CDAR2\_IG\_HAIRPT\_R3\_D2\_2017JUL\_

Vol2\_Templates\_and\_Supporting



**HL7 CDA® R2 Implementation Guide:**

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

**Release 3, STU 2—US Realm**

**Volume 2—Templates and Supporting Material**

July 2017

**Release 3, 2nd HL7 Standard for Trial Use (STU)**

**Sponsored by:   
Structured Documents Work Group**

**National Healthcare Safety Network**

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# 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 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | 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)]

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

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

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

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)]

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

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

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

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).

HAI Outpatient Procedure Component (OPC) Summary Report

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.48 (closed)]

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

Table 8: HAI Outpatient Procedure Component (OPC) Summary Report Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (OPC)](#S_Summary_Data_Section_OPC) |

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.

Table 9: HAI Outpatient Procedure Component (OPC) Summary Report Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.48) | | | | | |
| templateId | 1..1 | SHALL |  | [1113-21970](#C_1113-21970) |  |
| @root | 1..1 | SHALL |  | [1113-21971](#C_1113-21971) | 2.16.840.1.113883.10.20.5.7.2.2 |
| templateId | 1..1 | SHALL |  | [1113-21789](#C_1113-21789) |  |
| @root | 1..1 | SHALL |  | [1113-21797](#C_1113-21797) | 2.16.840.1.113883.10.20.5.48 |
| title | 1..1 | SHALL |  | [1113-21798](#C_1113-21798) | Denominator for Outpatient Procedure Component (OPC) |
| documentationOf | 1..1 | SHALL |  | [1113-21790](#C_1113-21790) |  |
| serviceEvent | 1..1 | SHALL |  | [1113-21791](#C_1113-21791) |  |
| code | 1..1 | SHALL |  | [1113-21792](#C_1113-21792) |  |
| @code | 1..1 | SHALL |  | [1113-21799](#C_1113-21799) | 1657-6 |
| @codeSystem | 1..1 | SHALL |  | [1113-21800](#C_1113-21800) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [1113-21793](#C_1113-21793) |  |
| structuredBody | 1..1 | SHALL |  | [1113-21794](#C_1113-21794) |  |
| component | 1..1 | SHALL |  | [1113-21795](#C_1113-21795) |  |
| section | 1..1 | SHALL |  | [1113-21796](#C_1113-21796) | [Summary Data Section (OPC) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.56](#S_Summary_Data_Section_OPC) |

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:1113-21970) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2" (CONF:1113-21971).
2. SHALL contain exactly one [1..1] templateId (CONF:1113-21789) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.48" (CONF:1113-21797).
3. SHALL contain exactly one [1..1] title="Denominator for Outpatient Procedure Component (OPC)" (CONF:1113-21798).
4. SHALL contain exactly one [1..1] documentationOf (CONF:1113-21790).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:1113-21791).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:1113-21792).
         1. This code SHALL contain exactly one [1..1] @code="1657-6" Summary data reporting outpatient procedure component events at a facility (CONF:1113-21799).
         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:1113-21800).
5. SHALL contain exactly one [1..1] component (CONF:1113-21793).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1113-21794).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1113-21795).
         1. This component SHALL contain exactly one [1..1] [Summary Data Section (OPC)](#S_Summary_Data_Section_OPC) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.56) (CONF:1113-21796).

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

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

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 11: 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 12: 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 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Non-CMS Hospital Unit(s) |
| 1265-8 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Inpatient Psychiatric Facility Unit(s) |
| 1264-1 | HL7 HealthcareServiceLocation | 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1.1 - US Realm

Table 13: Hemovigilance (HV) Summary Report (V2) Contexts

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

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 14: 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 (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.40:2014-12-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

Table 15: Intensive Care Unit (ICU) Summary Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section](#S_Summary_Data_Section) |

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”.

Table 16: Intensive Care Unit (ICU) Summary Report (V2) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.40:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-28321](#C_1129-28321) |  |
| @root | 1..1 | SHALL |  | [1129-28322](#C_1129-28322) | 2.16.840.1.113883.10.20.5.7.2.2.1 |
| templateId | 1..1 | SHALL |  | [1129-22793](#C_1129-22793) |  |
| @root | 1..1 | SHALL |  | [1129-22794](#C_1129-22794) | 2.16.840.1.113883.10.20.5.40 |
| @extension | 1..1 | SHALL |  | [1129-30596](#C_1129-30596) | 2014-12-01 |
| title | 1..1 | SHALL |  | [1129-22799](#C_1129-22799) | Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report |
| documentationOf | 1..1 | SHALL |  | [1129-22800](#C_1129-22800) |  |
| serviceEvent | 1..1 | SHALL |  | [1129-22801](#C_1129-22801) |  |
| code | 1..1 | SHALL |  | [1129-22802](#C_1129-22802) |  |
| @code | 1..1 | SHALL |  | [1129-22803](#C_1129-22803) | 1879-6 |
| @codeSystem | 1..1 | SHALL |  | [1129-22804](#C_1129-22804) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [1129-22795](#C_1129-22795) |  |
| structuredBody | 1..1 | SHALL |  | [1129-22796](#C_1129-22796) |  |
| component | 1..1 | SHALL |  | [1129-22797](#C_1129-22797) |  |
| section | 1..1 | SHALL |  | [1129-22798](#C_1129-22798) | [Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47](#S_Summary_Data_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:1129-28321) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-28322).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22793) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.40" (CONF:1129-22794).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30596).
3. SHALL contain exactly one [1..1] title="Denominator for Intensive Care Unit (ICU)/Other Locations (not NICU or SCA) Report" (CONF:1129-22799).
4. SHALL contain exactly one [1..1] documentationOf (CONF:1129-22800).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:1129-22801).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:1129-22802).
         1. This code SHALL contain exactly one [1..1] @code="1879-6" Summary data reporting catheter and ventilator use in an ICU (CONF:1129-22803).
         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:1129-22804).
5. SHALL contain exactly one [1..1] component (CONF:1129-22795).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1129-22796).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1129-22797).
         1. This component 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:1129-22798).

Neonatal Intensive Care Unit (NICU) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.41:2014-12-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

Table 17: Neonatal Intensive Care Unit (NICU) Summary Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (NICU)](#S_Summary_Data_Section_NICU) |

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)”.

Table 18: Neonatal Intensive Care Unit (NICU) Summary Report (V2) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.41:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-28323](#C_1129-28323) |  |
| @root | 1..1 | SHALL |  | [1129-28324](#C_1129-28324) | 2.16.840.1.113883.10.20.5.7.2.2.1 |
| templateId | 1..1 | SHALL |  | [1129-22805](#C_1129-22805) |  |
| @root | 1..1 | SHALL |  | [1129-22806](#C_1129-22806) | 2.16.840.1.113883.10.20.5.41 |
| @extension | 1..1 | SHALL |  | [1129-30595](#C_1129-30595) | 2014-12-01 |
| title | 1..1 | SHALL |  | [1129-22807](#C_1129-22807) | Denominator for Neonatal Intensive Care Unit (NICU) |
| documentationOf | 1..1 | SHALL |  | [1129-22808](#C_1129-22808) |  |
| serviceEvent | 1..1 | SHALL |  | [1129-22809](#C_1129-22809) |  |
| code | 1..1 | SHALL |  | [1129-22810](#C_1129-22810) |  |
| @code | 1..1 | SHALL |  | [1129-22811](#C_1129-22811) | 1881-2 |
| @codeSystem | 1..1 | SHALL |  | [1129-22812](#C_1129-22812) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [1129-22813](#C_1129-22813) |  |
| structuredBody | 1..1 | SHALL |  | [1129-22814](#C_1129-22814) |  |
| component | 1..1 | SHALL |  | [1129-22815](#C_1129-22815) |  |
| section | 1..1 | SHALL |  | [1129-22816](#C_1129-22816) | [Summary Data Section (NICU) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.48](#S_Summary_Data_Section_NICU) |

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:1129-28323) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-28324).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22805) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.41" (CONF:1129-22806).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30595).
3. SHALL contain exactly one [1..1] title="Denominator for Neonatal Intensive Care Unit (NICU)" (CONF:1129-22807).
4. SHALL contain exactly one [1..1] documentationOf (CONF:1129-22808).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:1129-22809).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:1129-22810).
         1. This code SHALL contain exactly one [1..1] @code="1881-2" Summary data reporting catheter and ventilator use in a NICU (CONF:1129-22811).
         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:1129-22812).
5. SHALL contain exactly one [1..1] component (CONF:1129-22813).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1129-22814).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1129-22815).
         1. This component SHALL contain exactly one [1..1] [Summary Data Section (NICU)](#S_Summary_Data_Section_NICU) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.48) (CONF:1129-22816).

Prevention Process and Outcome Measures (POM) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.43:2014-12-01 (closed)]

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Table 19: Prevention Process and Outcome Measures (POM) Summary Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (POM) (V2)](#S_Summary_Data_Section_POM_V2) |

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.

Table 20: Prevention Process and Outcome Measures (POM) Summary Report (V2) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.43:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-30549](#C_1129-30549) |  |
| @root | 1..1 | SHALL |  | [1129-30550](#C_1129-30550) | 2.16.840.1.113883.10.20.5.7.2.2.1 |
| templateId | 1..1 | SHALL |  | [1129-22886](#C_1129-22886) |  |
| @root | 1..1 | SHALL |  | [1129-22887](#C_1129-22887) | 2.16.840.1.113883.10.20.5.43 |
| @extension | 1..1 | SHALL |  | [1129-30476](#C_1129-30476) | 2014-12-01 |
| title | 1..1 | SHALL |  | [1129-22888](#C_1129-22888) | Prevention Process and Outcome Measures (POM) Monthly Monitoring |
| documentationOf | 1..1 | SHALL |  | [1129-22889](#C_1129-22889) |  |
| serviceEvent | 1..1 | SHALL |  | [1129-22890](#C_1129-22890) |  |
| code | 1..1 | SHALL |  | [1129-22891](#C_1129-22891) |  |
| @code | 1..1 | SHALL |  | [1129-22892](#C_1129-22892) | 1884-6 |
| @codeSystem | 1..1 | SHALL |  | [1129-22893](#C_1129-22893) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [1129-22894](#C_1129-22894) |  |
| structuredBody | 1..1 | SHALL |  | [1129-22895](#C_1129-22895) |  |
| component | 1..1 | SHALL |  | [1129-22896](#C_1129-22896) |  |
| section | 1..1 | SHALL |  | [1129-30433](#C_1129-30433) | [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) |

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:1129-30549) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-30550).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22886) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.43" (CONF:1129-22887).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30476).
3. SHALL contain exactly one [1..1] title="Prevention Process and Outcome Measures (POM) Monthly Monitoring" (CONF:1129-22888).
4. SHALL contain exactly one [1..1] documentationOf (CONF:1129-22889).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:1129-22890).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:1129-22891).
         1. This code SHALL contain exactly one [1..1] @code="1884-6" Summary data reporting Active Surveillance Testing (CONF:1129-22892).
         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:1129-22893).
5. SHALL contain exactly one [1..1] component (CONF:1129-22894).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1129-22895).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1129-22896).
         1. This component 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:1129-30433).

Specialty Care Area (SCA) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.42:2014-12-01 (closed)]

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Table 21: Specialty Care Area (SCA) Summary Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section](#S_Summary_Data_Section) |

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.

Table 22: Specialty Care Area (SCA) Summary Report (V2) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.42:2014-12-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1129-28327](#C_1129-28327) |  |
| @root | 1..1 | SHALL |  | [1129-28328](#C_1129-28328) | 2.16.840.1.113883.10.20.5.7.2.2.1 |
| templateId | 1..1 | SHALL |  | [1129-22843](#C_1129-22843) |  |
| @root | 1..1 | SHALL |  | [1129-22844](#C_1129-22844) | 2.16.840.1.113883.10.20.5.42 |
| @extension | 1..1 | SHALL |  | [1129-30594](#C_1129-30594) | 2014-12-01 |
| title | 1..1 | SHALL |  | [1129-22845](#C_1129-22845) | Denominator for Specialty Care Area (SCA) |
| documentationOf | 1..1 | SHALL |  | [1129-22846](#C_1129-22846) |  |
| serviceEvent | 1..1 | SHALL |  | [1129-22847](#C_1129-22847) |  |
| code | 1..1 | SHALL |  | [1129-22848](#C_1129-22848) |  |
| @code | 1..1 | SHALL |  | [1129-22849](#C_1129-22849) | 1880-4 |
| @codeSystem | 1..1 | SHALL |  | [1129-22850](#C_1129-22850) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [1129-22851](#C_1129-22851) |  |
| structuredBody | 1..1 | SHALL |  | [1129-22852](#C_1129-22852) |  |
| component | 1..1 | SHALL |  | [1129-22853](#C_1129-22853) |  |
| section | 1..1 | SHALL |  | [1129-22854](#C_1129-22854) | [Summary Data Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.47](#S_Summary_Data_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:1129-28327) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2.1" (CONF:1129-28328).
2. SHALL contain exactly one [1..1] templateId (CONF:1129-22843) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.42" (CONF:1129-22844).
   2. SHALL contain exactly one [1..1] @extension="2014-12-01" (CONF:1129-30594).
3. SHALL contain exactly one [1..1] title="Denominator for Specialty Care Area (SCA)" (CONF:1129-22845).
4. SHALL contain exactly one [1..1] documentationOf (CONF:1129-22846).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:1129-22847).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:1129-22848).
         1. This code SHALL contain exactly one [1..1] @code="1880-4" Summary data reporting catheter and ventilator use in a SCA (CONF:1129-22849).
         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:1129-22850).
5. SHALL contain exactly one [1..1] component (CONF:1129-22851).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1129-22852).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1129-22853).
         1. This component 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:1129-22854).

Vascular Access Type Report (VAT) Summary Report (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.45:2015-10-01 (closed)]

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Table 23: Vascular Access Type Report (VAT) Summary Report (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Summary Data Section (VAT)](#S_Summary_Data_Section_VAT) |

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”.

Table 24: Vascular Access Type Report (VAT) Summary Report (V2) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.45:2015-10-01) | | | | | |
| templateId | 1..1 | SHALL |  | [1202-28329](#C_1202-28329) |  |
| @root | 1..1 | SHALL |  | [1202-28330](#C_1202-28330) | 2.16.840.1.113883.10.20.5.7.3.1 |
| templateId | 1..1 | SHALL |  | [1202-22921](#C_1202-22921) |  |
| @root | 1..1 | SHALL |  | [1202-22922](#C_1202-22922) | 2.16.840.1.113883.10.20.5.45 |
| @extension | 1..1 | SHALL |  | [1202-30765](#C_1202-30765) | 2015-10-01 |
| title | 1..1 | SHALL |  | [1202-22923](#C_1202-22923) | Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report |
| documentationOf | 1..1 | SHALL |  | [1202-22924](#C_1202-22924) |  |
| serviceEvent | 1..1 | SHALL |  | [1202-22925](#C_1202-22925) |  |
| code | 1..1 | SHALL |  | [1202-22926](#C_1202-22926) |  |
| @code | 1..1 | SHALL |  | [1202-22927](#C_1202-22927) | 2316-8 |
| @codeSystem | 1..1 | SHALL |  | [1202-22928](#C_1202-22928) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| component | 1..1 | SHALL |  | [1202-22929](#C_1202-22929) |  |
| structuredBody | 1..1 | SHALL |  | [1202-22930](#C_1202-22930) |  |
| component | 1..1 | SHALL |  | [1202-22931](#C_1202-22931) |  |
| section | 1..1 | SHALL |  | [1202-22932](#C_1202-22932) | [Summary Data Section (VAT) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.50](#S_Summary_Data_Section_VAT) |

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:1202-28329) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.1" (CONF:1202-28330).
2. SHALL contain exactly one [1..1] templateId (CONF:1202-22921) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.45" (CONF:1202-22922).
   2. SHALL contain exactly one [1..1] @extension="2015-10-01" (CONF:1202-30765).
3. SHALL contain exactly one [1..1] title="Maintenance Hemodialysis Patients Stratified by Vascular Access Type Report" (CONF:1202-22923).
4. SHALL contain exactly one [1..1] documentationOf (CONF:1202-22924).
   1. This documentationOf SHALL contain exactly one [1..1] serviceEvent (CONF:1202-22925).
      1. This serviceEvent SHALL contain exactly one [1..1] code (CONF:1202-22926).
         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:1202-22927).
         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:1202-22928).
5. SHALL contain exactly one [1..1] component (CONF:1202-22929).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1202-22930).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1202-22931).
         1. This component 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:1202-22932).

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 25: 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 26: 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 27: 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 28: Ethnicity

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Ethnicity urn:oid:2.16.840.1.114222.4.11.837  Code System: Race & Ethnicity - CDC 2.16.840.1.113883.6.238  Value Set Source: <https://vsac.nlm.nih.gov/> | | | |
| 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1.1 - US Realm

Table 29: 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) |

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 30: 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 31: 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 |

HAI Bloodstream Infection Report (BSI) (V2)

[ClinicalDocument: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.32:2017-04-01 (closed)]

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

Table 32: HAI Bloodstream Infection Report (BSI) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Findings Section in an Infection-Type Report](#S_Findings_Section_in_an_InfectionType_)  [Infection Details Section in a BSI Report](#S_Infection_Details_Section_in_a_BSI_Re)  [Infection Risk Factors Section in a BSI Report (V2)](#S_Infection_Risk_Factors_Section_in_a_B)  [NHSN Comment Section](#S_NHSN_Comment_Section) |

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 33: HAI Bloodstream Infection Report (BSI) (V2) Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.32:2017-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3311-28307](#C_3311-28307) |  |
| @root | 1..1 | SHALL |  | [3311-28308](#C_3311-28308) | 2.16.840.1.113883.10.20.5.7.3.2 |
| templateId | 1..1 | SHALL |  | [3311-22460](#C_3311-22460) |  |
| @root | 1..1 | SHALL |  | [3311-22461](#C_3311-22461) | 2.16.840.1.113883.10.20.5.32 |
| @extension | 1..1 | SHALL |  | [3311-28432](#C_3311-28432) | 2017-04-01 |
| componentOf | 1..1 | SHALL |  | [3311-22462](#C_3311-22462) |  |
| encompassingEncounter | 1..1 | SHALL |  | [3311-22463](#C_3311-22463) |  |
| effectiveTime | 1..1 | SHALL |  | [3311-22464](#C_3311-22464) |  |
| low | 1..1 | SHALL |  | [3311-22465](#C_3311-22465) |  |
| @value | 1..1 | SHALL |  | [3311-22466](#C_3311-22466) |  |
| high | 0..1 | MAY |  | [3311-22467](#C_3311-22467) |  |
| @value | 1..1 | SHALL |  | [3311-22468](#C_3311-22468) |  |
| location | 1..1 | SHALL |  | [3311-22469](#C_3311-22469) |  |
| healthCareFacility | 1..1 | SHALL |  | [3311-22470](#C_3311-22470) |  |
| id | 1..1 | SHALL |  | [3311-22471](#C_3311-22471) |  |
| @root | 1..1 | SHALL |  | [3311-22472](#C_3311-22472) |  |
| @extension | 1..1 | SHALL |  | [3311-22473](#C_3311-22473) |  |
| code | 1..1 | SHALL |  | [3311-22474](#C_3311-22474) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [3311-22476](#C_3311-22476) |  |
| structuredBody | 1..1 | SHALL |  | [3311-22477](#C_3311-22477) |  |
| component | 1..1 | SHALL |  | [3311-22478](#C_3311-22478) |  |
| section | 1..1 | SHALL |  | [3311-22479](#C_3311-22479) | [Infection Risk Factors Section in a BSI Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01](#S_Infection_Risk_Factors_Section_in_a_B) |
| component | 1..1 | SHALL |  | [3311-22480](#C_3311-22480) |  |
| section | 1..1 | SHALL |  | [3311-22481](#C_3311-22481) | [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 |  | [3311-22482](#C_3311-22482) |  |
| section | 1..1 | SHALL |  | [3311-22483](#C_3311-22483) | [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 |  | [3311-28411](#C_3311-28411) |  |
| section | 1..1 | SHALL |  | [3311-28412](#C_3311-28412) | [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:3311-28307) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.2" (CONF:3311-28308).
2. SHALL contain exactly one [1..1] templateId (CONF:3311-22460) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.32" (CONF:3311-22461).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28432).
3. SHALL contain exactly one [1..1] componentOf (CONF:3311-22462).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:3311-22463).
      1. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:3311-22464).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:3311-22465).
            1. This low SHALL contain exactly one [1..1] @value (CONF:3311-22466).  
               Note: Admission Date
         2. This effectiveTime MAY contain zero or one [0..1] high (CONF:3311-22467).
            1. The high, if present, SHALL contain exactly one [1..1] @value (CONF:3311-22468).  
               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:3311-23359).
      2. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:3311-22469).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:3311-22470).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:3311-22471).

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

This id SHALL contain exactly one [1..1] @root (CONF:3311-22472).

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

This id SHALL contain exactly one [1..1] @extension (CONF:3311-22473).

* + - * 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:3311-22474).

1. SHALL contain exactly one [1..1] component (CONF:3311-22476).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:3311-22477).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:3311-22478) such that it
         1. SHALL contain exactly one [1..1] [Infection Risk Factors Section in a BSI Report (V2)](#S_Infection_Risk_Factors_Section_in_a_B) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01) (CONF:3311-22479).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:3311-22480) 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:3311-22481).
      3. This structuredBody SHALL contain exactly one [1..1] component (CONF:3311-22482) 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:3311-22483).
      4. This structuredBody MAY contain zero or one [0..1] component (CONF:3311-28411) 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:3311-28412).

Table 34: 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 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | All Inpatient Locations [FACWIDEIN] |
| 1251-8 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | All Outpatient Locations [FACWIDEOUT] |
| 1025-6 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Trauma Critical Care |
| 1026-4 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Burn Critical Care |
| 1027-2 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Medical Critical Care |
| 1028-0 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Medical Cardiac Critical Care |
| 1029-8 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Medical/Surgical Critical Care |
| 1030-6 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Surgical Critical Care |
| 1031-4 | HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 | Neurosurgical Critical Care |
| 1032-2 | HL7 HealthcareServiceLocation | 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

Table 35: HAI Central-Line Insertion Practice Numerator Report (V2) Contexts

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

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 36: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1.1 - US Realm

Table 37: HAI Evidence of Infection (Dialysis) Report (V5) Contexts

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

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 38: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

Table 39: 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)  [Findings Section in a LIO Report (V2)](#S_Findings_Section_in_a_LIO_Report_V2) |

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 40: 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 Outpatient Procedure Component (OPC) Event Report

[ClinicalDocument: identifier urn:oid:2.16.840.1.113883.10.20.5.47 (closed)]

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

Table 41: HAI Outpatient Procedure Component (OPC) Event Report Contexts

| Contained By: | Contains: |
| --- | --- |
|  | [Findings Section in an OPC Report](#S_Findings_Section_in_an_OPC_Report)  [Other Event Details Section](#Other_Event_Details_Section)  [Surgical Site Infection Details Section in an OPC Report](#Surgical_Site_Infection_Details_Section) |

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.

Table 42: HAI Outpatient Procedure Component (OPC) Event Report Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| ClinicalDocument (identifier: urn:oid:2.16.840.1.113883.10.20.5.47) | | | | | |
| templateId | 1..1 | SHALL |  | [1113-21968](#C_1113-21968) |  |
| @root | 1..1 | SHALL |  | [1113-21969](#C_1113-21969) | 2.16.840.1.113883.10.20.5.7.2.2 |
| templateId | 1..1 | SHALL |  | [1113-21755](#C_1113-21755) |  |
| @root | 1..1 | SHALL |  | [1113-21770](#C_1113-21770) | 2.16.840.1.113883.10.20.5.47 |
| componentOf | 1..1 | SHALL |  | [1113-21756](#C_1113-21756) |  |
| encompassingEncounter | 1..1 | SHALL |  | [1113-21757](#C_1113-21757) |  |
| code | 1..1 | SHALL |  | [1113-21763](#C_1113-21763) |  |
| @code | 1..1 | SHALL |  | [1113-21775](#C_1113-21775) | AMB |
| @codeSystem | 1..1 | SHALL |  | [1113-21776](#C_1113-21776) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| effectiveTime | 1..1 | SHALL |  | [1113-21758](#C_1113-21758) |  |
| low | 1..1 | SHALL |  | [1113-21759](#C_1113-21759) |  |
| @value | 1..1 | SHALL |  | [1113-21771](#C_1113-21771) |  |
| location | 1..1 | SHALL |  | [1113-21760](#C_1113-21760) |  |
| healthCareFacility | 1..1 | SHALL |  | [1113-21761](#C_1113-21761) |  |
| id | 1..1 | SHALL |  | [1113-21762](#C_1113-21762) |  |
| @root | 1..1 | SHALL |  | [1113-21772](#C_1113-21772) |  |
| @extension | 0..1 | MAY |  | [1113-21773](#C_1113-21773) |  |
| code | 0..1 | MAY |  | [1113-21774](#C_1113-21774) | urn:oid:2.16.840.1.113883.13.19 (NHSNHealthcareServiceLocationCode) |
| component | 1..1 | SHALL |  | [1113-21764](#C_1113-21764) |  |
| structuredBody | 1..1 | SHALL |  | [1113-21765](#C_1113-21765) |  |
| component | 1..1 | SHALL |  | [1113-21766](#C_1113-21766) |  |
| section | 1..1 | SHALL |  | [1113-21769](#C_1113-21769) | [Surgical Site Infection Details Section in an OPC Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.53](#Surgical_Site_Infection_Details_Section) |
| component | 1..1 | SHALL |  | [1113-21767](#C_1113-21767) |  |
| section | 1..1 | SHALL |  | [1113-21777](#C_1113-21777) | [Findings Section in an OPC Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.55](#S_Findings_Section_in_an_OPC_Report) |
| component | 1..1 | SHALL |  | [1113-21768](#C_1113-21768) |  |
| section | 1..1 | SHALL |  | [1113-21778](#C_1113-21778) | [Other Event Details Section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.54](#Other_Event_Details_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:1113-21968) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.2.2" (CONF:1113-21969).
2. SHALL contain exactly one [1..1] templateId (CONF:1113-21755) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.47" (CONF:1113-21770).
3. SHALL contain exactly one [1..1] componentOf (CONF:1113-21756).
   1. This componentOf SHALL contain exactly one [1..1] encompassingEncounter (CONF:1113-21757).
      1. This encompassingEncounter SHALL contain exactly one [1..1] code (CONF:1113-21763).
         1. This code SHALL contain exactly one [1..1] @code="AMB" Outpatient (CONF:1113-21775).
         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:1113-21776).
      2. This encompassingEncounter SHALL contain exactly one [1..1] effectiveTime (CONF:1113-21758).
         1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:1113-21759).
            1. This low SHALL contain exactly one [1..1] @value (CONF:1113-21771).  
               Note: Admission Date
      3. This encompassingEncounter SHALL contain exactly one [1..1] location (CONF:1113-21760).
         1. This location SHALL contain exactly one [1..1] healthCareFacility (CONF:1113-21761).
            1. This healthCareFacility SHALL contain exactly one [1..1] id (CONF:1113-21762).

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

This id SHALL contain exactly one [1..1] @root (CONF:1113-21772).

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

This id MAY contain zero or one [0..1] @extension (CONF:1113-21773).

* + - * 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:1113-21774).

1. SHALL contain exactly one [1..1] component (CONF:1113-21764).
   1. This component SHALL contain exactly one [1..1] structuredBody (CONF:1113-21765).
      1. This structuredBody SHALL contain exactly one [1..1] component (CONF:1113-21766) such that it
         1. SHALL contain exactly one [1..1] [Surgical Site Infection Details Section in an OPC Report](#Surgical_Site_Infection_Details_Section) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.53) (CONF:1113-21769).
      2. This structuredBody SHALL contain exactly one [1..1] component (CONF:1113-21767) such that it
         1. SHALL contain exactly one [1..1] [Findings Section in an OPC Report](#S_Findings_Section_in_an_OPC_Report) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.55) (CONF:1113-21777).
      3. This structuredBody SHALL contain exactly one [1..1] component (CONF:1113-21768) such that it
         1. SHALL contain exactly one [1..1] [Other Event Details Section](#Other_Event_Details_Section) (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.54) (CONF:1113-21778).

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 43: 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)  [Procedure Details Section in a Procedure Report (V2)](#Procedure_Details_Section_in_a_Procedur) |

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 44: 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 45: HAI Surgical Site Infection Report (SSI) (V2) Contexts

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

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 46: 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)]

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

Table 47: HAI Urinary Tract Infection Numerator Report (UTI) Contexts

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

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 48: 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).

Ventilator Associated Event (VAE) Report

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

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

Table 49: Ventilator Associated Event (VAE) Report Contexts

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

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 50: 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 51: 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 52: 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) | [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer)  [Death Observation in an Evidence of Infection (Dialysis) Report](#E_Death_Observation_in_an_Evidence_of_I)  [Dialysis Clinic Admission Clinical Statement](#E_Dialysis_Clinic_Admission_Clinical_St)  [Hospital Admission Clinical Statement](#E_Hospital_Admission_Clinical_Statement)  [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4)  [Loss of Vascular Access Observation](#E_Loss_of_Vascular_Access_Observation) |

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 53: 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 1: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

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

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

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 55: 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 2: 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 56: 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) |

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 57: 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 3: 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 58: 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) |

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

Table 59: 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 4: 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 60: 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) (V2)](#D_HAI_Bloodstream_Infection_Report_BSI_) (required) | [Findings Organizer](#E_Findings_Organizer)  [MDRO/CDI Observation](#E_MDROCDI_Observation)  [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) |

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

Table 61: 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 not an EOID Report, an entry element SHALL be present, containing an MDRO/CDI Observation (CONF:86-23056).

Figure 5: 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>

Findings Section in an OPC Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.55 (closed)]

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Table 62: Findings Section in an OPC Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Outpatient Procedure Component (OPC) Event Report](#HAI_Outpatient_Procedure_Component_OPC_) (required) | [Findings Organizer](#E_Findings_Organizer)  [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) |

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

Table 63: Findings Section in an OPC Report Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.55) | | | | | |
| templateId | 1..1 | SHALL |  | [1113-21739](#C_1113-21739) |  |
| @root | 1..1 | SHALL |  | [1113-21744](#C_1113-21744) | 2.16.840.1.113883.10.20.5.5.55 |
| code | 1..1 | SHALL |  | [1113-21740](#C_1113-21740) |  |
| @code | 1..1 | SHALL |  | [1113-21745](#C_1113-21745) | 18769-0 |
| @codeSystem | 1..1 | SHALL |  | [1113-21749](#C_1113-21749) | 2.16.840.1.113883.6.1 |
| entry | 0..3 | MAY |  | [1113-21738](#C_1113-21738) |  |
| organizer | 1..1 | SHALL |  | [1113-21743](#C_1113-21743) | [Findings Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.182](#E_Findings_Organizer) |
| entry | 0..1 | MAY |  | [1113-21741](#C_1113-21741) |  |
| observation | 1..1 | SHALL |  | [1113-21747](#C_1113-21747) | [Pathogen Identified Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.145](#E_Pathogen_Identified_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:1113-21739) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.55" (CONF:1113-21744).
3. SHALL contain exactly one [1..1] code (CONF:1113-21740).
   1. This code SHALL contain exactly one [1..1] @code="18769-0" Findings Section (CONF:1113-21745).
   2. This code SHALL contain exactly one [1..1] @codeSystem="2.16.840.1.113883.6.1" (CONF:1113-21749).

This section must contain either a Findings Organizer detailing identified pathogens or a Pathogen Identified Observation reporting that no pathogens were identified. Both a Findings Organizer and a Pathogen Identified Observation cannot be present at the same time.

1. MAY contain [0..3] entry (CONF:1113-21738) 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:1113-21743).
   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:1113-21746).
2. MAY contain zero or one [0..1] entry (CONF:1113-21741) 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:1113-21747).
   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:1113-21748).

Figure 6: Findings Section in an OPC Report Example

<section>

<!-- HAI Generic section templateId -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- Findings Section in an OPC Report templateId -->

<templateId root="2.16.840.1.113883.10.20.5.5.55" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="18769-0"

displayName="Findings Section" />

<title>Findings</title>

...

<!-- If pathogens were identified, a Findings Organizer is required. If no pathogens were

identified, a Pathogen Identified Observation is required. Both cannot be present at the

same time -->

<entry typeCode="DRIV">

<!-- Findings Organizer -->

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

<templateId root="2.16.840.1.113883.10.20.5.6.182" />

...

</organizer>

</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 64: Infection Details Section in a BSI Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Bloodstream Infection Report (BSI) (V2)](#D_HAI_Bloodstream_Infection_Report_BSI_) (required) | [Death Observation](#E_Death_Observation)  [Infection-Type Observation](#E_InfectionType_Observation)  [Post-Procedure Observation](#E_PostProcedure_Observation) |

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 65: 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 7: 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)]

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

Table 66: 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)  [Infection-Type Observation](#E_InfectionType_Observation)  [Post-Procedure Observation](#E_PostProcedure_Observation) |

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

Table 67: 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 8: 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)]

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

Table 68: 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)  [Infection-Type Observation](#E_InfectionType_Observation)  [Post-Procedure Observation](#E_PostProcedure_Observation) |

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 69: 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 9: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 1 - US Realm

Table 70: 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)  [Infection Present at the Time of Surgery Observation](#E_Infection_Present_at_the_Time_of_Surg)  [Infection-Type Observation](#E_InfectionType_Observation)  [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Statement_)  [SSI Detected Using Toolkit Observation](#E_SSI_Detected_Using_Toolkit_Observation) |

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 71: 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_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: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_Statement_) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.154) (CONF:1101-30297).

Figure 10: 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 (V2)

[section: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01 (closed)]

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

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

| Contained By: | Contains: |
| --- | --- |
| [HAI Bloodstream Infection Report (BSI) (V2)](#D_HAI_Bloodstream_Infection_Report_BSI_) (required) | [Extracorporeal Life Support Present](#E_Extracorporeal_Life_Support_Present)  [Hemodialysis Catheter Present](#E_Hemodialysis_Catheter_Present)  [Infection Risk Factors Measurement Observation](#E_Infection_Risk_Factors_Measurement_Ob)  [Infection Risk Factors Observation](#E_Infection_Risk_Factors_Observation)  [Ventricular Assist Device (VAD) Present](#E_Ventricular_Assist_Device_VAD_Present) |

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

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01) | | | | | |
| templateId | 1..1 | SHALL |  | [3311-22266](#C_3311-22266) |  |
| @root | 1..1 | SHALL |  | [3311-22267](#C_3311-22267) | 2.16.840.1.113883.10.20.5.5.33 |
| @extension | 1..1 | SHALL |  | [3311-28433](#C_3311-28433) | 2017-04-01 |
| code | 1..1 | SHALL |  | [3311-22268](#C_3311-22268) |  |
| @code | 1..1 | SHALL |  | [3311-22269](#C_3311-22269) | 51898-5 |
| @codeSystem | 1..1 | SHALL |  | [3311-28360](#C_3311-28360) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..2 | SHALL |  | [3311-23203](#C_3311-23203) |  |
| observation | 1..1 | SHALL |  | [3311-23204](#C_3311-23204) | [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 |  | [3311-23208](#C_3311-23208) |  |
| observation | 1..1 | SHALL |  | [3311-23209](#C_3311-23209) | [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 |  | [3311-28361](#C_3311-28361) |  |
| procedure | 1..1 | SHALL |  | [3311-28464](#C_3311-28464) | [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 |  | [3311-28362](#C_3311-28362) |  |
| procedure | 1..1 | SHALL |  | [3311-28465](#C_3311-28465) | [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 |  | [3311-28363](#C_3311-28363) |  |
| procedure | 1..1 | SHALL |  | [3311-28466](#C_3311-28466) | [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) |

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:3311-22266) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.33" (CONF:3311-22267).
   2. SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28433).
3. SHALL contain exactly one [1..1] code (CONF:3311-22268).
   1. This code SHALL contain exactly one [1..1] @code="51898-5" Risk Factors Section (CONF:3311-22269).
   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:3311-28360).
4. SHALL contain at least one and not more than 2 entry (CONF:3311-23203) 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:3311-23204).
   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:3311-23205).
   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:3311-23206).
   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:3311-23207).
5. MAY contain zero or one [0..1] entry (CONF:3311-23208) 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:3311-23209).
   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:3311-23210).
6. SHALL contain exactly one [1..1] entry (CONF:3311-28361) 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:3311-28464).
7. SHALL contain exactly one [1..1] entry (CONF:3311-28362) 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:3311-28465).
8. SHALL contain exactly one [1..1] entry (CONF:3311-28363) 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:3311-28466).

Figure 11: Infection Risk Factors Section in BSI Report (V2) 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 BSI Report template -->

<templateId root="2.16.840.1.113883.10.20.5.5.33"/>

<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 -->

<templateId root="2.16.840.1.113883.10.20.22.4.4"/>

<!-- Infection Risk Factors Observation template -->

<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 Vital Sign Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.27"/>

<!-- Infection Risk Factors Measurement Observation template -->

<templateId root="2.16.840.1.113883.10.20.5.6.137"/>

...

</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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

Table 74: 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) | [Antimicrobial Coated Catheter Used Observation](#E_Antimicrobial_Coated_Catheter_Used_Ob)  [Central-Line Insertion Practice Clinical Statement (V2)](#E_CentralLine_Insertion_Practice_Clinic) |

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 75: 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 12: 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 76: 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)  [Diabetes Mellitus Observation](#E_Diabetes_Mellitus_Observation)  [Duration of Labor Observation](#E_Duration_of_Labor_Observation)  [Height Observation](#E_Height_Observation)  [Procedure Risk Factors Clinical Statement in a Procedure Report](#E_Procedure_Risk_Factors_Clinical_State)  [Trauma Observation](#E_Trauma_Observation)  [Weight Observation](#E_Weight_Observation) |

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 77: 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 13: 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 78: 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) |

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

Table 79: 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 14: 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)]

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Table 80: 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) (V2)](#D_HAI_Bloodstream_Infection_Report_BSI_) (optional) | [NHSN Comment](#E_NHSN_Comment) |

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 81: 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 15: 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>

Other Event Details Section

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.54 (closed)]

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Table 82: Other Event Details Section Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Outpatient Procedure Component (OPC) Event Report](#HAI_Outpatient_Procedure_Component_OPC_) (required) | [Prophylactic IV Antibiotic Timing Observation](#Prophylactic_IV_Antibiotic_Timing_Obser)  [Same Day Outcome Measures Organizer](#E_Same_Day_Outcome_Measures_Organizer) |

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.

Table 83: Other Event Details Section Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.54) | | | | | |
| templateId | 1..1 | SHALL |  | [1113-21684](#C_1113-21684) |  |
| @root | 1..1 | SHALL |  | [1113-21688](#C_1113-21688) | 2.16.840.1.113883.10.20.5.5.54 |
| code | 1..1 | SHALL |  | [1113-21685](#C_1113-21685) |  |
| @code | 1..1 | SHALL |  | [1113-21689](#C_1113-21689) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [1113-21725](#C_1113-21725) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 0..\* | SHOULD |  | [1113-21683](#C_1113-21683) |  |
| organizer | 0..1 | SHOULD |  | [1113-21788](#C_1113-21788) | [Same Day Outcome Measures Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.212](#E_Same_Day_Outcome_Measures_Organizer) |
| entry | 1..1 | SHALL |  | [1113-21686](#C_1113-21686) |  |
| observation | 1..1 | SHALL |  | [1113-21690](#C_1113-21690) | [Prophylactic IV Antibiotic Timing Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.209](#Prophylactic_IV_Antibiotic_Timing_Obser) |

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:1113-21684) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.54" (CONF:1113-21688).
3. SHALL contain exactly one [1..1] code (CONF:1113-21685).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Event Details (CONF:1113-21689).
   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:1113-21725).
4. SHOULD contain zero or more [0..\*] entry (CONF:1113-21683) such that it
   1. SHOULD contain zero or one [0..1] [Same Day Outcome Measures Organizer](#E_Same_Day_Outcome_Measures_Organizer) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.212) (CONF:1113-21788).
5. SHALL contain exactly one [1..1] entry (CONF:1113-21686) such that it
   1. SHALL contain exactly one [1..1] [Prophylactic IV Antibiotic Timing Observation](#Prophylactic_IV_Antibiotic_Timing_Obser) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.209) (CONF:1113-21690).

Figure 16: Other Event Details Section Example

<section>

<!-- HAI Generic section templateId -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- Other Event Details Section templateId -->

<templateId root="2.16.840.1.113883.10.20.5.5.54" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Event Details" />

<title>Other Event Details</title>

...

<entry typeCode="DRIV">

<!-- Same Day Outcome Measure Organizer-->

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

<!-- Same Day Outcome Measure Organizer templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.212" />

...

</organizer>

</entry>

<entry typeCode="DRIV">

<!-- Prophylactic IV Antibiotic Timing Observation -->

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

<!-- Prophylactic IV Antibiotic Timing Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.209" />

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

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

...

</observation>

</entry>

</section>

Procedure Details Section in a CLIP Report

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

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

Table 84: 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_) |

In a CLIP Report, this section records details of the procedure, including the reason for it.

Table 85: 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 17: 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 86: 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) |

This section records details of the procedure.

Table 87: 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 18: 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>

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)]

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

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) | [APRV or Related at Time of VAE Observation](#E_APRV_or_Related_at_Time_of_VAE_Observ)  [Mechanical Ventilation Initiation Act](#E_Mechanical_Ventilation_Initiation_Act) |

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 19: 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) | [Dialysis Patient Observation](#E_Dialysis_Patient_Observation)  [Dialyzer Reused Observation](#Dialyzer_Reused_Observation)  [Vascular Access Type Observation](#E_Vascular_Access_Type_Observation) |

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 20: 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: |
| --- | --- |
| [Specialty Care Area (SCA) Summary Report (V2)](#D_Specialty_Care_Area_SCA_Summary_Repor) (required)  [Intensive Care Unit (ICU) Summary Report (V2)](#D_Intensive_Care_Unit_ICU_Summary_Repor) (required) | [Summary Encounter](#E_Summary_Encounter) |

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 21: 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) |

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 22: 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 (AUP) (V2)](#E_Summary_Encounter_AUP_V2)  [Summary Encounter Patient Presence (AUP) (V2)](#E_Summary_Encounter_Patient_Presence_AU) |

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 23: 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)  [Vaccination Type Observation](#E_Vaccination_Type_Observation) |

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 24: 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)  [No Hemovigilance Incidents Reported This Month Observation](#E_No_Hemovigilance_Incidents_Reported_T)  [Summary Encounter (HV) (V2)](#E_Summary_Encounter_HV_V2) |

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 25: 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)

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.48 (closed)]

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Table 102: Summary Data Section (NICU) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Neonatal Intensive Care Unit (NICU) Summary Report (V2)](#D_Neonatal_Intensive_Care_Unit_NICU_Sum) (required) | [Summary Encounter (NICU)](#E_Summary_Encounter_NICU) |

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) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.48) | | | | | |
| templateId | 1..1 | SHALL |  | [86-22837](#C_86-22837) |  |
| @root | 1..1 | SHALL |  | [86-22838](#C_86-22838) | 2.16.840.1.113883.10.20.5.5.48 |
| code | 1..1 | SHALL |  | [86-22839](#C_86-22839) |  |
| @code | 1..1 | SHALL |  | [86-22840](#C_86-22840) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [86-28368](#C_86-28368) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..\* | SHALL |  | [86-22841](#C_86-22841) |  |
| encounter | 1..1 | SHALL |  | [86-22842](#C_86-22842) | [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:86-22837) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.48" (CONF:86-22838).
3. SHALL contain exactly one [1..1] code (CONF:86-22839).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:86-22840).
   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:86-28368).
4. SHALL contain at least one [1..\*] entry (CONF:86-22841).
   1. Such entries 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:86-22842).

Figure 26: 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 (OPC)

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.56 (closed)]

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Table 104: Summary Data Section (OPC) Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Outpatient Procedure Component (OPC) Summary Report](#HAI_Outpatient_Procedure_Component_OPCS) (required) | [Summary Encounter (OPC)](#E_Summary_Encounter_OPC) |

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.

Table 105: Summary Data Section (OPC) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.56) | | | | | |
| templateId | 1..1 | SHALL |  | [1113-21802](#C_1113-21802) |  |
| @root | 1..1 | SHALL |  | [1113-21805](#C_1113-21805) | 2.16.840.1.113883.10.20.5.5.56 |
| code | 1..1 | SHALL |  | [1113-21803](#C_1113-21803) |  |
| @code | 1..1 | SHALL |  | [1113-21806](#C_1113-21806) | 51900-9 |
| @codeSystem | 1..1 | SHALL |  | [1113-21807](#C_1113-21807) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..\* | SHALL |  | [1113-21801](#C_1113-21801) |  |
| encounter | 1..1 | SHALL |  | [1113-21804](#C_1113-21804) | [Summary Encounter (OPC) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.213](#E_Summary_Encounter_OPC) |

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:1113-21802) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.56" (CONF:1113-21805).
3. SHALL contain exactly one [1..1] code (CONF:1113-21803).
   1. This code SHALL contain exactly one [1..1] @code="51900-9" Summary Data Section (CONF:1113-21806).
   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:1113-21807).
4. SHALL contain at least one [1..\*] entry (CONF:1113-21801).
   1. Such entries SHALL contain exactly one [1..1] [Summary Encounter (OPC)](#E_Summary_Encounter_OPC) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.213) (CONF:1113-21804).

Figure 27: Summary Data Section (OPC) Example

<section>

<!-- HAI Section Generic Constraints templateId -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- Summary Data Section (OPC) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.5.56" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51900-9"

displayName="Summary Data Section" />

<title>Summary Data Section (OPC)</title>

<text>

...

</text>

<entry typeCode="DRIV">

<!-- Summary Encounter (OPC) -->

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

<!-- Summary Encounter (OPC) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.213" />

...

</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 106: Summary Data Section (POM) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Prevention Process and Outcome Measures (POM) Summary Report (V2)](#D_Prevention_Process_and_Outcome_Measur) (required) | [Primary C. Difficile Testing Method This Quarter](#E_Primary_C_Difficile_Testing_Method_Th)  [Summary Encounter (POM)](#E_Summary_Encounter_POM) |

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 107: 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 28: 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 108: Summary Data Section (VAT) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Vascular Access Type Report (VAT) Summary Report (V2)](#D_Vascular_Access_Type_Report_VAT_Summa) (required) | [Summary Encounter (VAT)](#E_Summary_Encounter_VAT) |

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 109: 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 29: 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>

Surgical Site Infection Details Section in an OPC Report

[section: identifier urn:oid:2.16.840.1.113883.10.20.5.5.53 (closed)]

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Table 110: Surgical Site Infection Details Section in an OPC Report Contexts

| Contained By: | Contains: |
| --- | --- |
| [HAI Outpatient Procedure Component (OPC) Event Report](#HAI_Outpatient_Procedure_Component_OPC_) (required) | [Infection First Reported Source Observation](#Infection_First_Reported_Source_Observa)  [Procedure Category](#E_Procedure_Category)  [Surgical Site Infection Observation](#E_Surgical_Site_Infection_Observation) |

This section records details of the surgical site infection in an OPC Report.

Table 111: Surgical Site Infection Details Section in an OPC Report Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| section (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.53) | | | | | |
| templateId | 1..1 | SHALL |  | [1113-27](#C_1113-27) |  |
| @root | 1..1 | SHALL |  | [1113-34](#C_1113-34) | 2.16.840.1.113883.10.20.5.5.53 |
| code | 1..1 | SHALL |  | [1113-28](#C_1113-28) |  |
| @code | 1..1 | SHALL |  | [1113-35](#C_1113-35) | 51899-3 |
| @codeSystem | 1..1 | SHALL |  | [1113-21724](#C_1113-21724) | urn:oid:2.16.840.1.113883.6.1 (LOINC) = 2.16.840.1.113883.6.1 |
| entry | 1..1 | SHALL |  | [1113-26](#C_1113-26) |  |
| observation | 1..1 | SHALL |  | [1113-33](#C_1113-33) | [Surgical Site Infection Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.210](#E_Surgical_Site_Infection_Observation) |
| entry | 0..1 | MAY |  | [1113-32](#C_1113-32) |  |
| procedure | 1..1 | SHALL |  | [1113-39](#C_1113-39) | [Procedure Category (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.215](#E_Procedure_Category) |
| entry | 1..\* | SHALL |  | [1113-48](#C_1113-48) |  |
| observation | 1..1 | SHALL |  | [1113-49](#C_1113-49) | [Infection First Reported Source Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.207](#Infection_First_Reported_Source_Observa) |

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:1113-27) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.5.53" (CONF:1113-34).
3. SHALL contain exactly one [1..1] code (CONF:1113-28).
   1. This code SHALL contain exactly one [1..1] @code="51899-3" Details Section (CONF:1113-35).
   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:1113-21724).
4. SHALL contain exactly one [1..1] entry (CONF:1113-26) such that it
   1. SHALL contain exactly one [1..1] [Surgical Site Infection Observation](#E_Surgical_Site_Infection_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.210) (CONF:1113-33).
5. MAY contain zero or one [0..1] entry (CONF:1113-32) such that it
   1. SHALL contain exactly one [1..1] [Procedure Category](#E_Procedure_Category) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.215) (CONF:1113-39).
6. SHALL contain at least one [1..\*] entry (CONF:1113-48) such that it
   1. SHALL contain exactly one [1..1] [Infection First Reported Source Observation](#Infection_First_Reported_Source_Observa) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.207) (CONF:1113-49).

Figure 30: Surgical Site Infection Details Section in an OPC Report Example

<section>

<!-- HAI Generic Section templateId -->

<templateId root="2.16.840.1.113883.10.20.5.4.26" />

<!-- Surgical Site Infection Details Section templateId -->

<templateId root="2.16.840.1.113883.10.20.5.5.53" />

<code codeSystem="2.16.840.1.113883.6.1"

codeSystemName="LOINC"

code="51899-3"

displayName="Details Section" />

<title>Surgical Site Infection Details</title>

...

<entry typeCode="DRIV">

<!-- Procedure Category -->

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

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

<templateId root="2.16.840.1.113883.10.20.22.4.14" />

<!-- Procedure Category templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.215" />

...

</procedure>

</entry>

<entry typeCode="DRIV">

<!-- Infection First Reported Source Observation -->

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

<!-- Infection First Reported Source Observation templateId-->

<templateId root="2.16.840.1.113883.10.20.5.6.207" />

...

</observation>

</entry>

<entry typeCode="DRIV">

<!-- Surgical Site Infection 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" />

<!-- Surgical Site infection Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.210" />

...

</observation>

</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 112: 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 113: 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 31: 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 114: 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 115: 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 32: 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 116: 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 117: 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 33: 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 118: 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 119: 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 120: 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 34: 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 121: 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 122: 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 123: 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 |
| 50471002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Zika virus (organism) |
| 2423009 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Chikungunya virus (organism) |

Figure 35: 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 124: 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

    <value>

        <low value="0.5" unit="mg/ul"/>

    </value>

Greater than or equal to 0.9 mg/ul

    <value>

        <low value="0.9" unit="mg/ul" inclusive="true"/>

    </value>

Less than 0.7 mg/ul

    <value>

        <high value="0.7" unit="mg/ul"/>

    </value>

Less than or equal to 0.4 mg/ul

    <value>

        <high value="0.4" unit="mg/ul" inclusive="true"/>

    </value>

Exactly equal to 0.2 mg/ul

    <value>

        <center value="0.2" unit="mg/ul"/>

    </value>

Table 125: 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 126: 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 127: 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 36: 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 37: 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 128: 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) |

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 129: 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 38: 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 130: 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)  [Antimicrobial Susceptibility Result Organizer (V3)](#E_Antimicrobial_Susceptibility_Result_O) |

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 131: 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 39: 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)]

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

Table 132: 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 133: 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 40: 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 134: 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) |

This organizer represents the set of specific tests conducted on an isolate of Staphylococcus aureus when performing antimicrobial susceptibility testing.

Table 135: 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 41: 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 136: 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 137: 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 138: 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 139: 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 42: 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 140: 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 141: 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 142: 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 43: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

Table 143: 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)  [Positive Test for Carbapenemase Observation](#E_Positive_Test_for_Carbapenemase_Obser) |

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 144: 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 44: 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 145: 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 146: 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 147: 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 45: 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 46: 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 148: 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_Observation) |

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 149: 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 (NHSN Summary Blood Product Usage) |
| 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_Observation) |

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 [NHSN Summary Blood Product Usage](#NHSN_Summary_Blood_Product_Usage) 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_Observation) (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:  
       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 (CONF:3247-30764).

Table 150: NHSN Summary Blood Product Usage

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Summary Blood Product Usage 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 47: 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 151: 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 152: 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 48: 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 153: 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 154: 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 155: 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 49: 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 156: 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 157: 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 50: 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 158: 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 159: 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 160: 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 161: 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 51: 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 52: 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 162: 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) |

This organizer represents the set of specific tests conducted on a bacterial isolate to test for carbapenemase.

Table 163: 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 53: 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 164: 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 165: 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 166: 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 54: 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 55: 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 167: 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) | [Central-Line Insertion Preparation Organizer (V2)](#E_CentralLine_Insertion_Preparation_Org)  [Solutions Dried Observation](#E_Solutions_Dried_Observation) |

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 168: 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 56: 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 169: Central-Line Insertion Preparation Organizer (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Central-Line Insertion Practice Clinical Statement (V2)](#E_CentralLine_Insertion_Practice_Clinic) (required) | [Hand Hygiene Performed Clinical Statement](#E_Hand_Hygiene_Performed_Clinical_State)  [Skin-Preparation Solutions Applied Organizer (V2)](#E_SkinPreparation_Solutions_Applied_Org)  [Sterile Barriers Applied Clinical Statement](#E_Sterile_Barriers_Applied_Clinical_Sta) |

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 170: 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 57: 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 171: 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 172: 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 173: 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 58: 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 174: 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) |

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 175: 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 59: 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 60: 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 176: Contraindication Type Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Contraindicated Observation (V2)](#E_Contraindicated_Observation_V2) (optional) |  |

This template represents the type of contraindication.

Table 177: 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 178: 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 61: 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 179: Criteria of Diagnosis Organizer Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection-Type Observation](#E_InfectionType_Observation) (required)  [Surgical Site Infection Observation](#E_Surgical_Site_Infection_Observation) (required)  [Details Section in an Evidence of Infection (Dialysis) Report (V5)](#S_Details_Section_in_an_Evidence_of_Inf) (required) | [Criterion of Diagnosis Observation](#E_Criterion_of_Diagnosis_Observation) |

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 180: 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 62: 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 181: 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 182: 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 183: 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 63: 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 184: 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 Contributed to Death Observation](#E_Infection_Contributed_to_Death_Observ) |

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 185: 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 64: 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 186: 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 187: 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 65: 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 188: 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 189: 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 66: 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 190: 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 191: 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 67: 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 192: 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 193: 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 68: 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 194: 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) |

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 195: 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 69: 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 196: 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 197: 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 70: 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 198: 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 199: 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 71: 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 200: 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 201: 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 72: 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 202: 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 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 203: 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 73: 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>

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 204: Extracorporeal Life Support Present Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V2)](#S_Infection_Risk_Factors_Section_in_a_B) (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 205: 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 74: 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 206: 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 207: 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 75: 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 208: 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](#S_Findings_Section_in_an_OPC_Report) (optional) | [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation)  [Pathogen Identified Observation](#E_Pathogen_Identified_Observation)  [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) |

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 209: 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 76: 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>

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 77: 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 in 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 78: 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 79: 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 (V2)](#S_Infection_Risk_Factors_Section_in_a_B) (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 80: 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 81: 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 82: 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)]

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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 83: 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>

Infection Condition Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.135 (closed)]

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Table 224: Infection Condition Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection-Type Observation](#E_InfectionType_Observation) (optional)  [Surgical Site Infection Observation](#E_Surgical_Site_Infection_Observation) (required) |  |

This observation records the infection condition being reported.

Table 225: 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 226: 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 84: 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 227: 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 228: 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 85: 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 First Reported Source Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.207 (closed)]

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

Table 229: Infection First Reported Source Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Surgical Site Infection Details Section in an OPC Report](#Surgical_Site_Infection_Details_Section) (required) |  |

This template represents how the infection was first reported.

Table 230: Infection First Reported Source Observation Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.207) | | | | | |
| @classCode | 1..1 | SHALL |  | [1113-40](#C_1113-40) | OBS |
| @moodCode | 1..1 | SHALL |  | [1113-41](#C_1113-41) | EVN |
| templateId | 1..1 | SHALL |  | [1113-42](#C_1113-42) |  |
| @root | 1..1 | SHALL |  | [1113-43](#C_1113-43) | 2.16.840.1.113883.10.20.5.6.207 |
| id | 1..1 | SHALL |  | [1113-21720](#C_1113-21720) |  |
| @nullFlavor | 1..1 | SHALL |  | [1113-21721](#C_1113-21721) | NA |
| code | 1..1 | SHALL |  | [1113-44](#C_1113-44) |  |
| @code | 1..1 | SHALL |  | [1113-45](#C_1113-45) | 1656-8 |
| @codeSystem | 1..1 | SHALL |  | [1113-46](#C_1113-46) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [1113-21722](#C_1113-21722) |  |
| @code | 1..1 | SHALL |  | [1113-21723](#C_1113-21723) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | CD | [1113-47](#C_1113-47) | urn:oid:2.16.840.1.114222.4.11.7215 (NHSNInfectionFirstReportedSource) |

1. SHALL contain exactly one [1..1] @classCode="OBS" (CONF:1113-40).
2. SHALL contain exactly one [1..1] @moodCode="EVN" (CONF:1113-41).
3. SHALL contain exactly one [1..1] templateId (CONF:1113-42) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.207" (CONF:1113-43).
4. SHALL contain exactly one [1..1] id (CONF:1113-21720).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1113-21721).
5. SHALL contain exactly one [1..1] code (CONF:1113-44).
   1. This code SHALL contain exactly one [1..1] @code="1656-8" Infection first reported source (CONF:1113-45).
   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:1113-46).
6. SHALL contain exactly one [1..1] statusCode (CONF:1113-21722).
   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:1113-21723).
7. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNInfectionFirstReportedSource](#NHSNInfectionFirstReportedSource) urn:oid:2.16.840.1.114222.4.11.7215 (CONF:1113-47).

Table 231: NHSNInfectionFirstReportedSource

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNInfectionFirstReportedSource urn:oid:2.16.840.1.114222.4.11.7215  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.  Codes describing how an infection was first reported. | | | |
| Code | Code System | Code System OID | Print Name |
| 304292004 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Surgeon |
| 1651-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Attending physician other than surgeon |
| 1652-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Admitting inpatient facility |
| 1653-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Routine follow-up at outpatient facility |
| 1654-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Patient or family member |

Figure 86: Infection First Reported Source Observation Example

<!-- Infection First Reported Source Observation -->

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

<!-- Infection First Reported Source Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.207" />

<id nullFlavor="NA"/>

<code code="1656-8"

displayName="Infection first reported source"

codeSystem="2.16.840.1.113883.6.277" />

<statusCode code="completed" />

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

code="1651-9"

displayName="Attending physician other than surgeon"/>

</observation>

Infection Indicator Organizer (V4)

[organizer: identifier urn:hl7ii:2.16.840.1.113883.10.20.5.6.181:2016-08-01 (closed)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1.1 - US Realm

Table 232: 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) | [IV Antibiotic Start Clinical Statement (V3)](#E_IV_Antibiotic_Start_Clinical_Statemen)  [IV Antifungal Start Clinical Statement](#E_IV_Antifungal_Start_Clinical_Statemen)  [Positive Blood Culture Observation (V2)](#E_Positive_Blood_Culture_Observation_V2)  [Pus, Redness, or Increased Swelling Observation](#E_Pus_Redness_or_Increased_Swelling_Obs) |

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 233: 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 87: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 1 - US Realm

Table 234: 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 235: 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 88: 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 236: Infection Risk Factors Measurement Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V2)](#S_Infection_Risk_Factors_Section_in_a_B) (optional) |  |

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 237: 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 89: 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 238: Infection Risk Factors Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V2)](#S_Infection_Risk_Factors_Section_in_a_B) (required) | [Device Insertion Time and Location Procedure](#E_Device_Insertion_Time_and_Location_Pr) |

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 239: 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 240: 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 90: 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 241: 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) | [Bloodstream Infection Evidence Type Observation](#E_Bloodstream_Infection_Evidence_Type_O)  [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer)  [Infection Condition Observation](#E_Infection_Condition_Observation)  [Occasion of HAI Detection Observation](#E_Occasion_of_HAI_Detection_Observation)  [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) |

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 242: 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 an Infection-type Report and the infection type is not BSI, 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 an Infection-type Report and the infection type is not BSI, 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 243: 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 |

Figure 91: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1.1 - US Realm

Table 244: 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 245: 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 246: NHSN Plasma/Apheresis/Psoralen-Treated

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSN Plasma/Apheresis/Psoralen-Treated 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 |
| ... | | | |

Figure 92: 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 247: Isolate Susceptibility Tests Organizer (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Specimen Collection Procedure (ARO) (V3)](#E_Specimen_Collection_Procedure_ARO_V3) (required) | [Antimicrobial Susceptibility Isolate Participant](#E_Antimicrobial_Susceptibility_Isolate_)  [Antimicrobial Susceptibility Tests Organizer (V3)](#E_Antimicrobial_Susceptibility_Tests_Or)  [ARO Staph Aureus Specific Tests Organizer](#E_ARO_Staph_Aureus_Specific_Tests_Organ) |

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 248: 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 93: 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 249: IV Antibiotic Start Clinical Statement (V3) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) (required) | [Blood Sample Collected for Culture Observation](#E_Blood_Sample_Collected_for_Culture_Ob)  [Type of Antimicrobial Start Observation](#E_Type_of_Antimicrobial_Start_Observati) |

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 250: 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 94: 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 251: 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 252: 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 95: 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>

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 253: 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) |

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 254: 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 96: 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 97: 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 255: 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 256: 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 257: 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 | impatient encounter |

Table 258: 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 98: 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 99: 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 259: 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 260: 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 100: 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 261: 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 262: 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 101: 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)]

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Table 263: 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 264: 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 102: 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)]

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

Table 265: 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 266: 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 103: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1 - US Realm

Table 267: 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 268: 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 104: 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 269: 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 270: 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 105: 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>

Occasion of HAI Detection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.144 (closed)]

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

Table 271: 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 272: 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 273: 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 106: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

Table 274: 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) |

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 275: 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 276: 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 107: 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 108: 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 109: 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 277: 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 278: 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 279: 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 110: 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 280: 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](#S_Findings_Section_in_an_OPC_Report) (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 281: 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 111: 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 282: 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) | [Bacterial Isolate Tested for Carbapenemase Observation](#E_Bacterial_Isolate_Tested_for_Carbapen)  [Specimen Collection Procedure (LIO)](#E_Specimen_Collection_Procedure_LIO) |

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 283: 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 284: 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 112: 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 285: 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 286: 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 113: 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 287: 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_Observation) |

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 288: 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_Observation) |

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_Observation) (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 289: 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 114: 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 290: 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 291: 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 115: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 2.1 - US Realm

Table 292: Positive Blood Culture Observation (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Indicator Organizer (V4)](#E_Infection_Indicator_Organizer_V4) (required) | [Blood Collection Location](#Blood_Collection_Location)  [Suspected Source Observation](#E_Suspected_Source_Observation) |

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 293: 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 116: 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 294: 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) |

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 295: 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 117: 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 296: 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_Statement_) |

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 297: 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_Statement_) |

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_Statement_) (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 118: 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 298: 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 299: 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 300: 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 119: 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 120: 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 301: 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 302: 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 121: 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 122: 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 Category

[procedure: identifier urn:oid:2.16.840.1.113883.10.20.5.6.215 (closed)]

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Table 303: Procedure Category Contexts

| Contained By: | Contains: |
| --- | --- |
| [Surgical Site Infection Details Section in an OPC Report](#Surgical_Site_Infection_Details_Section) (optional)  [Summary Data Observation (OPC)](#E_Summary_Data_Observation_OPC) (optional) |  |

This template records the NHSN Procedure Category.

Table 304: Procedure Category Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| procedure (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.215) | | | | | |
| @classCode | 1..1 | SHALL |  | [1113-21846](#C_1113-21846) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = PROC |
| @moodCode | 1..1 | SHALL |  | [1113-21847](#C_1113-21847) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1113-21862](#C_1113-21862) |  |
| @root | 1..1 | SHALL |  | [1113-21863](#C_1113-21863) | 2.16.840.1.113883.10.20.22.4.14 |
| templateId | 1..1 | SHALL |  | [1113-21842](#C_1113-21842) |  |
| @root | 1..1 | SHALL |  | [1113-21845](#C_1113-21845) | 2.16.840.1.113883.10.20.5.6.215 |
| id | 1..1 | SHALL |  | [1113-21848](#C_1113-21848) |  |
| @nullFlavor | 0..1 | MAY |  | [1113-21854](#C_1113-21854) | NA |
| code | 1..1 | SHALL |  | [1113-21841](#C_1113-21841) | urn:oid:2.16.840.1.113883.13.17 (NHSNProcedureCategoryCode) |
| translation | 0..1 | MAY |  | [1113-21859](#C_1113-21859) | urn:oid:2.16.840.1.113883.6.12 (CPT4) |
| statusCode | 1..1 | SHALL |  | [1113-21843](#C_1113-21843) |  |
| @code | 1..1 | SHALL |  | [1113-21849](#C_1113-21849) | 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:1113-21846).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1113-21847).
4. SHALL contain exactly one [1..1] templateId (CONF:1113-21862) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.14" (CONF:1113-21863).
5. SHALL contain exactly one [1..1] templateId (CONF:1113-21842) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.215" (CONF:1113-21845).
6. SHALL contain exactly one [1..1] id (CONF:1113-21848).
   1. This id MAY contain zero or one [0..1] @nullFlavor="NA" (CONF:1113-21854).
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 DYNAMIC (CONF:1113-21841).
   1. This code MAY contain zero or one [0..1] translation, which SHALL be selected from CodeSystem CPT4 (urn:oid:2.16.840.1.113883.6.12) DYNAMIC (CONF:1113-21859).
      1. If this template is used in the HAI Outpatient Procedure Component (OPC) Event Report, then the translation SHALL be present (CONF:1113-21860).
8. SHALL contain exactly one [1..1] statusCode (CONF:1113-21843).
   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:1113-21849).

Table 305: 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 |
| ... | | | |

Figure 123: Procedure Category 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 Category templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.215" />

<id nullFlavor="NA" />

<code code="2129-5"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"

displayName="Open reduction of fracture"/>

<statusCode code="completed" />

</procedure>

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 306: 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)  [Reason for Procedure Observation](#E_Reason_for_Procedure_Observation)  [Recorder Observation](#E_Recorder_Observation) |

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 307: 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 308: 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 309: 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 310: 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 311: 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 124: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 1 - US Realm

Table 312: 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)  [Closure Technique Procedure](#E_Closure_Technique_Procedure)  [Revision Associated with Prior Infection Observation](#Revision_Associated_with_Prior_Infectio)  [Spinal Fusion Level Observation](#E_Spinal_Fusion_Level_Observation) |

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 313: 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-9 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 314: 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 315: 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 316: 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 125: 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 126: 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 127: 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 128: 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 317: 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 318: 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-9 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 129: 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 130: 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 319: 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) | [Endoscope Used Clinical Statement](#E_Endoscope_Used_Clinical_Statement)  [Wound Class Observation](#E_Wound_Class_Observation) |

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 320: 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 131: 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>

Prophylactic IV Antibiotic Timing Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.209 (closed)]

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

Table 321: Prophylactic IV Antibiotic Timing Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Other Event Details Section](#Other_Event_Details_Section) (required) |  |

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.

Table 322: Prophylactic IV Antibiotic Timing Observation Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.209) | | | | | |
| @classCode | 1..1 | SHALL |  | [1113-21667](#C_1113-21667) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1113-21668](#C_1113-21668) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1113-21681](#C_1113-21681) |  |
| templateId | 1..1 | SHALL |  | [1113-21864](#C_1113-21864) |  |
| @root | 1..1 | SHALL |  | [1113-21865](#C_1113-21865) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [1113-21669](#C_1113-21669) |  |
| @root | 1..1 | SHALL |  | [1113-21670](#C_1113-21670) | 2.16.840.1.113883.10.20.5.6.209 |
| id | 1..1 | SHALL |  | [1113-21671](#C_1113-21671) |  |
| @nullFlavor | 1..1 | SHALL |  | [1113-21672](#C_1113-21672) | NA |
| code | 1..1 | SHALL |  | [1113-21673](#C_1113-21673) |  |
| @code | 1..1 | SHALL |  | [1113-21674](#C_1113-21674) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1113-21675](#C_1113-21675) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1113-21676](#C_1113-21676) |  |
| @code | 1..1 | SHALL |  | [1113-21677](#C_1113-21677) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [1113-21861](#C_1113-21861) |  |
| value | 1..1 | SHALL | CD | [1113-21678](#C_1113-21678) |  |
| @code | 1..1 | SHALL |  | [1113-21679](#C_1113-21679) | 1650-1 |
| @codeSystem | 1..1 | SHALL |  | [1113-21680](#C_1113-21680) | 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:1113-21667).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001) (CONF:1113-21668).

If 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.

1. SHALL contain exactly one [1..1] @negationInd (CONF:1113-21681).
2. SHALL contain exactly one [1..1] templateId (CONF:1113-21864) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1113-21865).
3. SHALL contain exactly one [1..1] templateId (CONF:1113-21669) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.209" (CONF:1113-21670).
4. SHALL contain exactly one [1..1] id (CONF:1113-21671).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1113-21672).
5. SHALL contain exactly one [1..1] code (CONF:1113-21673).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1113-21674).
   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:1113-21675).
6. SHALL contain exactly one [1..1] statusCode (CONF:1113-21676).
   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:1113-21677).
7. SHALL contain exactly one [1..1] effectiveTime (CONF:1113-21861).
8. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1113-21678).
   1. This value SHALL contain exactly one [1..1] @code="1650-1" Order for prophylactic IV antibiotic NOT administered on time (CONF:1113-21679).
   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 STATIC) (CONF:1113-21680).

Figure 132: Prophylactic IV Antibiotic Timing Observation Example

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

<!-- If 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.-->

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

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- Prophylactic IV Antibiotic Timing Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.209" />

<id nullFlavor="NA" />

<code code="ASSERTION" codeSystem="2.16.840.1.113883.5.4" />

<statusCode code="completed" />

<effectiveTime nullFlavor="NA" />

<value xsi:type="CD"

code="1650-1"

displayName="Order for prophylactic IV antibiotic NOT administered on time"

codeSystem="2.16.840.1.113883.6.277"

codeSystemName="cdcNHSN"/>

</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 323: 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 324: 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 325: 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 133: 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 326: 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) |

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 327: 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 328: 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 134: 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 329: 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 330: 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 135: 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>

Revision Associated with Prior Infection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.204 (closed)]

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Table 331: 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 332: 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 136: 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>

Same Day Outcome Measure Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.208 (closed)]

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Table 333: Same Day Outcome Measure Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Same Day Outcome Measures Organizer](#E_Same_Day_Outcome_Measures_Organizer) (required) |  |

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.

Table 334: Same Day Outcome Measure Observation Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.208) | | | | | |
| @classCode | 1..1 | SHALL |  | [1113-21655](#C_1113-21655) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1113-21656](#C_1113-21656) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| @negationInd | 1..1 | SHALL |  | [1113-21779](#C_1113-21779) |  |
| templateId | 1..1 | SHALL |  | [1113-21866](#C_1113-21866) |  |
| @root | 1..1 | SHALL |  | [1113-21867](#C_1113-21867) | 2.16.840.1.113883.10.20.22.4.4 |
| templateId | 1..1 | SHALL |  | [1113-21657](#C_1113-21657) |  |
| @root | 1..1 | SHALL |  | [1113-21658](#C_1113-21658) | 2.16.840.1.113883.10.20.5.6.208 |
| id | 1..1 | SHALL |  | [1113-21663](#C_1113-21663) |  |
| @nullFlavor | 1..1 | SHALL |  | [1113-21664](#C_1113-21664) | NA |
| code | 1..1 | SHALL |  | [1113-21659](#C_1113-21659) |  |
| @code | 1..1 | SHALL |  | [1113-21660](#C_1113-21660) | 1655-0 |
| @codeSystem | 1..1 | SHALL |  | [1113-21661](#C_1113-21661) | urn:oid:2.16.840.1.113883.6.277 (cdcNHSN) = 2.16.840.1.113883.6.277 |
| statusCode | 1..1 | SHALL |  | [1113-21665](#C_1113-21665) |  |
| @code | 1..1 | SHALL |  | [1113-21666](#C_1113-21666) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [1113-21858](#C_1113-21858) |  |
| value | 1..1 | SHALL | CD | [1113-21662](#C_1113-21662) | urn:oid:2.16.840.1.114222.4.11.7214 (NHSNSameDayOutcomeMeasure) |

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 STATIC) (CONF:1113-21655).
3. SHALL contain exactly one [1..1] @moodCode="EVN" (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1113-21656).

If the outcome occurred, set the value of @negationInd to false. If the outcome did not occur, set the value of @negationInd to true.

1. SHALL contain exactly one [1..1] @negationInd (CONF:1113-21779).
2. SHALL contain exactly one [1..1] templateId (CONF:1113-21866) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1113-21867).
3. SHALL contain exactly one [1..1] templateId (CONF:1113-21657) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.208" (CONF:1113-21658).
4. SHALL contain exactly one [1..1] id (CONF:1113-21663).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1113-21664).
5. SHALL contain exactly one [1..1] code (CONF:1113-21659).
   1. This code SHALL contain exactly one [1..1] @code="1655-0" Same day outcome measure (CONF:1113-21660).
   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:1113-21661).
6. SHALL contain exactly one [1..1] statusCode (CONF:1113-21665).
   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:1113-21666).
7. SHALL contain exactly one [1..1] effectiveTime (CONF:1113-21858).
8. SHALL contain exactly one [1..1] value with @xsi:type="CD", where the code SHALL be selected from ValueSet [NHSNSameDayOutcomeMeasure](#NHSNSameDayOutcomeMeasure) urn:oid:2.16.840.1.114222.4.11.7214 DYNAMIC (CONF:1113-21662).

Table 335: NHSNSameDayOutcomeMeasure

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: NHSNSameDayOutcomeMeasure urn:oid:2.16.840.1.114222.4.11.7214  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.  This value set contains codes that describe facility-level outcome measures that occur on the same day as the outpatient procedure. | | | |
| Code | Code System | Code System OID | Print Name |
| 125666000 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Patient burn |
| 217082002 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Patient fall |
| 1645-1 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Hospital transfer/admission |
| 1646-9 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Wrong site |
| 1647-7 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Wrong side |
| 1648-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Wrong patient |
| 370898007 | SNOMED CT | urn:oid:2.16.840.1.113883.6.96 | Wrong surgical procedure performed on a patient |
| 1649-3 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Wrong implant |

Figure 137: Same Day Outcome Measure Observation Example

<!-- Outcome did not occur -->

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

<!-- C-CDA R1.1 Problem Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- Same Day Outcome Measure templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.208" />

<id nullFlavor="NA" />

<code code="1655-0"

displayName="Same Day Outcome Measure"

codeSystem="2.16.840.1.113883.6.277"

codeSystmeName="cdcNHSN"/>

<statusCode code="completed" />

<effectiveTime>

<low value="20130805" />

</effectiveTime>

<value xsi:type="CD"

code="370898007"

codeSystem="2.16.840.1.113883.6.96"

codeSystemName="SNOMED CT"

displayName="Wrong surgical procedure performed on a patient" />

</observation>

Same Day Outcome Measures Organizer

[organizer: identifier urn:oid:2.16.840.1.113883.10.20.5.6.212 (closed)]

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Table 336: Same Day Outcome Measures Organizer Contexts

| Contained By: | Contains: |
| --- | --- |
| [Other Event Details Section](#Other_Event_Details_Section) (optional) | [Same Day Outcome Measure Observation](#Same_Day_Outcome_Measure_Observation) |

This organizer groups together the same-day outcome measures.

Table 337: Same Day Outcome Measures Organizer Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.212) | | | | | |
| @classCode | 1..1 | SHALL |  | [1113-21784](#C_1113-21784) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = CLUSTER |
| @moodCode | 1..1 | SHALL |  | [1113-21785](#C_1113-21785) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1113-21781](#C_1113-21781) |  |
| @root | 1..1 | SHALL |  | [1113-21786](#C_1113-21786) | 2.16.840.1.113883.10.20.5.6.212 |
| statusCode | 1..1 | SHALL |  | [1113-21782](#C_1113-21782) |  |
| @code | 1..1 | SHALL |  | [1113-21787](#C_1113-21787) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| component | 1..\* | SHALL |  | [1113-21780](#C_1113-21780) |  |
| observation | 1..1 | SHALL |  | [1113-21783](#C_1113-21783) | [Same Day Outcome Measure Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.208](#Same_Day_Outcome_Measure_Observation) |

1. SHALL contain exactly one [1..1] @classCode="CLUSTER" Cluster (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1113-21784).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1113-21785).
3. SHALL contain exactly one [1..1] templateId (CONF:1113-21781) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.212" (CONF:1113-21786).
4. SHALL contain exactly one [1..1] statusCode (CONF:1113-21782).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1113-21787).
5. SHALL contain at least one [1..\*] component (CONF:1113-21780).
   1. Such components SHALL contain exactly one [1..1] [Same Day Outcome Measure Observation](#Same_Day_Outcome_Measure_Observation) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.208) (CONF:1113-21783).

Figure 138: Same Day Outcome Measures Organizer Example

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

<!-- Same Day Outcome Measures Organizer templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.212" />

<statusCode code="completed" />

<component>

<!-- Same Day Outcome Measure -->

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

<!-- Same Day Outcome Measure templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.208" />

...

</observation>

</component>

<component>

<!-- Same Day Outcome Measure -->

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

<!-- Same Day Outcome Measure templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.208" />

...

</observation>

</component>

...

</organizer>

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 338: 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 339: 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 139: 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 340: 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) |

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 341: 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 342: 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 140: 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 141: 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 343: 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) |

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 344: 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 142: 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 345: 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 346: 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 143: 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 347: 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 348: 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 144: 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 349: 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 350: 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 145: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1.1 - US Realm

Table 351: 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) | [Isolate Susceptibility Tests Organizer (V3)](#E_Isolate_Susceptibility_Tests_Organize)  [Specimen Collection Encounter (ARO)](#E_Specimen_Collection_Encounter_ARO) |

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 352: 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 353: 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 146: 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 354: 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) |

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 355: 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 147: 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 356: 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 357: 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 358: 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 148: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 2, DSTU 1 - US Realm

Table 359: 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 360: 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 149: 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 361: 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 362: 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 363: 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 150: 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 364: 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 365: 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 366: 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  Code System: cdcNHSN 2.16.840.1.113883.6.277  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 367: 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  Code System: cdcNHSN 2.16.840.1.113883.6.277  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 |
| 3307-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of umbilical catheter days |

Table 368: 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  Code System: cdcNHSN 2.16.840.1.113883.6.277  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 369: 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  Code System: cdcNHSN 2.16.840.1.113883.6.277  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 370: 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  Code System: cdcNHSN 2.16.840.1.113883.6.277    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) |
| 1832-5 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of encounters as adjusted for C.diff reporting (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 |
| ... | | | |

Table 371: 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 151: 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="3307-6"

codeSystem="2.16.840.1.113883.6.270"

codeSystemName="NHSN Summary Data"

displayName="Number of umbilical catheter days" />

<statusCode code="completed" />

<value unit="d"

value="23"

xsi:type="PQ" />

</observation>

</entryRelationship>

Figure 152: 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 153: 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 154: 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 372: 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 373: 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 374: 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  Code System: cdcNHSN 2.16.840.1.113883.6.277  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 375: 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  Code System: cdcNHSN 2.16.840.1.113883.6.277  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 155: 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 376: 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 377: 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 378: 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 156: 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 379: 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 380: 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 381: 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 157: 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 (OPC)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.214 (closed)]

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

Table 382: Summary Data Observation (OPC) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (OPC)](#E_Summary_Encounter_OPC) (required) | [Procedure Category](#E_Procedure_Category) |

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.

Table 383: Summary Data Observation (OPC) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.214) | | | | | |
| @classCode | 1..1 | SHALL |  | [1113-21830](#C_1113-21830) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1113-21831](#C_1113-21831) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1113-21826](#C_1113-21826) |  |
| @root | 1..1 | SHALL |  | [1113-21832](#C_1113-21832) | 2.16.840.1.113883.10.20.5.6.214 |
| code | 1..1 | SHALL |  | [1113-21827](#C_1113-21827) | urn:oid:2.16.840.1.113883.10.20.5.9.14 (Codes for Outpatient Procedure Component (OPC) Summary) |
| statusCode | 1..1 | SHALL |  | [1113-21828](#C_1113-21828) |  |
| @code | 1..1 | SHALL |  | [1113-21839](#C_1113-21839) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| value | 1..1 | SHALL | INT | [1113-21829](#C_1113-21829) |  |
| @value | 1..1 | SHALL |  | [1113-21840](#C_1113-21840) |  |
| entryRelationship | 0..1 | MAY |  | [1113-21850](#C_1113-21850) |  |
| @typeCode | 1..1 | SHALL |  | [1113-21851](#C_1113-21851) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| procedure | 1..1 | SHALL |  | [1113-21852](#C_1113-21852) | [Procedure Category (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.215](#E_Procedure_Category) |

1. SHALL contain exactly one [1..1] @classCode="OBS" Observation (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1113-21830).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1113-21831).
3. SHALL contain exactly one [1..1] templateId (CONF:1113-21826) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.214" (CONF:1113-21832).
4. SHALL contain exactly one [1..1] code, which SHALL be selected from ValueSet [Codes for Outpatient Procedure Component (OPC) Summary](#Codes_for_Outpatient_Procedure_Componen) urn:oid:2.16.840.1.113883.10.20.5.9.14 STATIC (CONF:1113-21827).
5. SHALL contain exactly one [1..1] statusCode (CONF:1113-21828).
   1. This statusCode SHALL contain exactly one [1..1] @code="completed" Completed (CodeSystem: HL7ActStatus urn:oid:2.16.840.1.113883.5.14) (CONF:1113-21839).
6. SHALL contain exactly one [1..1] value with @xsi:type="INT" (CONF:1113-21829).
   1. This value SHALL contain exactly one [1..1] @value (CONF:1113-21840).  
      Note: Number of admissions
7. MAY contain zero or one [0..1] entryRelationship (CONF:1113-21850).
   1. The entryRelationship, if present, SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1113-21851).
   2. The entryRelationship, if present, SHALL contain exactly one [1..1] [Procedure Category](#E_Procedure_Category) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.215) (CONF:1113-21852).
   3. To record total number of admissions with a primary CPT code for the procedure category (code/@code 1644-4), this observation SHALL contain this entryRelationship (CONF:1113-21853).

Table 384: Codes for Outpatient Procedure Component (OPC) Summary

|  |  |  |  |
| --- | --- | --- | --- |
| Value Set: Codes for Outpatient Procedure Component (OPC) Summary urn:oid:2.16.840.1.113883.10.20.5.9.14  Code System: cdcNHSN 2.16.840.1.113883.6.277    NHSN protocol specifies which data to report for each type of content. The data required by NHSN for OPC 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 |
| 1641-0 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of admission with an order for a prophylactic IV antibiotic that was administered on time |
| 1642-8 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of admission with an order for a prophylactic IV antibiotic that was NOT administered on time |
| 1643-6 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of admission with no order for a prophylactic IV antibiotic |
| 1644-4 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Total number of admissions with a primary CPT code for this Procedure Category |
| 1862-2 | cdcNHSN | urn:oid:2.16.840.1.113883.6.277 | Number of admissions |

Figure 158: Summary Data Observation (OPC) Example

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

<!-- Summary Data Observation (OPC) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.214" />

<code code="1644-4"

codeSystem="2.16.840.1.113883.6.270"

codeSystemName="cdcNHSN"

displayName="Total number of admissions with a primary CPT code for this

Procedure Category" />

<statusCode code="completed" />

<value xsi:type="INT" value="3" />

<entryRelationship typeCode="REFR">

<!-- Procedure Category -->

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

<!-- Procedure Category templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.215" />

...

</procedure>

</entryRelationship>

</observation>

Summary Data Observation (POM)

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.192 (closed)]

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

Table 385: Summary Data Observation (POM) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (POM)](#E_Summary_Encounter_POM) (required) | [Summary Data Observation](#E_Summary_Data_Observation) |

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 386: 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 387: 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 388: 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 389: 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 159: 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 390: Summary Data Observation (VAT) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Encounter (VAT)](#E_Summary_Encounter_VAT) (required) | [Summary Data Observation](#E_Summary_Data_Observation) |

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 391: 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 160: 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 392: Summary Encounter Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section](#S_Summary_Data_Section) (required) | [Summary Data Observation](#E_Summary_Data_Observation) |

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 393: 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 161: 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)]

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

Table 394: 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) |

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 395: 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 (HL7 HealthcareServiceLocation) |
| @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: HL7 HealthcareServiceLocation 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 162: 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)]

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

Table 396: Summary Encounter (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)  [Summary Data Observation (AUP)](#E_Summary_Data_Observation_AUP) |

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 397: 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 163: 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)]

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

Table 398: 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) |

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 399: 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 400: 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 164: 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)]

Published as part of NHSN Healthcare Associated Infection (HAI) Reports Release 3, DSTU 1.1 - US Realm

Table 401: Summary Encounter (HV) (V2) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (HV) (V2)](#S_Summary_Data_Section_HV_V2) (required) | [Blood Product Usage Summary Observation (V2)](#E_Blood_Product_Usage_Summary_Observati)  [Facility Transfuses Blood Products Treated with Pathogen Reduction Technology Observation (V2)](#E_Facility_Transfuses_Blood_Products_Tr)  [Pathogen Reduced Apheresis Platelet Usage Summary Observation](#E_Pathogen_Reduced_Apheresis_Platelet_U)  [Summary Data Observation (HV)](#E_Summary_Data_Observation_HV) |

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 402: 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 (HL7 HealthcareServiceLocation) |
| @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: HL7 HealthcareServiceLocation 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 165: 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 403: Summary Encounter (NICU) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (NICU)](#S_Summary_Data_Section_NICU) (required) | [Summary Data Observation](#E_Summary_Data_Observation) |

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 404: 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 405: 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 166: 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 (OPC)

[encounter: identifier urn:oid:2.16.840.1.113883.10.20.5.6.213 (closed)]

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Table 406: Summary Encounter (OPC) Contexts

| Contained By: | Contains: |
| --- | --- |
| [Summary Data Section (OPC)](#S_Summary_Data_Section_OPC) (required) | [Summary Data Observation (OPC)](#E_Summary_Data_Observation_OPC) |

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.

Table 407: Summary Encounter (OPC) Constraints Overview

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| XPath | Card. | Verb | Data Type | CONF# | Value |
| encounter (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.213) | | | | | |
| @classCode | 1..1 | SHALL |  | [1113-21815](#C_1113-21815) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = ENC |
| @moodCode | 1..1 | SHALL |  | [1113-21816](#C_1113-21816) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1113-21809](#C_1113-21809) |  |
| @root | 1..1 | SHALL |  | [1113-21817](#C_1113-21817) | 2.16.840.1.113883.10.20.5.6.213 |
| entryRelationship | 1..\* | SHALL |  | [1113-21808](#C_1113-21808) |  |
| @typeCode | 1..1 | SHALL |  | [1113-21825](#C_1113-21825) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = COMP |
| observation | 1..1 | SHALL |  | [1113-21814](#C_1113-21814) | [Summary Data Observation (OPC) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.214](#E_Summary_Data_Observation_OPC) |

1. SHALL contain exactly one [1..1] @classCode="ENC" Encounter (CodeSystem: HL7ActClass urn:oid:2.16.840.1.113883.5.6 STATIC) (CONF:1113-21815).
2. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1113-21816).
3. SHALL contain exactly one [1..1] templateId (CONF:1113-21809) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.213" (CONF:1113-21817).
4. SHALL contain at least one [1..\*] entryRelationship (CONF:1113-21808).
   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:1113-21825).
   2. Such entryRelationships SHALL contain exactly one [1..1] [Summary Data Observation (OPC)](#E_Summary_Data_Observation_OPC) (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.214) (CONF:1113-21814).

Figure 167: Summary Encounter (OPC) Example

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

<!-- Summary Encounter (OPC) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.213" />

<entryRelationship typeCode="COMP">

<!-- Summary Data Observation (OPC) -->

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

<!-- Summary Data Observation (OPC) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.214" />

...

</observation>

</entryRelationship>

<entryRelationship typeCode="COMP">

<!-- Summary Data Observation (OPC) -->

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

<!-- Summary Data Observation (OPC) templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.214" />

...

</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 408: 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) |

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 409: 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 168: 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 facility-wide, outpatient, NHSN requires one additional

observation here, constructed as above but with a different code:

1832-5 Number of Encounters as calculated 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 410: 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) |

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 411: 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 169: 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)]

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

Table 412: 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) |

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 413: 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 170: 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>

Surgical Site Infection Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.210 (closed)]

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

Table 414: Surgical Site Infection Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Surgical Site Infection Details Section in an OPC Report](#Surgical_Site_Infection_Details_Section) (required) | [Criteria of Diagnosis Organizer](#E_Criteria_of_Diagnosis_Organizer)  [Infection Condition Observation](#E_Infection_Condition_Observation) |

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.

Table 415: Surgical Site Infection Observation Constraints Overview

| XPath | Card. | Verb | Data Type | CONF# | Value |
| --- | --- | --- | --- | --- | --- |
| observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.210) | | | | | |
| @classCode | 1..1 | SHALL |  | [1113-21703](#C_1113-21703) | urn:oid:2.16.840.1.113883.5.6 (HL7ActClass) = OBS |
| @moodCode | 1..1 | SHALL |  | [1113-21704](#C_1113-21704) | urn:oid:2.16.840.1.113883.5.1001 (HL7ActMood) = EVN |
| templateId | 1..1 | SHALL |  | [1113-21868](#C_1113-21868) |  |
| @root | 1..1 | SHALL |  | [1113-21869](#C_1113-21869) | 2.16.840.1.113883.10.20.5.6.210 |
| templateId | 1..1 | SHALL |  | [1113-21967](#C_1113-21967) |  |
| @root | 1..1 | SHALL |  | [1113-21713](#C_1113-21713) | 2.16.840.1.113883.10.20.22.4.4 |
| id | 1..1 | SHALL |  | [1113-21706](#C_1113-21706) |  |
| @nullFlavor | 1..1 | SHALL |  | [1113-21717](#C_1113-21717) | NA |
| code | 1..1 | SHALL |  | [1113-21694](#C_1113-21694) |  |
| @code | 1..1 | SHALL |  | [1113-21707](#C_1113-21707) | ASSERTION |
| @codeSystem | 1..1 | SHALL |  | [1113-21708](#C_1113-21708) | urn:oid:2.16.840.1.113883.5.4 (HL7ActCode) = 2.16.840.1.113883.5.4 |
| statusCode | 1..1 | SHALL |  | [1113-21695](#C_1113-21695) |  |
| @code | 1..1 | SHALL |  | [1113-21709](#C_1113-21709) | urn:oid:2.16.840.1.113883.5.14 (HL7ActStatus) = completed |
| effectiveTime | 1..1 | SHALL |  | [1113-21696](#C_1113-21696) |  |
| low | 1..1 | SHALL |  | [1113-21710](#C_1113-21710) |  |
| value | 1..1 | SHALL | CD | [1113-21711](#C_1113-21711) |  |
| @code | 1..1 | SHALL |  | [1113-21718](#C_1113-21718) | 433202001 |
| @codeSystem | 1..1 | SHALL |  | [1113-21719](#C_1113-21719) | urn:oid:2.16.840.1.113883.6.96 (SNOMED CT) = 2.16.840.1.113883.6.96 |
| entryRelationship | 1..1 | SHALL |  | [1113-21698](#C_1113-21698) |  |
| @typeCode | 1..1 | SHALL |  | [1113-21714](#C_1113-21714) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = REFR |
| observation | 1..1 | SHALL |  | [1113-21715](#C_1113-21715) | [Infection Condition Observation (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.135](#E_Infection_Condition_Observation) |
| entryRelationship | 1..1 | SHALL | EntryRelationship | [1113-21855](#C_1113-21855) |  |
| @typeCode | 1..1 | SHALL |  | [1113-21856](#C_1113-21856) | urn:oid:2.16.840.1.113883.5.1002 (HL7ActRelationshipType) = SPRT |
| organizer | 1..1 | SHALL |  | [1113-21857](#C_1113-21857) | [Criteria of Diagnosis Organizer (identifier: urn:oid:2.16.840.1.113883.10.20.5.6.180](#E_Criteria_of_Diagnosis_Organizer) |

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:1113-21703).
3. SHALL contain exactly one [1..1] @moodCode="EVN" Event (CodeSystem: HL7ActMood urn:oid:2.16.840.1.113883.5.1001 STATIC) (CONF:1113-21704).
4. SHALL contain exactly one [1..1] templateId (CONF:1113-21868) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.6.210" (CONF:1113-21869).
5. SHALL contain exactly one [1..1] templateId (CONF:1113-21967) such that it
   1. SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.22.4.4" (CONF:1113-21713).
6. SHALL contain exactly one [1..1] id (CONF:1113-21706).
   1. This id SHALL contain exactly one [1..1] @nullFlavor="NA" (CONF:1113-21717).
7. SHALL contain exactly one [1..1] code (CONF:1113-21694).
   1. This code SHALL contain exactly one [1..1] @code="ASSERTION" Assertion (CONF:1113-21707).
   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:1113-21708).
8. SHALL contain exactly one [1..1] statusCode (CONF:1113-21695).
   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:1113-21709).
9. SHALL contain exactly one [1..1] effectiveTime (CONF:1113-21696).
   1. This effectiveTime SHALL contain exactly one [1..1] low (CONF:1113-21710).  
      Note: Date of SSI
10. SHALL contain exactly one [1..1] value with @xsi:type="CD" (CONF:1113-21711).
    1. This value SHALL contain exactly one [1..1] @code="433202001" Surgical Site Infection (CONF:1113-21718).
    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:1113-21719).
11. SHALL contain exactly one [1..1] entryRelationship (CONF:1113-21698) such that it
    1. SHALL contain exactly one [1..1] @typeCode="REFR" (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1113-21714).
    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:1113-21715).
12. SHALL contain exactly one [1..1] entryRelationship (CONF:1113-21855) such that it
    1. SHALL contain exactly one [1..1] @typeCode="SPRT" Supports (CodeSystem: HL7ActRelationshipType urn:oid:2.16.840.1.113883.5.1002) (CONF:1113-21856).
    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:1113-21857).

Figure 171: Surgical Site Infection Observation Example

<!-- Surgical Site Infection Observation -->

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

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

<templateId root="2.16.840.1.113883.10.20.22.4.4" />

<!-- Surgical Site infection Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.210" />

<id nullFlavor="NA" />

<code codeSystem="2.16.840.1.113883.5.4" code="ASSERTION" />

<statusCode code="completed" />

<!-- Date of SSI -->

<effectiveTime>

<low value="20130806" />

</effectiveTime>

<value xsi:type="CD"

codeSystem="2.16.840.1.113883.6.96"

code="433202001"

displayName="Surgical Site Infection" />

<!-- NHSN Infection Condition-->

<entryRelationship typeCode="REFR">

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

<!-- HAI Infection Condition Observation templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.135" />

...

</observation>

</entryRelationship>

<!-- Criteria of Diagnosis Organizer -->

<entryRelationship typeCode="SPRT">

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

<!-- Criteria of Diagnosis Organizer templateId -->

<templateId root="2.16.840.1.113883.10.20.5.6.180" />

...

</organizer>

</entryRelationship>

</observation>

Suspected Source Observation

[observation: identifier urn:oid:2.16.840.1.113883.10.20.5.6.168 (closed)]

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Table 416: Suspected Source Observation Contexts

| Contained By: | Contains: |
| --- | --- |
| [Positive Blood Culture Observation (V2)](#E_Positive_Blood_Culture_Observation_V2) (optional) | [Imputability Observation](#E_Imputability_Observation) |

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 417: 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 418: 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 172: 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 419: 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 420: 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 173: 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 421: 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 422: 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 174: 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 423: 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 424: 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 425: 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 175: 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 426: 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)  [History of Object Presence Observation](#E_History_of_Object_Presence_Observatio) |

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 427: 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 176: 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)]

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

Table 428: 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 429: 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 177: 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 430: 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) |

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 431: 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 432: 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 178: 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)]

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

Table 433: Ventricular Assist Device (VAD) Present Contexts

| Contained By: | Contains: |
| --- | --- |
| [Infection Risk Factors Section in a BSI Report (V2)](#S_Infection_Risk_Factors_Section_in_a_B) (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 434: 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 179: 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 435: 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 436: 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 180: 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 437: 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 438: 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 439: 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 181: 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 440: 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) (V2)](#D_HAI_Bloodstream_Infection_Report_BSI_) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.32:2017-04-01 |
| [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](#HAI_Outpatient_Procedure_Component_OPC_) | document | urn:oid:2.16.840.1.113883.10.20.5.47 |
| [HAI Outpatient Procedure Component (OPC) Summary Report](#HAI_Outpatient_Procedure_Component_OPCS) | document | urn:oid:2.16.840.1.113883.10.20.5.48 |
| [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 (V2)](#D_Intensive_Care_Unit_ICU_Summary_Repor) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.40:2014-12-01 |
| [Neonatal Intensive Care Unit (NICU) Summary Report (V2)](#D_Neonatal_Intensive_Care_Unit_NICU_Sum) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.41:2014-12-01 |
| [Prevention Process and Outcome Measures (POM) Summary Report (V2)](#D_Prevention_Process_and_Outcome_Measur) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.43:2014-12-01 |
| [Specialty Care Area (SCA) Summary Report (V2)](#D_Specialty_Care_Area_SCA_Summary_Repor) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.42:2014-12-01 |
| [Vascular Access Type Report (VAT) Summary Report (V2)](#D_Vascular_Access_Type_Report_VAT_Summa) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.45:2015-10-01 |
| [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](#S_Findings_Section_in_an_OPC_Report) | section | urn:oid:2.16.840.1.113883.10.20.5.5.55 |
| [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) | section | urn:oid:2.16.840.1.113883.10.20.5.4.26 |
| [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 (V2)](#S_Infection_Risk_Factors_Section_in_a_B) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01 |
| [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](#Other_Event_Details_Section) | section | urn:oid:2.16.840.1.113883.10.20.5.5.54 |
| [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 |
| [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)](#S_Summary_Data_Section_NICU) | section | urn:oid:2.16.840.1.113883.10.20.5.5.48 |
| [Summary Data Section (OPC)](#S_Summary_Data_Section_OPC) | section | urn:oid:2.16.840.1.113883.10.20.5.5.56 |
| [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](#Surgical_Site_Infection_Details_Section) | section | urn:oid:2.16.840.1.113883.10.20.5.5.53 |
| [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 |
| [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 |
| [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 |
| [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](#Infection_First_Reported_Source_Observa) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.207 |
| [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_Observation) | 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 |
| [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 |
| [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](#E_Procedure_Category) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.215 |
| [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_Statement_) | 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](#Prophylactic_IV_Antibiotic_Timing_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.209 |
| [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 |
| [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](#Same_Day_Outcome_Measure_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.208 |
| [Same Day Outcome Measures Organizer](#E_Same_Day_Outcome_Measures_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.212 |
| [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)](#E_Summary_Data_Observation_OPC) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.214 |
| [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)](#E_Summary_Encounter_OPC) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.213 |
| [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](#E_Surgical_Site_Infection_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.210 |
| [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 441: 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 (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 (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 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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [Specimen Collection Encounter (ARO)](#E_Specimen_Collection_Encounter_ARO) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.187 |
| [HAI Bloodstream Infection Report (BSI) (V2)](#D_HAI_Bloodstream_Infection_Report_BSI_) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.32:2017-04-01 |
| [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 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [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 |
| [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 |
| [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 |
| [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 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [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_Statement_) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [Infection Risk Factors Section in a BSI Report (V2)](#S_Infection_Risk_Factors_Section_in_a_B) | section | urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01 |
| [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 |
| [Hemodialysis Catheter Present](#E_Hemodialysis_Catheter_Present) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [Sterile Barriers Applied Clinical Statement](#E_Sterile_Barriers_Applied_Clinical_Sta) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.167 |
| [Solutions Dried Observation](#E_Solutions_Dried_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.163 |
| [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 |
| [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 |
| [Recorder Observation](#E_Recorder_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.159 |
| [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 |
| [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 |
| [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 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 |
| [Dialysis Clinic Admission Clinical Statement](#E_Dialysis_Clinic_Admission_Clinical_St) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.124 |
| [Hospital Admission Clinical Statement](#E_Hospital_Admission_Clinical_Statement) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.133 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [Blood Collection Location](#Blood_Collection_Location) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.219:2014-12-01 |
| [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 |
| [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 |
| [Loss of Vascular Access Observation](#E_Loss_of_Vascular_Access_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.203 |
| [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 Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [HAI Outpatient Procedure Component (OPC) Event Report](#HAI_Outpatient_Procedure_Component_OPC_) | document | urn:oid:2.16.840.1.113883.10.20.5.47 |
| [Findings Section in an OPC Report](#S_Findings_Section_in_an_OPC_Report) | section | urn:oid:2.16.840.1.113883.10.20.5.5.55 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [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 |
| [Other Event Details Section](#Other_Event_Details_Section) | section | urn:oid:2.16.840.1.113883.10.20.5.5.54 |
| [Prophylactic IV Antibiotic Timing Observation](#Prophylactic_IV_Antibiotic_Timing_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.209 |
| [Same Day Outcome Measures Organizer](#E_Same_Day_Outcome_Measures_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.212 |
| [Same Day Outcome Measure Observation](#Same_Day_Outcome_Measure_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.208 |
| [Surgical Site Infection Details Section in an OPC Report](#Surgical_Site_Infection_Details_Section) | section | urn:oid:2.16.840.1.113883.10.20.5.5.53 |
| [Infection First Reported Source Observation](#Infection_First_Reported_Source_Observa) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.207 |
| [Procedure Category](#E_Procedure_Category) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.215 |
| [Surgical Site Infection Observation](#E_Surgical_Site_Infection_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.210 |
| [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 |
| [Infection Condition Observation](#E_Infection_Condition_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.135 |
| [HAI Outpatient Procedure Component (OPC) Summary Report](#HAI_Outpatient_Procedure_Component_OPCS) | document | urn:oid:2.16.840.1.113883.10.20.5.48 |
| [Summary Data Section (OPC)](#S_Summary_Data_Section_OPC) | section | urn:oid:2.16.840.1.113883.10.20.5.5.56 |
| [Summary Encounter (OPC)](#E_Summary_Encounter_OPC) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.213 |
| [Summary Data Observation (OPC)](#E_Summary_Data_Observation_OPC) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.214 |
| [Procedure Category](#E_Procedure_Category) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.215 |
| [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 |
| [Diabetes Mellitus Observation](#E_Diabetes_Mellitus_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.123 |
| [Duration of Labor Observation](#E_Duration_of_Labor_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.127 |
| [Height Observation](#E_Height_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.131 |
| [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 |
| [Endoscope Used Clinical Statement](#E_Endoscope_Used_Clinical_Statement) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.128 |
| [Wound Class Observation](#E_Wound_Class_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.174 |
| [Trauma Observation](#E_Trauma_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.170 |
| [Weight Observation](#E_Weight_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.173 |
| [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 |
| [Revision Associated with Prior Infection Observation](#Revision_Associated_with_Prior_Infectio) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.204 |
| [Spinal Fusion Level Observation](#E_Spinal_Fusion_Level_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.166 |
| [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 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [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 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-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 |
| [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 |
| [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 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [Procedure Details Clinical Statement in an Infection-Type Report](#E_Procedure_Details_Clinical_Statement_) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [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 |
| [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 Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [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 |
| [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 |
| [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 |
| [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 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [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_Statement_) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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 |
| [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_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01 |
| [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 |
| [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_Observation) | entry | urn:hl7ii:2.16.840.1.113883.10.20.5.6.238:2016-08-01 |
| [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 |
| [Intensive Care Unit (ICU) Summary Report (V2)](#D_Intensive_Care_Unit_ICU_Summary_Repor) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.40:2014-12-01 |
| [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 |
| [Neonatal Intensive Care Unit (NICU) Summary Report (V2)](#D_Neonatal_Intensive_Care_Unit_NICU_Sum) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.41:2014-12-01 |
| [Summary Data Section (NICU)](#S_Summary_Data_Section_NICU) | section | urn:oid:2.16.840.1.113883.10.20.5.5.48 |
| [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 |
| [Prevention Process and Outcome Measures (POM) Summary Report (V2)](#D_Prevention_Process_and_Outcome_Measur) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.43:2014-12-01 |
| [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 |
| [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 |
| [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 |
| [Specialty Care Area (SCA) Summary Report (V2)](#D_Specialty_Care_Area_SCA_Summary_Repor) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.42:2014-12-01 |
| [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 |
| [Vascular Access Type Report (VAT) Summary Report (V2)](#D_Vascular_Access_Type_Report_VAT_Summa) | document | urn:hl7ii:2.16.840.1.113883.10.20.5.45:2015-10-01 |
| [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 |
| [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 |
| [Findings Organizer](#E_Findings_Organizer) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.182 |
| [Drug-Susceptibility Test Observation](#E_DrugSusceptibility_Test_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.126 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [Pathogen Ranking Observation](#E_Pathogen_Ranking_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.147 |
| [MDRO/CDI Observation](#E_MDROCDI_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.142 |
| [Pathogen Identified Observation](#E_Pathogen_Identified_Observation) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.145 |
| [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 |
| [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 |
| [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 |
| [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 |
| [Secondary Bloodstream Infection Observation](#E_Secondary_Bloodstream_Infection_Obser) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.160 |
| [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_Statement_) | entry | urn:oid:2.16.840.1.113883.10.20.5.6.154 |
| [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 |
| [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 |
| [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 |
| [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 |
| [HAI Section Generic Constraints](#S_HAI_Section_Generic_Constraints) | section | urn:oid:2.16.840.1.113883.10.20.5.4.26 |

# Value Sets In This Guide

Table 442: 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 Outpatient Procedure Component (OPC) Summary](#Codes_for_Outpatient_Procedure_Componen) | urn:oid:2.16.840.1.113883.10.20.5.9.14 | 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/> |
| [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](#NHSN_PlasmaApheresisPsoralenTreated) | urn:oid:2.16.840.1.114222.4.11.7326 | N/A |
| [NHSN Summary Blood Product Usage](#NHSN_Summary_Blood_Product_Usage) | urn:oid:2.16.840.1.114222.4.11.7353 | 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 |
| [NHSNInfectionFirstReportedSource](#NHSNInfectionFirstReportedSource) | urn:oid:2.16.840.1.114222.4.11.7215 | 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 |
| [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 |
| [NHSNSameDayOutcomeMeasure](#NHSNSameDayOutcomeMeasure) | urn:oid:2.16.840.1.114222.4.11.7214 | 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 |
| [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 |
| [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 443: 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 |
| HL7 HealthcareServiceLocation | urn:oid:2.16.840.1.113883.6.259 |
| 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 |
| 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 |

# Changes from Previous Version

HAI Bloodstream Infection Report (BSI) (V2)

[HAI Bloodstream Infection Report (BSI) (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.32:2017-04-01)](#D_HAI_Bloodstream_Infection_Report_BSI_)

| Change | Old | New |
| --- | --- | --- |
| Name | HAI Bloodstream Infection Report (BSI) | HAI Bloodstream Infection Report (BSI) (V2) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.32 | urn:hl7ii:2.16.840.1.113883.10.20.5.32:2017-04-01 |
| CONF #: 3311-28411 Added |  | This structuredBody MAY contain zero or one [0..1] component (CONF:3311-28411) such that it |
| CONF #: 3311-28412 Added |  | SHALL contain exactly one [1..1] NHSN Comment Section (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.61:2017-04-01) (CONF:3311-28412). |
| CONF #: 3311-28432 Added |  | SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28432). |
| CONF #: 3311-28308 Modified | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.1" (CONF:86-28308). | SHALL contain exactly one [1..1] @root="2.16.840.1.113883.10.20.5.7.3.2" (CONF:3311-28308). |
| CONF #: 3311-22472 Modified | This id SHALL contain exactly one [1..1] @root (CONF:86-22472). | The value of @root must be the NHSN assigned Facility OID.  This id SHALL contain exactly one [1..1] @root (CONF:3311-22472). |
| CONF #: 3311-22473 Modified | The value of healthCareFacility/id/@extension must be a value previously registered with NHSN.  This id SHALL contain exactly one [1..1] @extension (CONF:86-22473). | The value of @extension must be a value registered with NHSN.  This id SHALL contain exactly one [1..1] @extension (CONF:3311-22473). |
| CONF #: 3311-22479 Modified | SHALL contain exactly one [1..1] Infection Risk Factors Section in a BSI Report (identifier: urn:oid:2.16.840.1.113883.10.20.5.5.33) (CONF:86-22479). | SHALL contain exactly one [1..1] Infection Risk Factors Section in a BSI Report (V2) (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01) (CONF:3311-22479). |

Infection Risk Factors Section in a BSI Report (V2)

[Infection Risk Factors Section in a BSI Report (V2) (urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01)](#S_Infection_Risk_Factors_Section_in_a_B)

| Change | Old | New |
| --- | --- | --- |
| Name | Infection Risk Factors Section in a BSI Report | Infection Risk Factors Section in a BSI Report (V2) |
| Oid | urn:oid:2.16.840.1.113883.10.20.5.5.33 | urn:hl7ii:2.16.840.1.113883.10.20.5.5.33:2017-04-01 |
| Description | In a BSI Report, the Infection Risk Factors Section contains Infection Risk Factors Observations and optionally 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). | 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). |
| CONF #: 3311-28361 Added |  | SHALL contain exactly one [1..1] entry (CONF:3311-28361) such that it |
| CONF #: 3311-28362 Added |  | SHALL contain exactly one [1..1] entry (CONF:3311-28362) such that it |
| CONF #: 3311-28363 Added |  | SHALL contain exactly one [1..1] entry (CONF:3311-28363) such that it |
| CONF #: 3311-28433 Added |  | SHALL contain exactly one [1..1] @extension="2017-04-01" (CONF:3311-28433). |
| CONF #: 3311-28464 Added |  | SHALL contain exactly one [1..1] Hemodialysis Catheter Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.245:2017-04-01) (CONF:3311-28464). |
| CONF #: 3311-28465 Added |  | SHALL contain exactly one [1..1] Ventricular Assist Device (VAD) Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.247:2017-04-01) (CONF:3311-28465). |
| CONF #: 3311-28466 Added |  | SHALL contain exactly one [1..1] Extracorporeal Life Support Present (identifier: urn:hl7ii:2.16.840.1.113883.10.20.5.6.246:2017-04-01) (CONF:3311-28466). |