report, a collection procedure code is not recorded. The effectiveTime element records the date when the specimen was collected. The participant element records the specimen type.

Table 386: Specimen Collection Procedure (ARO) (V3) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-22668](#C_3247-22668) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [3247-22669](#C_3247-22669) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-22670](#C_3247-22670) |  |
| @root | 1..1 | SHALL |  | [3247-22671](#C_3247-22671) | 2.16.840.1.113883.10.20.5.6.188 |
| @extension | 1..1 | SHALL |  | [3247-30472](#C_3247-30472) | 2016-08-01 |
| effectiveTime | 1..1 | SHALL |  | [3247-22672](#C_3247-22672) |  |
| @value | 1..1 | SHALL |  | [3247-22673](#C_3247-22673) |  |
| specimen | 1..1 | SHALL |  | [3247-27160](#C_3247-27160) |  |
| specimenRole | 1..1 | SHALL |  | [3247-27161](#C_3247-27161) |  |
| specimenPlayingEntity | 1..1 | SHALL |  | [3247-27162](#C_3247-27162) |  |
| code | 1..1 | SHALL |  | [3247-27163](#C_3247-27163) | urn:oid:2.16.840.1.114222.4.11.3249 (NHSNSpecimenTypeCode) |
| entryRelationship | 1..1 | SHALL |  | [3247-22681](#C_3247-22681) |  |
| @typeCode | 1..1 | SHALL |  | [3247-22682](#C_3247-22682) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| @inversionInd | 1..1 | SHALL |  | [3247-22683](#C_3247-22683) | true |
| encounter | 1..1 | SHALL |  | [3247-22684](#C_3247-22684) | [Specimen Collection Encounter (ARO) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.187](#E_Specimen_Collection_Encounter_ARO) |
| entryRelationship | 1..\* | SHALL |  | [3247-27164](#C_3247-27164) |  |
| @typeCode | 1..1 | SHALL |  | [3247-27165](#C_3247-27165) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| @inversionInd | 1..1 | SHALL |  | [3247-27432](#C_3247-27432) | true |
| organizer | 1..1 | SHALL |  | [3247-30471](#C_3247-30471) | [Isolate Susceptibility Tests Organizer (V3) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2016-08-01](#E_Isolate_Susceptibility_Tests_Organize) |

1. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3247-22668).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3247-22669).
3. SHALL contain exactly one [1..1] templateId (CONF:3247-22670) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.188" (CONF:3247-22671).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30472).
4. SHALL contain exactly one [1..1] effectiveTime (CONF:3247-22672).
   1. This effectiveTime SHALL contain exactly one [1..1] @value (CONF:3247-22673).
5. SHALL contain exactly one [1..1] specimen (CONF:3247-27160).
   1. This specimen SHALL contain exactly one [1..1] specimenRole (CONF:3247-27161).
      1. This specimenRole SHALL contain exactly one [1..1] specimenPlayingEntity (CONF:3247-27162).
         1. This specimenPlayingEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNSpecimenTypeCode](#NHSNSpecimenTypeCode) urn:oid:2.16.840.1.114222.4.11.3249 DYNAMIC (CONF:3247-27163).
6. SHALL contain exactly one [1..1] entryRelationship (CONF:3247-22681) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:3247-22682).
   2. SHALL contain exactly one [1..1] @inversionInd="true" (CONF:3247-22683).
   3. SHALL contain exactly one [1..1] [Specimen Collection Encounter (ARO)](#E_Specimen_Collection_Encounter_ARO) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.187) (CONF:3247-22684).
7. SHALL contain at least one [1..\*] entryRelationship (CONF:3247-27164) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:3247-27165).
   2. SHALL contain exactly one [1..1] @inversionInd="true" (CONF:3247-27432).
   3. SHALL contain exactly one [1..1] [Isolate Susceptibility Tests Organizer (V3)](#E_Isolate_Susceptibility_Tests_Organize) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2016-08-01) (CONF:3247-30471).

Table 387: NHSNSpecimenTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSpecimenTypeCode urn:oid:2.16.840.1.114222.4.11.3249  Code System: SNOMED CT 2.16.840.1.113883.6.96  A full listing of codes can be found in the hai\_voc.xls file provided with this package.  The full table is shown in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 110893002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Cutaneous cytologic material |
| 110894008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Mammary cytologic material |
| 110896005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Subcutaneous cytologic material |
| 110903005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Nasal cytologic material |
| 110926003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Gallbladder cytologic material |
| 110931001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Penis cytologic material |
| 110933003 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Prostate cytologic material |
| 110935005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Testis cytologic material |
| 110937002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Seminal vesicle cytologic material |
| 110939004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Vas deferens cytologic material |
| ... | | | |

Figure 169: Specimen Collection Procedure (ARO) (V3) Example

<procedure classCode="PROC" moodCode="EVN">

<!-- [HAI R3D1.1] Specimen Collection Procedure (ARO) (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.188" extension="2016-08-01" />

<!-- Date specimen collected -->

<effectiveTime value="20090121" />

<specimen>

<specimenRole>

<specimenPlayingEntity>

<!-- Specimen type -->

<code codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="119297000"

displayName="Blood specimen" />

</specimenPlayingEntity>

</specimenRole>

</specimen>

<entryRelationship typeCode="COMP" inversionInd="true">

<encounter classCode="ENC" moodCode="EVN">

<!-- [C-CDA R1.1] Encounter Activities -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- [HAI R1] Specimen Collection Encounter (ARO) -->

<templateId root="2.16.840.1.113883.10.20.5.6.187" />

...

</encounter>

</entryRelationship>

<entryRelationship typeCode="COMP" inversionInd="true">

<organizer classCode="CLUSTER" moodCode="EVN">

<!-- [HAI R3D1.1] Isolate Susceptibility Tests Organizer (V3) -->

<templateId root="2.16.840.1.113883.10.20.5.6.201" extension="2016-08-01" />

...

</organizer>

</entryRelationship>

</procedure>

Specimen Collection Procedure (LIO)

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.165 (closed)]

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Table 388: Specimen Collection Procedure (LIO) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Pathogen Identified Observation (LIO) (V2)](#E_Pathogen_Identified_Observation_LIO_V2) (required) | [Specimen Collection Encounter (LIO)](#E_Specimen_Collection_Encounter_LIO) (required) |

The Specimen Collection Procedure (LIO) records the date a specimen was collected and the type of specimen. It includes a Specimen Collection Encounter (LIO), which records the facility location where the specimen was collected and, for an inpatient, the date the patient was admitted or transferred to that in-facility location. The template is derived from the Specimen Collection Procedure template from Public Health Case Reports.

In the LIO Report, a collection procedure code is not recorded. The effectiveTime element records the date when the specimen was collected. The participant element records the specimen type.

Table 389: Specimen Collection Procedure (LIO) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.165) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21389](#C_86-21389) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [86-21390](#C_86-21390) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-21982](#C_86-21982) |  |
| @root | 1..1 | SHALL |  | [86-21983](#C_86-21983) | 2.16.840.1.113883.10.20.5.6.165 |
| effectiveTime | 1..1 | SHALL |  | [86-21391](#C_86-21391) |  |
| @value | 1..1 | SHALL |  | [86-21392](#C_86-21392) |  |
| participant | 1..1 | SHALL |  | [86-21393](#C_86-21393) |  |
| @typeCode | 1..1 | SHALL |  | [86-21394](#C_86-21394) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = PRD |
| participantRole | 1..1 | SHALL |  | [86-21395](#C_86-21395) |  |
| @classCode | 1..1 | SHALL |  | [86-21396](#C_86-21396) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = SPEC |
| playingEntity | 1..1 | SHALL |  | [86-21397](#C_86-21397) |  |
| code | 1..1 | SHALL |  | [86-21398](#C_86-21398) | urn:oid:2.16.840.1.114222.4.11.3249 (NHSNSpecimenTypeCode) |
| @nullFlavor | 0..1 | MAY |  | [86-28200](#C_86-28200) | UNK |
| entryRelationship | 1..1 | SHALL |  | [86-21400](#C_86-21400) |  |
| @typeCode | 1..1 | SHALL |  | [86-21401](#C_86-21401) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| @inversionInd | 1..1 | SHALL |  | [86-21402](#C_86-21402) | true |
| encounter | 1..1 | SHALL |  | [86-21403](#C_86-21403) | [Specimen Collection Encounter (LIO) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.164](#E_Specimen_Collection_Encounter_LIO) |

1. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21389).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21390).
3. SHALL contain exactly one [1..1] templateId (CONF:86-21982) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.165" (CONF:86-21983).
4. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21391).
   1. This effectiveTime SHALL contain exactly one [1..1] @value (CONF:86-21392).
5. SHALL contain exactly one [1..1] participant (CONF:86-21393).
   1. This participant SHALL contain exactly one [1..1] @typeCode="PRD" Product (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-21394).
   2. This participant SHALL contain exactly one [1..1] participantRole (CONF:86-21395).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SPEC" Specimen (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 STATIC) (CONF:86-21396).
      2. This participantRole SHALL contain exactly one [1..1] playingEntity (CONF:86-21397).

To record a specimen type, use @code. To record that the specimen type is not known, set the value of @nullFlavor to UNK.

* + - 1. This playingEntity SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNSpecimenTypeCode](#NHSNSpecimenTypeCode) urn:oid:2.16.840.1.114222.4.11.3249 DYNAMIC (CONF:86-21398).
         1. This code MAY contain zero or one [0..1] @nullFlavor="UNK" (CONF:86-28200).

1. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21400).
   1. This entryRelationship SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21401).
   2. This entryRelationship SHALL contain exactly one [1..1] @inversionInd="true" (CONF:86-21402).
   3. This entryRelationship SHALL contain exactly one [1..1] [Specimen Collection Encounter (LIO)](#E_Specimen_Collection_Encounter_LIO) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.164) (CONF:86-21403).

Figure 170: Specimen Collection Procedure (LIO) Example

<!-- Specimen collection procedure contains specimen collection encounter -->

<procedure classCode="PROC" moodCode="EVN">

<!-- Specimen Collection Procedure (LIO) -->

<templateId root="2.16.840.1.113883.10.20.5.6.165" />

<!-- Date specimen collected -->

<effectiveTime value="20090121" />

<!-- Specimen type -->

<participant typeCode="PRD">

<participantRole classCode="SPEC">

<playingEntity>

<code codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="122571007"

displayName="Pericardial fluid"/>

</playingEntity>

</participantRole>

</participant>

<entryRelationship typeCode="COMP" inversionInd="true">

<!-- Specimen Collection Encounter (LIO) -->

<encounter classCode="ENC" moodCode="EVN">

<!-- C-CDA Encounter Activities templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.49" />

<!-- HAI Specimen Collection Encounter (LIO) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.164" />

<id nullFlavor="NA" />

<effectiveTime>

<low value="20090117"/>

</effectiveTime>

</encounter>

</entryRelationship>

</procedure>

Spinal Fusion Level Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.166 (closed)]

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Table 390: Spinal Fusion Level Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Details Clinical Statement in a Procedure Report (V2)](#Procedure_Details_Clinical_Statement_in) (optional) |  |

This observation records the spinal level of a spinal fusion procedure.

Table 391: Spinal Fusion Level Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.166) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21543](#C_86-21543) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21544](#C_86-21544) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28283](#C_86-28283) |  |
| @root | 1..1 | SHALL |  | [86-28284](#C_86-28284) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-21553](#C_86-21553) |  |
| @root | 1..1 | SHALL |  | [86-21554](#C_86-21554) | 2.16.840.1.113883.10.20.5.6.166 |
| id | 1..1 | SHALL |  | [86-21555](#C_86-21555) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22775](#C_86-22775) | NA |
| code | 1..1 | SHALL |  | [86-21545](#C_86-21545) |  |
| @code | 1..1 | SHALL |  | [86-21546](#C_86-21546) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28390](#C_86-28390) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21547](#C_86-21547) |  |
| @code | 1..1 | SHALL |  | [86-21548](#C_86-21548) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21549](#C_86-21549) | urn:oid:2.16.840.1.113883.13.11 (NHSNSpinalFusionLevelCode) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21543).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21544).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28283) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28284).
5. SHALL contain exactly one [1..1] templateId (CONF:86-21553) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.166" (CONF:86-21554).
6. SHALL contain exactly one [1..1] id (CONF:86-21555).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22775).
7. SHALL contain exactly one [1..1] code (CONF:86-21545).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21546).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28390).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-21547).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21548).
9. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNSpinalFusionLevelCode](#NHSNSpinalFusionLevelCode) urn:oid:2.16.840.1.113883.13.11 STATIC 2009-06-25 (CONF:86-21549).

Table 392: NHSNSpinalFusionLevelCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSpinalFusionLevelCode urn:oid:2.16.840.1.113883.13.11  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1101-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | atlas-axis (C1-C2 only) |
| 1102-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | atlas-axis/cervical (C1-C7: any combination) |
| 1103-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | cervical (C3-C7: any combination) |
| 1104-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | cervical/dorsal/dorsolumbar (Extends from any cervical through any lumbar levels ) |
| 1105-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | dorsal/dorsolumbar (T1-L5: any combination) |
| 1106-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | lumbar/lumbosacral (L1-S5: any combination) |

Figure 171: Spinal Fusion Level Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Spinal Fusion Level Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.166"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1101-5"

displayName="atlas-axis (C1-C2 only)"/>

</observation>

SSI Detected Using Toolkit Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.206 (closed)]

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Table 393: SSI Detected Using Toolkit Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) (required) |  |

This template indicates that a surgical site infection was identified through the use of discharge diagnosis or procedure codes as described in the NHSN reporting protocol. It is based on the C-CDA Problem Observation template.

When the surgical site infection was identified through the use of discharge diagnosis or procedure codes, set the value of @negationInd to false. When the surgical site infection was not identified through the use of discharge diagnosis or procedure codes, set the value of @negationInd to true. If this observation is not required per the NHSN protocol, then set the value of @nullFlavor to "NA".

Table 394: SSI Detected Using Toolkit Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.206) | | | | | |
| @nullFlavor | 0..1 | MAY |  | [1101-30277](#C_1101-30277) | NA |
| @classCode | 1..1 | SHALL |  | [1101-30278](#C_1101-30278) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1101-30279](#C_1101-30279) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 0..1 | MAY |  | [1101-30280](#C_1101-30280) |  |
| templateId | 1..1 | SHALL |  | [1101-30282](#C_1101-30282) |  |
| @root | 1..1 | SHALL |  | [1101-30283](#C_1101-30283) | 2.16.840.1.113883.10.20.5.6.206 |
| id | 1..1 | SHALL |  | [1101-30284](#C_1101-30284) |  |
| @nullFlavor | 1..1 | SHALL |  | [1101-30285](#C_1101-30285) | NA |
| code | 1..1 | SHALL |  | [1101-30286](#C_1101-30286) |  |
| @code | 1..1 | SHALL |  | [1101-30287](#C_1101-30287) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1101-30288](#C_1101-30288) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1101-30289](#C_1101-30289) |  |
| @code | 1..1 | SHALL |  | [1101-30290](#C_1101-30290) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1101-30291](#C_1101-30291) |  |
| @code | 1..1 | SHALL |  | [1101-30292](#C_1101-30292) | 1238-5 |
| @codeSystem | 1..1 | SHALL |  | [1101-30293](#C_1101-30293) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |

If this observation is not required per the NHSN protocol then set the value of @nullFlavor to NA.

1. MAY contain zero or one [0..1] @nullFlavor="NA" (CONF:1101-30277).
   1. If the value of @nullFlavor is set to NA then the value of @negationInd SHALL NOT be set (CONF:1101-30298).
2. SHALL contain exactly one [1..1] @classCode="OBS" (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1101-30278).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1101-30279).
4. MAY contain zero or one [0..1] @negationInd (CONF:1101-30280).
   1. If the surgical site infection was identified through the use of discharge diagnosis or procedure codes, the value of @negationInd SHALL be false. If the surgical site infection was not identified through the use of discharge diagnosis or procedure codes, the value of @negationInd SHALL be true. If the value of @negationInd is set then the value of @nullFlavor SHALL NOT be set (CONF:1101-30281).
5. SHALL contain exactly one [1..1] templateId (CONF:1101-30282) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.206" (CONF:1101-30283).
6. SHALL contain exactly one [1..1] id (CONF:1101-30284).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1101-30285).
7. SHALL contain exactly one [1..1] code (CONF:1101-30286).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" (CONF:1101-30287).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:1101-30288).
8. SHALL contain exactly one [1..1] statusCode (CONF:1101-30289).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1101-30290).
9. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1101-30291).
   1. This value SHALL contain exactly one [1..1] @code="1238-5" SSI detected using the NHSN ICD-Code based Admit and Readmit SSI Surveillance Toolkit (CONF:1101-30292).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1101-30293).

Figure 172: SSI Detected Using Toolkit Observation Example

<!--

If the surgical site infection was identified through the use

of discharge diagnosis or procedure codes, the value of

@negationInd SHALL be false.

If the surgical site infection was not identified through the

use of discharge diagnosis or procedure codes,

the value of @negationInd SHALL be true.

If the value of @negationInd is set then the value of

@nullFlavor SHALL NOT be set.

If this observation is not required per the NHSN protocol

set the value of nullFlavor to NA as follows:

<observation classCode="OBS" moodCode="EVN" nullFlavor="NA">

-->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- SSI Detected Using Toolkit Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.206"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD" code="1238-5"

displayName="SSI detected using the NHSN ICD-Code based Admit

and Readmit SSI Surveillance Toolkit"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

</observation>

Sterile Barriers Applied Clinical Statement

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.167 (closed)]

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Table 395: Sterile Barriers Applied Clinical Statement Contexts

| Contained By: | Contains: |
| --- | --- |
| [Central-Line Insertion Preparation Organizer (V2)](#E_CentralLine_Insertion_Preparation_Org) (required) |  |

This clinical statement records sterile barriers applied. It is used in the first, preparatory step in the central-line insertion practice.

Table 396: Sterile Barriers Applied Clinical Statement Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.167) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21531](#C_86-21531) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [86-21532](#C_86-21532) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21533](#C_86-21533) | false |
| templateId | 1..1 | SHALL |  | [86-28285](#C_86-28285) |  |
| @root | 1..1 | SHALL |  | [86-28286](#C_86-28286) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [86-21558](#C_86-21558) |  |
| @root | 1..1 | SHALL |  | [86-21559](#C_86-21559) | 2.16.840.1.113883.10.20.5.6.167 |
| id | 1..1 | SHALL |  | [86-21560](#C_86-21560) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22772](#C_86-22772) |  |
| code | 1..1 | SHALL |  | [86-21534](#C_86-21534) |  |
| @code | 1..1 | SHALL | CD | [86-21535](#C_86-21535) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 370822003 |
| statusCode | 1..1 | SHALL |  | [86-21561](#C_86-21561) |  |
| @code | 1..1 | SHALL |  | [86-21562](#C_86-21562) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| participant | 0..\* | MAY |  | [86-21536](#C_86-21536) |  |
| @typeCode | 1..1 | SHALL |  | [86-21537](#C_86-21537) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| participantRole | 1..1 | SHALL |  | [86-21538](#C_86-21538) |  |
| @classCode | 1..1 | SHALL |  | [86-21539](#C_86-21539) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingDevice | 1..1 | SHALL |  | [86-21540](#C_86-21540) |  |
| code | 1..1 | SHALL |  | [86-21541](#C_86-21541) | urn:oid:2.16.840.1.114222.4.11.3184 (NHSNSterileBarrierCode) |

1. Conforms to Procedure Activity Procedure template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.14).
2. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21531).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21532).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-21533).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28285) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:86-28286).
6. SHALL contain exactly one [1..1] templateId (CONF:86-21558) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.167" (CONF:86-21559).
7. SHALL contain exactly one [1..1] id (CONF:86-21560).
   1. This id SHALL contain exactly one [1..1] @nullFlavor (CONF:86-22772).
8. SHALL contain exactly one [1..1] code (CONF:86-21534).
   1. This code SHALL contain exactly one [1..1] @code="370822003" Use of sterile technique (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-21535).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21561).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-21562).
10. MAY contain zero or more [0..\*] participant (CONF:86-21536).
    1. The participant, if present, SHALL contain exactly one [1..1] @typeCode="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-21537).
    2. The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:86-21538).
       1. This participantRole SHALL contain exactly one [1..1] @classCode="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110 STATIC) (CONF:86-21539).
       2. This participantRole SHALL contain exactly one [1..1] playingDevice (CONF:86-21540).
          1. This playingDevice SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNSterileBarrierCode](#NHSNSterileBarrierCode) urn:oid:2.16.840.1.114222.4.11.3184 DYNAMIC (CONF:86-21541).

Table 397: NHSNSterileBarrierCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSterileBarrierCode urn:oid:2.16.840.1.114222.4.11.3184  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 6122-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Cap |
| 6112-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Large sterile drape |
| 6110-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Mask/Eye shield |
| 6113-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Sterile gloves |
| 6111-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Sterile gown |

Figure 173: Sterile Barriers Applied Clinical Statement Example

<procedure moodCode="EVN" classCode="PROC" negationInd="false">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Sterile Barriers Applied Clinical Statement templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.167" />

<id nullFlavor="NA" />

<code code="370822003"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Use of Sterile Technique" />

<statusCode code="completed" />

<participant typeCode="DEV">

<participantRole classCode="MANU">

<playingDevice>

<code code="6110-1"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Mask/Eye shield" />

</playingDevice>

</participantRole>

</participant>

...

</procedure>

Summary Data Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.185 (closed)]

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Table 398: Summary Data Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter](#E_Summary_Encounter) (required)  [Summary Encounter (NICU)](#E_Summary_Encounter_NICU) (required)  [Summary Data Observation (POM)](#E_Summary_Data_Observation_POM) (optional)  [Summary Data Observation (VAT)](#E_Summary_Data_Observation_VAT) (optional)  [Summary Encounter (HP-FLU)](#E_Summary_Encounter_HPFLU) (required) |  |

The Summary Data Observation is used in some population-summary reports.

The documentationOf/serviceEvent/code in the header identifies the intended content of the report. For example, cdcNHSN code 1879-6 indicates that the data content is "Summary data reporting catheter and ventilator use in an ICU". NHSN protocol specifies which data to report for each type of content. The data required by NHSN for most types of content, at time of publication, are shown in the tables below; the tables for antimicrobial reports are with the Summary Data Observation (AU/AR) template and the table for the OPC Report is with the Summary Data Observation (OPC) template.

The table of codes for a particular report indicate what data are required at time of publication for the NHSN protocol. Accordingly, the Summary Encounter will contain the same number of Summary Data Observations as codes in the table.

Most Summary Data Observations are a simple code-value pair. The code element identifies the datum being reported, and the value element records a number of days, patients, episodes, or events.

Table 399: Summary Data Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22407](#C_86-22407) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22408](#C_86-22408) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22409](#C_86-22409) |  |
| @root | 1..1 | SHALL |  | [86-22410](#C_86-22410) | 2.16.840.1.113883.10.20.5.6.185 |
| code | 1..1 | SHALL |  | [86-22411](#C_86-22411) |  |
| statusCode | 1..1 | SHALL |  | [86-22412](#C_86-22412) |  |
| @code | 1..1 | SHALL |  | [86-28189](#C_86-28189) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL |  | [86-22413](#C_86-22413) |  |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:86-22407).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:86-22408).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22409) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.185" (CONF:86-22410).
4. SHALL contain exactly one [1..1] code (CONF:86-22411).
   1. If this is ICU Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Intensive Care Unit (ICU) Summary Data table below (CONF:86-28193).
   2. If this is NICU Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Neonatal Intensive Care Unit (NICU) Summary Data table below (CONF:86-28194).
   3. If this is SCA Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Specialty Care Area (SCA) Summary Data table below (CONF:86-28195).
   4. If this is VAT (Dialysis) Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Vascular Access Type (Dialysis) Summary Data table below (CONF:86-28196).
   5. If this is POM Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Prevention Process and Outcome Measures (POM) Summary Data table below (CONF:86-28199).
   6. If this is HP-FLU Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Healthcare Personnel Influenza Vaccination Summary Data table below (CONF:86-28405).
5. SHALL contain exactly one [1..1] statusCode (CONF:86-22412).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28189).
6. SHALL contain exactly one [1..1] value (CONF:86-22413).
   1. If the observation reports a number of days, the value of value/xsi:type SHALL be PQ and the value of value/@unit SHALL be d. If the observation reports a number of patients, episodes or events the value of value/@xsi:type SHALL be INT. If the value is a code, the value of value/@xsi:type SHALL be CD (CONF:86-26183).

Table 400: Codes for Intensive Care Unit (ICU) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Intensive Care Unit (ICU) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.12  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for ICU Summary, at the time of publication, is contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1833-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of central line days |
| 1851-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patient days |
| 1852-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of ventilator days |
| 1853-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of urinary catheter days |
| 1834-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of APRV days |
| 1826-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of new episodes of mechanical ventilation |

Table 401: Codes for Neonatal Intensive Care Unit (NICU) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Neonatal Intensive Care Unit (NICU) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.13  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for NICU Summary, at the time of publication, is contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1851-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patient days |
| 1852-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of ventilator days |
| 1854-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of central line days including umbilical catheter |
| 1853-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of urninary catheter days |

Table 402: Codes for Specialty Care Area (SCA) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Specialty Care Area (SCA) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.16  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for SCA Summary, at the time of publication, is contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1851-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patient days |
| 1852-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of ventilator days |
| 1853-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of urinary catheter days |
| 3306-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of permanent central line days |
| 3305-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of temporary central line days |
| 1834-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of APRV days |
| 1826-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of new episodes of mechanical ventilation |

Table 403: Codes for Vascular Access Type (Dialysis) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Vascular Access Type (Dialysis) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.17  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for VAT (Dialysis) Summary, at the time of publication, is contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2310-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of chronic hemodialysis patients, vascular access type is fistula |
| 2311-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of chronic hemodialysis patients, vascular access type is fistula, buttonhole cannulation |
| 2312-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of chronic hemodialysis patients, vascular access type is graft |
| 2313-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of chronic hemodialysis patients, vascular access type is tunnelled central line, dialysis |
| 2314-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of chronic hemodialysis patients, vascular access type is non-tunnelled central line, dialysis |
| 2315-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of chronic hemodialysis patients, vascular access type is other than fistula, graft, or tunneled central line |
| 2338-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Chronic Hemodialysis Patients, with vascular access, for whom diazlyers are reused |

Table 404: Codes for Prevention Process and Outcome Measures (POM) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Prevention Process and Outcome Measures (POM) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.15  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for POM Summary, at the time of publication, is contained in this table.    A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1888-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Total Facility Patient days (for inpatient location) |
| 1889-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Total Facility Admissions (for inpatient location) |
| 1830-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patient days as adjusted for C.diff reporting (for inpatient location) |
| 1890-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Total Facility Encounters (for outpatient location) |
| 1864-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of observations in which hand hygiene was indicated |
| 1865-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of observations in which hand hygiene was performed |
| 1866-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of observations in which the use of gown and gloves was indicated |
| 1867-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of observations in which gown and gloves were used |
| 3193-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | AST organism monitored |
| 1870-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Timing |
| 1871-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Eligibility |
| 1872-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patients eligible for monitoring at admission/transfer in |
| 1873-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patients on which monitoring was performed at admission/transfer in |
| 1874-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patients eligible for monitoring at discharge/transfer out |
| 1875-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patients on which monitoring was performed at discharge/transfer out |
| 1827-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Patient Days adjusted for MDRO reporting (for inpatient location) |
| 1828-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Admissions adjusted for MDRO reporting (for inpatient location) |

Table 405: Codes for Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.10  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for HP-FLU Summary, at the time of publication, is contained in this table.    A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 86552-7 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Number of HCP who worked at this healthcare facility for at least 1 day between October 1 and March 31 |
| 86553-5 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Number of HCP who received an influenza vaccination at this healthcare facility since influenza vaccine became available this season |
| 86554-3 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Number of HCP who provided a written report or documentation of influenza vaccination outside this healthcare facility since influenza vaccine became available this season |
| 86555-0 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Number of HCP who have a medical contraindication to the influenza vaccine |
| 86556-8 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Number of HCP who declined to receive the influenza vaccine |
| 86557-6 | LOINC | urn:oid:2.16.840.1.113883.6.1 | Number of HCP with unknown vaccination status (or other criteria not met) |

Figure 174: Summary Data Observation Example—NICU

<!-- second participant: a subgroup of population reported on -->

<participant typeCode="SBJ" contextControlCode="OP">

<participantRole classCode="PRS">

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3300-1"

displayName="The subset of inpatients whose

birth weight is under 750gm"/>

</participantRole>

</participant>

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185"/>

<code code="1853-1"

codeSystem="2.16.840.1.113883.6.270"

codeSystemName="NHSN Summary Data"

displayName="Number of urinary catheter days" />

<statusCode code="completed" />

<value unit="d"

value="23"

xsi:type="PQ" />

</observation>

</entryRelationship>

Figure 175: Summary Data Observation Example—SCA

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185"/>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3306-8"

displayName="Number of permanent central line days"/>

<statusCode code="completed"/>

<value xsi:type="PQ"

unit="d"

value="100"/>

</observation>

Figure 176: Summary Data Observation Example—ICU

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185"/>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1851-5"

displayName="Number of Patient Days"/>

<statusCode code="completed"/>

<value xsi:type="PQ"

unit="d"

value="100"/>

</observation>

Figure 177: Summary Data Observation Example—HP-FLU

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="86553-5"

displayName="Number of HCP who received an influenza

vaccination at this healthcare facility since

influenza vaccine became available this

season" />

<statusCode code="completed" />

<value xsi:type="INT" value="55" />

</observation>

Summary Data Observation (AU/AR)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01 (closed)]

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Table 406: Summary Data Observation (AU/AR) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter Patient Presence (AUP) (V2)](#E_Summary_Encounter_Patient_Presence_AU) (required)  [Summary Encounter (AUP) (V2)](#E_Summary_Encounter_AUP_V2) (required)  [Summary Encounter (ARO) (V2)](#E_Summary_Encounter_ARO_V2) (required) |  |

This template specializes the Summary Data Observation for the AU/AR population-summary reports.

The documentationOf/serviceEvent/code in the header identifies the intended content of the report. For example, cdcNHSN code 1887-9 indicates that the data content is "Summary data reporting Antimicrobial Usage". NHSN protocol specifies which data to report for each type of content. The data required by NHSN for each type of content, at time of publication, are shown in the tables below.

The table of codes for a particular report indicate what data are required at time of publication for the NHSN protocol. Accordingly, the Summary Encounter will contain the same number of Summary Data Observations as codes in the table.

Most Summary Data Observations are a simple code-value pair. The code element identifies the datum being reported, and the value element records a number of days, patients, episodes, or events.

Table 407: Summary Data Observation (AU/AR) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1181-30549](#C_1181-30549) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1181-30550](#C_1181-30550) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1181-30545](#C_1181-30545) |  |
| @root | 1..1 | SHALL |  | [1181-30551](#C_1181-30551) | 2.16.840.1.113883.10.20.5.6.229 |
| @extension | 1..1 | SHALL |  | [1181-30561](#C_1181-30561) | 2015-04-01 |
| code | 1..1 | SHALL |  | [1181-30546](#C_1181-30546) |  |
| statusCode | 1..1 | SHALL |  | [1181-30547](#C_1181-30547) |  |
| @code | 1..1 | SHALL |  | [1181-30559](#C_1181-30559) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL |  | [1181-30548](#C_1181-30548) |  |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1181-30549).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1181-30550).
3. SHALL contain exactly one [1..1] templateId (CONF:1181-30545) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.229" (CONF:1181-30551).
   2. SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30561).
4. SHALL contain exactly one [1..1] code (CONF:1181-30546).
   1. If this is ARO Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Antimicrobial Resistance Option (ARO) Summary Data table below (CONF:1181-30552).
   2. If this is AUP Summary Data, NHSN protocol requires, at the time of publication, the data in the Codes for Antimicrobial Usage, Pharmacy (AUP) Summary Data table below (CONF:1181-30557).
5. SHALL contain exactly one [1..1] statusCode (CONF:1181-30547).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1181-30559).
6. SHALL contain exactly one [1..1] value (CONF:1181-30548).
   1. If the observation reports a number of days, the value of value/xsi:type SHALL be PQ and the value of value/@unit SHALL be d. If the observation reports a number of patients, episodes or events the value of value/@xsi:type SHALL be INT. If the value is a code, the value of value/@xsi:type SHALL be CD (CONF:1181-30560).

Table 408: Codes for Antimicrobial Resistance Option (ARO) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Antimicrobial Resistance Option (ARO) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.8  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for ARO Summary, at the time of publication, is contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 1851-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patient days |
| 1862-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of admissions |
| 2409-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of blood cultures performed |

Table 409: Codes for Antimicrobial Usage, Pharmacy (AUP) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Antimicrobial Usage, Pharmacy (AUP) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.9  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for AUP Summary, at the time of publication, is contained in this table.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2524-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of therapy days |
| 2525-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of patient-present days |
| 1862-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of admissions (for facility-wide inpatient reporting) |

Figure 178: Summary Data Observation (AU/AR) Example

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (AU/AR) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.229"

extension="2015-04-01"/>

<code code="2409-1"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Number of blood cultures performed"/>

<statusCode code="completed"/>

<value xsi:type="INT" value="24" />

</observation>

Summary Data Observation (AUP)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.194 (closed)]

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Table 410: Summary Data Observation (AUP) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (AUP) (V2)](#E_Summary_Encounter_AUP_V2) (required) |  |

This template specializes the Summary Data Observation for an Antimicrobial Use (AUP) Summary Report.  
The Summary Data Observation (AUP) records data for the antimicrobial stratified by route of administration. (See the NHSN protocol for how the values are calculated.) If a value is not applicable for a combination of drug and route, the value of @nullFlavor must be "NA".

Table 411: Summary Data Observation (AUP) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.194) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22910](#C_86-22910) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22911](#C_86-22911) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22912](#C_86-22912) |  |
| @root | 1..1 | SHALL |  | [86-22913](#C_86-22913) | 2.16.840.1.113883.10.20.5.6.194 |
| code | 1..1 | SHALL |  | [86-22914](#C_86-22914) |  |
| statusCode | 1..1 | SHALL |  | [86-22915](#C_86-22915) |  |
| @code | 1..1 | SHALL |  | [86-28111](#C_86-28111) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL |  | [86-22916](#C_86-22916) |  |
| methodCode | 1..1 | SHALL |  | [86-23044](#C_86-23044) | urn:oid:2.16.840.1.114222.4.11.3361 (NHSNRouteOfAdminstrationAURPCode) |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22910).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22911).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22912) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.194" (CONF:86-22913).
4. SHALL contain exactly one [1..1] code (CONF:86-22914).
5. SHALL contain exactly one [1..1] statusCode (CONF:86-22915).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28111).
6. SHALL contain exactly one [1..1] value (CONF:86-22916).
7. SHALL contain exactly one [1..1] methodCode, which SHALL be selected from ValueSet [NHSNRouteOfAdminstrationAURPCode](#NHSNRouteOfAdminstrationAURPCode) urn:oid:2.16.840.1.114222.4.11.3361 (CONF:86-23044).
8. If the observation reports a number of days, the value of value/xsi:type SHALL be PQ and the value of value/@unit SHALL be d. If the observation reports a number of patients, the value of value/@xsi:type SHALL be INT. If the value is a code, the value of value/@xsi:type SHALL be CD (CONF:86-22917).

Table 412: NHSNRouteOfAdminstrationAURPCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNRouteOfAdminstrationAURPCode urn:oid:2.16.840.1.114222.4.11.3361  Code System: SNOMED CT 2.16.840.1.113883.6.96  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 447964005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Digestive tract route [A route that begins anywhere in the digestive tract extending from the mouth through rectum.] |
| 447694001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Respiratory tract route [A route that begins within the respiratory tract, including the oropharynx and nasopharynx.] |
| 47625008 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Intravenous route [An intravascular route that begins with a vein.] |
| 78421000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Intramuscular route [A route that begins within a muscle.] |

Figure 179: Summary Data Observation (AUP) Example

<observation classCode="OBS" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.194" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2524-7"

displayName="Number of Therapy Days" />

<statusCode code="completed" />

<value xsi:type="PQ" unit="d" value="3" />

<methodCode code="447694001" codeSystemName="SNOMED CT"

codeSystem="2.16.840.1.113883.6.96"

displayName="Respiratory tract route"/>

</observation>

Summary Data Observation (HV)

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1 - US Realm

Table 413: Summary Data Observation (HV) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) (required) |  |

This template specializes the Summary Data Observation for an HAI Hemovigilance (HV) Summary Report.

The documentationOf/serviceEvent/code in the header identifies the intended content of the report. NHSN protocol specifies which data to report for each type of content. The data required by NHSN for each type of content, at time of publication, are shown in the tables below.

The table of codes for a particular report indicate what data are required at time of publication for the NHSN protocol. Accordingly, the Summary Encounter will contain the same number of Summary Data Observations as codes in the table.

Most Summary Data Observations are a simple code-value pair. The code element identifies the datum being reported, and the value element records a number of days, patients, episodes, or events.

Table 414: Summary Data Observation (HV) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1202-30675](#C_1202-30675) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1202-30676](#C_1202-30676) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1202-30671](#C_1202-30671) |  |
| @root | 1..1 | SHALL |  | [1202-30677](#C_1202-30677) | 2.16.840.1.113883.10.20.5.6.235 |
| @extension | 1..1 | SHALL |  | [1202-30684](#C_1202-30684) | 2015-10-01 |
| code | 1..1 | SHALL |  | [1202-30672](#C_1202-30672) | urn:oid:2.16.840.1.113883.10.20.5.9.11 (Codes for Hemovigilance (HV) Summary Data) |
| statusCode | 1..1 | SHALL |  | [1202-30673](#C_1202-30673) |  |
| @code | 1..1 | SHALL |  | [1202-30683](#C_1202-30683) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | INT | [1202-30674](#C_1202-30674) |  |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1202-30675).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1202-30676).
3. SHALL contain exactly one [1..1] templateId (CONF:1202-30671) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.235" (CONF:1202-30677).
   2. SHALL contain exactly one [1..1] @extension="2015-10-01" (CONF:1202-30684).
4. SHALL contain exactly one [1..1] code, which SHOULD be selected from ValueSet [Codes for Hemovigilance (HV) Summary Data](#Codes_for_Hemovigilance_HV_Summary_Data) urn:oid:2.16.840.1.113883.10.20.5.9.11 DYNAMIC (CONF:1202-30672).
5. SHALL contain exactly one [1..1] statusCode (CONF:1202-30673).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1202-30683).
6. SHALL contain exactly one [1..1] value with @xsi:type="INT" (CONF:1202-30674).

Table 415: Codes for Hemovigilance (HV) Summary Data

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Hemovigilance (HV) Summary Data urn:oid:2.16.840.1.113883.10.20.5.9.11  NHSN protocol specifies which data to report for each type of content. The data required by NHSN for IV Summary, at the time of publication, is contained in this table.   A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3436-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of Patient samples collected for type and screen or crossmatch |
| 3538-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total crossmatch procedures |
| 3539-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total patients transfused |

Figure 180: Summary Data Observation (HV) Example

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (HV) -->

<templateId root="2.16.840.1.113883.10.20.5.6.235"

extension="2015-10-01" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3539-4"

displayName="Total patients transfused" />

<statusCode code="completed" />

<value xsi:type="INT" value="74" />

</observation>

Summary Data Observation (POM)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.192 (closed)]

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Table 416: Summary Data Observation (POM) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (POM)](#E_Summary_Encounter_POM) (required) | [Summary Data Observation](#E_Summary_Data_Observation) (optional) |

This template extends the Summary Data Observation for a POM Report.  
When recording AST outcome measures, Summary Data Observation (POM)s record the organism monitored; the data required by NHSN protocol are recorded within those observations.

Table 417: Summary Data Observation (POM) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.192) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22855](#C_86-22855) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22856](#C_86-22856) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22857](#C_86-22857) |  |
| @root | 1..1 | SHALL |  | [86-22858](#C_86-22858) | 2.16.840.1.113883.10.20.5.6.192 |
| code | 1..1 | SHALL |  | [86-22859](#C_86-22859) |  |
| statusCode | 1..1 | SHALL |  | [86-22860](#C_86-22860) |  |
| @code | 1..1 | SHALL |  | [86-28112](#C_86-28112) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL |  | [86-22861](#C_86-22861) |  |
| entryRelationship | 0..\* | MAY |  | [86-23372](#C_86-23372) |  |
| observation | 1..1 | SHALL |  | [86-23373](#C_86-23373) | [Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185](#E_Summary_Data_Observation) |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22855).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22856).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22857) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.192" (CONF:86-22858).
4. SHALL contain exactly one [1..1] code (CONF:86-22859).
5. SHALL contain exactly one [1..1] statusCode (CONF:86-22860).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28112).
6. SHALL contain exactly one [1..1] value (CONF:86-22861).
   1. To record which organism was monitored (code/@code 3193-0 AST Organism Monitored), the value of value/@code SHALL be selected from Value Set NHSNOrganismASTCode 2.16.840.1.114222.4.11.3283 DYNAMIC (CONF:86-22862).
   2. To record the timing of monitoring (code/@code 1870-5 Timing), the value of value/@code SHALL be selected from Value Set 2.16.840.1.114222.4.11.3247 NHSNTimingCode STATIC 20091030 (CONF:86-22863).
   3. To record eligibility criteria for monitoring (code/@code 1871-3 Eligibility), the value of value/@code SHALL be selected from Value Set 2.16.840.1.114222.4.11.3248 NHSNEligibilityCode DYNAMIC (CONF:86-22864).
   4. If the observation reports a number of days, the value of value/xsi:type SHALL be PQ and the value of value/@unit SHALL be d. If the observation reports a number of patients, the value of value/@xsi:type SHALL be INT. If the value is a code, the value of value/@xsi:type SHALL be CD (CONF:86-23371).
7. MAY contain zero or more [0..\*] entryRelationship (CONF:86-23372).
   1. The entryRelationship, if present, SHALL contain exactly one [1..1] [Summary Data Observation](#E_Summary_Data_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:86-23373).
   2. To record which organism was monitored (code/@code 3193-0 AST Organism Monitored) this observation SHALL contain, as entryRelationships where the value of @typeCode is COMP, Summary Data Observations recording the data collected for that class. The specific data required are specified by the NHSN protocol (CONF:86-23374).

Table 418: NHSNOrganismASTCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNOrganismASTCode urn:oid:2.16.840.1.114222.4.11.3283  Code System: SNOMED CT 2.16.840.1.113883.6.96  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 113727004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | VRE |
| 115329001 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | MRSA |

Table 419: NHSNTimingCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNTimingCode urn:oid:2.16.840.1.114222.4.11.3247  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2201-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | On admission only |
| 2202-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | On admission and on discharge/transfer |

Table 420: NHSNEligibilityCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNEligibilityCode urn:oid:2.16.840.1.114222.4.11.3248  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2301-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | All patients |
| 2302-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Only patients with no prior documentation of colonization or infection |

Figure 181: Summary Data Observation (POM) Example

<!-- example showing AST for MRSA -->

<!-- The organism monitored was MRSA.

Within this observation are child observations

that record additional information about the monitoring

and the data reported by the monitoring. -->

<!-- AST Organism Monitored -->

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (POM) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.192"/>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3193-0

displayName="AST Organism Monitored"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="115329001"

displayName="MRSA"/>

<!-- The observations below are within

the observation of what organism was monitored -->

<!-- Timing of monitoring -->

<entryRelationship>

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185"/>

...

</observation>

</entryRelationship>

<!-- Eligibility for monitoring -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185"/>

...

</observation>

</entryRelationship>

<!-- Number eligible on admission-->

...

<!-- Number performed on admission-->

...

<!-- Number eligible on discharge/transfer -->

...

<!-- Number performed on discharge/transfer-->

...

<!-- Number prevalent cases AST/clinical positive-->

...

<!-- Number prevalent cases previously known-->

...

<!-- Number incident cases -->

...

</observation>

<!-- end of data about monitoring for this organism -->

Summary Data Observation (VAT)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.195 (closed)]

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Table 421: Summary Data Observation (VAT) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (VAT)](#E_Summary_Encounter_VAT) (required) | [Summary Data Observation](#E_Summary_Data_Observation) (optional) |

This template specializes the Summary Data Observation for a Vascular Access Type Report.  
When the vascular access type is fistula there is an entryRelationship containing a Summary Data Observation recording the number of patients with buttonhole cannulation.

Table 422: Summary Data Observation (VAT) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.195) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22933](#C_86-22933) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-22934](#C_86-22934) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22935](#C_86-22935) |  |
| @root | 1..1 | SHALL |  | [86-22936](#C_86-22936) | 2.16.840.1.113883.10.20.5.6.195 |
| code | 1..1 | SHALL |  | [86-22937](#C_86-22937) | urn:oid:2.16.840.1.113883.10.20.5.9.17 (Codes for Vascular Access Type (Dialysis) Summary Data) |
| statusCode | 1..1 | SHALL |  | [86-22938](#C_86-22938) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) |
| @code | 1..1 | SHALL |  | [86-28113](#C_86-28113) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL |  | [86-22939](#C_86-22939) |  |
| entryRelationship | 0..1 | MAY |  | [86-22940](#C_86-22940) |  |
| @typeCode | 1..1 | SHALL |  | [86-22941](#C_86-22941) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-22942](#C_86-22942) | [Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185](#E_Summary_Data_Observation) |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22933).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22934).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22935) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.195" (CONF:86-22936).
4. SHALL contain exactly one [1..1] code, which SHOULD be selected from ValueSet [Codes for Vascular Access Type (Dialysis) Summary Data](#Codes_for_Vascular_Access_Type_Dialysis) urn:oid:2.16.840.1.113883.10.20.5.9.17 DYNAMIC (CONF:86-22937).
5. SHALL contain exactly one [1..1] statusCode (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-22938).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:86-28113).
6. SHALL contain exactly one [1..1] value (CONF:86-22939).
7. MAY contain zero or one [0..1] entryRelationship (CONF:86-22940).
   1. The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-22941).
   2. The entryRelationship, if present, SHALL contain exactly one [1..1] [Summary Data Observation](#E_Summary_Data_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:86-22942).
   3. In a VAT Report, the Summary Observation recording the number of patients with fistula SHALL contain an entryRelationship where the value of @typeCode is COMP, that contains a Summary Data Observation recording the number of those patients with buttonhole cannulation (CONF:86-22943).
8. If the observation reports a number of days, the value of value/xsi:type SHALL be PQ and the value of value/@unit SHALL be d. If the observation reports a number of patients, the value of value/@xsi:type SHALL be INT. If the value is a code, the value of value/@xsi:type SHALL be CD (CONF:86-22944).

Figure 182: Summary Data Observation (VAT) Example

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (VAT) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.195" />

<code code="2310-1"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Number of Chronic Hemodialysis Patients, vascular access

type is fistula" />

<statusCode code="completed" />

<value value="100" xsi:type="INT" />

<!-- When recording fistula, the patients with buttonhole cannulation

is also required -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

<code code="2311-9"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Number of chronic hemodialysis patients, vascular

access type is fistula, buttonhole cannulation" />

<statusCode code="completed" />

<value value="20" xsi:type="INT" />

</observation>

</entryRelationship>

</observation>

Summary Encounter

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.184 (closed)]

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Table 423: Summary Encounter Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section](#S_Summary_Data_Section) (required) | [Summary Data Observation](#E_Summary_Data_Observation) (required) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. Each datum is recorded as a Summary Data Observation. The data requirements at time of publication are shown in tables under the generic Summary Data Observation template, above. The table of codes for a particular report indicate what data are required at time of publication for the NHSN protocol. Accordingly, the Summary Encounter will contain the same number of Summary Data Observations as codes in the table. A participant element records the location to which the data pertains. It has three parts: a location id, a location type code, and a scoping entity. The location id has the form <id root=”…” extension=”…”/> representing a location such as ward 9W, or <id root=”…”/> representing the whole facility. The scoping entity is optional if an id is present. However, specialized subsets of the facility such as “the whole facility excluding NICU and well-baby units” have no NHSN location id, and the scopingEntity is required in those cases.

Table 424: Summary Encounter Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.184) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22392](#C_86-22392) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [86-22393](#C_86-22393) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22394](#C_86-22394) |  |
| @root | 1..1 | SHALL |  | [86-22395](#C_86-22395) | 2.16.840.1.113883.10.20.5.6.184 |
| participant | 1..1 | SHALL |  | [86-22397](#C_86-22397) |  |
| @typeCode | 1..1 | SHALL |  | [86-22398](#C_86-22398) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [86-22399](#C_86-22399) |  |
| @classCode | 1..1 | SHALL |  | [86-22400](#C_86-22400) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| entryRelationship | 1..\* | SHALL |  | [86-22404](#C_86-22404) |  |
| @typeCode | 1..1 | SHALL |  | [86-22405](#C_86-22405) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-22406](#C_86-22406) | [Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185](#E_Summary_Data_Observation) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22392).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22393).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22394) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.184" (CONF:86-22395).
4. SHALL contain exactly one [1..1] participant (CONF:86-22397) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-22398).
   2. SHALL contain exactly one [1..1] participantRole (CONF:86-22399).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:86-22400).

The value of @root must be the NHSN assigned Facility OID.  
The value of @extension must be a value registered with NHSN.

* + 1. If recording data from an in-facility location, the participantRole element shall contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 DYNAMIC, recording the type of location (CONF:86-22401).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from the whole facility, the participantRole element shall contain an id element with @root (CONF:86-22402).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from a specialized subset of a facility, the participantRole element shall contain a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 DYNAMIC, recording the type of location, and a scopingEntity element where the value of @classCode is “PLC” and id/@root is present (CONF:86-22403).

1. SHALL contain at least one [1..\*] entryRelationship (CONF:86-22404).
   1. Such entryRelationships SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-22405).
   2. Such entryRelationships SHALL contain exactly one [1..1] [Summary Data Observation](#E_Summary_Data_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:86-22406).

Figure 183: Summary Encounter Example

<encounter classCode="ENC" moodCode="EVN">

<!-- Summary Encounter templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.184" />

<!-- the in-facility location ID and type -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<!-- the facility OID scopes the in-facility location ID -->

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 HealthcareServiceLocation"

code="1029-8"

displayName="Medical/Surgical Critical Care" />

</participantRole>

</participant>

<!-- Patient Days -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

...

</observation>

</entryRelationship>

<!-- Central Line Days -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

...

</observation>

</entryRelationship>

...

</entryRelationship>

</encounter>

Summary Encounter (ARO) (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2015-04-01 (closed)]

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Table 425: Summary Encounter (ARO) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (ARO) (V2)](#S_Summary_Data_Section_ARO_V2) (required) | [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) (required) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. For an ARO report, each datum is recorded as a Summary Data Observation (AU/AR). The data requirements at time of publication are shown in a table under the Summary Data Observation (AU/AR) template, above. A participant element records the location to which the data pertains. The location id has the form <id root=”…” extension=”…”/> with an extension of 'FACWIDEIN' representing the whole facility.

Table 426: Summary Encounter (ARO) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2015-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1181-23077](#C_1181-23077) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [1181-23078](#C_1181-23078) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1181-23079](#C_1181-23079) |  |
| @root | 1..1 | SHALL |  | [1181-23080](#C_1181-23080) | 2.16.840.1.113883.10.20.5.6.199 |
| @extension | 1..1 | SHALL |  | [1181-30564](#C_1181-30564) | 2015-04-01 |
| participant | 1..1 | SHALL |  | [1181-23081](#C_1181-23081) |  |
| @typeCode | 1..1 | SHALL |  | [1181-23082](#C_1181-23082) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [1181-23083](#C_1181-23083) |  |
| @classCode | 1..1 | SHALL |  | [1181-23084](#C_1181-23084) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| id | 1..1 | SHALL |  | [1181-23085](#C_1181-23085) |  |
| @root | 1..1 | SHALL |  | [1181-23086](#C_1181-23086) |  |
| @extension | 1..1 | SHALL |  | [1181-23087](#C_1181-23087) | FACWIDEIN |
| code | 1..1 | SHALL |  | [1181-23088](#C_1181-23088) | urn:oid:2.16.840.1.113883.6.259 (HSLOC) |
| @code | 1..1 | SHALL |  | [1181-23089](#C_1181-23089) | 1250-0 |
| @codeSystem | 1..1 | SHALL |  | [1181-23090](#C_1181-23090) | 2.16.840.1.113883.6.259 |
| @displayName | 1..1 | SHOULD |  | [1181-23091](#C_1181-23091) | Facility Wide Inpatient |
| entryRelationship | 1..\* | SHALL |  | [1181-23092](#C_1181-23092) |  |
| @typeCode | 1..1 | SHALL |  | [1181-23093](#C_1181-23093) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [1181-23094](#C_1181-23094) | [Summary Data Observation (AU/AR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01](#E_Summary_Data_Observation_AUAR) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1181-23077).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1181-23078).
3. SHALL contain exactly one [1..1] templateId (CONF:1181-23079) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.199" (CONF:1181-23080).
   2. SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30564).
4. SHALL contain exactly one [1..1] participant (CONF:1181-23081) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:1181-23082).
   2. SHALL contain exactly one [1..1] participantRole (CONF:1181-23083).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:1181-23084).
      2. This participantRole SHALL contain exactly one [1..1] id (CONF:1181-23085).

The value of @root must be the NHSN assigned Facility OID.

* + - 1. This id SHALL contain exactly one [1..1] @root (CONF:1181-23086).

The value of @extension must be a value registered with NHSN.

* + - 1. This id SHALL contain exactly one [1..1] @extension="FACWIDEIN" (CONF:1181-23087).
    1. This participantRole SHALL contain exactly one [1..1] code (CodeSystem: HSLOC urn:oid:2.16.840.1.113883.6.259 DYNAMIC) (CONF:1181-23088).
       1. This code SHALL contain exactly one [1..1] @code="1250-0" (CONF:1181-23089).
       2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.259" (CONF:1181-23090).
       3. This code SHOULD contain exactly one [1..1] @displayName="Facility Wide Inpatient" (CONF:1181-23091).

1. SHALL contain at least one [1..\*] entryRelationship (CONF:1181-23092).
   1. Such entryRelationships SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:1181-23093).
   2. Such entryRelationships SHALL contain exactly one [1..1] [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01) (CONF:1181-23094).

Figure 184: Summary Encounter (ARO) (V2)

<!-- Summary Encounter -->

<encounter classCode="ENC" moodCode="EVN">

<!-- Summary Encounter (ARO) (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.199"

extension="2015-04-01"/>

<!-- the location id and type -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<id root="2.111.111.111.10709" extension="FACWIDEIN"/>

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 Healthcare Service Location Code"

code="1250-0"

displayName="Facility Wide Inpatient"/>

</participantRole>

</participant>

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (AU/AR) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.229"

extension="2015-04-01"/>

<code code="1851-5"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Patient Days"/>

<statusCode code="completed"/>

<value xsi:type="PQ" unit="d" value="235"/>

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (AU/AR) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.229"

extension="2015-04-01"/>

<code code="1862-2" codeSystem="2.16.840.1.113883.6.270"

codeSystemName="cdcNHSN"

displayName="Admission count"/>

<statusCode code="completed"/>

<value xsi:type="INT" value="46"/>

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<!-- Summary Data Observation (AU/AR) templateId -->

<observation classCode="OBS" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.229"

extension="2015-04-01"/>

<code code="2409-1" codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Blood cultures performed"/>

<statusCode code="completed"/>

<value xsi:type="INT" value="24"/>

</observation>

</entryRelationship>

</encounter>

Summary Encounter (AUP) (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01 (closed)]

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Table 427: Summary Encounter (AUP) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (AUP) (V2)](#S_Summary_Data_Section_AUP_V2) (required) | [Summary Data Observation (AUP)](#E_Summary_Data_Observation_AUP) (required)  [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) (required) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. For an AUP report, data are recorded in both a Summary Data Observation (AU/AR) (non-stratified data) and a Summary Data Observation (AUP) (stratified data). The data requirements at time of publication are shown in a table under the Summary Data Observation (AU/AR) template, above. A participant element records the location to which the data pertains. It has three parts: a location id, a location type code, and a scoping entity. The location id has the form <id root=”…” extension=”…”/> representing a location such as ward 9W, or <id root=”…”/> representing the whole facility. The scoping entity is optional if an id is present. In an Antimicrobial Use Report, each antimicrobial is represented by a Summary Encounter. The antimicrobial is recorded as a participant in the encounter, in addition to the location participant.

Table 428: Summary Encounter (AUP) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1181-23019](#C_1181-23019) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [1181-23020](#C_1181-23020) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1181-23021](#C_1181-23021) |  |
| @root | 1..1 | SHALL |  | [1181-23022](#C_1181-23022) | 2.16.840.1.113883.10.20.5.6.198 |
| @extension | 1..1 | SHALL |  | [1181-30563](#C_1181-30563) | 2015-04-01 |
| participant | 1..1 | SHALL |  | [1181-23023](#C_1181-23023) |  |
| @typeCode | 1..1 | SHALL |  | [1181-23024](#C_1181-23024) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [1181-23025](#C_1181-23025) |  |
| @classCode | 1..1 | SHALL |  | [1181-23026](#C_1181-23026) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| participant | 1..1 | SHALL |  | [1181-23030](#C_1181-23030) |  |
| @typeCode | 1..1 | SHALL |  | [1181-23031](#C_1181-23031) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = CSM |
| participantRole | 1..1 | SHALL |  | [1181-23032](#C_1181-23032) |  |
| @classCode | 0..1 | MAY |  | [1181-23033](#C_1181-23033) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| code | 1..1 | SHALL |  | [1181-23034](#C_1181-23034) | urn:oid:2.16.840.1.114222.4.11.3360 (NHSNAntimicrobialAgentAURPCode) |
| entryRelationship | 1..1 | SHALL |  | [1181-23036](#C_1181-23036) |  |
| @typeCode | 1..1 | SHALL |  | [1181-23037](#C_1181-23037) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [1181-23038](#C_1181-23038) | [Summary Data Observation (AU/AR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01](#E_Summary_Data_Observation_AUAR) |
| entryRelationship | 4..4 | SHALL |  | [1181-23040](#C_1181-23040) |  |
| @typeCode | 1..1 | SHALL |  | [1181-23041](#C_1181-23041) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [1181-23042](#C_1181-23042) | [Summary Data Observation (AUP) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.194](#E_Summary_Data_Observation_AUP) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1181-23019).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1181-23020).
3. SHALL contain exactly one [1..1] templateId (CONF:1181-23021) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.198" (CONF:1181-23022).
   2. SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30563).
4. SHALL contain exactly one [1..1] participant (CONF:1181-23023) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:1181-23024).
   2. SHALL contain exactly one [1..1] participantRole (CONF:1181-23025).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:1181-23026).

The value of @root must be the NHSN assigned Facility OID.  
The value of @extension must be a value registered with NHSN.

* + 1. If recording data from an in-facility location, the participantRole element shall contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet 2.16.840.1.113883.13.19NHSNHealthcareServiceLocationCode DYNAMIC, recording the type of location (CONF:1181-23027).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from the whole facility, the participantRole element shall contain an id element with @root (CONF:1181-23028).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from a specialized subset of a facility, the participantRole element shall contain a code element where the value is selected from ValueSet 2.16.840.1.113883.13.19 NHSNHealthcareServiceLocationCode DYNAMIC, recording the type of location, and a scopingEntity element where the value of @classCode is “PLC” and id/@root is present (CONF:1181-23029).

1. SHALL contain exactly one [1..1] participant (CONF:1181-23030) such that it
   1. SHALL contain exactly one [1..1] @typeCode="CSM" Consumable (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:1181-23031).
   2. SHALL contain exactly one [1..1] participantRole (CONF:1181-23032).
      1. This participantRole MAY contain zero or one [0..1] @classCode="MANU" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:1181-23033).
      2. This participantRole SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNAntimicrobialAgentAURPCode](#NHSNAntimicrobialAgentAURPCode) urn:oid:2.16.840.1.114222.4.11.3360 DYNAMIC (CONF:1181-23034).
2. SHALL contain exactly one [1..1] entryRelationship (CONF:1181-23036) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:1181-23037).
   2. SHALL contain exactly one [1..1] [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01) (CONF:1181-23038).
   3. This Summary Data Observation (AU/AR) records Number of Therapy Days for the antimicrobial (this is not a simple total of the stratified data; consult the NHSN protocol for the calculation) (CONF:1181-23039).
3. SHALL contain [4..4] entryRelationship (CONF:1181-23040) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1181-23041).
   2. SHALL contain exactly one [1..1] [Summary Data Observation (AUP)](#E_Summary_Data_Observation_AUP) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.194) (CONF:1181-23042).
   3. These Summary Data Observation (AUP) elements record Number of Therapy Days for the antimicrobial stratified by route of actual administration (four observations, one for each route) (CONF:1181-23043).

Figure 185: Summary Encounter (AUP) (V2) Example

<!-- encounter reporting data for one antimicrobial -->

<encounter classCode="ENC" moodCode="EVN">

<!—Summary Encounter (AUP) (V2) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.198"

extension="2015-04-01"/>

<!-- the location ID and type -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 Healthcare Service Location Code"

code="1029-8"

displayName="Medical/Surgical Critical Care" />

</participantRole>

</participant>

<!-- the antimicrobial agent reported -->

<participant typeCode="CSM">

<participantRole classCode="MANU">

<code codeSystem="2.16.840.1.113883.6.88"

codeSystemName="RxNorm"

code="7980"

displayName="Penicillin G"/>

</participantRole>

</participant>

<!-- first of five data observations -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (AU/AR) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.229"

extension="2015-04-01"/>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2524-7"

displayName="Number of Therapy Days"/>

<statusCode code="completed"/>

<value xsi:type="PQ" unit="d" value="36"/>

<!-- use this when recording the four stratified data

<methodCode codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="47625008"

displayName="Intravenous route" />

-->

</observation>

</entryRelationship>

<!-- ... four more observations here -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (AUP) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.194"/>

...

</observation>

</entryRelationship>

</encounter>

<!-- end of encounter for this antimicrobial -->

Summary Encounter (HP-FLU)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01 (closed)]

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Table 429: Summary Encounter (HP-FLU) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (HP-FLU)](#S_Summary_Data_Section_HPFLU) (required) | [Summary Data Observation](#E_Summary_Data_Observation) (required) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward for a specified period. The NHSN protocol defines which data to record for each type of summary report. For an HP-FLU Summary report, each datum is recorded as a Summary Data Observation. The data requirements at time of publication are shown in a table under the Summary Data Observation template, above.

In an HP-FLU Report, the data are stratified by healthcare personnel (HCP) type. A participant is provided to record the HCP type. Represent each HCP type with a separate Summary Encounter (HP-FLU).

Table 430: Summary Encounter (HP-FLU) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3311-32](#C_3311-32) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [3311-33](#C_3311-33) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3311-26](#C_3311-26) |  |
| @root | 1..1 | SHALL |  | [3311-34](#C_3311-34) | 2.16.840.1.113883.10.20.5.6.241 |
| @extension | 1..1 | SHALL |  | [3311-44](#C_3311-44) | 2017-04-01 |
| participant | 1..1 | SHALL |  | [3311-29](#C_3311-29) |  |
| @typeCode | 1..1 | SHALL |  | [3311-40](#C_3311-40) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SBJ |
| participantRole | 1..1 | SHALL |  | [3311-30](#C_3311-30) |  |
| @classCode | 1..1 | SHALL |  | [3311-41](#C_3311-41) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = PART |
| code | 1..1 | SHALL |  | [3311-42](#C_3311-42) | urn:oid:2.16.840.1.113883.10.20.5.9.6 (NHSNHealthcarePersonnelType) |
| entryRelationship | 1..\* | SHALL |  | [3311-25](#C_3311-25) |  |
| @typeCode | 1..1 | SHALL |  | [3311-43](#C_3311-43) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [3311-31](#C_3311-31) | [Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185](#E_Summary_Data_Observation) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3311-32).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3311-33).
3. SHALL contain exactly one [1..1] templateId (CONF:3311-26) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.241" (CONF:3311-34).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-44).
4. SHALL contain exactly one [1..1] participant (CONF:3311-29) such that it
   1. SHALL contain exactly one [1..1] @typeCode="SBJ" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-40).
   2. SHALL contain exactly one [1..1] participantRole (CONF:3311-30).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="PART" (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-41).
      2. This participantRole SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNHealthcarePersonnelType](#NHSNHealthcarePersonnelType) urn:oid:2.16.840.1.113883.10.20.5.9.6 STATIC 2016-12-01 (CONF:3311-42).
5. SHALL contain at least one [1..\*] entryRelationship (CONF:3311-25).
   1. Such entryRelationships SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:3311-43).
   2. Such entryRelationships SHALL contain exactly one [1..1] [Summary Data Observation](#E_Summary_Data_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:3311-31).

Table 431: NHSNHealthcarePersonnelType

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNHealthcarePersonnelType urn:oid:2.16.840.1.113883.10.20.5.9.6  This value set contains the healthcare personnel types that stratify a healthcare personnel influenza vaccination summary report.  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2366-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Employees (staff on facility payroll) |
| 2367-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Licensed independent practitioners: Physicians, advanced practice nurses, & physician assistants |
| 2368-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Adult students/trainees & volunteers |
| 2369-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Other contract personnel |

Figure 186: Summary Encounter (HP-FLU) Example

<encounter classCode="ENC" moodCode="EVN">

<!-- [HAI R3D2] Summary Encounter (HP-FLU) -->

<templateId root="2.16.840.1.113883.10.20.5.6.241" extension="2017-04-01" />

<!-- This encounter reports on a subset of the total group -->

<participant typeCode="SBJ" contextControlCode="OP">

<participantRole classCode="PART">

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2366-3"

displayName="Employees (staff on facility payroll)" />

</participantRole>

</participant>

<!-- This summary observation reports the number of HCP

who worked at the facility in the flu season -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

...

</observation>

</entryRelationship>

<!-- Each of the following summary observations report the

number of HCP in that vaccination category -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

...

</observation>

</entryRelationship>

...

</encounter>

Summary Encounter (HV) (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01 (closed)]

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Table 432: Summary Encounter (HV) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (HV) (V2)](#S_Summary_Data_Section_HV_V2) (required) | [Summary Data Observation (HV)](#E_Summary_Data_Observation_HV) (required)  [Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)](#E_Facility_Transfuses_Blood_Products_Tr) (required)  [Blood Product Usage Summary Observation (V2)](#E_Blood_Product_Usage_Summary_Observati) (required)  [Pathogen Reduced Apheresis Platelet Usage Summary Observation](#E_Pathogen_Reduced_Apheresis_Platelet_U) (optional) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. For a Hemovigilance Summary Report, each datum is recorded as a Summary Data Observation (HV). The data requirements at time of publication are shown in a table under the Summary Data Observation (HV) template, above. The Summary Encounter (HV) includes a Blood Product Usage Summary Observation for each type of blood product being reported and, conditionally (if the facility transfused pathogen reduced apheresis platelets), a Pathogen Reduced Apheresis Platelet Usage Summary Observation for each type of pathogen reduced apheresis platelet being reported. A participant element records the location to which the data pertains. The location id has the form <id root=”…” extension=”…”/> with an extension of 'FACWIDEIN' representing the whole facility.

Table 433: Summary Encounter (HV) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3247-30669](#C_3247-30669) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [3247-30670](#C_3247-30670) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3247-30653](#C_3247-30653) |  |
| @root | 1..1 | SHALL |  | [3247-30660](#C_3247-30660) | 2.16.840.1.113883.10.20.5.6.234 |
| @extension | 1..1 | SHALL |  | [3247-30661](#C_3247-30661) | 2016-08-01 |
| participant | 1..1 | SHALL |  | [3247-30654](#C_3247-30654) |  |
| @typeCode | 1..1 | SHALL |  | [3247-30668](#C_3247-30668) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [3247-30655](#C_3247-30655) |  |
| @classCode | 1..1 | SHALL |  | [3247-30667](#C_3247-30667) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| id | 1..1 | SHALL |  | [3247-30656](#C_3247-30656) |  |
| @root | 1..1 | SHALL |  | [3247-30662](#C_3247-30662) |  |
| @extension | 1..1 | SHALL |  | [3247-30663](#C_3247-30663) | FACWIDEIN |
| code | 1..1 | SHALL |  | [3247-30657](#C_3247-30657) | urn:oid:2.16.840.1.113883.6.259 (HSLOC) |
| @code | 1..1 | SHALL |  | [3247-30664](#C_3247-30664) | 1250-0 |
| @codeSystem | 1..1 | SHALL |  | [3247-30665](#C_3247-30665) | 2.16.840.1.113883.6.259 |
| @displayName | 1..1 | SHOULD |  | [3247-30666](#C_3247-30666) | Facility Wide Inpatient |
| entryRelationship | 1..\* | SHALL |  | [3247-30652](#C_3247-30652) |  |
| @typeCode | 1..1 | SHALL |  | [3247-30659](#C_3247-30659) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [3247-30658](#C_3247-30658) | [Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01](#E_Facility_Transfuses_Blood_Products_Tr) |
| entryRelationship | 1..\* | SHALL |  | [3247-30733](#C_3247-30733) |  |
| @typeCode | 1..1 | SHALL |  | [3247-30734](#C_3247-30734) | COMP |
| observation | 1..1 | SHALL |  | [3247-30735](#C_3247-30735) | [Blood Product Usage Summary Observation (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01](#E_Blood_Product_Usage_Summary_Observati) |
| entryRelationship | 0..\* | MAY |  | [3247-30792](#C_3247-30792) |  |
| observation | 1..1 | SHALL |  | [3247-30793](#C_3247-30793) | [Pathogen Reduced Apheresis Platelet Usage Summary Observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01](#E_Pathogen_Reduced_Apheresis_Platelet_U) |
| entryRelationship | 1..\* | SHALL |  | [3247-30730](#C_3247-30730) |  |
| @typeCode | 1..1 | SHALL |  | [3247-30731](#C_3247-30731) | COMP |
| observation | 1..1 | SHALL |  | [3247-30732](#C_3247-30732) | [Summary Data Observation (HV) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01](#E_Summary_Data_Observation_HV) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3247-30669).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3247-30670).
3. SHALL contain exactly one [1..1] templateId (CONF:3247-30653) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.234" (CONF:3247-30660).
   2. SHALL contain exactly one [1..1] @extension="2016-08-01" (CONF:3247-30661).
4. SHALL contain exactly one [1..1] participant (CONF:3247-30654) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:3247-30668).
   2. SHALL contain exactly one [1..1] participantRole (CONF:3247-30655).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:3247-30667).
      2. This participantRole SHALL contain exactly one [1..1] id (CONF:3247-30656).

The value of @root must be the NHSN assigned Facility OID.

* + - 1. This id SHALL contain exactly one [1..1] @root (CONF:3247-30662).

The value of @extension must be a value registered with NHSN.

* + - 1. This id SHALL contain exactly one [1..1] @extension="FACWIDEIN" (CONF:3247-30663).
    1. This participantRole SHALL contain exactly one [1..1] code (CodeSystem: HSLOC urn:oid:2.16.840.1.113883.6.259 DYNAMIC) (CONF:3247-30657).
       1. This code SHALL contain exactly one [1..1] @code="1250-0" (CONF:3247-30664).
       2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.259" (CONF:3247-30665).
       3. This code SHOULD contain exactly one [1..1] @displayName="Facility Wide Inpatient" (CONF:3247-30666).

1. SHALL contain at least one [1..\*] entryRelationship (CONF:3247-30652) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:3247-30659).
   2. SHALL contain exactly one [1..1] [Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)](#E_Facility_Transfuses_Blood_Products_Tr) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01) (CONF:3247-30658).

There *SHALL* be exactly 123 Blood Product Usage Summary Observation entryRelationships (one for each value in the value set NHSN Summary Blood Product Usage (urn:oid:2.16.840.1.114222.4.11.7353))

1. SHALL contain at least one [1..\*] entryRelationship (CONF:3247-30733) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CONF:3247-30734).
   2. SHALL contain exactly one [1..1] [Blood Product Usage Summary Observation (V2)](#E_Blood_Product_Usage_Summary_Observati) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01) (CONF:3247-30735).

If the facility transfused pathogen reduced apheresis platelets (i.e. the apheresis platelet total for any of codes 3514-7, 3515-4, 3516-2, 3517-0, 3518-8, or 3519-6 is > 0) then there *SHALL* be exactly 12 Pathogen Reduced Apheresis Platelet Usage Summary Observation entryRelationships (one for each value in the value set NHSN Pathogen Reduced Apheresis Platelet Usage (urn:oid:2.16.840.1.113883.10.20.5.9.5))

1. MAY contain zero or more [0..\*] entryRelationship (CONF:3247-30792) such that it
   1. SHALL contain exactly one [1..1] [Pathogen Reduced Apheresis Platelet Usage Summary Observation](#E_Pathogen_Reduced_Apheresis_Platelet_U) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01) (CONF:3247-30793).
2. SHALL contain at least one [1..\*] entryRelationship (CONF:3247-30730) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CONF:3247-30731).
   2. SHALL contain exactly one [1..1] [Summary Data Observation (HV)](#E_Summary_Data_Observation_HV) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01) (CONF:3247-30732).

Figure 187: Summary Encounter (HV) (V2) Example

<encounter classCode="ENC" moodCode="EVN">

<!-- Summary Encounter (HV) (V2) -->

<templateId root="2.16.840.1.113883.10.20.5.6.234" extension="2016-08-01" />

<!-- the location ID and type -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="FACWIDEIN" />

<code codeSystem="2.16.840.1.113883.6.259" codeSystemName="HL7 HealthCareServiceLocation" code="1250-0" displayName="FACWIDEIN" />

</participantRole>

</participant>

<!-- Blood product summaries

There SHALL be exactly 102 Blood Product Usage Summary Observation

entryRelationships (one for each value in the value set NHSN Summary

Blood Product Usage (urn:oid:2.16.840.1.114222.4.11.7353))

-->

<!-- Total number of units transfused - Whole blood -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI] Blood Product Usage Summary Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.237" extension="2015-10-01" />

...

</observation>

</entryRelationship>

<!-- Total number of aliquots transfused - Whole blood -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI] Blood Product Usage Summary Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.237" extension="2015-10-01" />

...

</observation>

</entryRelationship>

<!-- Total number of Discards - Whole blood -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI] Blood Product Usage Summary Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.237" extension="2015-10-01" />

...

</observation>

</entryRelationship>

...

<entryRelationship typeCode="COMP">

<!-- Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- [HAI R3D1.1] Facility Transfuses Blood Products Treated with

Pathogen Reduction Technology Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.236" extension="2016-08-01" />

...

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (HV) -->

<templateId root="2.16.840.1.113883.10.20.5.6.235" extension="2015-10-01" />

...

</observation>

</entryRelationship>

...

</encounter>

Summary Encounter (NICU)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.191 (closed)]

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Table 434: Summary Encounter (NICU) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (NICU) (V2)](#S_Summary_Data_Section_NICU_V2) (required) | [Summary Data Observation](#E_Summary_Data_Observation) (required) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. For a NICU Summary report, each datum is recorded as a Summary Data Observation. The data requirements at time of publication are shown in a table under the Summary Data Observation template, above.

In a NICU Report, the data are stratified by birthweight. A second participant is provided to record the participant subgroup. Represent each group with a separate Summary Encounter.

Table 435: Summary Encounter (NICU) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.191) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22817](#C_86-22817) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [86-22818](#C_86-22818) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22819](#C_86-22819) |  |
| @root | 1..1 | SHALL |  | [86-22820](#C_86-22820) | 2.16.840.1.113883.10.20.5.6.191 |
| participant | 1..1 | SHALL |  | [86-22821](#C_86-22821) |  |
| @typeCode | 1..1 | SHALL |  | [86-22822](#C_86-22822) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [86-22823](#C_86-22823) |  |
| @classCode | 1..1 | SHALL |  | [86-22824](#C_86-22824) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| participant | 1..1 | SHALL |  | [86-22828](#C_86-22828) |  |
| @typeCode | 1..1 | SHALL |  | [86-22829](#C_86-22829) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = SBJ |
| participantRole | 1..1 | SHALL |  | [86-22830](#C_86-22830) |  |
| @classCode | 1..1 | SHALL |  | [86-22831](#C_86-22831) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = PRS |
| code | 1..1 | SHALL |  | [86-22832](#C_86-22832) | urn:oid:2.16.840.1.114222.4.11.3234 (NHSNPopulationCategoryCode) |
| entryRelationship | 1..\* | SHALL |  | [86-22834](#C_86-22834) |  |
| @typeCode | 1..1 | SHALL |  | [86-22835](#C_86-22835) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-22836](#C_86-22836) | [Summary Data Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185](#E_Summary_Data_Observation) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22817).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22818).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22819) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.191" (CONF:86-22820).
4. SHALL contain exactly one [1..1] participant (CONF:86-22821) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-22822).
   2. SHALL contain exactly one [1..1] participantRole (CONF:86-22823).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:86-22824).

The value of @root must be the NHSN assigned Facility OID.  
The value of @extension must be a value registered with NHSN.

* + 1. If recording data from an in-facility location, the participantRole element shall contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 DYNAMIC, recording the type of location (CONF:86-22825).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from the whole facility, the participantRole element shall contain an id element with @root (CONF:86-22826).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from a specialized subset of a facility, the participantRole element shall contain a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 DYNAMIC, recording the type of location, and a scopingEntity element where the value of @classCode is “PLC” and id/@root is present (CONF:86-22827).

1. SHALL contain exactly one [1..1] participant (CONF:86-22828) such that it
   1. SHALL contain exactly one [1..1] @typeCode="SBJ" (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:86-22829).
   2. SHALL contain exactly one [1..1] participantRole (CONF:86-22830).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="PRS" (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41) (CONF:86-22831).
      2. This participantRole SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [NHSNPopulationCategoryCode](#NHSNPopulationCategoryCode) urn:oid:2.16.840.1.114222.4.11.3234 STATIC 2009-06-25 (CONF:86-22832).
2. SHALL contain at least one [1..\*] entryRelationship (CONF:86-22834).
   1. Such entryRelationships SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-22835).
   2. Such entryRelationships SHALL contain exactly one [1..1] [Summary Data Observation](#E_Summary_Data_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.185) (CONF:86-22836).

Table 436: NHSNPopulationCategoryCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNPopulationCategoryCode urn:oid:2.16.840.1.114222.4.11.3234  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 3300-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Birthweight under 750gm |
| 3301-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Birthweight 751-1000gm |
| 3302-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Birthweight 1001-1500gm |
| 3303-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Birthweight 1501-2500gm |
| 3304-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Birthweight over 2500gm |

Figure 188: Summary Encounter (NICU) Example

<encounter classCode="ENC" moodCode="EVN">

<!—Summary Encounter (NICU) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.191" />

<!-- the location id and type -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 HealthcareServiceLocation"

code="1029-8"

displayName="Medical/Surgical Critical Care" />

</participantRole>

</participant>

<!-- This encounter reports on a subset of the total group -->

<participant typeCode="SBJ" contextControlCode="OP">

<participantRole classCode="PRS">

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3300-1"

displayName="Birthweight under 750g" />

</participantRole>

</participant>

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!—Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1851-5"

displayName="Patient Days" />

<statusCode code="completed" />

<value xsi:type="PQ" unit="d" value="23" />

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!—Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

<code codeSystem="2.16.840.1.113883.6.270"

codeSystemName="cdcNHSN"

code="1852-3"

displayName="Ventilator Days" />

<statusCode code="completed" />

<value xsi:type="PQ" unit="d" value="5" />

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!—Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1854-9"

displayName="Number of central line days including umbilical catheter" />

<statusCode code="completed" />

<value xsi:type="PQ" unit="d" value="5" />

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!—Summary Data Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.185" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1854-9"

displayName="Central Line Days including umbilical catheter" />

<statusCode code="completed" />

<value xsi:type="PQ" unit="d" value="5" />

</observation>

</entryRelationship>

</encounter>

Summary Encounter (POM)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.193 (closed)]

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Table 437: Summary Encounter (POM) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (POM) (V2)](#S_Summary_Data_Section_POM_V2) (required) | [Summary Data Observation (POM)](#E_Summary_Data_Observation_POM) (required) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. The Summary Encounter (POM) contains one or more Summary Data Observations (POM). The data requirements at time of publication are shown in a table under the Summary Data Observation template, above.

The POM Report records summary data for a location during a specified period. It can be submitted at the facility-wide level or at the unit level.

• In either case, the data reported is Number of Total Facility Patient Days and Number of Total Facility Admissions, or Number of Total Facility Encounters (as appropriate for an inpatient location or an outpatient location).  
• In a facility-level report, the Number of MDRO Patient Days and Number of MDRO Admissions, or Number of MDRO Encounters (as appropriate for an inpatient location or an outpatient location) is recorded.  
• In a facility-level report, if the facility includes reporting for C.difficile at the facility-wide level in its monthly plan, data adjusted for C.difficile reporting are required; see the NHSN protocol for definitions and calculations.

Table 438: Summary Encounter (POM) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.193) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22866](#C_86-22866) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [86-22867](#C_86-22867) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22868](#C_86-22868) |  |
| @root | 1..1 | SHALL |  | [86-22869](#C_86-22869) | 2.16.840.1.113883.10.20.5.6.193 |
| participant | 1..1 | SHALL |  | [86-22870](#C_86-22870) |  |
| @typeCode | 1..1 | SHALL |  | [86-22871](#C_86-22871) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [86-22872](#C_86-22872) |  |
| @classCode | 1..1 | SHALL |  | [86-22873](#C_86-22873) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| entryRelationship | 1..\* | SHALL |  | [86-22877](#C_86-22877) |  |
| @typeCode | 1..1 | SHALL |  | [86-22878](#C_86-22878) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-22879](#C_86-22879) | [Summary Data Observation (POM) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.192](#E_Summary_Data_Observation_POM) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22866).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22867).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22868) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.193" (CONF:86-22869).
4. SHALL contain exactly one [1..1] participant (CONF:86-22870) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-22871).
   2. SHALL contain exactly one [1..1] participantRole (CONF:86-22872).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:86-22873).

The value of @root must be the NHSN assigned Facility OID.  
The value of @extension must be a value registered with NHSN.

* + 1. If recording data from an in-facility location, the participantRole element shall contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 DYNAMIC, recording the type of location (CONF:86-22874).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from the whole facility, the participantRole element shall contain an id element with @root (CONF:86-22875).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from a specialized subset of a facility, the participantRole element shall contain a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 DYNAMIC, recording the type of location, and a scopingEntity element where the value of @classCode is “PLC” and id/@root is present (CONF:86-22876).

1. SHALL contain at least one [1..\*] entryRelationship (CONF:86-22877).
   1. Such entryRelationships SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-22878).
   2. Such entryRelationships SHALL contain exactly one [1..1] [Summary Data Observation (POM)](#E_Summary_Data_Observation_POM) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.192) (CONF:86-22879).

Figure 189: Summary Encounter (POM) Example

<encounter classCode="ENC" moodCode="EVN">

<!-- Summary Encounter (POM) -->

<templateId root="2.16.840.1.113883.10.20.5.6.193" />

<!-- the location id and type -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 HealthcareServiceLocation"

code="1029-8"

displayName="Medical/Surgical Critical Care" />

</participantRole>

</participant>

<!-- Number of Total Facility Patient days -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation POM -->

<templateId root="2.16.840.1.113883.10.20.5.6.192" />

...

</observation>

</entryRelationship>

<!-- Number of Total Facility Admissions -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation POM -->

<templateId root="2.16.840.1.113883.10.20.5.6.192" />

...

</observation>

</entryRelationship>

<!-- If the report is facility-wide, inpatient, NHSN requires additional

observations here, constructed as above but with different codes:

1827-5 Number of MDRO Patient Days

1828-3 Number of MDRO Admissions

1829 Number of MDRO Encounters

1830-9 Number of Patient Days as adjusted for C.Diff reporting

1831-7 Number of Admissions as adjusted for C.Diff reporting

If the report is not facility-wide, NHSN will collect but does not require the

surveillance details shown below. -->

<!-- Number hand hygiene indicated -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation POM -->

<templateId root="2.16.840.1.113883.10.20.5.6.192" />

...

</observation>

</entryRelationship>

<!-- Number hand hygiene performed -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation POM -->

<templateId root="2.16.840.1.113883.10.20.5.6.192" />

...

</observation>

</entryRelationship>

<!-- Number gown and gloves indicated -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation POM -->

...

</observation>

</entryRelationship>

<!-- Number gown and gloves used -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation POM -->

<templateId root="2.16.840.1.113883.10.20.5.6.192" />

...

</observation>

</entryRelationship>

<!-- MRSA was monitored -->

<entryRelationship typeCode="COMP" negationInd="false">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation POM -->

<templateId root="2.16.840.1.113883.10.20.5.6.192" />

...

</observation>

</entryRelationship>

<!-- end of AST for MRSA data -->

</encounter>

Summary Encounter (VAT)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.196 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 1 - US Realm

Table 439: Summary Encounter (VAT) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (VAT)](#S_Summary_Data_Section_VAT) (required) | [Summary Data Observation (VAT)](#E_Summary_Data_Observation_VAT) (required) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. Each datum in a VAT Report is recorded as a Summary Data Observation (VAT). The data requirements at time of publication are shown in a table under the Summary Data Observation template, above. A participant element records the location to which the data pertains. It has three parts: a location id, a location type code, and a scoping entity. The location id has the form <id root=”…” extension=”…”/> representing a location such as ward 9W, or <id root=”…”/> representing the whole facility.

Table 440: Summary Encounter (VAT) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.196) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-22951](#C_86-22951) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [86-22952](#C_86-22952) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-22953](#C_86-22953) |  |
| @root | 1..1 | SHALL |  | [86-22954](#C_86-22954) | 2.16.840.1.113883.10.20.5.6.196 |
| participant | 1..1 | SHALL |  | [86-22955](#C_86-22955) |  |
| @typeCode | 1..1 | SHALL |  | [86-22956](#C_86-22956) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [86-22957](#C_86-22957) |  |
| @classCode | 1..1 | SHALL |  | [86-22958](#C_86-22958) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| entryRelationship | 1..\* | SHALL |  | [86-22962](#C_86-22962) |  |
| @typeCode | 1..1 | SHALL |  | [86-22963](#C_86-22963) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-22964](#C_86-22964) | [Summary Data Observation (VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.195](#E_Summary_Data_Observation_VAT) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-22951).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-22952).
3. SHALL contain exactly one [1..1] templateId (CONF:86-22953) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.196" (CONF:86-22954).
4. SHALL contain exactly one [1..1] participant (CONF:86-22955) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:86-22956).
   2. SHALL contain exactly one [1..1] participantRole (CONF:86-22957).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:86-22958).

The value of @root must be the NHSN assigned Facility OID.  
The value of @extension must be a value registered with NHSN.

* + 1. If recording data from an in-facility location, the participantRole element shall contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 DYNAMIC, recording the type of location (CONF:86-22959).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from the whole facility, the participantRole element shall contain an id element with @root (CONF:86-22960).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from a specialized subset of a facility, the participantRole element shall contain a code element where the value is selected from ValueSet NHSNHealthcareServiceLocationCode 2.16.840.1.113883.13.19 DYNAMIC, recording the type of location, and a scopingEntity element where the value of @classCode is “PLC” and id/@root is present (CONF:86-22961).

1. SHALL contain at least one [1..\*] entryRelationship (CONF:86-22962).
   1. Such entryRelationships SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-22963).
   2. Such entryRelationships SHALL contain exactly one [1..1] [Summary Data Observation (VAT)](#E_Summary_Data_Observation_VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.195) (CONF:86-22964).

Figure 190: Summary Encounter (VAT) Example

<encounter classCode="ENC" moodCode="EVN">

<!-- Summary Encounter (VAT) template -->

<templateId root="2.16.840.1.113883.10.20.5.6.196" />

<!-- the in-facility location ID and type -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<!-- the facility OID scopes the in-facility location ID -->

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 HealthcareServiceLocation"

code="1153-6"

displayName="Outpatient Hemodialysis Clinic" />

</participantRole>

</participant>

<!-- Number of Chronic Hemodialysis Patients, vascular access type is fistula -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (VAT) template -->

<templateId root="2.16.840.1.113883.10.20.5.6.195" />

...

</observation>

</entryRelationship>

...

</encounter>

Summary Encounter Patient Presence (AUP) (V2)

[encounter: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01 (closed)]

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Table 441: Summary Encounter Patient Presence (AUP) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (AUP) (V2)](#S_Summary_Data_Section_AUP_V2) (required) | [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) (required) |

A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. The Summary Encounter Patient Presence (AUP) contains one or more Summary Data Observations (AU/AR). The data requirements at time of publication are shown in a table under the Summary Data Observation (AU/AR) template, above.  
NHSN reporting requires:  
• If the reporting location is a single unit such as a ward, Number of Patient-Present Days, or  
• If the encounter location is facility-wide rather than a single unit, Number of Admissions and Number of Patient-present Days.

Table 442: Summary Encounter Patient Presence (AUP) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| encounter (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1181-22995](#C_1181-22995) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [1181-22996](#C_1181-22996) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1181-22997](#C_1181-22997) |  |
| @root | 1..1 | SHALL |  | [1181-22998](#C_1181-22998) | 2.16.840.1.113883.10.20.5.6.197 |
| @extension | 1..1 | SHALL |  | [1181-30562](#C_1181-30562) | 2015-04-01 |
| participant | 1..1 | SHALL |  | [1181-22999](#C_1181-22999) |  |
| @typeCode | 1..1 | SHALL |  | [1181-23000](#C_1181-23000) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = LOC |
| participantRole | 1..1 | SHALL |  | [1181-23001](#C_1181-23001) |  |
| @classCode | 1..1 | SHALL |  | [1181-23002](#C_1181-23002) | urn:oid:2.16.840.1.113883.5.41 (HL7EntityClass) = SDLOC |
| entryRelationship | 1..\* | SHALL |  | [1181-23006](#C_1181-23006) |  |
| @typeCode | 1..1 | SHALL |  | [1181-23007](#C_1181-23007) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [1181-23008](#C_1181-23008) | [Summary Data Observation (AU/AR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01](#E_Summary_Data_Observation_AUAR) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1181-22995).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1181-22996).
3. SHALL contain exactly one [1..1] templateId (CONF:1181-22997) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.197" (CONF:1181-22998).
   2. SHALL contain exactly one [1..1] @extension="2015-04-01" (CONF:1181-30562).
4. SHALL contain exactly one [1..1] participant (CONF:1181-22999) such that it
   1. SHALL contain exactly one [1..1] @typeCode="LOC" Location (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90 STATIC) (CONF:1181-23000).
   2. SHALL contain exactly one [1..1] participantRole (CONF:1181-23001).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="SDLOC" Service Delivery Location (CodeSystem: HL7EntityClass urn:oid:2.16.840.1.113883.5.41 STATIC) (CONF:1181-23002).

The value of @root must be the NHSN assigned Facility OID.  
The value of @extension must be a value registered with NHSN.

* + 1. If recording data from an in-facility location, the participantRole element shall contain an id element with both @root and @extension, and a code element where the value is selected from ValueSet 2.16.840.1.113883.13.19NHSNHealthcareServiceLocationCode DYNAMIC, recording the type of location (CONF:1181-23003).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from the whole facility, the participantRole element shall contain an id element with @root (CONF:1181-23004).

The value of @root must be the NHSN assigned Facility OID.

* + 1. Or, if recording data from a specialized subset of a facility, the participantRole element shall contain a code element where the value is selected from ValueSet 2.16.840.1.113883.13.19 NHSNHealthcareServiceLocationCode DYNAMIC, recording the type of location, and a scopingEntity element where the value of @classCode is “PLC” and id/@root is present (CONF:1181-23005).

1. SHALL contain at least one [1..\*] entryRelationship (CONF:1181-23006).
   1. Such entryRelationships SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:1181-23007).
   2. Such entryRelationships SHALL contain exactly one [1..1] [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01) (CONF:1181-23008).
2. This Summary Encounter SHALL contain a Summary Data Observation (AU/AR) that records Number of Patient-present Days for the reporting location (CONF:1181-23011).
3. If the reporting location is facility-wide inpatient units, this Summary Encounter SHALL contain a second Summary Data Observation (AU/AR) that records Number of Admissions (CONF:1181-23012).

Figure 191: Summary Encounter Patient Presence (AUP) (V2)

<!-- encounter recording patient presence -->

<encounter classCode="ENC" moodCode="EVN">

<!-- Summary Encounter Patient Presence (AUP) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.197"

extension="2015-04-01" />

<!-- the location ID and type -->

<participant typeCode="LOC">

<participantRole classCode="SDLOC">

<id root="2.16.840.1.113883.3.117.1.1.5.1.1" extension="9W" />

<code codeSystem="2.16.840.1.113883.6.259"

codeSystemName="HL7 Healthcare Service Location Code"

code="1029-8"

displayName="Medical/Surgical Critical Care" />

</participantRole>

</participant>

<!-- report for a single unit: Number of Patient-present Days -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN">

<!-- Summary Data Observation (AU/AP) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.229"

extension="2015-04-01" />

...

</observation>

</entryRelationship>

<!-- if the reporting location is facility-wide inpatient units,

a second observation recording Number of Admissions -->

</encounter>

Suspected Source Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.168 (closed)]

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Table 443: Suspected Source Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Positive Blood Culture Observation (V2)](#E_Positive_Blood_Culture_Observation_V2) (optional) | [Imputability Observation](#E_Imputability_Observation) (required) |

This observation records a suspected source of a finding.  
This observation and its value set are used in an Evidence of Infection (Dialysis) Report. It could be generalized for broader use.

Table 444: Suspected Source Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.168) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21508](#C_86-21508) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21509](#C_86-21509) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21510](#C_86-21510) | false |
| templateId | 1..1 | SHALL |  | [86-28287](#C_86-28287) |  |
| @root | 1..1 | SHALL |  | [86-28288](#C_86-28288) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-21528](#C_86-21528) |  |
| @root | 1..1 | SHALL |  | [86-21529](#C_86-21529) | 2.16.840.1.113883.10.20.5.6.168 |
| id | 1..1 | SHALL |  | [86-21530](#C_86-21530) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22741](#C_86-22741) | NA |
| code | 1..1 | SHALL |  | [86-21511](#C_86-21511) |  |
| @code | 1..1 | SHALL |  | [86-21512](#C_86-21512) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28356](#C_86-28356) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21513](#C_86-21513) |  |
| @code | 1..1 | SHALL |  | [86-21514](#C_86-21514) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21515](#C_86-21515) |  |
| entryRelationship | 1..1 | SHALL |  | [86-21519](#C_86-21519) |  |
| @typeCode | 1..1 | SHALL |  | [86-21520](#C_86-21520) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-21521](#C_86-21521) | [Imputability Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.134](#E_Imputability_Observation) |
| code | 1..1 | SHALL |  | [86-21522](#C_86-21522) |  |
| @code | 1..1 | SHALL | CD | [86-21523](#C_86-21523) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2307-7 |
| value | 1..1 | SHALL |  | [86-21524](#C_86-21524) |  |
| @code | 1..1 | SHALL | CD | [86-21525](#C_86-21525) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 60022001 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21508).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21509).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-21510).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28287) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28288).
6. SHALL contain exactly one [1..1] templateId (CONF:86-21528) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.168" (CONF:86-21529).
7. SHALL contain exactly one [1..1] id (CONF:86-21530).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22741).
8. SHALL contain exactly one [1..1] code (CONF:86-21511).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21512).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28356).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21513).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21514).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21515).
    1. In an Evidence of Infection (Dialysis) report, to represent the suspected source as a code, the value of @code SHALL be selected from ValueSet NHSNSuspectedSourceTypeCode 2.16.840.1.114222.4.11.6008 STATIC 20111215 (CONF:86-21516).
    2. If the suspected source is not listed in Value Set 2.16.840.1.114222.4.11.6008 NHSNSuspectedSourceTypeCode STATIC 20111215, set the value of @nullFlavor to ‘OTH’ (CONF:86-21517).
    3. If the suspected source is uncertain, set the value of @nullFlavor to “NI” (CONF:86-21518).
11. SHALL contain exactly one [1..1] entryRelationship (CONF:86-21519) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" Has component (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21520).
    2. SHALL contain exactly one [1..1] [Imputability Observation](#E_Imputability_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.134) (CONF:86-21521).
       1. This observation SHALL contain exactly one [1..1] code (CONF:86-21522).
          1. This code SHALL contain exactly one [1..1] @code="2307-7" Imputability of positive blood culture to the suspected source (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-21523).
       2. This observation SHALL contain exactly one [1..1] value (CONF:86-21524).
          1. This value SHALL contain exactly one [1..1] @code="60022001" Possible (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-21525).

Table 445: NHSNSuspectedSourceTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSuspectedSourceTypeCode urn:oid:2.16.840.1.114222.4.11.6008  Code System: cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2319-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Vascular access |
| 2303-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Contaminant |

Figure 192: Suspected Source Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Suspected Source of Pathogen templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.168"/>

<id nullFlavor="NA"/>

<code code="ASSERTION"

codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2319-2"

displayName="Vascular access"/>

<!-- Imputability = possible (the "suspected" source) -->

<entryRelationship typeCode="COMP">

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Imputability Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.134"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2307-7"

displayName="Imputability of positive blood culture

to the suspected source"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="60022001"

displayName="Possible"/>

</observation>

</entryRelationship>

</observation>

Transient Patient Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.169 (closed)]

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Table 446: Transient Patient Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Dialysis Patient Observation](#E_Dialysis_Patient_Observation) (required) |  |

This observation records whether the service location submitting the report is the location where the patient is usually seen. It is used in the Evidence of Infection (Dialysis) Report.

When the service location is not the location where the patient is usually seen, set the value of @negationInd to false. When the service location is the location where the patient is usually seen, set the value of @negationInd to true.

Table 447: Transient Patient Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.169) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21451](#C_86-21451) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21452](#C_86-21452) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21453](#C_86-21453) |  |
| templateId | 1..1 | SHALL |  | [86-28289](#C_86-28289) |  |
| @root | 1..1 | SHALL |  | [86-28290](#C_86-28290) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-22035](#C_86-22035) |  |
| @root | 1..1 | SHALL |  | [86-22036](#C_86-22036) | 2.16.840.1.113883.10.20.5.6.169 |
| id | 1..1 | SHALL |  | [86-22737](#C_86-22737) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22738](#C_86-22738) | NA |
| code | 1..1 | SHALL |  | [86-21454](#C_86-21454) |  |
| @code | 1..1 | SHALL |  | [86-21455](#C_86-21455) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28391](#C_86-28391) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21456](#C_86-21456) |  |
| @code | 1..1 | SHALL |  | [86-21457](#C_86-21457) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21458](#C_86-21458) |  |
| @code | 1..1 | SHALL |  | [86-21459](#C_86-21459) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2304-4 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21451).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21452).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-21453).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28289) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28290).
6. SHALL contain exactly one [1..1] templateId (CONF:86-22035) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.169" (CONF:86-22036).
7. SHALL contain exactly one [1..1] id (CONF:86-22737).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22738).
8. SHALL contain exactly one [1..1] code (CONF:86-21454).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21455).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28391).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21456).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21457).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21458).
    1. This value SHALL contain exactly one [1..1] @code="2304-4" Transient Patient (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277 STATIC) (CONF:86-21459).

Figure 193: Transient Patient Observation Example

<!-- Transient Patient Observation -->

<!-- If the patient is a transient patient, not usually seen at the

service location submitting the report, set @negationInd to "true". -->

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Transient Patient Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.169"/>

<id nullFlavor="NA"/>

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2304-4"

displayName="Transient patient"/>

</observation>

Trauma Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.170 (closed)]

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Table 448: Trauma Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (required) |  |

This observation records whether the person had trauma. It is used in reporting the circumstances of a procedure.  
If trauma was involved, set the value of @negationInd to false. If trauma was not involved, set the value of @negationInd to true.

Table 449: Trauma Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.170) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-20922](#C_86-20922) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-20923](#C_86-20923) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-20924](#C_86-20924) |  |
| templateId | 1..\* | SHALL |  | [86-28291](#C_86-28291) |  |
| @root | 1..1 | SHALL |  | [86-28292](#C_86-28292) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..\* | SHALL |  | [86-20927](#C_86-20927) |  |
| @root | 1..1 | SHALL |  | [86-20928](#C_86-20928) | 2.16.840.1.113883.10.20.5.6.170 |
| id | 1..1 | SHALL |  | [86-20929](#C_86-20929) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22735](#C_86-22735) | NA |
| code | 1..1 | SHALL |  | [86-20930](#C_86-20930) |  |
| @code | 1..1 | SHALL | CS | [86-20931](#C_86-20931) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28392](#C_86-28392) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-20932](#C_86-20932) |  |
| @code | 1..1 | SHALL |  | [86-20933](#C_86-20933) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-20934](#C_86-20934) |  |
| @code | 1..1 | SHALL |  | [86-20936](#C_86-20936) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 417746004 |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-20922).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-20923).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-20924).
5. SHALL contain at least one [1..\*] templateId (CONF:86-28291) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28292).
6. SHALL contain at least one [1..\*] templateId (CONF:86-20927) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.170" (CONF:86-20928).
7. SHALL contain exactly one [1..1] id (CONF:86-20929).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22735).
8. SHALL contain exactly one [1..1] code (CONF:86-20930).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-20931).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28392).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-20932).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-20933).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-20934).
    1. This value SHALL contain exactly one [1..1] @code="417746004" Trauma (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-20936).

Figure 194: Trauma Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Trauma Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.170"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

code="417746004"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

displayName="Trauma"/>

</observation>

Type of Antimicrobial Start Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01 (closed)]

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Table 450: Type of Antimicrobial Start Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [IV Antibiotic Start Clinical Statement (V3)](#E_IV_Antibiotic_Start_Clinical_Statemen) (optional) |  |

This observation records whether the antimicrobial start was a new outpatient start or a continuation of an inpatient course.

Table 451: Type of Antimicrobial Start Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [1202-30558](#C_1202-30558) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1202-30559](#C_1202-30559) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1202-30548](#C_1202-30548) |  |
| @root | 1..1 | SHALL |  | [1202-30552](#C_1202-30552) | 2.16.840.1.113883.10.20.5.6.230 |
| @extension | 1..1 | SHALL |  | [1202-30553](#C_1202-30553) | 2015-10-01 |
| code | 1..1 | SHALL |  | [1202-30549](#C_1202-30549) |  |
| @code | 1..1 | SHALL |  | [1202-30554](#C_1202-30554) | 2335-8 |
| @codeSystem | 1..1 | SHALL |  | [1202-30555](#C_1202-30555) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [1202-30551](#C_1202-30551) |  |
| @code | 1..1 | SHALL |  | [1202-30560](#C_1202-30560) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1202-30550](#C_1202-30550) |  |
| @code | 1..1 | SHALL |  | [1202-30556](#C_1202-30556) | urn:oid:2.16.840.1.114222.4.11.7338 (NHSNStartOrContinuation) |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:1202-30558).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1202-30559).
3. SHALL contain exactly one [1..1] templateId (CONF:1202-30548) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.230" (CONF:1202-30552).
   2. SHALL contain exactly one [1..1] @extension="2015-10-01" (CONF:1202-30553).
4. SHALL contain exactly one [1..1] code (CONF:1202-30549).
   1. This code SHALL contain exactly one [1..1] @code="2335-8" New outpatient start or continuation of inpatient course (CONF:1202-30554).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:1202-30555).
5. SHALL contain exactly one [1..1] statusCode (CONF:1202-30551).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1202-30560).
6. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1202-30550).
   1. This value SHALL contain exactly one [1..1] @code, which SHALL be selected from ValueSet [NHSNStartOrContinuation](#NHSNStartOrContinuation) urn:oid:2.16.840.1.114222.4.11.7338 STATIC 2015-06-01 (CONF:1202-30556).

Table 452: NHSNStartOrContinuation

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNStartOrContinuation urn:oid:2.16.840.1.114222.4.11.7338  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 2336-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | New antimicrobial start |
| 2337-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Continuation of antimicrobial |

Figure 195: Type of Antimicrobial Start Observation

<observation classCode="OBS" moodCode="EVN">

<templateId root="2.16.840.1.113883.10.20.5.6.230"

extension="2015-10-01" />

<code codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2335-8"

displayName="New outpatient start or continuation of inpatient course" />

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="2337-4"

displayName="Continuation of antimicrobial" />

</observation>

Urinary Catheter Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.171 (closed)]

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Table 453: Urinary Catheter Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a UTI Report](#S_Infection_Risk_Factors_Section_in_a_U) (required) | [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) (optional)  [History of Object Presence Observation](#E_History_of_Object_Presence_Observatio) (optional) |

This observation records whether or not the person was using a urinary catheter in a UTI report.

If a urinary catheter is present, set the value of @negationInd to false. If the urinary catheter is not present, set the value of @negationInd to true.

Table 454: Urinary Catheter Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.171) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21460](#C_86-21460) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21461](#C_86-21461) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21462](#C_86-21462) |  |
| templateId | 1..1 | SHALL |  | [86-28293](#C_86-28293) |  |
| @root | 1..1 | SHALL |  | [86-28294](#C_86-28294) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-22114](#C_86-22114) |  |
| @root | 1..1 | SHALL |  | [86-22117](#C_86-22117) | 2.16.840.1.113883.10.20.5.6.171 |
| id | 1..1 | SHALL |  | [86-22115](#C_86-22115) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22727](#C_86-22727) | NA |
| code | 1..1 | SHALL |  | [86-21463](#C_86-21463) |  |
| @code | 1..1 | SHALL | CS | [86-22116](#C_86-22116) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28393](#C_86-28393) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [86-21465](#C_86-21465) |  |
| @code | 1..1 | SHALL |  | [86-21466](#C_86-21466) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-21467](#C_86-21467) |  |
| @code | 1..1 | SHALL |  | [86-21468](#C_86-21468) | 3191-4 |
| @codeSystem | 1..1 | SHALL |  | [86-28394](#C_86-28394) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| entryRelationship | 0..\* | MAY |  | [86-21469](#C_86-21469) |  |
| @typeCode | 1..1 | SHALL |  | [86-21470](#C_86-21470) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| @inversionInd | 1..1 | SHALL |  | [86-21471](#C_86-21471) | true |
| procedure | 1..1 | SHALL |  | [86-21472](#C_86-21472) | [Device Insertion Time and Location Procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122](#E_Device_Insertion_Time_and_Location_Pr) |
| entryRelationship | 0..1 | MAY |  | [86-22728](#C_86-22728) |  |
| @typeCode | 1..1 | SHALL |  | [86-22729](#C_86-22729) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-22730](#C_86-22730) | [History of Object Presence Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.132](#E_History_of_Object_Presence_Observatio) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21460).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21461).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-21462).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28293) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28294).
6. SHALL contain exactly one [1..1] templateId (CONF:86-22114) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.171" (CONF:86-22117).
7. SHALL contain exactly one [1..1] id (CONF:86-22115).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22727).
8. SHALL contain exactly one [1..1] code (CONF:86-21463).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-22116).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28393).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-21465).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21466).
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:86-21467).
    1. This value SHALL contain exactly one [1..1] @code="3191-4" Urinary catheter present (CONF:86-21468).
    2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.277" (CodeSystem: cdcNHSN urn:oid:2.16.840.1.113883.6.277) (CONF:86-28394).
11. MAY contain zero or more [0..\*] entryRelationship (CONF:86-21469) such that it
    1. SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21470).
    2. SHALL contain exactly one [1..1] @inversionInd="true" (CONF:86-21471).
    3. SHALL contain exactly one [1..1] [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.122) (CONF:86-21472).
12. MAY contain zero or one [0..1] entryRelationship (CONF:86-22728) such that it
    1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:86-22729).
    2. SHALL contain exactly one [1..1] [History of Object Presence Observation](#E_History_of_Object_Presence_Observatio) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.132) (CONF:86-22730).
    3. If a urinary catheter is not present (@negationInd="true"), this entryRelationship SHALL be present (CONF:86-22731).

Figure 196: Urinary Catheter Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId. -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Urinary Catheter Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.171"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4"

code="ASSERTION"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="3191-4"

displayName="Urinary Catheter Present"/>

<entryRelationship typeCode="REFR"

<procedure classCode="PROC" moodCode="EVN">

<!-- C-CDA Procedure Activity Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- HAI Device Insertion Time and Location Procedure templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.122" />

...

</entryRelationship>

</observation>

Vaccination Type Observation

[observation: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01 (closed)]

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Table 455: Vaccination Type Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (HP-FLU)](#S_Summary_Data_Section_HPFLU) (required) |  |

This clinical statement represents the type of vaccination administered.

Table 456: Vaccination Type Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3311-61](#C_3311-61) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [3311-69](#C_3311-69) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [3311-46](#C_3311-46) |  |
| @root | 1..1 | SHALL |  | [3311-59](#C_3311-59) | 2.16.840.1.113883.10.20.5.6.242 |
| @extension | 1..1 | SHALL |  | [3311-60](#C_3311-60) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-47](#C_3311-47) |  |
| @code | 1..1 | SHALL |  | [3311-64](#C_3311-64) | 30956-7 |
| @codeSystem | 1..1 | SHALL |  | [3311-65](#C_3311-65) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| value | 1..1 | SHALL | CD | [3311-49](#C_3311-49) |  |
| @code | 1..1 | SHALL |  | [3311-70](#C_3311-70) | 6142004 |
| @codeSystem | 1..1 | SHALL |  | [3311-71](#C_3311-71) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| qualifier | 1..1 | SHALL |  | [3311-50](#C_3311-50) |  |
| name | 1..1 | SHALL |  | [3311-51](#C_3311-51) |  |
| @code | 1..1 | SHALL |  | [3311-66](#C_3311-66) | 260837004 |
| @codeSystem | 1..1 | SHALL |  | [3311-67](#C_3311-67) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| value | 1..1 | SHALL |  | [3311-68](#C_3311-68) |  |
| @code | 1..1 | SHALL |  | [3311-72](#C_3311-72) | 21864008 |
| @codeSystem | 1..1 | SHALL |  | [3311-73](#C_3311-73) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6) (CONF:3311-61).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:3311-69).
3. SHALL contain exactly one [1..1] templateId (CONF:3311-46) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.242" (CONF:3311-59).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-60).
4. SHALL contain exactly one [1..1] code (CONF:3311-47).
   1. This code SHALL contain exactly one [1..1] @code="30956-7" Type [Identifier] Vaccine (CONF:3311-64).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CodeSystem: LOINC urn:oid:2.16.840.1.113883.6.1) (CONF:3311-65).
5. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:3311-49).  
   Note: Vaccination type (defaults to Influenza)
   1. This value SHALL contain exactly one [1..1] @code="6142004" Influenza (CONF:3311-70).
   2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-71).
   3. This value SHALL contain exactly one [1..1] qualifier (CONF:3311-50) such that it
      1. SHALL contain exactly one [1..1] name (CONF:3311-51).
         1. This name SHALL contain exactly one [1..1] @code="260837004" subtype (CONF:3311-66).
         2. This name SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-67).
      2. SHALL contain exactly one [1..1] value (CONF:3311-68).  
         Note: Influenza subtype
         1. This value SHALL contain exactly one [1..1] @code="21864008" Seasonal (CONF:3311-72).
         2. This value SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-73).

Figure 197: Vaccination Type Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- [HAI R3D2] Vaccination Type Observation -->

<templateId root="2.16.840.1.113883.10.20.5.6.242" extension="2017-04-01" />

<code code="30956-7"

displayName="Type [Identifier] Vaccine"

codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC" />

<value xsi:type="CD" code="6142004"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Influenza">

<qualifier>

<!-- name is how value "qualifies" the code - Seasonal is a subtype of Influenza -->

<name code="260837004"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="subtype" />

<value code="21864008"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Seasonal" />

</qualifier>

</value>

</observation>

Vascular Access Type Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.172 (closed)]

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Table 457: Vascular Access Type Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)](#S_Risk_Factors_Section_in_an_Evidence_o) (required) | [Buttonhole Cannulation Observation](#E_Buttonhole_Cannulation_Observation) (optional) |

This observation records the presence or absence of a type of vascular access. This clinical statement is used in the Risk Factors Section in an Evidence of Infection (Dialysis) Report.

NHSN protocol requires one such observation for each value in the NHSNVascularAccessType value set, and an additional such observation that records whether any other type of vascular access was present.

The value of effectiveTime/low represents the access placement date. NHSN protocol specifies that this date be recorded as year and month. CDA requires that the year be recorded as four digits: the form of an access placement date will be yyyymm.

Table 458: Vascular Access Type Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.172) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-21474](#C_86-21474) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-21475](#C_86-21475) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-21476](#C_86-21476) |  |
| templateId | 1..1 | SHALL |  | [86-28295](#C_86-28295) |  |
| @root | 1..1 | SHALL |  | [86-28296](#C_86-28296) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-22037](#C_86-22037) |  |
| @root | 1..1 | SHALL |  | [86-22038](#C_86-22038) | 2.16.840.1.113883.10.20.5.6.172 |
| id | 1..1 | SHALL |  | [86-22721](#C_86-22721) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22722](#C_86-22722) |  |
| code | 1..1 | SHALL |  | [86-21477](#C_86-21477) |  |
| @code | 1..1 | SHALL |  | [86-21478](#C_86-21478) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [86-28395](#C_86-28395) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| text | 0..1 | MAY |  | [86-21479](#C_86-21479) |  |
| statusCode | 1..1 | SHALL |  | [86-21481](#C_86-21481) |  |
| @code | 1..1 | SHALL |  | [86-21482](#C_86-21482) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-21483](#C_86-21483) |  |
| low | 1..1 | SHALL |  | [86-21484](#C_86-21484) |  |
| value | 1..1 | SHALL |  | [86-21487](#C_86-21487) |  |
| entryRelationship | 0..1 | MAY |  | [86-21490](#C_86-21490) |  |
| @typeCode | 1..1 | SHALL |  | [86-21491](#C_86-21491) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [86-21492](#C_86-21492) | [Buttonhole Cannulation Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.115](#E_Buttonhole_Cannulation_Observation) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-21474).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-21475).
4. SHALL contain exactly one [1..1] @negationInd (CONF:86-21476).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28295) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28296).
6. SHALL contain exactly one [1..1] templateId (CONF:86-22037) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.172" (CONF:86-22038).
7. SHALL contain exactly one [1..1] id (CONF:86-22721).
   1. This id SHALL contain exactly one [1..1] @nullFlavor (CONF:86-22722).
8. SHALL contain exactly one [1..1] code (CONF:86-21477).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:86-21478).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.5.4" (CodeSystem: HL7ActCode urn:oid:2.16.840.1.113883.5.4) (CONF:86-28395).
9. MAY contain zero or one [0..1] text (CONF:86-21479).
   1. The text element is to be used for additional information commenting on the vascular access type (CONF:86-21480).
10. SHALL contain exactly one [1..1] statusCode (CONF:86-21481).
    1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-21482).
11. SHALL contain exactly one [1..1] effectiveTime (CONF:86-21483).
    1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:86-21484).
       1. When the access placement date is not known, the value of @nullFlavor SHALL be NI (no information) (CONF:86-21485).
       2. When the access placement date is known, it SHALL be recorded as year and month (yyyymm) (CONF:86-21486).
12. SHALL contain exactly one [1..1] value (CONF:86-21487).
    1. To record the presence or absence of a vascular access type that is listed in the NHSN Vascular Access Type value set, the value of @code SHALL be selected from ValueSet 2.16.840.1.114222.4.11.6007 NHSNVascularAccessTypeCode STATIC 20120808 (CONF:86-21488).
    2. To record that another type of vascular access is present, set the value of @nullFlavor to OTH (other) (CONF:86-21489).

If the vascular access type is “Surgically constructed arteriovenous fistula” (SNOMED CT 438503005), this observation must contain the following entryRelationship

1. MAY contain zero or one [0..1] entryRelationship (CONF:86-21490) such that it
   1. SHALL contain exactly one [1..1] @typeCode="COMP" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002 STATIC) (CONF:86-21491).
   2. SHALL contain exactly one [1..1] [Buttonhole Cannulation Observation](#E_Buttonhole_Cannulation_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.115) (CONF:86-21492).

Table 459: NHSNVascularAccessTypeCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNVascularAccessTypeCode urn:oid:2.16.840.1.114222.4.11.6007  Code System: SNOMED CT 2.16.840.1.113883.6.96 or cdcNHSN 2.16.840.1.113883.6.277  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 438503005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Surgically constructed arteriovenous fistula |
| 439218000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Surgically constructed arteriovenous graft |
| 1117-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Tunneled central line, dialysis |
| 1119-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Non-tunneled central line, dialysis |
| 1969-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Catheter-graft hybrid |

Figure 198: Vascular Access Type Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Vascular Access Type Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.172"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION"/>

<statusCode code="completed"/>

<!-- Access placement date; may be unknown @nullFlavor="NI" -->

<effectiveTime>

<low value="200708"/>

</effectiveTime>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

code="438503005"

displayName="Surgically constructed arteriovenous fistula"/>

<!-- If a fistula, specify whether buttonhole cannulation is used -->

<entryRelationship typeCode=”COMP”>

<observation classCode=”OBS” moodCode=”EVN”>

<!-- C-CDA Procedure Activity Observation -->

<templateId root="2.16.840.1.113883.10.20.22.4.13"/>

<!-- HAI Buttonhole Cannulation Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.115"/>

...

</observation>

</entryRelationship>

</observation>

Ventricular Assist Device (VAD) Present

[procedure: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01 (closed)]

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Table 460: Ventricular Assist Device (VAD) Present Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) (required) |  |

This procedure represents whether or not a ventricular assist device is present. The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the ventricular assist device is unknown. The ventricular assist device is represented by the participant.

If a ventricular assist device was present, set the value of @negationInd to false. If a ventricular assist device was not present, set the value of @negationInd to true.

Table 461: Ventricular Assist Device (VAD) Present Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| procedure (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01) | | | | | |
| @classCode | 1..1 | SHALL |  | [3311-226](#C_3311-226) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [3311-227](#C_3311-227) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [3311-228](#C_3311-228) |  |
| templateId | 1..1 | SHALL |  | [3311-218](#C_3311-218) |  |
| @root | 1..1 | SHALL |  | [3311-224](#C_3311-224) | 2.16.840.1.113883.10.20.5.6.247 |
| @extension | 1..1 | SHALL |  | [3311-225](#C_3311-225) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-215](#C_3311-215) |  |
| @nullFlavor | 1..1 | SHALL |  | [3311-28443](#C_3311-28443) | urn:oid:2.16.840.1.113883.5.1008 (HL7NullFlavor) = UNK |
| statusCode | 1..1 | SHALL |  | [3311-216](#C_3311-216) |  |
| @code | 1..1 | SHALL |  | [3311-221](#C_3311-221) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| participant | 0..\* | MAY |  | [3311-28445](#C_3311-28445) |  |
| @typeCode | 1..1 | SHALL |  | [3311-28447](#C_3311-28447) | urn:oid:2.16.840.1.113883.5.90 (HL7ParticipationType) = DEV |
| participantRole | 1..1 | SHALL |  | [3311-28446](#C_3311-28446) |  |
| @classCode | 1..1 | SHALL |  | [3311-28448](#C_3311-28448) | urn:oid:2.16.840.1.113883.5.110 (HL7RoleClass) = MANU |
| playingDevice | 1..1 | SHALL |  | [3311-28449](#C_3311-28449) |  |
| code | 1..1 | SHALL |  | [3311-28450](#C_3311-28450) |  |
| @code | 1..1 | SHALL |  | [3311-28451](#C_3311-28451) | 360064003 |
| @codeSystem | 1..1 | SHALL |  | [3311-28452](#C_3311-28452) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |

1. SHALL contain exactly one [1..1] @classCode="PROC" Procedure (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:3311-226).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:3311-227).

If a ventricular assist device (VAD) was present, set the value of @negationInd to false. If a ventricular assist device (VAD) was not present set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:3311-228).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-218) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.247" (CONF:3311-224).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-225).

The code for the procedure is represented with nullFlavor="UNK" as the procedure to implant the ventricular assist device is unknown.

1. SHALL contain exactly one [1..1] code (CONF:3311-215).
   1. This code SHALL contain exactly one [1..1] @nullFlavor="UNK" Unknown (CodeSystem: HL7NullFlavor urn:oid:2.16.840.1.113883.5.1008) (CONF:3311-28443).
2. SHALL contain exactly one [1..1] statusCode (CONF:3311-216).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:3311-221).

The ventricular assist device is represented by the participant.

1. MAY contain zero or more [0..\*] participant (CONF:3311-28445).
   1. The participant, if present, SHALL contain exactly one [1..1] @typeCode="DEV" Device (CodeSystem: HL7ParticipationType urn:oid:2.16.840.1.113883.5.90) (CONF:3311-28447).
   2. The participant, if present, SHALL contain exactly one [1..1] participantRole (CONF:3311-28446).
      1. This participantRole SHALL contain exactly one [1..1] @classCode="MANU" Manufactured product (CodeSystem: HL7RoleClass urn:oid:2.16.840.1.113883.5.110) (CONF:3311-28448).
      2. This participantRole SHALL contain exactly one [1..1] playingDevice (CONF:3311-28449).
         1. This playingDevice SHALL contain exactly one [1..1] code (CONF:3311-28450).
            1. This code SHALL contain exactly one [1..1] @code="360064003" Ventricular assist device (CONF:3311-28451).
            2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.96" (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96) (CONF:3311-28452).

Figure 199: Ventricular Assist Device (VAD) Present Example

<procedure classCode="PROC" moodCode="EVN" negationInd="false">

<!-- [HAI R3D2] Ventricular Assist Device (VAD) Present -->

<templateId root="2.16.840.1.113883.10.20.5.6.247" extension="2017-04-01" />

<code nullFlavor="UNK" />

<statusCode code="completed" />

<participant typeCode="DEV">

<participantRole classCode="MANU">

<playingDevice>

<code code="360064003"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Ventricular assist device" />

</playingDevice>

</participantRole>

</participant>

</procedure>

Weight Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.173 (closed)]

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Table 462: Weight Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) (required) |  |

This observation records a body weight. NHSN protocol requires that the value be an integer.

Table 463: Weight Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.173) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19702](#C_86-19702) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19703](#C_86-19703) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [86-19704](#C_86-19704) | false |
| templateId | 1..1 | SHALL |  | [86-28297](#C_86-28297) |  |
| @root | 1..1 | SHALL |  | [86-28298](#C_86-28298) | 2.16.840.1.113883.10.20.22.4.27 |
| templateId | 1..1 | SHALL |  | [86-19712](#C_86-19712) |  |
| @root | 1..1 | SHALL |  | [86-19714](#C_86-19714) | 2.16.840.1.113883.10.20.5.6.173 |
| id | 1..1 | SHALL |  | [86-19897](#C_86-19897) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22718](#C_86-22718) | NA |
| code | 1..1 | SHALL |  | [86-19705](#C_86-19705) |  |
| @code | 1..1 | SHALL |  | [86-19706](#C_86-19706) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 27113001 |
| statusCode | 1..1 | SHALL |  | [86-19707](#C_86-19707) |  |
| @code | 1..1 | SHALL |  | [86-19708](#C_86-19708) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [86-19898](#C_86-19898) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22719](#C_86-22719) | NA |
| value | 1..1 | SHALL | PQ | [86-19709](#C_86-19709) |  |
| @value | 1..1 | SHALL |  | [86-19710](#C_86-19710) |  |
| @unit | 1..1 | SHALL |  | [86-28399](#C_86-28399) |  |

1. Conforms to Vital Sign Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.27).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19702).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19703).
4. SHALL contain exactly one [1..1] @negationInd="false" (CONF:86-19704).
5. SHALL contain exactly one [1..1] templateId (CONF:86-28297) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.27" (CONF:86-28298).
6. SHALL contain exactly one [1..1] templateId (CONF:86-19712) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.173" (CONF:86-19714).
7. SHALL contain exactly one [1..1] id (CONF:86-19897).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22718).
8. SHALL contain exactly one [1..1] code (CONF:86-19705).
   1. This code SHALL contain exactly one [1..1] @code="27113001" Body weight (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-19706).
9. SHALL contain exactly one [1..1] statusCode (CONF:86-19707).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19708).
10. SHALL contain exactly one [1..1] effectiveTime (CONF:86-19898).
    1. This effectiveTime SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22719).
11. SHALL contain exactly one [1..1] value with @xsi:type="PQ" (CONF:86-19709).
    1. This value SHALL contain exactly one [1..1] @value (CONF:86-19710).
       1. The value of @value SHALL be a non-negative real number representing the body weight in terms of the units specified in @unit (CONF:86-28400).
    2. This value SHALL contain exactly one [1..1] @unit (CONF:86-28399).

Figure 200: Weight Observation Example

<observation classCode="OBS" moodCode="EVN" negationInd="false">

<!-- C-CDA Vital Sign Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.27"/>

<!-- HAI Weight Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.173"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED"

code="27113001"

displayName="Body Weight"/>

<statusCode code="completed"/>

<effectiveTime nullFlavor="NA"/>

<value xsi:type="PQ" value="65" unit="kg"/>

</observation>

Wound Class Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.174 (closed)]

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Table 464: Wound Class Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Procedure Risk Factors Clinical Statement in a Procedure Report](#E_Procedure_Risk_Factors_Clinical_State) (required) |  |

NHSN patient safety protocol on this topic is an adaptation of (not a change to) the American College of Surgeons (ACoS) definitions, which are the definitions used by SNOMED. Thus, SNOMED wound-class codes are appropriate for use with this observation.

Table 465: Wound Class Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.174) | | | | | |
| @classCode | 1..1 | SHALL |  | [86-19679](#C_86-19679) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [86-19680](#C_86-19680) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [86-28299](#C_86-28299) |  |
| @root | 1..1 | SHALL |  | [86-28300](#C_86-28300) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [86-19689](#C_86-19689) |  |
| @root | 1..1 | SHALL |  | [86-19690](#C_86-19690) | 2.16.840.1.113883.10.20.5.6.174 |
| id | 1..1 | SHALL |  | [86-19691](#C_86-19691) |  |
| @nullFlavor | 1..1 | SHALL |  | [86-22717](#C_86-22717) | NA |
| code | 1..1 | SHALL |  | [86-19681](#C_86-19681) |  |
| @code | 1..1 | SHALL |  | [86-19682](#C_86-19682) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 420089007 |
| statusCode | 1..1 | SHALL |  | [86-19683](#C_86-19683) |  |
| @code | 1..1 | SHALL |  | [86-19684](#C_86-19684) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [86-19685](#C_86-19685) | urn:oid:2.16.840.1.113883.13.9 (NHSNWoundClassCode) |

1. Conforms to Problem Observation template (identifier: urn:oid:2.16.840.1.113883.10.20.22.4.4).
2. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:86-19679).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:86-19680).
4. SHALL contain exactly one [1..1] templateId (CONF:86-28299) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:86-28300).
5. SHALL contain exactly one [1..1] templateId (CONF:86-19689) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.174" (CONF:86-19690).
6. SHALL contain exactly one [1..1] id (CONF:86-19691).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:86-22717).
7. SHALL contain exactly one [1..1] code (CONF:86-19681).
   1. This code SHALL contain exactly one [1..1] @code="420089007" CDC Wound Classification Category (CodeSystem: SNOMED CT urn:oid:2.16.840.1.113883.6.96 STATIC) (CONF:86-19682).
8. SHALL contain exactly one [1..1] statusCode (CONF:86-19683).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14 STATIC) (CONF:86-19684).
9. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNWoundClassCode](#NHSNWoundClassCode) urn:oid:2.16.840.1.113883.13.9 STATIC 2008-01-30 (CONF:86-19685).

Table 466: NHSNWoundClassCode

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNWoundClassCode urn:oid:2.16.840.1.113883.13.9  Code System: SNOMED CT 2.16.840.1.113883.6.96  A full listing of codes can be found in the hai\_voc.xls file provided with this package. | | | |
| Code | Code System | Code System OID | Print Name |
| 418780004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Class I/Clean (Clean) |
| 418115006 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Class II/Clean Contaminated (Clean-contaminated) |
| 419877002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Class III/Contaminated (Contaminated) |
| 418422005 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Class IV/Dirty Infected (Dirty) |

Figure 201: Wound Class Observation Example

<observation classCode="OBS" moodCode="EVN">

<!-- C-CDA Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- HAI Wound Class Observation templateID -->

<templateId root="2.16.840.1.113883.10.20.5.6.174"/>

<id nullFlavor="NA"/>

<code codeSystem="2.16.840.1.113883.6.96"

code="420089007"

displayName="Wound Classification Category"/>

<statusCode code="completed"/>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

code="418115006"

displayName="CDC Wound Class II/Clean Contaminated"/>

</observation>

# Template Ids in This Guide

Table 467: Template List

| Template Title | Template Type | templateId |
| --- | --- | --- |
| [Antimicrobial Resistance Option (ARO) Summary Report (V2)](#D_Antimicrobial_Resistance_Option_ARO_S) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.46:2015-04-01 |
| [Antimicrobial Use (AUP) Summary Report (V2)](#D_Antimicrobial_Use_AUP_Summary_Report_) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01 |
| [HAI AUR Antimicrobial Resistance Option (ARO) Report (V4)](#D_HAI_AUR_Antimicrobial_Resistance_Opti) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.31:2016-08-01 |
| [HAI Bloodstream Infection Report (BSI) (V3)](#D_HAI_BSI_Rep_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.32:2018-04-01 |
| [HAI Central-Line Insertion Practice Numerator Report (V2)](#D_HAI_CentralLine_Insertion_Practice_Nu) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.36:2014-12-01 |
| [HAI Evidence of Infection (Dialysis) Report (V5)](#D_HAI_Evidence_of_Infection_Dialysis_Re) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.37:2016-08-01 |
| [HAI Laboratory-Identified Organism (LIO) Report (V2)](#D_HAI_LaboratoryIdentified_Organism_LIO) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.38:2014-12-01 |
| HAI Outpatient Procedure Component (OPC) Event Report (RETIRED) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.47:2018-04-01 |
| HAI Outpatient Procedure Component (OPC) Summary Report (RETIRED) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.48:2018-04-01 |
| [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) | document | urn:oid:2.16.840.1.113883.10.20.5.4.28 |
| [HAI Procedure Denominator Report (V2)](#D_HAI_Procedure_Denominator_Report_V2) | document | urn:oid:2.16.840.1.113883.10.20.5.35.2 |
| [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) | document | urn:oid:2.16.840.1.113883.10.20.5.4.27 |
| [HAI Surgical Site Infection Report (SSI) (V2)](#D_HAI_Surgical_Site_Infection_Report_V2) | document | urn:oid:2.16.840.1.113883.10.20.5.33.2 |
| [HAI Urinary Tract Infection Numerator Report (UTI)](#D_HAI_Urinary_Tract_Infection_Numerator) | document | urn:oid:2.16.840.1.113883.10.20.5.34 |
| [Healthcare Associated Infection Report](#D_Healthcare_Associated_Infection_Repor) | document | urn:oid:2.16.840.1.113883.10.20.5.4.25 |
| [Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report](#D_Healthcare_Personnel_Influenza_Vaccin) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01 |
| [Hemovigilance (HV) Summary Report (V2)](#D_Hemovigilance_HV_Summary_Report_V2) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.49:2016-08-01 |
| [Intensive Care Unit (ICU) Summary Report (V3)](#D_Intensive_Care_Unit_ICU_Summary_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01 |
| [Late Onset Sepsis/Meningitis Event (LOS) Report](#D_Late_Onset_SepsisMeningitis_Event_LOS) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.53:2018-04-01 |
| [Neonatal Intensive Care Unit (NICU) Summary Report (V3)](#D_Neonatal_Intensive_Care_Unit_NICU_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01 |
| [Prevention Process and Outcome Measures (POM) Summary Report (V3)](#D_Prevention_Process_and_Outcome_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.43:2018-04-01 |
| [Specialty Care Area (SCA) Summary Report (V3)](#D_Specialty_Care_Area_SCA_Summary_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01 |
| [Vascular Access Type Report (VAT) Summary Report (V3)](#D_Vascular_Access_Type_Report_VAT_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01 |
| [Ventilator Associated Event (VAE) Report](#D_Ventilator_Associated_Event_VAE_Repor) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.51:2017-04-01 |
| [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2016-08-01 |
| [Encounters Section in a LIO Report (V2)](#S_Encounters_Section_in_a_LIO_Report_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01 |
| [Findings Section in a LIO Report (V2)](#S_Findings_Section_in_a_LIO_Report_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01 |
| [Findings Section in an ARO Report (V3)](#S_Findings_Section_in_an_ARO_Report_V3) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2016-08-01 |
| [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) | section | urn:oid:2.16.840.1.113883.10.20.5.5.45 |
| Findings Section in an OPC Report (RETIRED) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.55:2018-04-01 |
| [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) | section | urn:oid:2.16.840.1.113883.10.20.5.4.26 |
| [Infection Details in Late Onset Sepsis Report](#S_Infection_Details_in_Late_Onset_Sepsi) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01 |
| [Infection Details Section in a BSI Report](#S_Infection_Details_Section_in_a_BSI_Re) | section | urn:oid:2.16.840.1.113883.10.20.5.5.38 |
| [Infection Details Section in a UTI Report](#S_Infection_Details_Section_in_a_UTI_Re) | section | urn:oid:2.16.840.1.113883.10.20.5.5.40 |
| [Infection Details Section in a VAE Report](#S_Infection_Details_Section_in_a_VAE_Re) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01 |
| [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) | section | urn:oid:2.16.840.1.113883.10.20.5.5.39.2 |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01 |
| [Infection Risk Factors Section in a CLIP Report (V2)](#S_Infection_Risk_Factors_Section_in_a_C) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01 |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) | section | urn:oid:2.16.840.1.113883.10.20.5.5.35 |
| [Infection Risk Factors Section in a UTI Report](#S_Infection_Risk_Factors_Section_in_a_U) | section | urn:oid:2.16.840.1.113883.10.20.5.5.36 |
| [NHSN Comment Section](#S_NHSN_Comment_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01 |
| Other Event Details Section (RETIRED) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.54:2018-04-01 |
| [Procedure Details Section in a CLIP Report](#S_Procedure_Details_Section_in_a_CLIP_R) | section | urn:oid:2.16.840.1.113883.10.20.5.5.42 |
| [Procedure Details Section in a Procedure Report (V2)](#Procedure_Details_Section_in_a_Procedur) | section | urn:oid:2.16.840.1.113883.10.20.5.5.43.2 |
| [Report No Events Section](#S_Report_No_Events_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01 |
| [Risk Factors Section (LOS/Men)](#S_Risk_Factors_Section_LOSMen) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2018-04-01 |
| [Risk Factors Section in a VAE Report](#S_Risk_Factors_Section_in_a_VAE_Report) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01 |
| [Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)](#S_Risk_Factors_Section_in_an_Evidence_o) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2015-10-01 |
| [Summary Data Section](#S_Summary_Data_Section) | section | urn:oid:2.16.840.1.113883.10.20.5.5.47 |
| [Summary Data Section (ARO) (V2)](#S_Summary_Data_Section_ARO_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2015-04-01 |
| [Summary Data Section (AUP) (V2)](#S_Summary_Data_Section_AUP_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01 |
| [Summary Data Section (HP-FLU)](#S_Summary_Data_Section_HPFLU) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01 |
| [Summary Data Section (HV) (V2)](#S_Summary_Data_Section_HV_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01 |
| [Summary Data Section (NICU) (V2)](#S_Summary_Data_Section_NICU_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01 |
| Summary Data Section (OPC) (RETIRED) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.56:2018-04-01 |
| [Summary Data Section (POM) (V2)](#S_Summary_Data_Section_POM_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2014-12-01 |
| [Summary Data Section (VAT)](#S_Summary_Data_Section_VAT) | section | urn:oid:2.16.840.1.113883.10.20.5.5.50 |
| Surgical Site Infection Details Section in an OPC Report (RETIRED) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.53:2018-04-01 |
| [Anesthesia Administration Clinical Statement](#E_Anesthesia_Administration_Clinical_St) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.112 |
| [Antimicrobial Coated Catheter Used Observation](#E_Antimicrobial_Coated_Catheter_Used_Ob) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01 |
| [Antimicrobial Susceptibility Antibiotic](#E_Antimicrobial_Susceptibility_Antibiot) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.176 |
| [Antimicrobial Susceptibility Final Interpretation Result](#E_Antimicrobial_Susceptibility_Final_In) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.175 |
| [Antimicrobial Susceptibility Isolate Participant](#E_Antimicrobial_Susceptibility_Isolate_) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.202 |
| [Antimicrobial Susceptibility Result Observation (V3)](#E_Antimicrobial_Susceptibility_Res_Obs) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01 |
| [Antimicrobial Susceptibility Result Organizer (V3)](#E_Antimicrobial_Susceptibility_Result_O) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01 |
| [Antimicrobial Susceptibility Tests Organizer (V3)](#E_Antimicrobial_Susceptibility_Tests_Or) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01 |
| [APRV or Related at Time of VAE Observation](#E_APRV_or_Related_at_Time_of_VAE_Observ) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01 |
| [ARO Staph Aureus Specific Tests Organizer](#E_ARO_Staph_Aureus_Specific_Tests_Organ) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.190 |
| [ARO Staph Aureus Specific Tests Result Observation](#E_ARO_Staph_Aureus_Specific_Tests_Resul) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.189 |
| [ASA Class Observation](#E_ASA_Class_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.113 |
| [Bacterial Isolate Tested for Carbapenemase Observation](#E_Bacterial_Isolate_Tested_for_Carbapen) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01 |
| [Blood Collection Location](#Blood_Collection_Location) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01 |
| [Blood Product Usage Summary Observation (V2)](#E_Blood_Product_Usage_Summary_Observati) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01 |
| [Blood Sample Collected for Culture Observation](#E_Blood_Sample_Collected_for_Culture_Ob) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01 |
| [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.114 |
| [Buttonhole Cannulation Observation](#E_Buttonhole_Cannulation_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.115 |
| [Carbapenemase Test Observation](#E_Carbapenemase_Test_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01 |
| [Carbapenemase Test Organizer](#E_Carbapenemase_Test_Organizer) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01 |
| [Carbapenemase Type Identified Observation](#E_Carbapenemase_Type_Identified_Observa) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01 |
| [Central-Line Insertion Practice Clinical Statement (V2)](#E_CentralLine_Insertion_Practice_Clinic) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01 |
| [Central-Line Insertion Preparation Organizer (V2)](#E_CentralLine_Insertion_Preparation_Org) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01 |
| [Closure Technique Procedure](#E_Closure_Technique_Procedure) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.117 |
| [Contraindicated Observation (V2)](#E_Contraindicated_Observation_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01 |
| [Contraindication Type Observation](#E_Contraindication_Type_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01 |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.180 |
| [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.119 |
| [Death Observation](#E_Death_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.120 |
| [Death Observation in an Evidence of Infection (Dialysis) Report](#E_Death_Observation_in_an_Evidence_of_I) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.121 |
| [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.122 |
| [Diabetes Mellitus Observation](#E_Diabetes_Mellitus_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.123 |
| [Dialysis Clinic Admission Clinical Statement](#E_Dialysis_Clinic_Admission_Clinical_St) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.124 |
| [Dialysis Patient Observation](#E_Dialysis_Patient_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.125 |
| [Dialyzer Reused Observation](#Dialyzer_Reused_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Duration of Labor Observation](#E_Duration_of_Labor_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.127 |
| [Endoscope Used Clinical Statement](#E_Endoscope_Used_Clinical_Statement) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.128 |
| [Epidermolysis Bullosa Observation](#E_Epidermolysis_Bullosa_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01 |
| [Extracorporeal Life Support Present](#E_Extracorporeal_Life_Support_Present) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01 |
| [Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)](#E_Facility_Transfuses_Blood_Products_Tr) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Gestational Age at Birth Observation](#E_Gestational_Age_at_Birth_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2018-04-01 |
| [Guidewire Used Clinical Statement](#E_Guidewire_Used_Clinical_Statement) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.129 |
| [Hand Hygiene Performed Clinical Statement](#E_Hand_Hygiene_Performed_Clinical_State) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.130 |
| [Height Observation](#E_Height_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.131 |
| [Hemodialysis Catheter Present](#E_Hemodialysis_Catheter_Present) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01 |
| [History of Object Presence Observation](#E_History_of_Object_Presence_Observatio) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.132 |
| [Hospital Admission Clinical Statement](#E_Hospital_Admission_Clinical_Statement) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.133 |
| [Imputability Observation](#E_Imputability_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.134 |
| [Inborn/Outborn Observation](#E_InbornOutborn_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01 |
| [Infection Condition Observation](#E_Infection_Condition_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.135 |
| [Infection Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.136 |
| Infection First Reported Source Observation (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.207:2018-04-01 |
| [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2016-08-01 |
| [Infection Present at the Time of Surgery Observation](#E_Infection_Present_at_the_Time_of_Surg) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.205 |
| [Infection Risk Factors Measurement Observation](#E_Infection_Risk_Factors_Measurement_Ob) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.137 |
| [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.138 |
| [Infection-Type Observation](#E_InfectionType_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.139 |
| [ISBT Product Code Summary Observation (V2)](#E_ISBT_Product_Code_Summary_ObsV2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01 |
| [Isolate Susceptibility Tests Organizer (V3)](#E_Isolate_Susceptibility_Tests_Organize) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2016-08-01 |
| [IV Antibiotic Start Clinical Statement (V3)](#E_IV_Antibiotic_Start_Clinical_Statemen) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2016-08-01 |
| [IV Antifungal Start Clinical Statement](#E_IV_Antifungal_Start_Clinical_Statemen) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.141 |
| [Known or Suspected Munchhausen's By Proxy Observation](#E_Known_or_Suspected_Munchhausens_By_Pr) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01 |
| [Last Physical Overnight Location Act](#E_Last_Physical_Overnight_Location_Act) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01 |
| [Last Physical Overnight Location Encounter](#E_Last_Physical_Overnight_Location_Enco) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01 |
| [Loss of Vascular Access Observation](#E_Loss_of_Vascular_Access_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.203 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Mechanical Ventilation Initiation Act](#E_Mechanical_Ventilation_Initiation_Act) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01 |
| [NHSN Comment](#E_NHSN_Comment) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01 |
| [No Hemovigilance Adverse Reactions Reported This Month Observation](#E_No_Hemovigilance_Adverse_Reactions_Re) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01 |
| [No Hemovigilance Incidents Reported This Month Observation](#E_No_Hemovigilance_Incidents_Reported_T) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01 |
| [Observed or Suspected Patient Injection into Vascular Line Observation](#E_Observed_or_Suspected_Patient_Injecti) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01 |
| [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.144 |
| [Other Facility Discharge Act](#E_Other_Facility_Discharge_Act) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01 |
| [Other Facility Discharge Encounter](#E_Other_Facility_Discharge_Encounter) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Pathogen Identified Observation (LIO) (V2)](#E_Pathogen_Identified_Observation_LIO_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [Pathogen Reduced Apheresis Platelet Usage Summary Observation](#E_Pathogen_Reduced_Apheresis_Platelet_U) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01 |
| [PICC/IV Team](#E_PICCIV_Team) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.148 |
| [Positive Blood Culture Observation (V2)](#E_Positive_Blood_Culture_Observation_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2014-12-01 |
| [Positive Test for Carbapenemase Observation](#E_Positive_Test_for_Carbapenemase_Obser) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01 |
| [Post-Procedure Observation](#E_PostProcedure_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.150 |
| [Primary C. Difficile Testing Method This Quarter](#E_Primary_C_Difficile_Testing_Method_Th) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01 |
| [Prior Discharge Encounter (V2)](#E_Prior_Discharge_Encounter_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01 |
| Procedure Category (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.215:2018-04-01 |
| [Procedure Details Clinical Statement in a CLIP Report](#E_Procedure_Details_Clinical_Statement_) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.155 |
| [Procedure Details Clinical Statement in a Procedure Report (V2)](#Procedure_Details_Clinical_Statement_in) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.153.2 |
| [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [Procedure Risk Factors Clinical Statement in a Procedure Report](#E_Procedure_Risk_Factors_Clinical_State) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.156 |
| Prophylactic IV Antibiotic Timing Observation (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.209:2018-04-01 |
| [Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation](#E_Pus_Present_in_Specimen_Site_and_Matc) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01 |
| [Pus, Redness, or Increased Swelling Observation](#E_Pus_Redness_or_Increased_Swelling_Obs) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.157 |
| [Reason for Procedure Observation](#E_Reason_for_Procedure_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.158 |
| [Recorder Observation](#E_Recorder_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.159 |
| [Report No Events](#E_Report_No_Events) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01 |
| [Revision Associated with Prior Infection Observation](#Revision_Associated_with_Prior_Infectio) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.204 |
| Same Day Outcome Measure Observation (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2018-04-01 |
| Same Day Outcome Measures Organizer (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2018-04-01 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [Skin Preparation Clinical Statement (V2)](#E_Skin_Preparation_Clinical_Statement_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01 |
| [Skin-Preparation Solutions Applied Organizer (V2)](#E_SkinPreparation_Solutions_Applied_Org) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01 |
| [Solutions Dried Observation](#E_Solutions_Dried_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.163 |
| [Specimen Collection Encounter (ARO)](#E_Specimen_Collection_Encounter_ARO) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.187 |
| [Specimen Collection Encounter (LIO)](#E_Specimen_Collection_Encounter_LIO) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.164 |
| [Specimen Collection Procedure (ARO) (V3)](#E_Specimen_Collection_Procedure_ARO_V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2016-08-01 |
| [Specimen Collection Procedure (LIO)](#E_Specimen_Collection_Procedure_LIO) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.165 |
| [Spinal Fusion Level Observation](#E_Spinal_Fusion_Level_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.166 |
| [SSI Detected Using Toolkit Observation](#E_SSI_Detected_Using_Toolkit_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.206 |
| [Sterile Barriers Applied Clinical Statement](#E_Sterile_Barriers_Applied_Clinical_Sta) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.167 |
| [Summary Data Observation](#E_Summary_Data_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.185 |
| [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01 |
| [Summary Data Observation (AUP)](#E_Summary_Data_Observation_AUP) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.194 |
| [Summary Data Observation (HV)](#E_Summary_Data_Observation_HV) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01 |
| Summary Data Observation (OPC) (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.214:2018-04-01 |
| [Summary Data Observation (POM)](#E_Summary_Data_Observation_POM) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.192 |
| [Summary Data Observation (VAT)](#E_Summary_Data_Observation_VAT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.195 |
| [Summary Encounter](#E_Summary_Encounter) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.184 |
| [Summary Encounter (ARO) (V2)](#E_Summary_Encounter_ARO_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2015-04-01 |
| [Summary Encounter (AUP) (V2)](#E_Summary_Encounter_AUP_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01 |
| [Summary Encounter (HP-FLU)](#E_Summary_Encounter_HPFLU) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01 |
| [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01 |
| [Summary Encounter (NICU)](#E_Summary_Encounter_NICU) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.191 |
| Summary Encounter (OPC) (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.213:2018-04-01 |
| [Summary Encounter (POM)](#E_Summary_Encounter_POM) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.193 |
| [Summary Encounter (VAT)](#E_Summary_Encounter_VAT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.196 |
| [Summary Encounter Patient Presence (AUP) (V2)](#E_Summary_Encounter_Patient_Presence_AU) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01 |
| Surgical Site Infection Observation (RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.210:2018-04-01 |
| [Suspected Source Observation](#E_Suspected_Source_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.168 |
| [Transient Patient Observation](#E_Transient_Patient_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.169 |
| [Trauma Observation](#E_Trauma_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.170 |
| [Type of Antimicrobial Start Observation](#E_Type_of_Antimicrobial_Start_Observati) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01 |
| [Urinary Catheter Observation](#E_Urinary_Catheter_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.171 |
| [Vaccination Type Observation](#E_Vaccination_Type_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01 |
| [Vascular Access Type Observation](#E_Vascular_Access_Type_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.172 |
| [Ventricular Assist Device (VAD) Present](#E_Ventricular_Assist_Device_VAD_Present) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01 |
| [Weight Observation](#E_Weight_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.173 |
| [Wound Class Observation](#E_Wound_Class_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.174 |

Table 468: Template Containments

| Template Title | Template Type | templateId |
| --- | --- | --- |
| [Antimicrobial Resistance Option (ARO) Summary Report (V2)](#D_Antimicrobial_Resistance_Option_ARO_S) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.46:2015-04-01 |
| [Summary Data Section (ARO) (V2)](#S_Summary_Data_Section_ARO_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.52:2015-04-01 |
| [Summary Encounter (ARO) (V2)](#E_Summary_Encounter_ARO_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.199:2015-04-01 |
| [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01 |
| [Antimicrobial Use (AUP) Summary Report (V2)](#D_Antimicrobial_Use_AUP_Summary_Report_) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.44:2015-04-01 |
| [Summary Data Section (AUP) (V2)](#S_Summary_Data_Section_AUP_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.51:2015-04-01 |
| [Summary Encounter Patient Presence (AUP) (V2)](#E_Summary_Encounter_Patient_Presence_AU) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.197:2015-04-01 |
| [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01 |
| [Summary Encounter (AUP) (V2)](#E_Summary_Encounter_AUP_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.198:2015-04-01 |
| [Summary Data Observation (AUP)](#E_Summary_Data_Observation_AUP) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.194 |
| [Summary Data Observation (AU/AR)](#E_Summary_Data_Observation_AUAR) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.229:2015-04-01 |
| [HAI AUR Antimicrobial Resistance Option (ARO) Report (V4)](#D_HAI_AUR_Antimicrobial_Resistance_Opti) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.31:2016-08-01 |
| [Findings Section in an ARO Report (V3)](#S_Findings_Section_in_an_ARO_Report_V3) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.32:2016-08-01 |
| [Specimen Collection Procedure (ARO) (V3)](#E_Specimen_Collection_Procedure_ARO_V3) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.188:2016-08-01 |
| [Specimen Collection Encounter (ARO)](#E_Specimen_Collection_Encounter_ARO) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.187 |
| [Isolate Susceptibility Tests Organizer (V3)](#E_Isolate_Susceptibility_Tests_Organize) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.201:2016-08-01 |
| [ARO Staph Aureus Specific Tests Organizer](#E_ARO_Staph_Aureus_Specific_Tests_Organ) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.190 |
| [ARO Staph Aureus Specific Tests Result Observation](#E_ARO_Staph_Aureus_Specific_Tests_Resul) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.189 |
| [Antimicrobial Susceptibility Isolate Participant](#E_Antimicrobial_Susceptibility_Isolate_) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.202 |
| [Antimicrobial Susceptibility Tests Organizer (V3)](#E_Antimicrobial_Susceptibility_Tests_Or) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.177:2016-08-01 |
| [Antimicrobial Susceptibility Final Interpretation Result](#E_Antimicrobial_Susceptibility_Final_In) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.175 |
| [Antimicrobial Susceptibility Result Organizer (V3)](#E_Antimicrobial_Susceptibility_Result_O) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.200:2016-08-01 |
| [Antimicrobial Susceptibility Result Observation (V3)](#E_Antimicrobial_Susceptibility_Res_Obs) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.186:2016-08-01 |
| [HAI Bloodstream Infection Report (BSI) (V3)](#D_HAI_BSI_Rep_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.32:2018-04-01 |
| [Infection Details Section in a BSI Report](#S_Infection_Details_Section_in_a_BSI_Re) | section | urn:oid:2.16.840.1.113883.10.20.5.5.38 |
| [Death Observation](#E_Death_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.120 |
| [Infection Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.136 |
| [Post-Procedure Observation](#E_PostProcedure_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.150 |
| [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [Infection-Type Observation](#E_InfectionType_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.139 |
| [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.114 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [Infection Condition Observation](#E_Infection_Condition_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.135 |
| [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.144 |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.180 |
| [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.119 |
| [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) | section | urn:oid:2.16.840.1.113883.10.20.5.5.45 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [NHSN Comment Section](#S_NHSN_Comment_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01 |
| [NHSN Comment](#E_NHSN_Comment) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01 |
| [Infection Risk Factors Section in a BSI Report (V3)](#S_Infection_Risk_Factors_Sect_BSI_V3) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01 |
| [Infection Risk Factors Measurement Observation](#E_Infection_Risk_Factors_Measurement_Ob) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.137 |
| [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.138 |
| [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.122 |
| [Hemodialysis Catheter Present](#E_Hemodialysis_Catheter_Present) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01 |
| [Extracorporeal Life Support Present](#E_Extracorporeal_Life_Support_Present) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01 |
| [Ventricular Assist Device (VAD) Present](#E_Ventricular_Assist_Device_VAD_Present) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01 |
| [Known or Suspected Munchhausen's By Proxy Observation](#E_Known_or_Suspected_Munchhausens_By_Pr) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.250:2018-04-01 |
| [Observed or Suspected Patient Injection into Vascular Line Observation](#E_Observed_or_Suspected_Patient_Injecti) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.251:2018-04-01 |
| [Epidermolysis Bullosa Observation](#E_Epidermolysis_Bullosa_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.252:2018-04-01 |
| [Pus Present in Specimen Site and Matching Organism in Blood and Specimen Observation](#E_Pus_Present_in_Specimen_Site_and_Matc) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.253:2018-04-01 |
| [HAI Central-Line Insertion Practice Numerator Report (V2)](#D_HAI_CentralLine_Insertion_Practice_Nu) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.36:2014-12-01 |
| [Procedure Details Section in a CLIP Report](#S_Procedure_Details_Section_in_a_CLIP_R) | section | urn:oid:2.16.840.1.113883.10.20.5.5.42 |
| [Procedure Details Clinical Statement in a CLIP Report](#E_Procedure_Details_Clinical_Statement_) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.155 |
| [PICC/IV Team](#E_PICCIV_Team) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.148 |
| [Recorder Observation](#E_Recorder_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.159 |
| [Reason for Procedure Observation](#E_Reason_for_Procedure_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.158 |
| [Guidewire Used Clinical Statement](#E_Guidewire_Used_Clinical_Statement) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.129 |
| [Infection Risk Factors Section in a CLIP Report (V2)](#S_Infection_Risk_Factors_Section_in_a_C) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.34:2014-12-01 |
| [Central-Line Insertion Practice Clinical Statement (V2)](#E_CentralLine_Insertion_Practice_Clinic) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.116:2014-12-01 |
| [Solutions Dried Observation](#E_Solutions_Dried_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.163 |
| [Central-Line Insertion Preparation Organizer (V2)](#E_CentralLine_Insertion_Preparation_Org) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.179:2014-12-01 |
| [Sterile Barriers Applied Clinical Statement](#E_Sterile_Barriers_Applied_Clinical_Sta) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.167 |
| [Hand Hygiene Performed Clinical Statement](#E_Hand_Hygiene_Performed_Clinical_State) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.130 |
| [Skin-Preparation Solutions Applied Organizer (V2)](#E_SkinPreparation_Solutions_Applied_Org) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.183:2014-12-01 |
| [Skin Preparation Clinical Statement (V2)](#E_Skin_Preparation_Clinical_Statement_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.162:2014-12-01 |
| [Contraindicated Observation (V2)](#E_Contraindicated_Observation_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.118:2014-12-01 |
| [Contraindication Type Observation](#E_Contraindication_Type_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.216:2014-12-01 |
| [Antimicrobial Coated Catheter Used Observation](#E_Antimicrobial_Coated_Catheter_Used_Ob) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.217:2014-12-01 |
| [HAI Evidence of Infection (Dialysis) Report (V5)](#D_HAI_Evidence_of_Infection_Dialysis_Re) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.37:2016-08-01 |
| [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) | section | urn:oid:2.16.840.1.113883.10.20.5.5.45 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)](#S_Risk_Factors_Section_in_an_Evidence_o) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.37:2015-10-01 |
| [Vascular Access Type Observation](#E_Vascular_Access_Type_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.172 |
| [Buttonhole Cannulation Observation](#E_Buttonhole_Cannulation_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.115 |
| [Dialysis Patient Observation](#E_Dialysis_Patient_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.125 |
| [Transient Patient Observation](#E_Transient_Patient_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.169 |
| [Dialyzer Reused Observation](#Dialyzer_Reused_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.231:2015-10-01 |
| [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.41:2016-08-01 |
| [Death Observation in an Evidence of Infection (Dialysis) Report](#E_Death_Observation_in_an_Evidence_of_I) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.121 |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.180 |
| [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.119 |
| [Hospital Admission Clinical Statement](#E_Hospital_Admission_Clinical_Statement) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.133 |
| [Dialysis Clinic Admission Clinical Statement](#E_Dialysis_Clinic_Admission_Clinical_St) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.124 |
| [Loss of Vascular Access Observation](#E_Loss_of_Vascular_Access_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.203 |
| [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2016-08-01 |
| [Pus, Redness, or Increased Swelling Observation](#E_Pus_Redness_or_Increased_Swelling_Obs) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.157 |
| [IV Antifungal Start Clinical Statement](#E_IV_Antifungal_Start_Clinical_Statemen) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.141 |
| [Positive Blood Culture Observation (V2)](#E_Positive_Blood_Culture_Observation_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.149:2014-12-01 |
| [Suspected Source Observation](#E_Suspected_Source_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.168 |
| [Imputability Observation](#E_Imputability_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.134 |
| [Blood Collection Location](#Blood_Collection_Location) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01 |
| [IV Antibiotic Start Clinical Statement (V3)](#E_IV_Antibiotic_Start_Clinical_Statemen) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.140:2016-08-01 |
| [Type of Antimicrobial Start Observation](#E_Type_of_Antimicrobial_Start_Observati) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.230:2015-10-01 |
| [Blood Sample Collected for Culture Observation](#E_Blood_Sample_Collected_for_Culture_Ob) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.239:2016-08-01 |
| [HAI Laboratory-Identified Organism (LIO) Report (V2)](#D_HAI_LaboratoryIdentified_Organism_LIO) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.38:2014-12-01 |
| [Encounters Section in a LIO Report (V2)](#S_Encounters_Section_in_a_LIO_Report_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.44:2014-12-01 |
| [Prior Discharge Encounter (V2)](#E_Prior_Discharge_Encounter_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.151:2014-12-01 |
| [Last Physical Overnight Location Act](#E_Last_Physical_Overnight_Location_Act) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.227:2014-12-01 |
| [Last Physical Overnight Location Encounter](#E_Last_Physical_Overnight_Location_Enco) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.220:2014-12-01 |
| [Other Facility Discharge Act](#E_Other_Facility_Discharge_Act) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.228:2014-12-01 |
| [Other Facility Discharge Encounter](#E_Other_Facility_Discharge_Encounter) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.218:2014-12-01 |
| [Findings Section in a LIO Report (V2)](#S_Findings_Section_in_a_LIO_Report_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.46:2014-12-01 |
| [Pathogen Identified Observation (LIO) (V2)](#E_Pathogen_Identified_Observation_LIO_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.146:2014-12-01 |
| [Specimen Collection Procedure (LIO)](#E_Specimen_Collection_Procedure_LIO) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.165 |
| [Specimen Collection Encounter (LIO)](#E_Specimen_Collection_Encounter_LIO) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.164 |
| [Bacterial Isolate Tested for Carbapenemase Observation](#E_Bacterial_Isolate_Tested_for_Carbapen) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.222:2014-12-01 |
| [Carbapenemase Test Organizer](#E_Carbapenemase_Test_Organizer) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.223:2014-12-01 |
| [Carbapenemase Test Observation](#E_Carbapenemase_Test_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.224:2014-12-01 |
| [Positive Test for Carbapenemase Observation](#E_Positive_Test_for_Carbapenemase_Obser) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.225:2014-12-01 |
| [Carbapenemase Type Identified Observation](#E_Carbapenemase_Type_Identified_Observa) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.226:2014-12-01 |
| [HAI Outpatient Procedure Component (OPC) Event Report (RETIRED)](#D_HAI_Outpatient_Procedure_Component_OP) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.47:2018-04-01 |
| [HAI Outpatient Procedure Component (OPC) Summary Report (RETIRED)](#D_HAI_Outpatient_Procedure_Comp_OP) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.48:2018-04-01 |
| [HAI Population Summary Report Generic Constraints](#D_HAI_Population_Summary_Report_Generic) | document | urn:oid:2.16.840.1.113883.10.20.5.4.28 |
| [HAI Procedure Denominator Report (V2)](#D_HAI_Procedure_Denominator_Report_V2) | document | urn:oid:2.16.840.1.113883.10.20.5.35.2 |
| [Infection Risk Factors Section in a Procedure Report](#S_Infection_Risk_Factors_Section_in_a_P) | section | urn:oid:2.16.840.1.113883.10.20.5.5.35 |
| [ASA Class Observation](#E_ASA_Class_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.113 |
| [Weight Observation](#E_Weight_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.173 |
| [Height Observation](#E_Height_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.131 |
| [Trauma Observation](#E_Trauma_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.170 |
| [Diabetes Mellitus Observation](#E_Diabetes_Mellitus_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.123 |
| [Procedure Risk Factors Clinical Statement in a Procedure Report](#E_Procedure_Risk_Factors_Clinical_State) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.156 |
| [Wound Class Observation](#E_Wound_Class_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.174 |
| [Endoscope Used Clinical Statement](#E_Endoscope_Used_Clinical_Statement) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.128 |
| [Duration of Labor Observation](#E_Duration_of_Labor_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.127 |
| [Procedure Details Section in a Procedure Report (V2)](#Procedure_Details_Section_in_a_Procedur) | section | urn:oid:2.16.840.1.113883.10.20.5.5.43.2 |
| [Procedure Details Clinical Statement in a Procedure Report (V2)](#Procedure_Details_Clinical_Statement_in) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.153.2 |
| [Anesthesia Administration Clinical Statement](#E_Anesthesia_Administration_Clinical_St) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.112 |
| [Closure Technique Procedure](#E_Closure_Technique_Procedure) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.117 |
| [Spinal Fusion Level Observation](#E_Spinal_Fusion_Level_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.166 |
| [Revision Associated with Prior Infection Observation](#Revision_Associated_with_Prior_Infectio) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.204 |
| [HAI Single-Person Report Generic Constraints](#D_HAI_SinglePerson_Report_Generic_Const) | document | urn:oid:2.16.840.1.113883.10.20.5.4.27 |
| [HAI Surgical Site Infection Report (SSI) (V2)](#D_HAI_Surgical_Site_Infection_Report_V2) | document | urn:oid:2.16.840.1.113883.10.20.5.33.2 |
| [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) | section | urn:oid:2.16.840.1.113883.10.20.5.5.45 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Infection Details Section in an SSI Report (V2)](#S_Infection_Details_Section_in_an_SSI_V2) | section | urn:oid:2.16.840.1.113883.10.20.5.5.39.2 |
| [Death Observation](#E_Death_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.120 |
| [Infection Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.136 |
| [Infection-Type Observation](#E_InfectionType_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.139 |
| [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.114 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [Infection Condition Observation](#E_Infection_Condition_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.135 |
| [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.144 |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.180 |
| [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.119 |
| [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [Infection Present at the Time of Surgery Observation](#E_Infection_Present_at_the_Time_of_Surg) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.205 |
| [SSI Detected Using Toolkit Observation](#E_SSI_Detected_Using_Toolkit_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.206 |
| [HAI Urinary Tract Infection Numerator Report (UTI)](#D_HAI_Urinary_Tract_Infection_Numerator) | document | urn:oid:2.16.840.1.113883.10.20.5.34 |
| [Infection Risk Factors Section in a UTI Report](#S_Infection_Risk_Factors_Section_in_a_U) | section | urn:oid:2.16.840.1.113883.10.20.5.5.36 |
| [Urinary Catheter Observation](#E_Urinary_Catheter_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.171 |
| [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.122 |
| [History of Object Presence Observation](#E_History_of_Object_Presence_Observatio) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.132 |
| [Infection Details Section in a UTI Report](#S_Infection_Details_Section_in_a_UTI_Re) | section | urn:oid:2.16.840.1.113883.10.20.5.5.40 |
| [Death Observation](#E_Death_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.120 |
| [Infection Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.136 |
| [Post-Procedure Observation](#E_PostProcedure_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.150 |
| [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [Infection-Type Observation](#E_InfectionType_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.139 |
| [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.114 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [Infection Condition Observation](#E_Infection_Condition_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.135 |
| [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.144 |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.180 |
| [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.119 |
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| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Healthcare Associated Infection Report](#D_Healthcare_Associated_Infection_Repor) | document | urn:oid:2.16.840.1.113883.10.20.5.4.25 |
| [Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Report](#D_Healthcare_Personnel_Influenza_Vaccin) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.50:2017-04-01 |
| [Summary Data Section (HP-FLU)](#S_Summary_Data_Section_HPFLU) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.58:2017-04-01 |
| [Summary Encounter (HP-FLU)](#E_Summary_Encounter_HPFLU) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.241:2017-04-01 |
| [Summary Data Observation](#E_Summary_Data_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.185 |
| [Vaccination Type Observation](#E_Vaccination_Type_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.242:2017-04-01 |
| [NHSN Comment Section](#S_NHSN_Comment_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01 |
| [NHSN Comment](#E_NHSN_Comment) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01 |
| [Hemovigilance (HV) Summary Report (V2)](#D_Hemovigilance_HV_Summary_Report_V2) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.49:2016-08-01 |
| [Summary Data Section (HV) (V2)](#S_Summary_Data_Section_HV_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.57:2016-08-01 |
| [No Hemovigilance Adverse Reactions Reported This Month Observation](#E_No_Hemovigilance_Adverse_Reactions_Re) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.232:2015-10-01 |
| [No Hemovigilance Incidents Reported This Month Observation](#E_No_Hemovigilance_Incidents_Reported_T) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.233:2015-10-01 |
| [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.234:2016-08-01 |
| [Summary Data Observation (HV)](#E_Summary_Data_Observation_HV) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.235:2015-10-01 |
| [Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)](#E_Facility_Transfuses_Blood_Products_Tr) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.236:2016-08-01 |
| [Blood Product Usage Summary Observation (V2)](#E_Blood_Product_Usage_Summary_Observati) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.237:2016-08-01 |
| [ISBT Product Code Summary Observation (V2)](#E_ISBT_Product_Code_Summary_ObsV2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01 |
| [Pathogen Reduced Apheresis Platelet Usage Summary Observation](#E_Pathogen_Reduced_Apheresis_Platelet_U) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.240:2016-08-01 |
| [ISBT Product Code Summary Observation (V2)](#E_ISBT_Product_Code_Summary_ObsV2) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01 |
| [Intensive Care Unit (ICU) Summary Report (V3)](#D_Intensive_Care_Unit_ICU_Summary_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01 |
| [Summary Data Section](#S_Summary_Data_Section) | section | urn:oid:2.16.840.1.113883.10.20.5.5.47 |
| [Summary Encounter](#E_Summary_Encounter) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.184 |
| [Summary Data Observation](#E_Summary_Data_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.185 |
| [Report No Events Section](#S_Report_No_Events_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01 |
| [Report No Events](#E_Report_No_Events) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01 |
| [Late Onset Sepsis/Meningitis Event (LOS) Report](#D_Late_Onset_SepsisMeningitis_Event_LOS) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.53:2018-04-01 |
| [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) | section | urn:oid:2.16.840.1.113883.10.20.5.5.45 |
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| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [NHSN Comment Section](#S_NHSN_Comment_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01 |
| [NHSN Comment](#E_NHSN_Comment) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01 |
| [Infection Details in Late Onset Sepsis Report](#S_Infection_Details_in_Late_Onset_Sepsi) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.64:2018-04-01 |
| [Death Observation](#E_Death_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.120 |
| [Infection Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.136 |
| [Infection-Type Observation](#E_InfectionType_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.139 |
| [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.114 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [Infection Condition Observation](#E_Infection_Condition_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.135 |
| [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.144 |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.180 |
| [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.119 |
| [Inborn/Outborn Observation](#E_InbornOutborn_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.257:2018-04-01 |
| [Risk Factors Section (LOS/Men)](#S_Risk_Factors_Section_LOSMen) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.65:2018-04-01 |
| [Infection Risk Factors Measurement Observation](#E_Infection_Risk_Factors_Measurement_Ob) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.137 |
| [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.138 |
| [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.122 |
| [Gestational Age at Birth Observation](#E_Gestational_Age_at_Birth_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.255:2018-04-01 |
| [Neonatal Intensive Care Unit (NICU) Summary Report (V3)](#D_Neonatal_Intensive_Care_Unit_NICU_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01 |
| [Summary Data Section (NICU) (V2)](#S_Summary_Data_Section_NICU_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01 |
| [Summary Encounter (NICU)](#E_Summary_Encounter_NICU) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.191 |
| [Summary Data Observation](#E_Summary_Data_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.185 |
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| [Prevention Process and Outcome Measures (POM) Summary Report (V3)](#D_Prevention_Process_and_Outcome_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.43:2018-04-01 |
| [Summary Data Section (POM) (V2)](#S_Summary_Data_Section_POM_V2) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.49:2014-12-01 |
| [Summary Encounter (POM)](#E_Summary_Encounter_POM) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.193 |
| [Summary Data Observation (POM)](#E_Summary_Data_Observation_POM) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.192 |
| [Summary Data Observation](#E_Summary_Data_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.185 |
| [Primary C. Difficile Testing Method This Quarter](#E_Primary_C_Difficile_Testing_Method_Th) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.221:2014-12-01 |
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| [Report No Events](#E_Report_No_Events) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01 |
| [Specialty Care Area (SCA) Summary Report (V3)](#D_Specialty_Care_Area_SCA_Summary_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01 |
| [Summary Data Section](#S_Summary_Data_Section) | section | urn:oid:2.16.840.1.113883.10.20.5.5.47 |
| [Summary Encounter](#E_Summary_Encounter) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.184 |
| [Summary Data Observation](#E_Summary_Data_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.185 |
| [Report No Events Section](#S_Report_No_Events_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01 |
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| [Vascular Access Type Report (VAT) Summary Report (V3)](#D_Vascular_Access_Type_Report_VAT_V3) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01 |
| [Summary Data Section (VAT)](#S_Summary_Data_Section_VAT) | section | urn:oid:2.16.840.1.113883.10.20.5.5.50 |
| [Summary Encounter (VAT)](#E_Summary_Encounter_VAT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.196 |
| [Summary Data Observation (VAT)](#E_Summary_Data_Observation_VAT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.195 |
| [Summary Data Observation](#E_Summary_Data_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.185 |
| [Report No Events Section](#S_Report_No_Events_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.62:2018-04-01 |
| [Report No Events](#E_Report_No_Events) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.249:2018-04-01 |
| [Ventilator Associated Event (VAE) Report](#D_Ventilator_Associated_Event_VAE_Repor) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.51:2017-04-01 |
| [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_) | section | urn:oid:2.16.840.1.113883.10.20.5.5.45 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Infection Details Section in a VAE Report](#S_Infection_Details_Section_in_a_VAE_Re) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.59:2017-04-01 |
| [Death Observation](#E_Death_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.120 |
| [Infection Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.136 |
| [Post-Procedure Observation](#E_PostProcedure_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.150 |
| [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Stmt_IT) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [Infection-Type Observation](#E_InfectionType_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.139 |
| [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.114 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [Infection Condition Observation](#E_Infection_Condition_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.135 |
| [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.144 |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.180 |
| [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.119 |
| [Risk Factors Section in a VAE Report](#S_Risk_Factors_Section_in_a_VAE_Report) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.60:2017-04-01 |
| [Mechanical Ventilation Initiation Act](#E_Mechanical_Ventilation_Initiation_Act) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.244:2017-04-01 |
| [APRV or Related at Time of VAE Observation](#E_APRV_or_Related_at_Time_of_VAE_Observ) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.248:2017-04-01 |
| [NHSN Comment Section](#S_NHSN_Comment_Section) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01 |
| [NHSN Comment](#E_NHSN_Comment) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.243:2017-04-01 |
| [Antimicrobial Susceptibility Antibiotic](#E_Antimicrobial_Susceptibility_Antibiot) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.176 |
| [Infection First Reported Source Observation (RETIRED)](#E_Infection_First_Reported_Source_Obser) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.207:2018-04-01 |
| [Procedure Category (RETIRED)](#E_Procedure_Category_RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.215:2018-04-01 |
| [Prophylactic IV Antibiotic Timing Observation (RETIRED)](#E_Prophylactic_IV_Antibiotic_Timing_Obs) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.209:2018-04-01 |
| [Same Day Outcome Measure Observation (RETIRED)](#E_Same_Day_Outcome_Measure_Observation_) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2018-04-01 |
| [Same Day Outcome Measures Organizer (RETIRED)](#E_Same_Day_Outcome_Measures_Organizer_R) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2018-04-01 |
| [Summary Data Observation (OPC) (RETIRED)](#E_Summary_Data_Observation_OPC_RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.214:2018-04-01 |
| [Summary Encounter (OPC) (RETIRED)](#E_Summary_Encounter_OPC_RETIRED) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.213:2018-04-01 |
| [Surgical Site Infection Observation (RETIRED)](#E_Surgical_Site_Infection_Observation_R) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.210:2018-04-01 |
| [Infection Condition Observation](#E_Infection_Condition_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.135 |
| [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.180 |
| [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.119 |
| [Findings Section in an OPC Report (RETIRED)](#S_Findings_Section_in_an_OPC_Report_RET) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.55:2018-04-01 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) | section | urn:oid:2.16.840.1.113883.10.20.5.4.26 |
| [Other Event Details Section (RETIRED)](#S_Other_Event_Details_Section_RETIRED) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.54:2018-04-01 |
| [Summary Data Section (OPC) (RETIRED)](#S_Summary_Data_Section_OPC_RETIRED) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.56:2018-04-01 |
| [Surgical Site Infection Details Section in an OPC Report (RETIRED)](#S_Surgical_Site_Infection_Details_Secti) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.53:2018-04-01 |

# Value Sets In This Guide

Table 469: Value Sets

| Name | OID | URL |
| --- | --- | --- |
| [Administrative Gender (HL7 V3)](#Administrative_Gender_HL7_V3) | urn:oid:2.16.840.1.113883.1.11.1 | <https://vsac.nlm.nih.gov/> |
| [Codes for Antimicrobial Resistance Option (ARO) Summary Data](#Codes_for_Antimicrobial_Resistance_Opti) | urn:oid:2.16.840.1.113883.10.20.5.9.8 | N/A |
| [Codes for Antimicrobial Usage, Pharmacy (AUP) Summary Data](#Codes_for_Antimicrobial_Usage_Pharmacy_) | urn:oid:2.16.840.1.113883.10.20.5.9.9 | N/A |
| [Codes for Healthcare Personnel Influenza Vaccination (HP-FLU) Summary Data](#Codes_for_Healthcare_Personnel_Influenz) | urn:oid:2.16.840.1.113883.10.20.5.9.10 | N/A |
| [Codes for Hemovigilance (HV) Summary Data](#Codes_for_Hemovigilance_HV_Summary_Data) | urn:oid:2.16.840.1.113883.10.20.5.9.11 | N/A |
| [Codes for Intensive Care Unit (ICU) Summary Data](#Codes_for_Intensive_Care_Unit_ICU_Summa) | urn:oid:2.16.840.1.113883.10.20.5.9.12 | N/A |
| [Codes for Neonatal Intensive Care Unit (NICU) Summary Data](#Codes_for_Neonatal_Intensive_Care_Unit_) | urn:oid:2.16.840.1.113883.10.20.5.9.13 | N/A |
| [Codes for Prevention Process and Outcome Measures (POM) Summary Data](#Codes_for_Prevention_Process_and_Outcom) | urn:oid:2.16.840.1.113883.10.20.5.9.15 | N/A |
| [Codes for Specialty Care Area (SCA) Summary Data](#Codes_for_Specialty_Care_Area_SCA_Summa) | urn:oid:2.16.840.1.113883.10.20.5.9.16 | N/A |
| [Codes for Vascular Access Type (Dialysis) Summary Data](#Codes_for_Vascular_Access_Type_Dialysis) | urn:oid:2.16.840.1.113883.10.20.5.9.17 | N/A |
| [Ethnicity](#Ethnicity) | urn:oid:2.16.840.1.114222.4.11.837 | <https://vsac.nlm.nih.gov/valueset/2.16.840.1.114222.4.11.837/expansion> |
| [NHSN Cryoprecipitate (24)](#NHSN_Cryoprecipitate_24) | urn:oid:2.16.840.1.114222.4.11.7315 | N/A |
| [NHSN Cryoprecipitate/Psoralen-Treated (44)](#NHSN_CryoprecipitatePsoralenTreated_44) | urn:oid:2.16.840.1.114222.4.11.7502 | N/A |
| [NHSN Pathogen Reduced Apheresis Platelet Usage](#NHSN_Pathogen_Reduced_Apheresis_Platele) | urn:oid:2.16.840.1.113883.10.20.5.9.5 | N/A |
| [NHSN Plasma/Apheresis/Psoralen-Treated (35)](#NHSN_PlasmaApheresisPsoralenTreated_35) | urn:oid:2.16.840.1.114222.4.11.7326 | N/A |
| [NHSN Plasma/Apheresis/Riboflavin-Treated (36)](#NHSN_PlasmaApheresisRiboflavinTreated_3) | urn:oid:2.16.840.1.114222.4.11.7327 | N/A |
| [NHSN Plasma/Apheresis/Total (23)](#NHSN_PlasmaApheresisTotal_23) | urn:oid:2.16.840.1.114222.4.11.7314 | N/A |
| [NHSN Plasma/Whole Blood Derived/Psoralen-Treated (32)](#NHSN_PlasmaWhole_Blood_DerivedPsoralenT) | urn:oid:2.16.840.1.114222.4.11.7323 | N/A |
| [NHSN Plasma/Whole Blood Derived/Riboflavin-Treated (33)](#NHSN_PlasmaWhole_Blood_DerivedRiboflavi) | urn:oid:2.16.840.1.114222.4.11.7324 | N/A |
| [NHSN Plasma/Whole Blood Derived/Total (22)](#NHSN_PlasmaWhole_Blood_DerivedTotal_22) | urn:oid:2.16.840.1.114222.4.11.7313 | N/A |
| [NHSN Platelets/Apheresis/Irradiated (19)](#NHSN_PlateletsApheresisIrradiated_19) | urn:oid:2.16.840.1.114222.4.11.7310 | N/A |
| [NHSN Platelets/Apheresis/Irradiated or Leukocyte Reduced (21)](#NHSN_PlateletsApheresisIrradiated_or_Le) | urn:oid:2.16.840.1.114222.4.11.7312 | N/A |
| [NHSN Platelets/Apheresis/Leukocyte Reduced (20)](#NHSN_PlateletsApheresisLeukocyte_Reduce) | urn:oid:2.16.840.1.114222.4.11.7311 | N/A |
| [NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced (18)](#NHSN_PlateletsApheresisNot_Irradiated_o) | urn:oid:2.16.840.1.114222.4.11.7309 | N/A |
| [NHSN Platelets/Apheresis/Psoralen-Treated (29)](#NHSN_PlateletsApheresisPsoralenTreated_) | urn:oid:2.16.840.1.114222.4.11.7320 | N/A |
| [NHSN Platelets/Apheresis/Psoralen-Treated and In Plasma (46)](#NHSN_PlateletsApheresisPsoralenTreated_) | urn:oid:2.16.840.1.114222.4.11.7504 | N/A |
| [NHSN Platelets/Apheresis/Riboflavin-Treated (30)](#NHSN_PlateletsApheresisRiboflavinTreate) | urn:oid:2.16.840.1.114222.4.11.7321 | N/A |
| [NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma (48)](#NHSN_PlateletsApheresisRiboflavinTreate) | urn:oid:2.16.840.1.114222.4.11.7506 | N/A |
| [NHSN Platelets/Apheresis/Riboflavin-Treated and In Platelet Additive Solution (49)](#NHSN_PlateletsApheresisRiboflavinTreate) | urn:oid:2.16.840.1.114222.4.11.7507 | N/A |
| [NHSN Platelets/Whole Blood Derived/Irradiated (14)](#NHSN_PlateletsWhole_Blood_DerivedIrradi) | urn:oid:2.16.840.1.114222.4.11.7305 | N/A |
| [NHSN Platelets/Whole Blood Derived/Irradiated and Leukocyte Reduced (16)](#NHSN_PlateletsWhole_Blood_DerivedIrradi) | urn:oid:2.16.840.1.114222.4.11.7307 | N/A |
| [NHSN Platelets/Whole Blood Derived/Leukocyte Reduced (15)](#NHSN_PlateletsWhole_Blood_DerivedLeukoc) | urn:oid:2.16.840.1.114222.4.11.7306 | N/A |
| [NHSN Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (13)](#NHSN_PlateletsWhole_Blood_DerivedNot_Ir) | urn:oid:2.16.840.1.114222.4.11.7304 | N/A |
| [NHSN Platelets/Whole Blood Derived/Psoralen-Treated (26)](#NHSN_PlateletsWhole_Blood_DerivedPsoral) | urn:oid:2.16.840.1.114222.4.11.7317 | N/A |
| [NHSN Platelets/Whole Blood Derived/Riboflavin-Treated (27)](#NHSN_PlateletsWhole_Blood_DerivedRibofl) | urn:oid:2.16.840.1.114222.4.11.7318 | N/A |
| [NHSN Red Blood Cells/Apheresis/Irradiated (9)](#NHSN_Red_Blood_CellsApheresisIrradiated) | urn:oid:2.16.840.1.114222.4.11.7300 | N/A |
| [NHSN Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced (11)](#NHSN_Red_Blood_CellsApheresisIrradiated) | urn:oid:2.16.840.1.114222.4.11.7302 | N/A |
| [NHSN Red Blood Cells/Apheresis/Leukocyte Reduced (10)](#NHSN_Red_Blood_CellsApheresisLeukocyte_) | urn:oid:2.16.840.1.114222.4.11.7301 | N/A |
| [NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced (8)](#NHSN_Red_Blood_CellsApheresisNot_Irradi) | urn:oid:2.16.840.1.114222.4.11.7299 | N/A |
| [NHSN Red Blood Cells/Apheresis/Riboflavin-Treated (42)](#NHSN_Red_Blood_CellsApheresisRiboflavin) | urn:oid:2.16.840.1.114222.4.11.7501 | N/A |
| [NHSN Red Blood Cells/Apheresis/S-303-Treated (41)](#NHSN_Red_Blood_CellsApheresisS303Treate) | urn:oid:2.16.840.1.114222.4.11.7500 | N/A |
| [NHSN Red Blood Cells/Whole Blood Derived/Irradiated (4)](#NHSN_Red_Blood_CellsWhole_Blood_Derived) | urn:oid:2.16.840.1.114222.4.11.7295 | N/A |
| [NHSN Red Blood Cells/Whole Blood Derived/Irradiated and Leukocyte Reduced (6)](#NHSN_Red_Blood_CellsWhole_Blood_Derived) | urn:oid:2.16.840.1.114222.4.11.7297 | N/A |
| [NHSN Red Blood Cells/Whole Blood Derived/Leukocyte Reduced (5)](#NHSN_Red_Blood_CellsWhole_Blood_Derived) | urn:oid:2.16.840.1.114222.4.11.7296 | N/A |
| [NHSN Red Blood Cells/Whole Blood Derived/Not Irradiated or Leukocyte Reduced (3)](#NHSN_Red_Blood_CellsWhole_Blood_Derived) | urn:oid:2.16.840.1.114222.4.11.7294 | N/A |
| [NHSN Red Blood Cells/Whole Blood Derived/Riboflavin-Treated](#NHSN_Red_Blood_CellsWhole_Blood_Derived) | urn:oid:2.16.840.1.114222.4.11.7499 | N/A |
| [NHSN Red Blood Cells/Whole Blood Derived/S-303-Treated](#NHSN_Red_Blood_CellsWhole_Blood_Derived) | urn:oid:2.16.840.1.114222.4.11.7498 | N/A |
| [NHSN Whole Blood Total (1)](#NHSN_Whole_Blood_Total_1) | urn:oid:2.16.840.1.114222.4.11.7292 | N/A |
| [NHSNAntimicrobialAgentAURPCode](#NHSNAntimicrobialAgentAURPCode) | urn:oid:2.16.840.1.114222.4.11.3360 | <http://phinvads.cdc.gov> |
| [NHSNASAClassCode](#NHSNASAClassCode) | urn:oid:2.16.840.1.113883.13.10 | N/A |
| [NHSNBloodCollectionLocation](#NHSNBloodCollectionLocation) | urn:oid:2.16.840.1.114222.4.11.7237 | <http://www.phinvads.com> |
| [NHSNBloodStreamInfectionEvidenceTypeCode](#NHSNBloodStreamInfectionEvidenceTypeCod) | urn:oid:2.16.840.1.113883.13.7 | N/A |
| [NHSNCarbaDetectType](#NHSNCarbaDetectType) | urn:oid:2.16.840.1.114222.4.11.7241 | <http://www.phinvads.com> |
| [NHSNCarbaTestMethod](#NHSNCarbaTestMethod) | urn:oid:2.16.840.1.114222.4.11.7240 | <http://www.phinvads.com> |
| [NHSNCatheterTypeCode](#NHSNCatheterTypeCode) | urn:oid:2.16.840.1.114222.4.11.3185 | N/A |
| [NHSNCdiffTestMethod](#NHSNCdiffTestMethod) | urn:oid:2.16.840.1.114222.4.11.7242 | <http://www.phinvads.com> |
| [NHSNClosureTechniqueCode](#NHSNClosureTechniqueCode) | urn:oid:2.16.840.1.114222.4.11.6051 | N/A |
| [NHSNContraindicationType](#NHSNContraindicationType) | urn:oid:2.16.840.1.114222.4.11.7239 | N/A |
| [NHSNCriterionOfDiagnosisCode](#NHSNCriterionOfDiagnosisCode) | urn:oid:2.16.840.1.114222.4.11.3195 | N/A |
| [NHSNDrugSusceptibilityFindingCode](#NHSNDrugSusceptibilityFindingCode) | urn:oid:2.16.840.1.113883.13.13 | N/A |
| [NHSNDrugSusceptibilityTestMethod](#NHSNDrugSusceptibilityTestMethod) | urn:oid:2.16.840.1.113883.10.20.5.9.4 | N/A |
| [NHSNDrugSusceptibilityTestsCode](#NHSNDrugSusceptibilityTestsCode) | urn:oid:2.16.840.1.113883.13.15 | N/A |
| [NHSNEligibilityCode](#NHSNEligibilityCode) | urn:oid:2.16.840.1.114222.4.11.3248 | N/A |
| [NHSNEncounterTypeCode](#NHSNEncounterTypeCode) | urn:oid:2.16.840.1.113883.13.1 | N/A |
| [NHSNHealthcarePersonnelType](#NHSNHealthcarePersonnelType) | urn:oid:2.16.840.1.113883.10.20.5.9.6 | N/A |
| [NHSNHealthcareServiceLocationCode](#NHSNHealthcareServiceLocationCode) | urn:oid:2.16.840.1.113883.13.19 | N/A |
| [NHSNHipReplacementCode](#NHSNHipReplacementCode) | urn:oid:2.16.840.1.113883.13.3 | N/A |
| [NHSNInfectionConditionCode](#NHSNInfectionConditionCode) | urn:oid:2.16.840.1.114222.4.11.3196 | N/A |
| [NHSNInfectionRiskFactorsCode](#NHSNInfectionRiskFactorsCode) | urn:oid:2.16.840.1.113883.13.6 | N/A |
| [NHSNInfectionTypeCode](#NHSNInfectionTypeCode) | urn:oid:2.16.840.1.113883.13.20 | N/A |
| [NHSNInfluenzaVaccinationSetting](#NHSNInfluenzaVaccinationSetting) | urn:oid:2.16.840.1.113883.10.20.5.9.7 | N/A |
| [NHSNInsertionSiteCode](#NHSNInsertionSiteCode) | urn:oid:2.16.840.1.114222.4.11.3180 | N/A |
| [NHSNKneeReplacementCode](#NHSNKneeReplacementCode) | urn:oid:2.16.840.1.113883.13.4 | N/A |
| [NHSNLastLocationEncounterTypeCode](#NHSNLastLocationEncounterTypeCode) | urn:oid:2.16.840.1.113883.10.20.5.9.3 | N/A |
| [NHSNOccasionOfDetectionCode](#NHSNOccasionOfDetectionCode) | urn:oid:2.16.840.1.113883.13.12 | N/A |
| [NHSNOrganismASTCode](#NHSNOrganismASTCode) | urn:oid:2.16.840.1.114222.4.11.3283 | N/A |
| [NHSNPathogenCode](#NHSNPathogenCode) | urn:oid:2.16.840.1.113883.13.16 | N/A |
| [NHSNPopulationCategoryCode](#NHSNPopulationCategoryCode) | urn:oid:2.16.840.1.114222.4.11.3234 | N/A |
| [NHSNPopulationSummaryReportTypeCode](#NHSNPopulationSummaryReportTypeCode) | urn:oid:2.16.840.1.114222.4.11.3595 | N/A |
| [NHSNPreviousFacility](#NHSNPreviousFacility) | urn:oid:2.16.840.1.114222.4.11.7238 | N/A |
| [NHSNPreviousPatientLocation](#NHSNPreviousPatientLocation) | urn:oid:2.16.840.1.114222.4.11.7233 | N/A |
| [NHSNProcedureCategoryCode](#NHSNProcedureCategoryCode) | urn:oid:2.16.840.1.113883.13.17 | N/A |
| [NHSNRaceCategory](#NHSNRaceCategory) | urn:oid:2.16.840.1.114222.4.11.7232 | <https://phinvads.cdc.gov> |
| [NHSNReasonForInsertionCode](#NHSNReasonForInsertionCode) | urn:oid:2.16.840.1.114222.4.11.3182 | N/A |
| [NHSNReportNoEventsDialysis](#NHSNReportNoEventsDialysis) | urn:oid:2.16.840.1.113883.10.20.5.9.22 | N/A |
| [NHSNReportNoEventsICU](#NHSNReportNoEventsICU) | urn:oid:2.16.840.1.113883.10.20.5.9.18 | N/A |
| [NHSNReportNoEventsMDRO](#NHSNReportNoEventsMDRO) | urn:oid:2.16.840.1.113883.10.20.5.9.21 | N/A |
| [NHSNReportNoEventsNICU](#NHSNReportNoEventsNICU) | urn:oid:2.16.840.1.113883.10.20.5.9.19 | N/A |
| [NHSNReportNoEventsSCA](#NHSNReportNoEventsSCA) | urn:oid:2.16.840.1.113883.10.20.5.9.20 | N/A |
| [NHSNRoleOfPerformerCode](#NHSNRoleOfPerformerCode) | urn:oid:2.16.840.1.114222.4.11.3181 | N/A |
| [NHSNRouteOfAdminstrationAURPCode](#NHSNRouteOfAdminstrationAURPCode) | urn:oid:2.16.840.1.114222.4.11.3361 | N/A |
| [NHSNSignificantPathogenCode](#NHSNSignificantPathogenCode) | urn:oid:2.16.840.1.114222.4.11.3194 | N/A |
| [NHSNSkinPreparationCode](#NHSNSkinPreparationCode) | urn:oid:2.16.840.1.114222.4.11.3183 | N/A |
| [NHSNSpecimenTypeCode](#NHSNSpecimenTypeCode) | urn:oid:2.16.840.1.114222.4.11.3249 | N/A |
| [NHSNSpinalFusionApproachCode](#NHSNSpinalFusionApproachCode) | urn:oid:2.16.840.1.113883.13.2 | N/A |
| [NHSNSpinalFusionLevelCode](#NHSNSpinalFusionLevelCode) | urn:oid:2.16.840.1.113883.13.11 | N/A |
| [NHSNStaphAureusSpecificTest](#NHSNStaphAureusSpecificTest) | urn:oid:2.16.840.1.114222.4.11.7160 | N/A |
| [NHSNStaphAureusTestResults](#NHSNStaphAureusTestResults) | urn:oid:2.16.840.1.114222.4.11.6074 | N/A |
| [NHSNStartOrContinuation](#NHSNStartOrContinuation) | urn:oid:2.16.840.1.114222.4.11.7338 | N/A |
| [NHSNSterileBarrierCode](#NHSNSterileBarrierCode) | urn:oid:2.16.840.1.114222.4.11.3184 | N/A |
| [NHSNSummaryBloodProductUsage](#NHSNSummaryBloodProductUsage) | urn:oid:2.16.840.1.114222.4.11.7353 | N/A |
| [NHSNSuspectedSourceTypeCode](#NHSNSuspectedSourceTypeCode) | urn:oid:2.16.840.1.114222.4.11.6008 | N/A |
| [NHSNTimingCode](#NHSNTimingCode) | urn:oid:2.16.840.1.114222.4.11.3247 | N/A |
| [NHSNVascularAccessSiteCode](#NHSNVascularAccessSiteCode) | urn:oid:2.16.840.1.114222.4.11.6042 | N/A |
| [NHSNVascularAccessTypeCode](#NHSNVascularAccessTypeCode) | urn:oid:2.16.840.1.114222.4.11.6007 | N/A |
| [NHSNVascularSpecimenCollectionSite](#NHSNVascularSpecimenCollectionSite) | urn:oid:2.16.840.1.113883.10.20.5.9.24 | N/A |
| [NHSNWoundClassCode](#NHSNWoundClassCode) | urn:oid:2.16.840.1.113883.13.9 | N/A |
| [NullValues\_UNK\_NA](#NullValues_UNK_NA) | urn:oid:2.16.840.1.113883.10.20.5.9.2 | N/A |
| [NullValues\_UNK\_OTH](#NullValues_UNK_OTH) | urn:oid:2.16.840.1.113883.10.20.5.9.1 | N/A |
| [ProcedureAct statusCode](#ProcedureAct_statusCode) | urn:oid:2.16.840.1.113883.11.20.9.22 | <https://vsac.nlm.nih.gov/> |

# Code Systems in This Guide

Table 470: Code Systems

| Name | OID |
| --- | --- |
| cdcNHSN | urn:oid:2.16.840.1.113883.6.277 |
| CPT4 | urn:oid:2.16.840.1.113883.6.12 |
| Healthcare Provider Taxonomy (HIPAA) | urn:oid:2.16.840.1.113883.6.101 |
| HL7ActClass | urn:oid:2.16.840.1.113883.5.6 |
| HL7ActCode | urn:oid:2.16.840.1.113883.5.4 |
| HL7ActMood | urn:oid:2.16.840.1.113883.5.1001 |
| HL7ActRelationshipType | urn:oid:2.16.840.1.113883.5.1002 |
| HL7ActStatus | urn:oid:2.16.840.1.113883.5.14 |
| HL7AdministrativeGender | urn:oid:2.16.840.1.113883.5.1 |
| HL7Confidentiality | urn:oid:2.16.840.1.113883.5.25 |
| HL7ContextControl | urn:oid:2.16.840.1.113883.5.1057 |
| HL7EntityClass | urn:oid:2.16.840.1.113883.5.41 |
| HL7NullFlavor | urn:oid:2.16.840.1.113883.5.1008 |
| HL7ObservationInterpretation | urn:oid:2.16.840.1.113883.5.83 |
| HL7ParticipationType | urn:oid:2.16.840.1.113883.5.90 |
| HL7RoleClass | urn:oid:2.16.840.1.113883.5.110 |
| HSLOC | urn:oid:2.16.840.1.113883.6.259 |
| ISBT-128 | urn:oid:2.16.840.1.113883.6.18 |
| LOINC | urn:oid:2.16.840.1.113883.6.1 |
| Race & Ethnicity - CDC | urn:oid:2.16.840.1.113883.6.238 |
| RxNorm | urn:oid:2.16.840.1.113883.6.88 |
| SNOMED CT | urn:oid:2.16.840.1.113883.6.96 |
| UCUM | urn:oid:2.16.840.1.113883.6.8 |

# Retired Templates

Table 471: Retired Templates

| Name | OID | Description |
| --- | --- | --- |
| HAI Outpatient Procedure Component (OPC) Event Report (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.47:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| HAI Outpatient Procedure Component (OPC) Summary Report (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.48:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Infection First Reported Source Observation (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.6.207:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Procedure Category (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.6.215:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Prophylactic IV Antibiotic Timing Observation (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.6.209:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Same Day Outcome Measure Observation (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Same Day Outcome Measures Organizer (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Summary Data Observation (OPC) (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.6.214:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Summary Encounter (OPC) (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.6.213:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Surgical Site Infection Observation (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.6.210:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Findings Section in an OPC Report (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.5.55:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Other Event Details Section (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.5.54:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Summary Data Section (OPC) (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.5.56:2018-04-01 | This template has been retired due to changes to the OPC forms. |
| Surgical Site Infection Details Section in an OPC Report (RETIRED) | urn:hl7ii:2.16.840.1.113883.10.20.5.5.53:2018-04-01 | This template has been retired due to changes to the OPC forms. |

# Changes from Previous Version

HAI Bloodstream Infection Report (BSI) (V3)

[HAI Bloodstream Infection Report (BSI) (V3) (urn:hl7ii:2.16.840.1.113883.10.20.5.32:2018-04-01)](#D_HAI_BSI_Rep_V3)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Draft |
| Name | HAI Bloodstream Infection Report (BSI) (V2) | HAI Bloodstream Infection Report (BSI) (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.5.32:2017-04-01 | urn:hl7ii:2.16.840.1.113883.10.20.5.32:2018-04-01 |
| Description | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  This report type records a bloodstream infection event.   Preferred document title: “Bloodstream Infection Report (BSI)”  Key encounter data:   • A value for admission date is required.  • A value for discharge date may be recorded.  • The facility id, unit identifier, and unit type are required.  Other dates and locations:   • The date of the infection event is recorded as effectiveTime in the Infection-Type Observation. | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  This report type records a bloodstream infection event.   Preferred document title: “Bloodstream Infection Report (BSI)”.  Key encounter data:   • A value for admission date is required.  • A value for discharge date may be recorded.  • The facility id, unit identifier, and unit type are required.  Other dates and locations:   • The date of the infection event is recorded as effectiveTime in the Infection-Type Observation. |
| CONF #: 3357-30865 Added |  | Preferred document title: “Bloodstream Infection Report (BSI)”.  SHALL contain exactly one [1..1] title (CONF:3357-30865). |
| CONF #: 3357-28308 Modified | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.2" (CONF:3311-28308). | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28308). |
| CONF #: 3357-28432 Modified | SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28432). | SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-28432). |

HAI Outpatient Procedure Component (OPC) Event Report (RETIRED)

HAI Outpatient Procedure Component (OPC) Event Report (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.47:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | HAI Outpatient Procedure Component (OPC) Event Report | HAI Outpatient Procedure Component (OPC) Event Report (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.47 | urn:hl7ii:2.16.840.1.113883.10.20.5.47:2018-04-01 |
| Description | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  This report type records outpatient procedure component event(s) (multiple events can be reported for a single admission). There are three event types: Same Day Outcome Measures, Prophylactic IV Antibiotic Timing, and Surgical Site Infections (for any or all of the eligible procedures).  Preferred document title: “Outpatient Procedure Component Event Report”.   Key encounter data:   • The encounter type (outpatient) is required.  • The facility id is required.   • A value for the date admitted to facility where the outpatient procedure occurred is required.  Other dates and locations:   • The date of the infection is recorded as effectiveTime in the Infection-Type Observation. | This template has been retired due to changes to the OPC forms. |

HAI Outpatient Procedure Component (OPC) Summary Report (RETIRED)

HAI Outpatient Procedure Component (OPC) Summary Report (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.48:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | HAI Outpatient Procedure Component (OPC) Summary Report | HAI Outpatient Procedure Component (OPC) Summary Report (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.48 | urn:hl7ii:2.16.840.1.113883.10.20.5.48:2018-04-01 |
| Description | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.    The required title for the CDA document is “Denominator for Outpatient Procedure Component (OPC)”. The tables below show the data required at the time of publication.    The OPC Summary Report extends the simple pattern for Summary Encounter. Required data elements are recorded as entries within the Summary Encounter. | This template has been retired due to changes to the OPC forms. |

Intensive Care Unit (ICU) Summary Report (V3)

[Intensive Care Unit (ICU) Summary Report (V3) (urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01)](#D_Intensive_Care_Unit_ICU_Summary_V3)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Draft |
| Name | Intensive Care Unit (ICU) Summary Report (V2) | Intensive Care Unit (ICU) Summary Report (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.5.40:2014-12-01 | urn:hl7ii:2.16.840.1.113883.10.20.5.40:2018-04-01 |
| Description | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.    The required title for the CDA document is “Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report”. | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  Preferred document title: “Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report”. |
| CONF #: 3357-30854 Added |  | This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30854) such that it |
| CONF #: 3357-30855 Added |  | SHALL contain exactly one [1..1] section (CONF:3357-30855). |
| CONF #: 3357-30866 Added |  | Preferred document title: “Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report”.  SHALL contain exactly one [1..1] title (CONF:3357-30866). |
| CONF #: 1129-22799 Removed | SHALL contain exactly one [1..1] title="Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report" (CONF:1129-22799). |  |
| CONF #: 3357-22798 Modified | This component SHALL contain exactly one [1..1] section (CONF:1129-22798). | SHALL contain exactly one [1..1] section (CONF:3357-22798). |
| CONF #: 3357-28322 Modified | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-28322). | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28322). |
| CONF #: 3357-30596 Modified | SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30596). | SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30596). |

Neonatal Intensive Care Unit (NICU) Summary Report (V3)

[Neonatal Intensive Care Unit (NICU) Summary Report (V3) (urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01)](#D_Neonatal_Intensive_Care_Unit_NICU_V3)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Draft |
| Name | Neonatal Intensive Care Unit (NICU) Summary Report (V2) | Neonatal Intensive Care Unit (NICU) Summary Report (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.5.41:2014-12-01 | urn:hl7ii:2.16.840.1.113883.10.20.5.41:2018-04-01 |
| Description | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.    The required title for the CDA document is “Denominator for Neonatal Intensive Care Unit (NICU)”. | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  Preferred document title: “Denominator for Neonatal Intensive Care Unit (NICU)”. |
| CONF #: 3357-30612 Added |  | This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30612) such that it |
| CONF #: 3357-30613 Added |  | SHALL contain exactly one [1..1] section (CONF:3357-30613). |
| CONF #: 3357-30867 Added |  | Preferred document title: “Denominator for Neonatal Intensive Care Unit (NICU)”.  SHALL contain exactly one [1..1] title (CONF:3357-30867). |
| CONF #: 1129-22807 Removed | SHALL contain exactly one [1..1] title="Denominator for Neonatal Intensive Care Unit (NICU)" (CONF:1129-22807). |  |
| CONF #: 3357-22816 Modified | This component SHALL contain exactly one [1..1] section (CONF:1129-22816). | SHALL contain exactly one [1..1] section (CONF:3357-22816). |
| CONF #: 3357-28324 Modified | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-28324). | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28324). |
| CONF #: 3357-30595 Modified | SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30595). | SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30595). |

Prevention Process and Outcome Measures (POM) Summary Report (V3)

[Prevention Process and Outcome Measures (POM) Summary Report (V3) (urn:hl7ii:2.16.840.1.113883.10.20.5.43:2018-04-01)](#D_Prevention_Process_and_Outcome_V3)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Draft |
| Name | Prevention Process and Outcome Measures (POM) Summary Report (V2) | Prevention Process and Outcome Measures (POM) Summary Report (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.5.43:2014-12-01 | urn:hl7ii:2.16.840.1.113883.10.20.5.43:2018-04-01 |
| Description | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  The required title for the CDA document is “Prevention Process and Outcome Measures (POM) Monthly Monitoring”.   The POM Report records summary data for a location during a specified period. It can be submitted at the facility-wide level or at the unit level. | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  Preferred document title: “Prevention Process and Outcome Measures (POM) Monthly Monitoring”.   The POM Report records summary data for a location during a specified period. It can be submitted at the facility-wide level or at the unit level. |
| CONF #: 3357-30858 Added |  | This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30858) such that it |
| CONF #: 3357-30859 Added |  | SHALL contain exactly one [1..1] section (CONF:3357-30859). |
| CONF #: 3357-30868 Added |  | Preferred document title: “Prevention Process and Outcome Measures (POM) Monthly Monitoring”.  SHALL contain exactly one [1..1] title (CONF:3357-30868). |
| CONF #: 1129-22888 Removed | SHALL contain exactly one [1..1] title="Prevention Process and Outcome Measures (POM) Monthly Monitoring" (CONF:1129-22888). |  |
| CONF #: 3357-30433 Modified | This component SHALL contain exactly one [1..1] section (CONF:1129-30433). | SHALL contain exactly one [1..1] section (CONF:3357-30433). |
| CONF #: 3357-30550 Modified | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-30550). | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-30550). |
| CONF #: 3357-30476 Modified | SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30476). | SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30476). |

Specialty Care Area (SCA) Summary Report (V3)

[Specialty Care Area (SCA) Summary Report (V3) (urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01)](#D_Specialty_Care_Area_SCA_Summary_V3)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Draft |
| Name | Specialty Care Area (SCA) Summary Report (V2) | Specialty Care Area (SCA) Summary Report (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.5.42:2014-12-01 | urn:hl7ii:2.16.840.1.113883.10.20.5.42:2018-04-01 |
| Description | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.    The required title for the CDA document is “Denominator for Specialty Care Area (SCA)”.    This summary report uses the basic pattern for Summary Encounter and Summary Data Observation. Consult the NHSN protocol for which data to report. | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  Preferred document title: “Denominator for Specialty Care Area (SCA)”.  This summary report uses the basic pattern for Summary Encounter and Summary Data Observation. Consult the NHSN protocol for which data to report. |
| CONF #: 3357-30856 Added |  | This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30856) such that it |
| CONF #: 3357-30857 Added |  | SHALL contain exactly one [1..1] section (CONF:3357-30857). |
| CONF #: 3357-30869 Added |  | Preferred document title: “Denominator for Specialty Care Area (SCA)”.  SHALL contain exactly one [1..1] title (CONF:3357-30869). |
| CONF #: 1129-22845 Removed | SHALL contain exactly one [1..1] title="Denominator for Specialty Care Area (SCA)" (CONF:1129-22845). |  |
| CONF #: 3357-22854 Modified | This component SHALL contain exactly one [1..1] section (CONF:1129-22854). | SHALL contain exactly one [1..1] section (CONF:3357-22854). |
| CONF #: 3357-28328 Modified | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-28328). | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28328). |
| CONF #: 3357-30594 Modified | SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30594). | SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30594). |

Vascular Access Type Report (VAT) Summary Report (V3)

[Vascular Access Type Report (VAT) Summary Report (V3) (urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01)](#D_Vascular_Access_Type_Report_VAT_V3)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Draft |
| Name | Vascular Access Type Report (VAT) Summary Report (V2) | Vascular Access Type Report (VAT) Summary Report (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.5.45:2015-10-01 | urn:hl7ii:2.16.840.1.113883.10.20.5.45:2018-04-01 |
| Description | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.    The required title for the CDA document is “Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report”. | Note: The section on “Template Ids in this Guide” includes a containment table showing all the entries within each report type.  Preferred document title: “Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report”. |
| CONF #: 3357-30860 Added |  | SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30860). |
| CONF #: 3357-30861 Added |  | This structuredBody MAY contain zero or one [0..1] component (CONF:3357-30861) such that it |
| CONF #: 3357-30862 Added |  | SHALL contain exactly one [1..1] section (CONF:3357-30862). |
| CONF #: 3357-30870 Added |  | Preferred document title: “Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report”.  SHALL contain exactly one [1..1] title (CONF:3357-30870). |
| CONF #: 1202-22923 Removed | SHALL contain exactly one [1..1] title="Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report" (CONF:1202-22923). |  |
| CONF #: 1202-30765 Removed | SHALL contain exactly one [1..1] @extension="2015-10-01" (CONF:1202-30765). |  |
| CONF #: 3357-22932 Modified | This component SHALL contain exactly one [1..1] section (CONF:1202-22932). | SHALL contain exactly one [1..1] section (CONF:3357-22932). |
| CONF #: 3357-28330 Modified | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.1" (CONF:1202-28330). | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.3" (CONF:3357-28330). |

Infection First Reported Source Observation (RETIRED)

Infection First Reported Source Observation (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.6.207:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Infection First Reported Source Observation | Infection First Reported Source Observation (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.6.207 | urn:hl7ii:2.16.840.1.113883.10.20.5.6.207:2018-04-01 |
| Description | This template represents how the infection was first reported. | This template has been retired due to changes to the OPC forms. |

Procedure Category (RETIRED)

Procedure Category (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.6.215:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Procedure Category | Procedure Category (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.6.215 | urn:hl7ii:2.16.840.1.113883.10.20.5.6.215:2018-04-01 |
| Description | This template records the NHSN Procedure Category. | This template has been retired due to changes to the OPC forms. |

Prophylactic IV Antibiotic Timing Observation (RETIRED)

Prophylactic IV Antibiotic Timing Observation (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.6.209:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Prophylactic IV Antibiotic Timing Observation | Prophylactic IV Antibiotic Timing Observation (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.6.209 | urn:hl7ii:2.16.840.1.113883.10.20.5.6.209:2018-04-01 |
| Description | This template reports a facility-level process measure that occurs on the same day as the outpatient procedure. This process measure represents whether or not this patient had an order for a prophylactic IV antibiotic that was NOT administered on time (as defined by the NHSN protocol). When there was an order for a prophylactic IV antibiotic that was NOT administered on time, set the value of negationInd to false, otherwise set the value of negationInd to true. | This template has been retired due to changes to the OPC forms. |

Same Day Outcome Measure Observation (RETIRED)

Same Day Outcome Measure Observation (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Same Day Outcome Measure Observation | Same Day Outcome Measure Observation (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.6.208 | urn:hl7ii:2.16.840.1.113883.10.20.5.6.208:2018-04-01 |
| Description | This template reports a facility-level outcome measure that occurs on the same day as the outpatient procedure.  The measures include:  • Patient burn  • Patient fall  • Wrong site  • Wrong side  • Wrong patient  • Wrong procedure  • Wrong implant  • Hospital transfer/admission  If the outcome occurred, set the value of @negationInd to false. If the outcome did not occur, set the value of @negationInd to true. | This template has been retired due to changes to the OPC forms. |

Same Day Outcome Measures Organizer (RETIRED)

Same Day Outcome Measures Organizer (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Same Day Outcome Measures Organizer | Same Day Outcome Measures Organizer (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.6.212 | urn:hl7ii:2.16.840.1.113883.10.20.5.6.212:2018-04-01 |
| Description | This organizer groups together the same-day outcome measures. | This template has been retired due to changes to the OPC forms. |

Summary Data Observation (OPC) (RETIRED)

Summary Data Observation (OPC) (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.6.214:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Summary Data Observation (OPC) | Summary Data Observation (OPC) (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.6.214 | urn:hl7ii:2.16.840.1.113883.10.20.5.6.214:2018-04-01 |
| Description | This template specializes the Summary Data Observation for an Outpatient Procedure Component (OPC) Summary Report.    The code element of the Summary Data Observation (OPC) identifies the datum being reported, and the value element records the number of admissions.    When recording the total number of admissions with a primary Current Procedural Terminology (CPT) code for the procedure category, an entryRelationship to the Procedure Category template is required. | This template has been retired due to changes to the OPC forms. |

Summary Encounter (OPC) (RETIRED)

Summary Encounter (OPC) (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.6.213:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Summary Encounter (OPC) | Summary Encounter (OPC) (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.6.213 | urn:hl7ii:2.16.840.1.113883.10.20.5.6.213:2018-04-01 |
| Description | A Summary Encounter records a set of summary data, usually for a population such as the patients in a ward in a specified period. The NHSN protocol defines which data to record for each type of summary report. For an OPC Summary Report, each datum is recorded as a Summary Data Observation (OPC). The data requirements at time of publication are shown in a table under the Summary Data Observation (OPC) template. | This template has been retired due to changes to the OPC forms. |

Surgical Site Infection Observation (RETIRED)

Surgical Site Infection Observation (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.6.210:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Surgical Site Infection Observation | Surgical Site Infection Observation (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.6.210 | urn:hl7ii:2.16.840.1.113883.10.20.5.6.210:2018-04-01 |
| Description | This template represents a surgical site infection in an Outpatient Procedure Component Event Report. It records the date of the surgical site infection and contains entryRelationships to record the criteria of diagnosis and the infection condition being reported. | This template has been retired due to changes to the OPC forms. |

Findings Section in an OPC Report (RETIRED)

Findings Section in an OPC Report (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.5.55:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Findings Section in an OPC Report | Findings Section in an OPC Report (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.5.55 | urn:hl7ii:2.16.840.1.113883.10.20.5.5.55:2018-04-01 |
| Description | The Findings Section in an OPC Report records whether infection organisms were identified and, if so, records details about them. | This template has been retired due to changes to the OPC forms. |

Infection Risk Factors Section in a BSI Report (V3)

[Infection Risk Factors Section in a BSI Report (V3) (urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01)](#S_Infection_Risk_Factors_Sect_BSI_V3)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Draft |
| Name | Infection Risk Factors Section in a BSI Report (V2) | Infection Risk Factors Section in a BSI Report (V3) |
| Oid | urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01 | urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2018-04-01 |
| CONF #: 3357-30668 Added |  | SHALL contain exactly one [1..1] entry (CONF:3357-30668) such that it |
| CONF #: 3357-30669 Added |  | SHALL contain exactly one [1..1] observation (CONF:3357-30669). |
| CONF #: 3357-30670 Added |  | SHALL contain exactly one [1..1] entry (CONF:3357-30670) such that it |
| CONF #: 3357-30671 Added |  | SHALL contain exactly one [1..1] observation (CONF:3357-30671). |
| CONF #: 3357-30672 Added |  | SHALL contain exactly one [1..1] entry (CONF:3357-30672) such that it |
| CONF #: 3357-30673 Added |  | SHALL contain exactly one [1..1] observation (CONF:3357-30673). |
| CONF #: 3357-30693 Added |  | SHALL contain exactly one [1..1] entry (CONF:3357-30693) such that it |
| CONF #: 3357-30694 Added |  | SHALL contain exactly one [1..1] observation (CONF:3357-30694). |
| CONF #: 3357-28433 Modified | SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28433). | SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-28433). |

Other Event Details Section (RETIRED)

Other Event Details Section (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.5.54:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Other Event Details Section | Other Event Details Section (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.5.54 | urn:hl7ii:2.16.840.1.113883.10.20.5.5.54:2018-04-01 |
| Description | In an OPC Event Report, the Other Event Details Section contains details about non-infectious events such as same-day outcome measures and antibiotic timing. | This template has been retired due to changes to the OPC forms. |

Summary Data Section (NICU) (V2)

[Summary Data Section (NICU) (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01)](#S_Summary_Data_Section_NICU_V2)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Draft |
| Name | Summary Data Section (NICU) | Summary Data Section (NICU) (V2) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.5.48 | urn:hl7ii:2.16.840.1.113883.10.20.5.5.48:2018-04-01 |
| Description | The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported. The NICU Report extends the simple pattern for Summary Encounter. This report is stratified by birth weight. Each category is recorded in a separate Summary Encounter (NICU) within the Summary Data Section (NICU). The category is recorded as a participant in the encounter, in addition to the location participant that is required in all Summary Encounters. | The Summary Data Section is used in a population summary report. The specific counts to be reported in the Summary Data Section vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.  The NICU Report extends the simple pattern for Summary Encounter. This report is stratified by birth weight. Each category is recorded in a separate Summary Encounter (NICU) within the Summary Data Section (NICU). The category is recorded as a participant in the encounter, in addition to the location participant that is required in all Summary Encounters. |
| CONF #: 3357-30598 Added |  | SHALL contain exactly one [1..1] @extension="2018-04-01" (CONF:3357-30598). |
| CONF #: 3357-22842 Modified | Such entries SHALL contain exactly one [1..1] encounter (CONF:86-22842). | SHALL contain exactly one [1..1] encounter (CONF:3357-22842). |

Summary Data Section (OPC) (RETIRED)

Summary Data Section (OPC) (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.5.56:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Summary Data Section (OPC) | Summary Data Section (OPC) (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.5.56 | urn:hl7ii:2.16.840.1.113883.10.20.5.5.56:2018-04-01 |
| Description | The Summary Data Section is used in a population summary report. The specific counts to be reported in the various Summary Data Sections vary by report topic, but the section itself conveys the same kind of information wherever used; therefore, the section is represented by the same LOINC section code whatever the data reported.   The Summary Data Section (OPC) extends its generic equivalent, but is specific to the Outpatient Procedure Component (OPC) Summary Report. | This template has been retired due to changes to the OPC forms. |

Surgical Site Infection Details Section in an OPC Report (RETIRED)

Surgical Site Infection Details Section in an OPC Report (RETIRED) (urn:hl7ii:2.16.840.1.113883.10.20.5.5.53:2018-04-01)

| Change | Old | New |
| --- | --- | --- |
| Status | Published | Retired |
| Name | Surgical Site Infection Details Section in an OPC Report | Surgical Site Infection Details Section in an OPC Report (RETIRED) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.5.53 | urn:hl7ii:2.16.840.1.113883.10.20.5.5.53:2018-04-01 |
| Description | This section records details of the surgical site infection in an OPC Report. | This template has been retired due to changes to the OPC forms. |

# APPENDIX A - Acronyms and Abbreviations

<p class="acronym"> <span lang="X-NONE">ACoS               American College of Surgeons</span> </p> <p class="acronym"> AR                    <span lang="X-NONE">Antimicrobial Resistance</span> </p> <p class="acronym"> ARO                 Antimicrobial Resistance Option </p> <p class="acronym"> ASA                 American Society of Anesthesiologists </p> <p class="acronym"> APRV               Airway Pressure Release Ventilation </p> <p class="acronym"> AU                   <span lang="X-NONE">Antimicrobial Use</span> </p> <p class="acronym"> AUP                 Antimicrobial Use, Pharmacy Option (AUP) Summary Report </p> <p class="acronym"> AUR                 Antimicrobial Use and Resistance Module </p> <p class="acronym"> BPU                 <span lang="X-NONE">Blood Products Usage</span> </p> <p class="acronym"> BSI                  Bloodstream Infection </p> <p class="acronym"> C-CDA             Consolidated CDA </p> <p class="acronym"> CDA R2           CDA Release 2 </p> <p class="acronym"> CDA                 Clinical Document Architecture </p> <p class="acronym"> CDAD              C. difficile-associated disease </p> <p class="acronym"> CDC                Centers for Disease Control and Prevention </p> <p class="acronym"> CDI                  <em>C. difficile</em> infection </p> <p class="acronym"> CHI                  Consolidated Health Informatics </p> <p class="acronym"> CLIP                 central-line insertion practice </p> <p class="acronym"> CPT                  Current Procedural Terminology </p> <p class="acronym"> DSTU               Draft Standard for Trial Use </p> <p class="acronym"> EHR                 electronic health record </p> <p class="acronym"> EOID                Evidence of Infection (Dialysis) Report </p> <p class="acronym"> FOIA                <span lang="X-NONE">Freedom of Information Act</span> </p> <p class="acronym"> GIN                  Generic Incident Notification </p> <p class="acronym"> HAI                  Healthcare Associated Infection </p> <p class="acronym"> HAR                 <span lang="X-NONE">Hemovigilance Adverse Reaction</span> </p> <p class="acronym"> HI                     <span lang="X-NONE">Hemovigilance Incident Report</span> </p> <p class="acronym"> HITSP              Healthcare Information Technology Standards Panel </p> <p class="acronym"> HL7                  Health Level Seven </p> <p class="acronym"> HP FLU            Influenza Vaccination Summary </p> <p class="acronym"> HV                   Hemovigilance </p> <p class="acronym"> ICP                   infection control professional </p> <p class="acronym"> ICU                  intensive care unit </p> <p class="acronym"> ID                     identifier </p> <p class="acronym"> IDM                  Information Data Model </p> <p class="acronym"> IG                     implementation guide </p> <p class="acronym"> IHTSDO           International Health Terminology Standard Development Organisation </p> <p class="acronym"> ISBT                International Society for Blood Transfusion </p> <p class="acronym"> IV                     intravenous </p> <p class="acronym"> LIO                   Laboratory-identified organism </p> <p class="acronym"> LOS                   Late Onset Sepsis </p> <p class="acronym"> LOINC              Logical Observation Identifiers Names and Codes </p> <p class="acronym"> MDRO              Multi-drug-resistant organism </p> <p class="acronym"> NCEZID           National Center for Emerging and Zoonotic Infectious Diseases </p> <p class="acronym"> NHSN              National Healthcare Safety Network </p> <p class="acronym"> NICU                Neonatal Intensive Care Unit </p> <p class="acronym"> NUCC              National Uniform Claim Committee </p> <p class="acronym"> OID                  object identifier </p> <p class="acronym"> OPC                 Outpatient Procedure Component </p> <p class="acronym"> PHCR               Public Health Case Reports </p> <p class="acronym"> PHIN VADS     Public Health Information Network Vocabulary Access and Distribution System </p> <p class="acronym"> PICC/IV           peripherally inserted central catheter/intravenous </p> <p class="acronym"> <span lang="X-NONE">PNEU               Pneumonia Infection Numerator Report</span> </p> <p class="acronym"> POM                 Prevention Process and Outcome Measures Monthly Monitoring </p> <p class="acronym"> RIM                 Reference Information Model </p> <p class="acronym"> RMIM              Refined Message Information Model </p> <p class="acronym"> SCA                 Specialty Care Area </p> <p class="acronym"> SDWG             Structured Documents Working Group </p> <p class="acronym"> SNOMED-CT   Systematized Nomenclature of Medicine--Clinical Terms </p> <p class="acronym"> SSI                   Surgical Site Infection </p> <p class="acronym"> TA-GVHD        Transfusion associated graft vs. host disease </p> <p class="acronym"> TSC                 Technical Steering Committee </p> <p class="acronym"> URL                 Uniform Resource Locator </p> <p class="acronym"> URN                 Universal Resource Name </p> <p class="acronym"> UTI                   Urinary Tract Infection </p> <p class="acronym"> VAE                 Ventilator Associated Event </p> <p class="acronym"> VAD                 <span lang="X-NONE">Ventricular Assist Device</span> </p> <p class="acronym"> VAT                 Vascular Access Type </p> <p class="acronym"> XML                 Extensible Markup Language </p> <p class="acronym"> </p> <p class="MsoNormal"> <o:p> </o:p> </p>

# APPENDIX B - High-Level Changes from Previous Releases

<p class="BodyText"> <a id="High\_Level\_Changes"><span style="color: rgb(51, 51, 51);">This appendix summarizes the main changes in DSTU releases 3 through 9, Normative Release 1, and the two DSTU ballots for Normative Release 2. This IG is the third STU for Normative Release 3.</span></a> </p> <p class="Appendix2"> <a name="\_Toc214965045"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p class="Appendix2"> <a name="\_Toc214965045"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">DSTU Release 3</span></span></strong></a> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Release 3 updated the value set in the population summary report to include the Specialty Care Area (SCA) and Neonatal Intensive Care Unit (NICU) Monthly forms.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">To accommodate the recording of sub-groups in the NICU Monthly form, the Summary Encounter now allows a <span class="XMLname">participant</span> element specifying the characteristic of the subgroup (e.g., birth weight under 750g).</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">A single NHSN code system replaced the finer-grained NHSN code systems.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Final values replaced temporary values in the NHSN code system.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Final values were assigned to two temporary value-set OIDs.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">An influenza immunization report no longer records the in-facility location and type.</span> </p> <p class="Appendix2"> <a name="\_Toc214965046"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p class="Appendix2"> <a name="\_Toc214965046"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">DSTU Release 4</span></span></strong></a> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Release 4 introduced the Laboratory-identified Organisms (LIO) report and updated the population summary report to include the Prevention Process and Outcome Measures Monthly Monitoring (POM) form.</span><br /> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">To accommodate the grouping of information in the POM monthly form, the Summary Data Observation may now contain subordinate observations.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">In population summary reports, in-facility location and code are now recorded as a participant in the Summary Encounter. Previously, this information was recorded in the header.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">A population summary report that does not report in-facility identifier and type now records them with nullFlavors.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">In several observations, the values for <span class="XMLname">@classCode</span>, <span class="XMLname">@moodCode</span>, and <span class="XMLname">statusCode/@code</span> were made explicit, making the representation of these templates consistent with the approach elsewhere in this guide.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">The guide now uses the Templates Database constraints format.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Resolutions from the September 2009 ballot have been incorporated.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">In future releases, an appendix referenced by this summary section will document detailed changes to constraints.</span> </p> <p class="Appendix2"> <a name="\_Toc214965047"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p class="Appendix2"> <a name="\_Toc214965047"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">DSTU Release 4.1</span></span></strong></a> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Release 4.1 made minor updates to the Urinary Tract Infection (UTI) Report. The Urinary Catheter Observation now conditionally requires a (new) History of Object Presence Observation.</span> </p> <p class="Appendix2"> <a name="\_Toc214965048"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p class="Appendix2"> <a name="\_Toc214965048"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">DSTU Release 5</span></span></strong></a> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Release 5 included a new report type, the Hemovigilance Incident (HI) Report, and extended the population summary report to support reporting hemovigilance incident summary data and blood-product usage data.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">In the Population Summary Report template, a code in the header of the report now identifies the data content of the report.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">In the Population Summary Report template, the representation of terms was converted from a value set to tables of single-value bindings.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">The NHSN Healthcare Service Location value set changed from <span class="keyword">STATIC</span> to <span class="keyword">DYNAMIC</span>.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Release 5 also implemented NHSN changes to data requirements in the Central-line Insertion Practices (CLIP), Procedure, and LIO Reports.</span> </p> <p class="Appendix2"> <a name="\_Toc214965049"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p class="Appendix2"> <a name="\_Toc214965049"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">DSTU Release 6</span></span></strong></a> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Release 6 included a new report type, Hemovigilance Adverse Reaction (HAR) Report, extended the population summary report to support reporting antimicrobial usage and resistance data (AUP) and C.difficile days in a POM report, and made minor changes within existing templates.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Finally, beginning with this release, hai\_voc.xls is a new, reader-friendly resource for value-set information, substituting for the Word tables previously provided at the end of this implementation guide.</span> </p> <p class="Appendix2"> <a name="\_Toc214965050"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p class="Appendix2"> <a name="\_Toc214965050"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">DSTU Release 7</span></span></strong></a> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Release 7 included a new report type, Evidence of Infection (Dialysis) Report (EOID), and updates to the tables of values for the Population Summary Reports template to support summary reporting for maintenance (also known as chronic) hemodialysis patients.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">The guide no longer includes the MDRO/CDAD Report or the clinical statements uniquely associated with it. The MDRO Observation, used in the Findings Section, is updated to also report C. difficile infections. The guide no longer includes the Generic Infection Report.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Several value set bindings changed from <span class="keyword">STATIC</span> to <span class="keyword">DYNAMIC</span>.</span> </p> <p class="Appendix2"> <a name="\_Toc214965051"><span style="font-size: 16px;"><strong><span style="color: rgb(51, 51, 51);"><br /></span></strong></span></a> </p> <p class="Appendix2"> <a name="\_Toc214965051"><span style="font-size: 16px;"><strong><span style="color: rgb(51, 51, 51);">DSTU Release 8</span></strong></span></a> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">There were no new reports in this release.</span> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">A small number of templates were updated to reflect changes in data collected by the CDC.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">The population summary reports were recast for ease of use. This did not change the modeling.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">The header templates were refactored for ease of use. This did not change the modeling.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Constraints were edited to record only one element per constraint. This did not change the modeling.</span> </p> <p class="Appendix2"> <a name="\_Toc214965052"><span style="font-size: 16px;"><strong><span style="color: rgb(51, 51, 51);"><br /></span></strong></span></a> </p> <p class="Appendix2"> <a name="\_Toc214965052"><span style="font-size: 16px;"><strong><span style="color: rgb(51, 51, 51);">DSTU Release 9</span></strong></span></a> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">This release added no new reports.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Four numerator reports and four denominator reports that have not yet been implemented or are undergoing substantial change were removed from this release of the HAI IG. These reports may be reintroduced in future.</span> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">The numerator reports that were removed are:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">HAI Hemovigilance Adverse Reaction Report (HAR)</span> </li> <li> <span style="color: rgb(51, 51, 51);">HAI Hemovigilance Incident Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">HAI Immunization Numerator Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">HAI Pneumonia Infection Numerator Report (PNEU)</span> </li> </ul> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">The denominator reports that were removed are:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">Hemovigilance Incidents (HI) Summary Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">Blood Products Usage (BPU) Summary Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">Immunization Summary Reports</span> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">The top-level <span class="XMLname">templateId</span> was updated. Several templates were new and several had minor revisions.</span> </p> <p class="Appendix2"> <a name="\_Toc373341059"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p class="Appendix2"> <a name="\_Toc373341059"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 1</span></span></strong></a> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">In addition to the report and template changes described below, the format of the guide itself was restructured to align with the current HL7 state-of-the-art guides. The restructuring simplifies navigation and produces a guide that is more familiar to implementers, reviewers, analysts, and any other consumers.</span> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">Two new report(s) were added and none were removed:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">Antimicrobial Resistance Option (ARO) Summary Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">HAI AUR Antimicrobial Resistance Option (ARO) Report</span> </li> </ul> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);"><span lang="EN-AU">Although they are not new to the IG, the following reports now have separate templates and </span><span class="XMLname">templateIds</span><span lang="EN-AU"> rather than being described purely in narrative:</span></span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">Antimicrobial Use (AUP) Summary Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">Intensive Care Unit (ICU) Summary Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">Neonatal Intensive Care Unit (NICU) Summary Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">Prevention Process and Outcome Measures (POM) Summary Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">Specialty Care Area (SCA) Summary Report</span> </li> <li> <span style="color: rgb(51, 51, 51);">Vascular Access Type Report (VAT) Summary Report</span> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">No <span lang="EN-AU">templates </span>were removed in this release<span lang="EN-AU">.</span></span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Where possible, the HAI templates now conform to Consolidated CDA (C-CDA) templates, which is a requirement of Meaningful Use 2. C-CDA templates represent a significant effort by industry stakeholders; they are the best available standard to require for certification and to meet policy objectives for interoperability.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Summary reports were moved from purely narrative descriptions into report-specific templates.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Most narrative constraints were converted to computable constraints.</span> </p> <p class="Appendix2"> <span style="font-size: 16px;"><strong><span style="color: rgb(51, 51, 51);"><br /></span></strong></span> </p> <p class="Appendix2"> <span style="font-size: 16px;"><strong><span style="color: rgb(51, 51, 51);">Normative Release 2, 1<sup>st</sup> DSTU</span></strong></span> </p> <p style="break-after: avoid;" class="BodyText"> <a name="\_Toc373341046"><span style="color: rgb(51, 51, 51);">No reports were added or removed. Four new entry-level templates were added</span></a> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">Infection Present at the Time of Surgery Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">SSI Detected Using Toolkit Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Revision Associated with Prior Infection Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Loss of Vascular Access Observation</span> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">No new value sets were added, but some codes were added or removed:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">A code for “Number of APRV days” (1834-1) from codeSystem cdcNHSN (2.16.840.1.113883.6.277), was added to the Intensive Care Unit (ICU) Summary Report and the Neonatal Intensive Care Unit (NICU) Summary Report.</span> </li> <li> <span style="color: rgb(51, 51, 51);">A code “Number of central line days” (1833-3) from codeSystem cdcNHSN (2.16.840.1.113883.6.277) was deprecated from the Neonatal Intensive Care Unit (NICU) Summary Data table.</span> </li> <li> <span style="color: rgb(51, 51, 51);">A code &quot;Number of central line days including umbilical catheter&quot; (1854-9) from codeSystem cdcNHSN (2.16.840.1.113883.6.277) was added to the Neonatal Intensive Care Unit (NICU) Summary Data table.</span> </li> <li> <span style="color: rgb(51, 51, 51);">A code for “Urinary Tract Infection” (68566005) from codeSystem SNOMED CT (2.16.840.1.113883.6.96), was added to the Infection Type Value Set for the Criterion of Diagnosis Observation.</span> </li> </ul> <p class="Appendix2"> <strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong> </p> <p class="Appendix2"> <strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 2, Update to 1st DSTU</span></span></strong> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">There were no normative changes in this update.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">The guide was divided into two volumes. Volume 1 contains an overview of Clinical Document Architecture (CDA) markup standards, design, and use. Volume 2 contains the library of CDA templates for electronic submission of HAI Reports to NHSN-CDC.</span> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Three codes were added to and two codes were deprecated from the Criterion of Diagnosis value set.</span> </p> <p class="Appendix2"> <strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong> </p> <p class="Appendix2"> <strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 2, 2<sup>nd</sup> DSTU</span></span></strong> </p> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Two new reports, each containing new templates, were added: </span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">HAI Outpatient Procedure Component (OPC) Event Report, 2.16.840.1.113883.10.20.5.47</span> </li> <li> <span style="color: rgb(51, 51, 51);">Findings Section in an OPC Report, 2.16.840.1.113883.10.20.5.5.55</span> </li> <li> <span style="color: rgb(51, 51, 51);">Other Event Details Section, 2.16.840.1.113883.10.20.5.5.54</span> </li> <li> <span style="color: rgb(51, 51, 51);">Prophylactic IV Antibiotic Timing Observation, 2.16.840.1.113883.10.20.5.6.209</span> </li> <li> <span style="color: rgb(51, 51, 51);">Same Day Outcome Measures Organizer, 2.16.840.1.113883.10.20.5.6.212</span> </li> <li> <span style="color: rgb(51, 51, 51);">Same Day Outcome Measure Observation, 2.16.840.1.113883.10.20.5.6.208</span> </li> <li> <span style="color: rgb(51, 51, 51);">Surgical Site Infection Details Section in an OPC Report, 2.16.840.1.113883.10.20.5.5.53</span> </li> <li> <span style="color: rgb(51, 51, 51);">Infection First Reported Source Observation, 2.16.840.1.113883.10.20.5.6.207</span> </li> <li> <span style="color: rgb(51, 51, 51);">Procedure Details in an OPC Report, 2.16.840.1.113883.10.20.5.6.211</span> </li> <li> <span style="color: rgb(51, 51, 51);">Surgical Site Infection Observation, 2.16.840.1.113883.10.20.5.6.210</span> </li> <li> <span style="color: rgb(51, 51, 51);">HAI Outpatient Procedure Component (OPC) Summary Report, 2.16.840.1.113883.10.20.5.48</span> </li> <li> <span style="color: rgb(51, 51, 51);">Summary Data Section (OPC), 2.16.840.1.113883.10.20.5.5.56</span> </li> <li> <span style="color: rgb(51, 51, 51);">Summary Encounter (OPC), 2.16.840.1.113883.10.20.5.6.213</span> </li> <li> <span style="color: rgb(51, 51, 51);">Summary Data Observation (OPC), 2.16.840.1.113883.10.20.5.6.214</span> </li> <li> <span style="color: rgb(51, 51, 51);">Procedure Category, 2.16.840.1.113883.10.20.5.6.215</span> </li> </ul> <p class="Appendix2"> <strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong> </p> <p class="Appendix2"> <strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 2, Update to 2nd DSTU</span></span></strong> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">No reports were added or removed. Five reports were revised:</span> </p> <ul> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">HAI AUR Antimicrobial Resistance Option (ARO) Report</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">HAI </span><span style="text-indent: -18pt;">Central-Line Insertion Practice Numerator Report</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">HAI </span><span style="text-indent: -18pt;">Evidence of Infection (Dialysis) Report</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">HAI </span><span style="text-indent: -18pt;">Laboratory-Identified Organism (LIO) Report</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">Prevention </span><span style="text-indent: -18pt;">Process and Outcome Measures (POM) Summary Report</span></span> </li> </ul> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">Eleven new templates were added:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">Antimicrobial Coated Catheter Used Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Bacterial Isolate Tested for Carbapenemase Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Blood Collection Location</span> </li> <li> <span style="color: rgb(51, 51, 51);">Carbapenemase Test Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Carbapenemase Test Organizer</span> </li> <li> <span style="color: rgb(51, 51, 51);">Carbapenemase Type Identified Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Contraindication Type Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Last Physical Overnight Location</span> </li> <li> <span style="color: rgb(51, 51, 51);">Other Facility Discharge Encounter</span> </li> <li> <span style="color: rgb(51, 51, 51);">Positive Test for Carbapenemase Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Primary C. Difficile Testing Method This Quarter</span> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Three new value sets were added:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSNArDrugSuscTestsCode (</span><span style="text-indent: -18pt;" class="XMLname">2.16.840.1.114222.4.11.7230</span><span style="text-indent: -18pt;">)</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NullValues\_UNK\_OTH (</span><span style="text-indent: -18pt;" class="XMLname">2.16.840.1.113883.10.20.5.9.1</span><span style="text-indent: -18pt;">)</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NullValues\_UNK\_NA (</span><span style="text-indent: -18pt;" class="XMLname">2.16.840.1.113883.10.20.5.9.2</span><span style="text-indent: -18pt;">)</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSNLastLocationEncounterTypeCode (</span><span style="text-indent: -18pt;" class="XMLname">2.16.840.1.113883.10.20.5.9.2</span><span style="text-indent: -18pt;">)</span></span> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">One new code was added for use in the Summary Encounter in the Intensive Care Unit (ICU) Summary Report and the Specialty Care Area (SCA) Summary Report:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">New </span><span style="text-indent: -18pt;">Epis</span><span style="text-indent: -18pt;">o</span><span style="text-indent: -18pt;">des of Mechanica</span><span style="text-indent: -18pt;">l Ventilation</span><br /></span> </li> </ul> <p class="Appendix2"> <strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong> </p> <p class="Appendix2"> <strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 2, First Normative Ballot</span></span></strong> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">Three reports were revised:</span> </p> <ul> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">HAI AUR Antimicrobial Resistance Option (ARO) Report (V3)</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">Antimicrobial </span><span style="text-indent: -18pt;">Resistance Option (ARO) Summary Report (V2)</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">Antimicrobial </span><span style="text-indent: -18pt;">Use (AUP) Summary Report (V2)</span></span> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">One new template was added; this template is a refactoring of the generic Summary Data Observation that pulls out the AU/AR data into a separate template:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">Summary </span><span style="text-indent: -18pt;">Data Observa</span><span style="text-indent: -18pt;">tion (AU/AR)</span><br /></span> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Where necessary, templates above the new templates in the hierarchy have been versioned.</span> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">A third stand-alone volume was added. It consolidates copies of the antimicrobial use and resistance templates for single-person and summary reports; those templates also remain in Volume 2.</span> </p> <p class="Appendix2"> <a name="\_Toc301107525"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p class="Appendix2"> <a name="\_Toc301107525"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 3, 1st DSTU</span></span></strong></a> </p> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">One report was added:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">Hemo</span><span style="text-indent: -18pt;">vigilance (HV) Summary Report</span><br /></span> </li> </ul> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">Two reports were revised:</span> </p> <ul> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">HAI Evidence of Infection (Dialysis) Report (V4)</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">Vascular </span><span style="text-indent: -18pt;">Access Type Report (VAT) Summary Report (V2)</span></span> </li> </ul> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">Ten new templates were added:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);">Summary Data Section (HV)</span> </li> <li> <span style="color: rgb(51, 51, 51);">Blood Product Usage Summary Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Dialyzer Reused Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Facility Transfuses Pathogen Reduced/Inactivated Blood Products Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">ISBT Product Code Summary Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">No Adverse Reactions Reported This Month Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">No Incidents Reported This Month Observation</span> </li> <li> <span style="color: rgb(51, 51, 51);">Summary Data Observation (HV)</span> </li> <li> <span style="color: rgb(51, 51, 51);">Summary Encounter (HV)</span> </li> <li> <span style="color: rgb(51, 51, 51);">Type of Antimicrobial Start Observation</span> </li> </ul> <p style="break-after: avoid;" class="BodyText"> <span style="color: rgb(51, 51, 51);">Four templates were revised:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">Infection Ind</span><span style="text-indent: -18pt;">icator Organize</span><span style="text-indent: -18pt;">r (V3)</span></span> </li> <li> <a style="text-indent: -18pt;" name="\_Toc427744867"><span style="color: rgb(51, 51, 51);">IV Antibiotic Start Clinical Statement (V2)</span></a> </li> <li> <a style="text-indent: -18pt;" name="\_Toc427744868"><span style="color: rgb(51, 51, 51);">Details Section in an Evidence of Infection (Dialysis) Report (V4)</span></a> </li> <li> <a style="text-indent: -18pt;" name="\_Toc427744869"><span style="color: rgb(51, 51, 51);">Risk Factors Section in an Evidence of Infection (Dialysis) Report (V2)</span></a> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">Thirty new value sets were added:</span> </p> <ul> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Start or Continuat</span><span style="text-indent: -18pt;">ion</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Summary Blood P</span><span style="text-indent: -18pt;">rod</span><span style="text-indent: -18pt;">uct Usage</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Whole Blood Total</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Red Blood Cells/W</span><span style="text-indent: -18pt;">hole Blood Derived/Not Irradiated or Leukocyte Reduced</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Red Blood Cells/Whole Blood Derived/Irradiated</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Red Blood Cells/Whole Blood Derived/Leukocyte Reduced</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Red Blood Cells/Whole Blood Derived/Irradiated And Leukocyte Reduced</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Red Blood Cells/Apheresis/Not Irradiated or Leukocyte Reduced</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Red Blood Cells/Apheresis/Irradiated</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Red Blood Cells/Apheresis/Leukocyte Reduced</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Red Blood Cells/Apheresis/Irradiated or Leukocyte Reduced</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Platelets/Whole Blood Derived/Not Irradiated or Leukocyte Reduced</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Platelets/Whole Blood Derived/Irradiated</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN Platelets/W</span><span style="text-indent: -18pt;">hole Blood Derived/Leukocyte Reduced</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Platelets/Whole Blood Derived/Irradiated And Leukocyte Reduced</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Platelets/Apheresis/Not Irradiated or Leukocyte Reduced</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Platelets/Apheresis/Irradiated</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Platelets/Apheresis/Leukocyte Reduced</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Platelets/Apheresis/Irradiated or Leukocyte Reduced</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Plasma/Whole Blood Derived/Total</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Plasma/Apheresis/Total</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Cryoprecipitate</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Platelets/Whole Blood Derived/Psoralen-Treated</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Platelets/Whole Blood Derived/Riboflavin-Treated</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Platelets/Apheresis/Psoralen-Treated</span></span> </li> <li> <span style="color: rgb(51, 51, 51);"><span style="text-indent: -18pt;">NHSN </span><span style="text-indent: -18pt;">Platelets/Apheresis/Riboflavin-Treated</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Plasma/Whole Blood Derived/Psoralen-Treated</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Plasma/Whole Blood Derived/Riboflavin-Treated</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Plasma/Apheresis/Psoralen-Treated</span></span> </li> <li> <span style="text-indent: -18pt;"><span style="color: rgb(51, 51, 51);">NHSN Plasma/Apheresis/Riboflavin-Treated</span></span> </li> </ul> <p class="BodyText"> <span style="color: rgb(51, 51, 51);">One new code was added to the value set Codes for Vascular Access Type (Dialysis) Summary Data. </span> </p> <p> <span style="color: rgb(51, 51, 51);">A fourth stand-alone volume was added. It consolidates copies of the hemovigilance templates summary report; those templates also remain in Volume 2.</span> </p> <p> <a name="\_Toc301107525"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);"><br /></span></span></strong></a> </p> <p> <a name="\_Toc301107525"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 3, Update to 1st DSTU</span></span></strong></a> </p> <p class="BodyText" style="page-break-after:avoid"> Three reports were revised: </p> <p class="BodyText" style="page-break-after:avoid"> </p> <ul> <li> <span style="text-indent: -18pt;">HAI Evidence of Infection (Dialysis) Report (V5)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">emovigilance (HV) Summary Report (V2)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">AI AUR Antimicrobial</span><span style="text-indent: -18pt;"> Resistance Option (ARO) Report (V4)</span> </li> </ul> <p class="BodyText" style="page-break-after:avoid"> Two new templates were added: </p> <p class="BodyText" style="text-indent: 0px; break-after: avoid;"> </p> <ul> <li> <span style="text-indent: -18pt;">B</span><span style="text-indent: -18pt;">lood Sample Collected for Culture Observation</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">P</span><span style="text-indent: -18pt;">athogen Reduced Apheresis Platelet Usage Summary Observation</span> </li> </ul> <p class="BodyText" style="page-break-after:avoid"> Fourteen templates were revised: </p> <p class="BodyText" style="page-break-after:avoid"> </p> <ul> <li> <span style="text-indent: -18pt;">Antimicrobial Susceptibility Result Observation (V3)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">A</span><span style="text-indent: -18pt;">n</span><span style="text-indent: -18pt;">t</span><span style="text-indent: -18pt;">i</span><span style="text-indent: -18pt;">microbial Susceptibility Result Organize</span><span style="text-indent: -18pt;">r (V3)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">A</span><span style="text-indent: -18pt;">n</span><span style="text-indent: -18pt;">timicrobial Susceptibility Tests Organiz</span><span style="text-indent: -18pt;">er (V3)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">B</span><span style="text-indent: -18pt;">l</span><span style="text-indent: -18pt;">o</span><span style="text-indent: -18pt;">o</span><span style="text-indent: -18pt;">d</span><span style="text-indent: -18pt;"> </span><span style="text-indent: -18pt;">Product Usage Summary Observat</span><span style="text-indent: -18pt;">ion (V2)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">F</span><span style="text-indent: -18pt;">a</span><span style="text-indent: -18pt;">c</span><span style="text-indent: -18pt;">i</span><span style="text-indent: -18pt;">l</span><span style="text-indent: -18pt;">ity Transfuses Blood Products Treate</span><span style="text-indent: -18pt;">d with Pathogen Reduction Technology Observation (V2)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">I</span><span style="text-indent: -18pt;">n</span><span style="text-indent: -18pt;">f</span><span style="text-indent: -18pt;">e</span><span style="text-indent: -18pt;">c</span><span style="text-indent: -18pt;">tion Indicator Organizer (V4)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">I</span><span style="text-indent: -18pt;">SBT Product Code Summ</span><span style="text-indent: -18pt;">ary Observation (V2)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">I</span><span style="text-indent: -18pt;">s</span><span style="text-indent: -18pt;">olate Susceptibility Tests Organizer (</span><span style="text-indent: -18pt;">V3)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">I</span><span style="text-indent: -18pt;">V</span><span style="text-indent: -18pt;"> </span><span style="text-indent: -18pt;">Antibiotic Start Clinical Statem</span><span style="text-indent: -18pt;">ent (V3)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">S</span><span style="text-indent: -18pt;">pecimen Collection Procedure (</span><span style="text-indent: -18pt;">A</span><span style="text-indent: -18pt;">RO) (V3)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">S</span><span style="text-indent: -18pt;">u</span><span style="text-indent: -18pt;">mmary Encounter (HV) (V2)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">D</span><span style="text-indent: -18pt;">e</span><span style="text-indent: -18pt;">t</span><span style="text-indent: -18pt;">a</span><span style="text-indent: -18pt;">i</span><span style="text-indent: -18pt;">ls Section in an E</span><span style="text-indent: -18pt;">vidence of Infection (Dialysis) Report (V5)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">F</span><span style="text-indent: -18pt;">i</span><span style="text-indent: -18pt;">n</span><span style="text-indent: -18pt;">d</span><span style="text-indent: -18pt;">i</span><span style="text-indent: -18pt;">n</span><span style="text-indent: -18pt;">gs Section in an ARO Report (V3</span><span style="text-indent: -18pt;">)</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">Summary Data Section (HV) (</span><span style="text-indent: -18pt;">V</span><span style="text-indent: -18pt;">2)</span> </li> </ul> <p class="BodyText"> Twelve new value sets were added: </p> <p class="BodyText"> </p> <ul> <li> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">HSN Red Blood Cell</span><span style="text-indent: -18pt;">s</span><span style="text-indent: -18pt;">/Whole Blood Derived/S-303-Treated</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">S</span><span style="text-indent: -18pt;">N Red Blood Cells/Whole Blood Derived/Ribofl</span><span style="text-indent: -18pt;">avin-Treated</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">SN Red Blood Cells/Apheresis/S-303-Treated</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">HSN Red Blood Cells/Apheresis/Ribof</span><span style="text-indent: -18pt;">l</span><span style="text-indent: -18pt;">avin-Treated</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">SN Cryoprecipitate/Psoralen-Treate</span><span style="text-indent: -18pt;">d</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">S</span><span style="text-indent: -18pt;">N Cryoprecipitate/Riboflav</span><span style="text-indent: -18pt;">i</span><span style="text-indent: -18pt;">n-Treated</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">S</span><span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;"> </span><span style="text-indent: -18pt;">P</span><span style="text-indent: -18pt;">l</span><span style="text-indent: -18pt;">a</span><span style="text-indent: -18pt;">t</span><span style="text-indent: -18pt;">e</span><span style="text-indent: -18pt;">lets/Apheresis/Psora</span><span style="text-indent: -18pt;">l</span><span style="text-indent: -18pt;">en-Treated and In Plasma</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">S</span><span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;"> </span><span style="text-indent: -18pt;">P</span><span style="text-indent: -18pt;">l</span><span style="text-indent: -18pt;">a</span><span style="text-indent: -18pt;">t</span><span style="text-indent: -18pt;">elets/Apheresis/Psoralen-Treated and I</span><span style="text-indent: -18pt;">n</span><span style="text-indent: -18pt;"> Platelet Additive Solution</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">NHSN Platelets/Apheresis/Riboflavin-Treated and In Plasma</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">N</span><span style="text-indent: -18pt;">H</span><span style="text-indent: -18pt;">S</span><span style="text-indent: -18pt;">N Platelets/Apheresis/Riboflavin-Treated and I</span><span style="text-indent: -18pt;">n</span><span style="text-indent: -18pt;"> Platelet Additive Solution</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">NHSNPathogenReducedApheresisPlateletUsage</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">NHSNDrugSusceptibilityTestMetho</span><span style="text-indent: -18pt;">d</span> </li> </ul> <p class="BodyText"> Six value sets were revised: </p> <p class="BodyText"> </p> <ul> <li> <span style="text-indent: -18pt;">NHSNHealthca</span><span style="text-indent: -18pt;">reServiceLocationCode</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">NHSNPathogenCode</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">NHSNSpecimenTypeCode</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">NHSNDrugSusceptibilityTestsCode</span> </li> <li style="text-indent: 0px; "> <span style="text-indent: -18pt;">NHSNCdiffTestMethod</span> </li> </ul> <div> <br /> </div> <p> <a name="\_Toc301107525"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 3, 2<sup>nd </sup>STU</span></span></strong></a> </p> <p style="break-after: avoid;" class="BodyText"> Two reports were added: </p> <p style="break-after: avoid;" class="BodyText"> </p> <ul> <li> Ventilator Associated Event (VAE) Report </li> <li> Healthcare Personnel Influenza Vaccination (HP FLU) Summary Report </li> </ul> <div> <br /> </div> <p> One report was revised:<br /> </p> <div> <div> <ul> <li> HAI Bloodstream Infection Report (BSI) (V2)<br /> </li> </ul> </div> <div> <br /> </div> <div> Twelve new templates were added: </div> <div> <ul> <li> Summary Data Section (HP-FLU)<br /> </li> <li> Infection Details Section in a VAE Report<br /> </li> <li> Risk Factors Section in a VAE Report<br /> </li> <li> NHSN Comment Section<br /> </li> <li> Summary Encounter (HP-FLU) <br /> </li> <li> Vaccination Type Observation <br /> </li> <li> NHSN Comment <br /> </li> <li> Hemodialysis Catheter Present <br /> </li> <li> Extracorporeal Life Support Present <br /> </li> <li> Ventricular Assist Device (VAD) Present <br /> </li> <li> Mechanical Ventilation Initiation Act <br /> </li> <li> APRV or Related at Time of VAE Observation <br /> </li> </ul> </div> <div> <br /> </div> <div> One template was revised: </div> <div> <ul> <li> Infection Risk Factors Section in a BSI Report (V2)<br /> </li> </ul> </div> <div> <br /> </div> <div> Two new value sets were added: </div> <div> <ul> <li> NHSNHealthcarePersonnelType<br /> </li> <li> NHSNInfluenzaVaccinationSetting<br /> </li> </ul> </div> <div> <br /> </div> <div> Four value sets were revised: </div> <div> <ul> <li> NHSNCriterionOfDiagnosis<br /> </li> <li> NHSNInfectionConditionCode<br /> </li> <li> NHSNInfectionTypeCode<br /> </li> <li> NHSNPopulationSummaryReportTypeCode<br /> </li> </ul> </div> <div> <br /> </div> <div> <p> <a name="\_Toc301107525"><strong><span style="font-size: 16px;"><span style="color: rgb(51, 51, 51);">Normative Release 3, 3<sup>rd </sup>STU</span></span></strong></a> </p> <p class="BodyText" style="break-after: avoid;"> One new report: </p> <ul> <li> Late Onset Sepsis/Meningitis Event (LOS) Report<br /> </li> <p style="" class=""> <br /> </p> </ul> <p> Two removed (i.e., retired) reports:<br /> </p> <div> <div> <ul> <li> Late Onset Sepsis/Meningitis Event (LOS) Report<br /> </li> <li> HAI Outpatient Procedure Component (OPC) Summary Report <br /> </li> </ul> </div> <div> <br /> </div> <div> Six revised reports: </div> <div> <ul> <li> </li> <li> Intensive Care Unit (ICU) Summary Report (V3) </li> <li> Neonatal Intensive Care Unit (NICU) Summary Report (V3) </li> <li> Prevention Process and Outcome Measures (POM) Summary Report (V3) </li> <li> Specialty Care Area (SCA) Summary Report (V3) </li> <li> Vascular Access Type Report (VAT) Summary Report (V3) </li> <li> HAI Bloodstream Infection Report (BSI) (V3) </li> </ul> </div> <div> <br /> </div> <div> <div> Eleven new templates: </div> <div> <ul> <li> Infection Details in Late Onset Sepsis Report<br /> </li> <li> Report No Events Section<br /> </li> <li> Risk Factors Section (LOS/Men)<br /> </li> <li> Epidermolysis Bullosa Observation<br /> </li> <li> Gestational Age Observation<br /> </li> <li> Group B Streptococcus in First 6 Days of Life Observation<br /> </li> <li> Inborn/Outborn Observation<br /> </li> <li> Known or Suspected Munchhausen’s by Proxy Observation<br /> </li> <li> Observed or Suspected Patient Injection into Vascular Line Observation<br /> </li> <li> Pus Present in Site and Matching Organism in Blood and Specimen Observation<br /> </li> <li> Report No Events Observation<br /> </li> </ul> </div> <div> <br /> </div> <div> Two revised templates: </div> <div> <ul> <li> Infection Risk Factors Section in a BSI Report (V3)<br /> </li> <li> Summary Data Section (NICU) (V2)<br /> </li> </ul> </div> <div> <br /> </div> <div> Twelve removed (i.e., retired) templates: </div> <div> <ul> <li> Infection First Reported Source Observation<br /> </li> <li> Procedure Category <br /> </li> <li> Prophylactic IV Antibiotic Timing Observation <br /> </li> <li> Same Day Outcome Measure Observation <br /> </li> <li> Same Day Outcome Measures Organizer <br /> </li> <li> Summary Data Observation (OPC) <br /> </li> <li> Summary Encounter (OPC) <br /> </li> <li> Surgical Site Infection Observation <br /> </li> <li> Findings Section in an OPC Report <br /> </li> <li> Other Event Details Section<br /> </li> <li> Summary Data Section (OPC) <br /> </li> <li> Surgical Site Infection Details Section in an OPC Report <br /> </li> </ul> </div> <div> <br /> </div> <div> Eight new value sets: </div> <div> <ul> <li> NHSNInbornOutbornObservationCode<br /> </li> <li> NHSNLOS/MENEvent<br /> </li> <li> NHSNReportNoEventsICU<br /> </li> <li> NHSNReportNoEventsNICU<br /> </li> <li> NHSNReportNoEventsSCA<br /> </li> <li> NHSNReportNoEventsMDRO<br /> </li> <li> NHSNReportNoEventsDialysis<br /> </li> <li> NHSNVascularSpecimenCollectionSite<br /> </li> </ul> </div> <div> <br /> </div> <div> Seven revised value sets: </div> <div> <ul> <li> NHSNCriterionofDiagnosis<br /> </li> <li> NHSNHealthcareServiceLocations<br /> </li> <li> NHSNInfectionCondition<br /> </li> <li> NHSNInfectionType<br /> </li> <li> NHSNPathogenCode<br /> </li> <li> NHSNPopulationSummaryReportType<br /> </li> <li> NHSNVascularAccessType<br /> </li> </ul> </div> </div> </div> </div> </div>

# APPENDIX C - Document and Section Codes (Non-Normative)

The templates in Volumes 2, 3, and 4 use LOINC codes to identify the document type and section types. The document and section templates specify which code to use. This appendix is provided as a convenient summary for the implementer.

*Document and Section Codes*

| codeSystem | Name | code | Meaning |
| --- | --- | --- | --- |
| 2.16.840.1.113883.6.1 | LOINC | 51897-7 | Healthcare Associated Infection Report |
| 51898-5 | Risk Factors Section |
| 51899-3 | Details Section |
| 18769-0 | Findings Section |
| 51900-9 | Summary Data Section |
| 46240-8 | History of Encounters |

# APPENDIX D - Consolidated CDA (C-CDA) Templates Referenced in this Guide

A few NHSN templates conform to templates in the C-CDA guide: *HL7 Implementation Guide for CDA Release 2.0, Consolidated CDA Templates, (US Realm)8*.

*8 HL7 Implementation Guide for CDA Release 2.0, Consolidated CDA Templates, (US Realm).* <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=258> 

*C-CDA Template OIDs*

| Template Title | Template OID |
| --- | --- |
| Deceased Observation | 2.16.840.1.113883.10.20.22.4.79 |
| Encounter Activities | 2.16.840.1.113883.10.20.22.4.49 |
| Indication | 2.16.840.1.113883.10.20.22.4.19 |
| Medication Activity | 2.16.840.1.113883.10.20.22.4.16 |
| Problem Observation | 2.16.840.1.113883.10.20.22.4.4 |
| Procedure Activity Act | 2.16.840.1.113883.10.20.22.4.12 |
| Procedure Activity Observation | 2.16.840.1.113883.10.20.22.4.13 |
| Procedure Activity Procedure | 2.16.840.1.113883.10.20.22.4.14 |
| Result Observation | 2.16.840.1.113883.10.20.22.4.2 |
| Result Organizer | 2.16.840.1.113883.10.20.22.4.1 |
| Vital Sign Observation | 2.16.840.1.113883.10.20.22.4.27 |

# APPENDIX E - Example Instance Identifiers (Non-Normative)

<p> As discussed in <a href="#/volume1#section14">Background</a> and <a href="#/volume1#section10">Example Instance Identifiers</a>, much of the development of this guide was driven by a pilot project in July 2007. The pilot project assigned example OIDs to a fictional facility and vendor to illustrate the numbering schemes for which facilities and vendors are responsible. In practice, these identifiers will be assigned by facilities and software applications within those facilities participating in the NHSN. </p> <p> All example OIDs in this IG and in the accompanying sample files begin with <span class="XMLname"><span style="font-family: 'Courier New';">2.16.840.1.113883.3.117.1.1.5</span>. </span>and are documented below for reference. </p> <p> Each OID-owner such as a facility or vendor controls the structure of the OIDs it assigns under its root, and is responsible for ensuring that each identifier it issues is globally unique. A vendor must, for example, ensure that there is no duplication amongst the <span class="XMLname">setIds</span> issued by its various software installations. The example instance identifiers in this guide use the following plan for assigning instance identifiers: </p> <p style="text-align: center; "> <strong><em>Structure of Example OIDs</em></strong><br /> </p> <table class="MsoNormalTable" cellspacing="0" cellpadding="0" style="width: 576px; margin-left: 36pt; border-collapse: collapse; border: 1px none;"> <tbody> <tr> <td valign="top" style="width: 264px; border: 1pt solid windowtext; padding: 0cm 5.4pt; background: rgb(224, 224, 224);"> <p class="TableHead"> Usage </p> </td> <td valign="top" style="width: 312px; border-style: solid solid solid none; border-top-color: windowtext; border-right-color: windowtext; border-bottom-color: windowtext; border-top-width: 1pt; border-right-width: 1pt; border-bottom-width: 1pt; padding: 0cm 5.4pt; background: rgb(224, 224, 224);"> <p class="TableHead"> OID </p> </td> </tr> <tr> <td valign="top" style="width: 264px; border-style: none solid solid; border-right-color: windowtext; border-bottom-color: windowtext; border-left-color: windowtext; border-right-width: 1pt; border-bottom-width: 1pt; border-left-width: 1pt; padding: 0cm 5.4pt;"> <p class="TableText"> a healthcare facility OID </p> </td> <td valign="top" style="width: 312px; border-style: none solid solid none; border-bottom-color: windowtext; border-bottom-width: 1pt; border-right-color: windowtext; border-right-width: 1pt; padding: 0cm 5.4pt;"> <p class="TableText"> 2.16.840.1.113883.3.117.1.1.5.1.1 </p> </td> </tr> <tr> <td valign="top" style="width: 264px; border-style: none solid solid; border-right-color: windowtext; border-bottom-color: windowtext; border-left-color: windowtext; border-right-width: 1pt; border-bottom-width: 1pt; border-left-width: 1pt; padding: 0cm 5.4pt;"> <p class="TableText">    its patient IDs </p> </td> <td valign="top" style="width: 312px; border-style: none solid solid none; border-bottom-color: windowtext; border-bottom-width: 1pt; border-right-color: windowtext; border-right-width: 1pt; padding: 0cm 5.4pt;"> <p class="TableText"> 2.16.840.1.113883.3.117.1.1.5.1.1.1 </p> </td> </tr> <tr> <td valign="top" style="width: 264px; 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border-style: none solid solid; border-right-color: windowtext; border-bottom-color: windowtext; border-left-color: windowtext; border-right-width: 1pt; border-bottom-width: 1pt; border-left-width: 1pt; padding: 0cm 5.4pt; background: rgb(224, 224, 224);"> <p class="TableHead"> Usage </p> </td> <td valign="top" style="width: 246px; border-style: none solid solid none; border-bottom-color: windowtext; border-bottom-width: 1pt; border-right-color: windowtext; border-right-width: 1pt; padding: 0cm 5.4pt; background: rgb(224, 224, 224);"> <p class="TableHead"> OID </p> </td> <td valign="top" style="width: 154px; border-style: none solid solid none; border-bottom-color: windowtext; border-bottom-width: 1pt; border-right-color: windowtext; border-right-width: 1pt; padding: 0cm 5.4pt; background: rgb(224, 224, 224);"> <p class="TableHead"> extension </p> </td> </tr> <tr> <td valign="top" style="width: 175px; border-style: none solid solid; border-right-color: windowtext; border-bottom-color: windowtext; 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# APPENDIX F - Vocabulary Heuristics for Codes and Value Sets (Non-Normative)

The CDC has identified questions and allowable responses for HAI form fields. In many cases these questions and responses have been mapped to local CDC/NHSN codes, and it is the CDC's intention to identify corresponding standard codes. Within the CDC, different groups have done vocabulary mapping work (e.g., with HL7 V2 messages), often with different results, and efforts are underway to not only reconcile internal CDC vocabulary usage, but also reconcile CDC vocabulary usage with the Healthcare Information Standards Technology Panel (HITSP) recommendations.

Vocabularies recommended in this guide are primarily standard vocabularies recommended for use in particular domains.  In many cases these vocabularies are further constrained into value sets for use within this guide or were previously constrained into value sets by the CDC.

The incremental strategy for vocabulary reconciliation for codes, code systems, and value sets in this document is as follows.

**Code and codeSystem Selection**

* Where there is conflicting precedent within the CDC, CDC will advise on the preferred CDC code system.
* Where there is a preferred code system within the CDC that is consistent with HITSP recommendations, existing CDC-cited code systems are used.
* Where there is a preferred code system within the CDC that is not consistent with HITSP recommendations, divergence from HITSP is flagged, and reconciliation between CDC and HITSP is planned (but outside the scope of this document).
* Where there is no established precedent within the CDC, available HITSP recommendations will be followed.
* Where there is no established precedent within the CDC and no HITSP recommendations, precedent in prior CDA Implementation Guides will be followed.
* Where there is no established precedent within the CDC, no HITSP recommendations, and no prior CDA IG precedent:
* An attempt will be made to map CDC/NHSN local codes to standard codes (e.g., SNOMED, HL7 V3 vocabularies).
* Where there is no corresponding standard code, the CDC/NHSN local code will be cited. (Submitting local CDC/NHSN codes to SNOMED is outside the scope of this document.)
* If post-coordination of SNOMED terms and codes would be required to capture the CDC/NHSN concept, the local CDC/NHSN code will be used.

**Value Set Assignment and Maintenance**

* Where there is conflicting precedent within the CDC, CDC will advise on the preferred CDC value set.
* Where there is a preferred CDC value set that is consistent with HITSP recommendations, existing CDC value sets are used.
* Where there is a preferred CDC value set that is not consistent with HITSP recommendations, divergence from HITSP is flagged, and reconciliation between CDC and HITSP is planned (but outside the scope of this document).
* Where there is no established precedent within the CDC, available HITSP recommendations will be followed.
* Where there is no established precedent within the CDC and no HITSP recommendations, then precedent in prior CDA Implementation Guides will be followed.
* Where there is no established precedent within the CDC, no HITSP recommendations, and no prior CDA IG precedent, new value sets will be created, each having a value set OID assigned by the CDC.

1. HL7 CDA R2. <http://www.hl7.org/implement/standards/product_brief.cfm?product_id=7> [↑](#footnote-ref-1)
2. *HL7 V3: Refinement, Constraint and Localization.* <http://www.hl7.org/v3ballot/html/infrastructure/conformance/conformance.htm> [↑](#footnote-ref-2)
3. *HL7 Version 3 Publishing Facilitator's Guide.* <http://www.hl7.org/v3ballot/html/help/pfg/pfg.htm> [↑](#footnote-ref-3)
4. *HL7 Version 3 Interoperability Standards*. [http://www.hl7.org/memonly/downloads/v3edition.cfm - V32010](http://www.hl7.org/memonly/downloads/v3edition.cfm#V32010) [↑](#footnote-ref-4)
5. W3C, *XML Path Language.* <http://www.w3.org/TR/xpath/> [↑](#footnote-ref-5)