PUBLIC HEALTH INFORMATION NETWORK

PHIN MESSAGING GUIDE FOR SYNDROMIC SURVEILLANCE: EMERGENCY DEPARTMENT, URGENT CARE AND INPATIENT SETTINGS

ADT MESSAGES A01, A03, A04, and A08

HL7 Version 2.5.1

(Version 2.3.1 Compatible)

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Centers for Disease Control and Prevention

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Publication History of *PHIN MESSAGING GUIDE FOR SYNDROMIC SURVEILLANCE: EMERGENCY DEPARTMENT, URGENT CARE AND INPATIENT SETTINGS ADT MESSAGES A01, A03, A04, AND A08 HL7 VERSION 2.5.1(VERSION 2.3.1 COMPATIBLE)*

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Release 1.3 DRAFT for Review	12/2012	ISDS, CDC Messaging Team
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A revision history may be found at the end of this Guide.

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ORGANIZATION OF THIS GUIDE

Chapter 1 - Introduction

This chapter describes the scope of this Guide and gives supporting background.

Chapter 2 - Actors, Goals and Messaging Transactions

Chapter 2 describes the business motivations that this Guide will support. This Guide also describes the entities (actors) that rely on the messages. In addition, it defines the transactions that will support the goals of these actors (use cases). Finally, it describes the broader context within which this messaging occurs. There are supporting business processes outside of the actual messaging that are keys to success.

Chapter 3 - Messaging infrastructure

Chapter 3 focuses on the underlying rules and concepts that are the basis for HL7 messaging. It illustrates the components of messages and the grammatical rules for specifying the components and subcomponents.

Chapter 4 – Data Type Definitions

This chapter describes and specifies all data types anticipated for use by the messages supported by this Guide. Where there are subcomponents to a data type, it will specify any rules related to their use. The value sets used in messages are specified in Appendix A. Data types are the building block for fields, described in Chapter 5.

Chapter 5 - Message Segments by Trigger Event

Chapter 5 gives specifications for message segments. Segments are units of the message that carry specific types of information. For instance, PID carries patient identifying information. The segments included in this chapter are those that are needed by the messages specified in Chapter 6.

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This appendix lists expected value sets for all coded data elements used in this Guide.

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This appendix shows detailed examples of the messages specified in the body of this Guide.

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Appendix D: Translation of Data Elements between HL7 2.5.1 and 2.3.1

This appendix documents the differences when using HL7 2.3.1 instead of HL7 2.5.1.

Appendix E: Revision History

This appendix documents the revision history of PHIN MESSAGING GUIDE FOR SYNDROMIC SURVEILLANCE: EMERGENCY DEPARTMENT, URGENT CARE AND INPATIENT SETTINGS ADT MESSAGES A01, A03, A04, and A08 HL7 Version 2.5.1(Version 2.3.1 Compatible).

CHAPTER 1 - INTRODUCTION

Syndromic surveillance is a process that regularly and systematically uses health and health-related data in near "real-time" to make information available on the health of a community. This information includes statistics on disease trends and community health seeking behaviors that support essential public health surveillance functions in governmental public health authorities (PHAs). Syndromic surveillance is particularly useful to local, state, and federal PHAs for supporting public health situational awareness, emergency response management, and outbreak recognition and characterization. Patient encounter data from healthcare settings are a critical input for syndromic surveillance. Clinical data are provided by hospitals and urgent care centers to PHAs for all patient encounters (not a subset), and used by PHAs under authorities granted to them by applicable local and state laws.

For the purposes of this Messaging Guide, emergency department and urgent care services are defined using the following definition from the Centers for Medicare and Medicaid Services (CMS)[1]:

> Emergency services are defined as being services furnished to an individual who has an emergency medical condition as defined in 42 CFR 424.101. The CMS has adopted the definition of emergency medical condition in that section of the Code of Federal Regulations (CFR). However, it seemed clear that Congress intended that the term "emergency or urgent care services" not be limited to emergency services since they also included "urgent care services." Urgent Care Services are defined in 42 CFR 405.400 as services furnished within 12 hours in order to avoid the likely onset of an emergency medical condition. For example, if a beneficiary has an ear infection with significant pain, CMS would view that as requiring treatment to avoid the adverse consequences of continued pain and perforation of the eardrum. The patient's condition would not meet the definition of emergency medical condition because **immediate care** is not needed to avoid placing the health of the individual in serious jeopardy or to avoid serious impairment or dysfunction. However, although it does not meet the definition of emergency care, the beneficiary needs care within a relatively short period of time (which CMS defines as 12 hours) to avoid adverse consequences, and the beneficiary may not be able to find another physician or practitioner to provide treatment within 12 hours.

The Centers for Disease Control and Prevention (CDC)'s Public Health Information Network (PHIN) is a national initiative to increase the capacity of public health agencies to electronically exchange data and information across organizations and jurisdictions

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[1] Medicare Benefit Policy Manual, Chapter 15. (Rev. 157, 06-08-12). Section 40.29-Definition of Emergency and Urgent Care Situations (Rev. 1, 10-01-03). B3-3044.29. Available online: <https://www.cms.gov/Regulations-and-Guidance/Guidance/Manuals/downloads/bp102c15.pdf>

(e.g., clinical care to public health, public health to public health and public health to other federal agencies). To do so, PHIN promotes the use of standards and defines functional and technical requirements for public health information exchange.

Health Level Seven (HL7) is a nationally recognized standard for electronic data exchange between systems housing health care data. The HL7 standard is a key factor that supports this two-way exchange of information because it defines a syntax or grammar for formulating the messages that carry this information. It further describes a standard vocabulary that is used in these messages. HL7 also does not depend on specific software, that is, it is platform independent.

This document represents the collaborative effort of the International Society for Disease Surveillance (ISDS), the Centers for Disease Control and Prevention (CDC), and National Institute of Standards and Technology (NIST) to specify a national electronic messaging standard that enables disparate healthcare applications to submit or transmit administrative and clinical data for public health surveillance and response. Recommendations made by expert committees convened by ISDS and CDC serve as the basis for this guide[2].

This Guide provides:

1. An HL7 messaging and content reference standard for national, syndromic surveillance electronic health record technology certification
2. A basis for local and state syndromic surveillance messaging implementation guides
3. A resource for planning for the increasing use of electronic health record technology and for providing details on health data elements that may become a part of future public health syndromic surveillance messaging requirements

This Guide provides elements of interest and business rules for laboratory results processing for syndromic surveillance but does not include the segment profiles. It is expected that a version 2.0 will be published that will reference conformance profile for electronic laboratory reporting for syndromic surveillance based on the S&I Framework Laboratory Results Interface (LRI) Implementation Guide.

This implementation guide replaces or supersedes all previous guide releases and related documentation. Specifically, this guide supersedes:

   ◦ PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data, Release 1.1 (August 2012)
   ◦ PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and

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[2] International Society for Disease Surveillance. Electronic Syndromic Surveillance Using Hospital Inpatient and Ambulatory Clinical Care Electronic Health Record Data: Recommendations from the ISDS Meaningful Use Workgroup. 2012. Available online: http://www.syndromic.org/meaningfuluse/IAData/Recommendations.

Urgent Care Data, Addendum Release 1.1 (August 2012)
- ◦ PHIN Conformance Clarification for EHR Certification of Electronic Syndromic Surveillance ADT MESSAGES A01, A03, A04, and A08 HL7 Version 2.5.1, Testing Clarification Document, Release 1.0 (September 28, 2012)

This Guide is based on HL7 Version 2.5.1, as published by the HL7 organization (www.hl7.org). Backwards compatibility considerations to HL7 Version 2.3.1 are provided in Appendix D.

INTENDED AUDIENCE

This Guide has three audiences. The first is managers of healthcare and public health information systems that must understand this process at a high level. The second is technical personnel who develop or work with the information systems that extract, transport, load and transform electronic health record (EHR) data for syndromic surveillance. Finally, the third is national health information technology policy makers who develop and implement EHR technology certification rules and procedures to promote gains in systems interoperability and capability.

SCOPE

This Guide is intended to facilitate the exchange of patient clinical encounter records for syndromic surveillance purposes between different systems. This includes:

- ◦ Sending for all patient encounters
- ◦ Treatment facility information
- ◦ Limited personal identifiable information,
- ◦ Demographic information about patients,
- ◦ Visit information,
- ◦ Diagnostic and pre-diagnostic information,
- ◦ Vital measurement information, and
- ◦ Risk factor and other information,
- ◦ Acknowledging message receipt

The Guide is *not* intended to specify other issues such as:

- ◦ Establishing and maintaining a health data relationship among healthcare providers and PHAs
- ◦ Legal and governance issues regarding data access authorizations, data ownership and data use
- ◦ Business rules, which are not implicit in HL7, applied when creating a message (including data extraction from source systems);
- ◦ A standard transport layer;
- ◦ Business rules, which are not implicit in HL7, applied when processing a received message (including translation, normalization, and preparing data for statistical analyses); and
- ◦ Data quality monitoring and control.

Local implementers are responsible for the important issues described above. One way

to insure success is to publish a local profile or implementation guide that outlines the local business rules and processes. These guides may further constrain this Guide, but may not contradict it. This Guide does identify some of the key issues that should be addressed in local profiles.

ASSUMPTIONS

This Guide makes the following assumptions:

- ◦ Infrastructure is in place to allow accurate and secure information exchange between sending and receiving systems;
- ◦ Privacy and security has been implemented at an appropriate level; and
- ◦ External business rules are documented locally

An ability to join multiple records for the same patient visit with limited personal identifiable information, as well as to securely look up additional information about the patient, is crucial for syndromic surveillance practice. This requires that data senders provide de-identified record identifier with each and every visit record, in addition to maintaining well-defined data integration and public health investigation processes. Guidance for these and other core syndromic surveillance processes are available from ISDS in *Core Processes and EHR Requirements for Public Health Syndromic Surveillance*. Visit www.syndromic.org for more information.

ORGANIZATION AND FLOW

The first two chapters define what can be done and why. The chapters that follow describe and specify how. They start at the most granular level and proceed to the message level. Several appendices support implementers with value sets and examples of use.

CHAPTER 2 - ACTORS, GOALS AND MESSAGING TRANSACTIONS

Use Case Model

The use case model is based on business process documentation and core requirements for public health syndromic surveillance using emergency department (ED), urgent care (UC) and inpatient electronic health record data.

ITEM	DETAIL
TABLE 2-1: USE CASE: ELECTRONIC EMERGENCY DEPARTMENT, URGENT CARE AND INPATIENT HEALTH RECORD SYNDROMIC DATA TO PUBLIC HEALTH	
Description	The Public Health Syndromic Surveillance Use Case focuses on the transmission of electronic health data from healthcare providers (senders) and the reception of that data by a public health authorities (PHAs) (receiver). Health data transmitted are captured in a health information system during a patient's visit to a healthcare facility.
	Senders of data include, but are not limited to hospitals, emergency departments, urgent care centers, clinician networks, hospital corporations, corporate third party operators of information brokers, regional data centers for hospitals, health information exchanges (HIEs), and regional health information organizations (RHIOs).
	Receivers may be state, regional and/or local public health authorities, or a designated third party. A PHA is broadly defined as including agencies or authorities of the United States, states, territories, political subdivisions of states or territories, American Indian tribes, or an individual or entity acting under a grant of authority from such agencies and responsible for public health matters as part of an official mandate.
	The goal of the use case is to provide secure, reliable delivery of syndromic surveillance data to PHAs. A variety of transport methods may be used. If PHIN MS is used for transport, then use of the HL7 Acknowledgements may be unnecessary, although PHIN MS does not ensure that the payload conforms to HL7 formatting rules, it does provide safe and reliable transport. If another transport mechanism is chosen, consideration should be given for acknowledgement of messages, whether single or batch, and/or possible acknowledgement of payload prior to processing or consumption.
Actors	Patient - A person with symptoms of a health problem that seeks treatment
	Senders of syndromic surveillance data include, but are not limited to: Hospitals, emergency departments, urgent care centers, and regional data centers for hospitals.
	The syndromic surveillance receiver perspective is from the PHA's point of view. Data transmission to a federal authority is not explicitly addressed. Data transmission between local and state jurisdictions is also out of scope.
Assumptions and Limitations	The following assumptions are preconditions for the use of this profile: 1. Syndromic surveillance data senders are responsible for providing data that are syntactically and semantically consistent with the syndromic

TABLE 2-1: USE CASE: ELECTRONIC EMERGENCY DEPARTMENT, URGENT CARE AND INPATIENT HEALTH RECORD SYNDROMIC DATA TO PUBLIC HEALTH	
ITEM	**DETAIL**
	surveillance data receiver's requirements.
	2. Prior to sending syndromic data, the data sender and receiver have completed all the necessary legal and administrative work for syndromic surveillance data exchange.
	The scope of data exchange is limited to hospital (ED and inpatient) and urgent care (UC) patient visits information captured by electronic medical record systems and sent to a PHA.
Business Rules	For emergency department (ED), urgent care (UC), and inpatient settings (Inpatient):
	• Data must be timely for syndromic surveillance. Therefore, data transmission frequency should be at least once every 24 hours...
	• Batch processing may optionally be used as shown in figures 2.1.3 and 2.1.5 and table 2-3. The statements below are conformance requirements for the application as a whole during the sending of multiple messages.
	a. **Conformance Statement SS-001:** ALL messages constrained by this guide that are produced as a result of a single patient encounter for the purpose of syndromic surveillance, **SHALL** have the same value for PV1-19.1 (Visit ID).
	b. **Conformance Statement SS-002:** Messages constrained by this guide that are produced as a result of **different** patient encounters for the purpose of syndromic surveillance, **SHALL NOT** have the same value for PV1-19.1 (Visit ID).
	For ED and UC settings **only**:
	• When data elements are updated in the sender's system, the entire record (i.e., all specified elements) shall be resent. Message receivers will use unique identifiers to match and reconcile records.
	• Provide syndromic surveillance data for all face-to-face clinical encounters
	• Provide with each syndromic surveillance record, de-identified data that can be securely used to lookup additional information about a patient visit of public health concern
	For inpatient setting **only**:
	• At minimum, syndromic surveillance inpatient data providers should:
	• Provide syndromic surveillance data for all new hospital inpatient admissions (a.k.a., syndromic surveillance admission records)
	• Provide syndromic surveillance data at least once for all hospital discharges (a.k.a., syndromic surveillance post-discharge records)
	• Provide with each syndromic surveillance admission and post-discharge record de-identified data that can be used to join records for the same visit, and securely used to lookup additional information about a patient visit of public health concern.
	If and only if senders are providing syndromic surveillance laboratory results data to PHA, the following business rules apply
	• In all cases, the dynamic interaction model for laboratory reporting is the same as that for ADT messages. In particular, lab reports may be sent in an

TABLE 2-1: USE CASE: ELECTRONIC EMERGENCY DEPARTMENT, URGENT CARE AND INPATIENT HEALTH RECORD SYNDROMIC DATA TO PUBLIC HEALTH	
ITEM	**DETAIL**
	acknowledged or unacknowledged mode. • Lab reports are always to be sent without regards to synchronization with any other messages including ADT messages. While it is acceptable to send laboratory messages either synchronously with or in the same message, batch, or file as their corresponding ADT messages, and data receiver systems must be able to correctly process all of these variations, there is no requirement or even suggestion that this be done. • **Conformance Statement SS-003:** Laboratory results should be sent as soon as they're available with a minimum delay. They shall be sent within a maximum 24 hours of receipt by the data center. There is no need to delay either ADT or laboratory messages, and this should not be done. • It is understood that laboratory data may well originate from different systems or even different facilities than the corresponding ADT data. However, as listed in the specification, it is essential that matching PID segments or, at a minimum, patient identifier fields, be sent. This may require additional logic on the data sender end. Note that, as with ADT segments, patient names should generally not be sent.

The Send Syndromic Surveillance Data Use Case Model has two primary participating actors, the Syndromic Data Sender and the Syndromic Data Receiver. The patient actor triggers the sending of the data initially from the original provider. See figure 2.1.1 below.
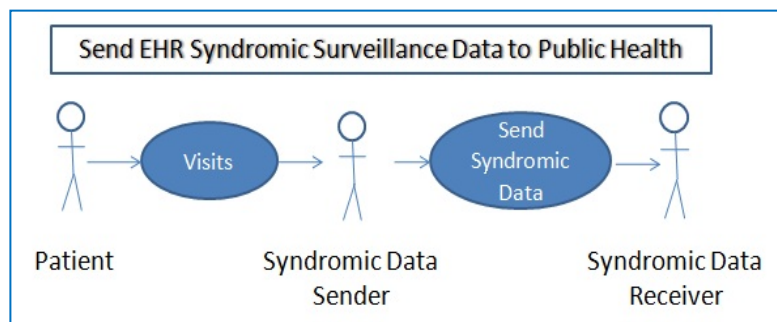
Figure 2.1.1 – Send Syndromic Surveillance Data Use Case Model

MESSAGE ACKNOWLEDGEMENTS

HL7 messages that are sent from a healthcare setting to Public Health may be acknowledged. The Acknowledgement type will be solely HL7 Original Mode – no Enhanced Mode Acknowledgements are supported. This means that the receiver at the public health department must assume responsibility for the syndromic surveillance message before it sends the Acknowledgement message, i.e., it must commit the message to persistent storage and intend to process the message. The only conditions

that are evaluated for the positive acknowledgement or a possible error rejection are the:

- Message Type contained in MSH-9 is one that can be processed

- Processing ID contained in MSH-11 is appropriate for the communications and can be processed

- Version ID contained in MSH-12 is 2.5.1 and can be processed.

Other types of possible errors in the message, especially in content, must result in downstream action after the acknowledgement message has been sent.

Note: Although the Original Model Acknowledgement is simplest and least costly to implement, it does not generally support syntactic validation of messages. Messages that are accepted with an Acknowledgement message may thus still be missing fields that are required. To do this more detailed level of Acknowledgement usually requires Enhanced Mode Accept Acknowledgement.

DYNAMIC INTERACTION MODELS

SEND SYNDROMIC SURVEILLANCE DATA WITH ACKNOWLEDGEMENT
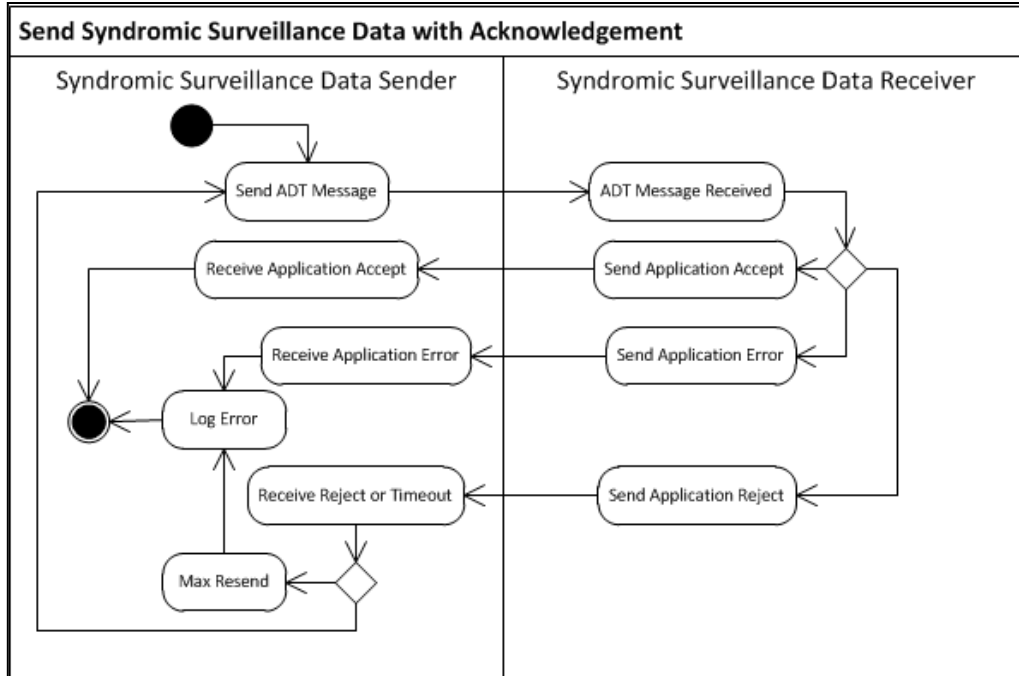
Figure 2.1.2 Activity Diagram for Send Syndromic Surveillance Data Use Case - Acknowledgement Required

The Send Syndromic Surveillance Data With Acknowledgement activity diagram model consists of Syndromic Surveillance Data Sender transmitting data to the Syndromic

Surveillance Data Receiver. An acknowledgement is sent by the Syndromic Surveillance Data Receiver.

SEND SYNDROMIC SURVEILLANCE DATA WITHOUT ACKNOWLEDGEMENT
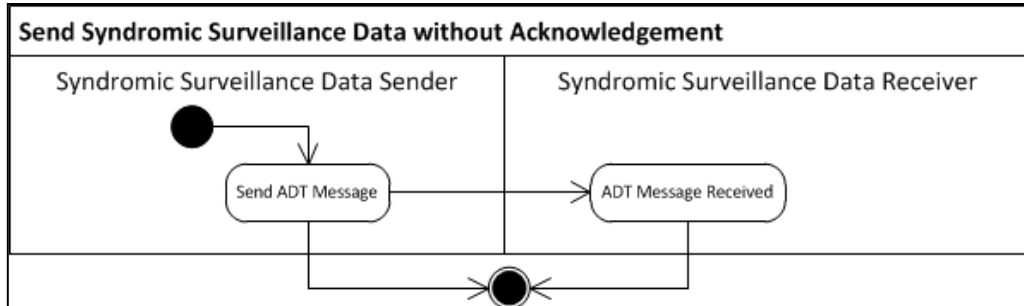
Figure 2.1.3 Activity Diagram for Send Syndromic Surveillance Data Use Case – Without Acknowledgement

The Send Syndromic Surveillance Data Without Acknowledgement activity diagram model consists of Syndromic Surveillance Data Sender transmitting data to the Syndromic Surveillance Data Receiver. An acknowledgement is not sent by the Syndromic Surveillance Data Receiver.

SEND SYNDROMIC SURVEILLANCE DATA - BATCH
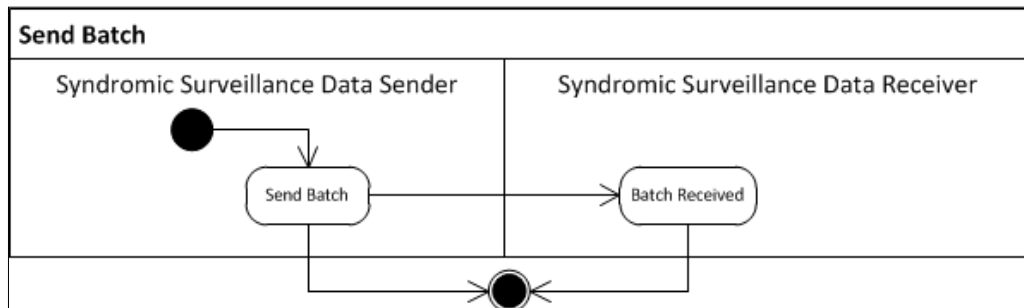
Figure 2.1.4 Activity Diagram for Send Syndromic Surveillance Data Use Case – Batch

The Send Syndromic Surveillance Data Batch activity diagram model consists of Syndromic Surveillance Data Sender transmitting a batch to the Syndromic Surveillance Data Receiver. An acknowledgement is not sent by the Syndromic Surveillance Data Receiver.

SEND SYNDROMIC SURVEILLANCE LABORATORY RESULTS WITH ACKNOWLEDGEMENT
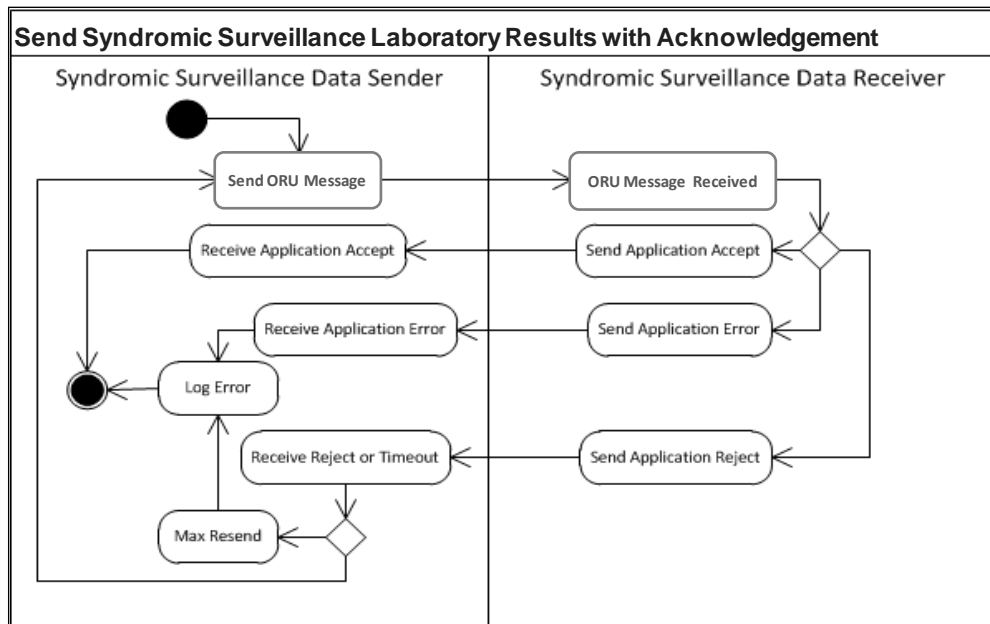
Figure 2.1.4 Activity Diagram for Send Syndromic Surveillance Laboratory Data Use Case - Acknowledgement Required

The Send Syndromic Surveillance Laboratory Results With Acknowledgement activity diagram model consists of Syndromic Surveillance Data Sender transmitting laboratory results to the Syndromic Surveillance Data Receiver. An acknowledgement is sent by the Syndromic Surveillance Data Receiver.

SEND SYNDROMIC SURVEILLANCE LABORATORY RESULTS WITHOUT ACKNOWLEDGEMENT
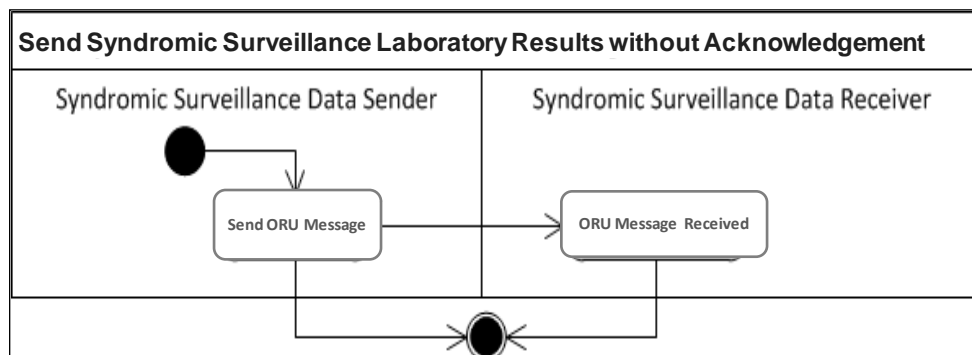
Figure 2.1.5 Activity Diagram for Send Syndromic Surveillance Laboratory Data Use Case – Without Acknowledgement

The Send Syndromic Surveillance Laboratory Results Without Acknowledgement activity diagram model consists of Syndromic Surveillance Data Sender transmitting laboratory results to the Syndromic Surveillance Data Receiver. An acknowledgement is not sent by the Syndromic Surveillance Data Receiver.

INTERACTIONS

Some additional ADT trigger events not noted in this section may occur within the normal workflow of an EHR. The below ADT trigger events represent the primary message types for PHAs related to syndromic surveillance.

TABLE 2-2: INTERACTIONS - INDIVIDUAL TRANSACTION WITH ACKNOWLEDGEMENTS				
EVENT	MESSAGE TYPE	RECEIVER ACTION	SENDER	DATA VALUES
Patient visits provider/facility	ADT^A01^ADT_A01	Accept, Reject, Error	SS Data Sender	MSH-9 = "ADT^A01^ADT_A01"
Patient is admitted to provider facility	ADT^A01^ADT_A01	Accept, Reject, Error	SS Data Sender	MSH-9 = "ADT^A01^ADT_A01"
Provider ends patient's visit	ADT^A03^ADT_A03	Accept, Reject, Error	SS Data Sender	MSH-9 = "ADT^A03^ADT_A03"
Patient is discharged from facility	ADT^A03^ADT_A03	Accept, Reject, Error	SS Data Sender	MSH-9 = "ADT^A03^ADT_A03"
Patient registers at provider facility	ADT^A04^ADT_A01	Accept, Reject, Error	SS Data Sender	MSH-9 = "ADT^A04^ADT_A01"
Patient record is updated	ADT^A08^ADT_A01	Accept, Reject, Error	SS Data Sender	MSH-9 = "ADT^A08^ADT_A01"
Lab results are received	ORU^R01^ORU_R01	Accept, Reject, Error	SS Data Sender	MSH-9 = "ORU^R01^ORU_R01" ORC-1 = "RE"
Accept message	ACK message related to type of message sent	None	SS Data Receiver	MSA-1 = 'AA'
Reject message	ACK message related to type of message sent	None	SS Data Receiver	MSA-1 = 'AR'
Error Message	ACK message related to type of message sent	None	SS Data Receiver	MSA-1 = 'AE'

	TABLE 2-3: INTERACTIONS - INDIVIDUAL TRANSACTION WITHOUT ACKNOWLEDGEMENTS / BATCH (SEE SECTION 3.7)			
EVENT	**MESSAGE TYPE**	**RECEIVER ACTION**	**SENDER**	**DATA VALUES**
Patient visits provider/facility	ADT^A01^ADT_A01	None	SS Data Sender	MSH-9 = "ADT^A01^ADT_A01"
Patient is admitted to provider facility	ADT^A01^ADT_A01	None	SS Data Sender	MSH-9 = "ADT^A01^ADT_A01"
Provider ends patient's visit	ADT^A03^ADT_A03	None	SS Data Sender	MSH-9 = "ADT^A03^ADT_A03"
Patient is discharged from facility	ADT^A03^ADT_A03	None	SS Data Sender	MSH-9 = "ADT^A03^ADT_A03"
Patient registers at provider facility	ADT^A04^ADT_A01	None	SS Data Sender	MSH-9 = "ADT^A04^ADT_A01"
Patient record is updated	ADT^A08^ADT_A01	None	SS Data Sender	MSH-9 = "ADT^A08^ADT_A01"
Labs results are received for patient	ORU^R01^ORU_R01	Accept, Reject, Error	SS Data Sender	MSH-9 = "ORU^R01^ORU_R01" ORC-1 = "RE"

DATA ELEMENTS OF INTEREST

Table 2-5 contains the data elements of interest commonly used for public health syndromic surveillance.

TABLE 2-4: SYNDROMIC SURVEILLANCE COLUMN HEADINGS	
COLUMN NAME	DEFINITION
Data Element Name	Name of the core data set element as provided by ISDS
Description of Field	Description of the data element
Usage	Refers to whether an element must appear in the message. The Usage codes are: • R – Required Indicates that the field is a required field. A value must be present in the field in order for the message to be accepted. • RE – Required, but can be empty: Indicates that the field is a required field. However, if there is no data captured in the field due to the setting (e.g. no chief complaint data for a trauma patient) and the field is blank, the message may be sent with the field containing no data. • O – Optional: Optional for data to be sent in a message. Local jurisdictions must further constrain these elements for implementation.
Cardinality	Minimum and maximum number of times the element may appear
Value Set OID / Name	Value Set OID and Name of value set containing the values that define the data element. These may be used to populate the tables from which coded message fields are drawn
Implementation Notes	Describes additional notes that are relevant to the rules and/or processing of the data element field. **NOTE**: If it is not otherwise explicitly stated, data element usage applies to both INPATIENT and ED/UC settings.
Recommended HL7 Location	Recommended location of Data Element for HL7 message population

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Facility Identifier (Treating)	Unique facility identifier of facility where the patient is treated (original provider of the data)	R	R	[1..1]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.	This number should be specific for each facility location (not a number representing an umbrella business) It is recommended that National Provider Identifier (NPI) be used for the Facility Identifier. National Provider Identifier. (10-digit identifier) **Note:** The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field	EVN-7.2 Example EVN-7: |OTH_REG_MEDCTR^1234567 890^NPI|

					TABLE 2-5: DATA ELEMENTS OF INTEREST		
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Facility Name (Treating)	Name of the treating facility where the patient is treated	RE	O	[0..1]	Recommend the use of the Organization Name Legal Business Name (LBN) associated with the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.	If this data element is captured and maintained as part of the facility registration process, it may not be sent with every message. See ISDS recommendations, section 4.2, on Facility Registration.[3]	EVN-7.1 Example EVN-7: |OTH_REG_MEDCTR^1234567890^NPI|

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[3] International Society for Disease Surveillance. (2011, January). Final Recommendation: Core Processes and EHR Requirements for Public Health Syndromic Surveillance. Available online: www.syndromic.org/projects/meaningful-use, pp. 42-47

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	**Description of Field**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Value Set /Value Domain**	**Implementation Notes**	**Recommended HL7 Location**
Facility Street Address (Treating)	Street address of treating facility location	RE	O	[0..1]		If this data element is captured and maintained as part of the facility registration process, it may not be sent with every message. See ISDS recommendations, section 4.2, on Facility Registration.[4]	OBX Segment (XAD Data Type) with PHINQUESTION Code (SS002) Observation Identifier
Facility City (Treating)	City of treating facility location	RE	O	[0..1]	The ISDS recommendations recommend free text City/Town designations.	If this data element is captured and maintained as part of the facility registration process, it may not be sent with every message. See ISDS recommendations, section 4.2, on Facility Registration.[4]	The XAD Data Type has specific fields to accommodate the street address, city, county and state, so only a single OBX is required to pass the data.

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[4] International Society for Disease Surveillance. (2011, January). Final Recommendation: Core Processes and EHR Requirements for Public Health Syndromic Surveillance. Available online: www.syndromic.org/projects/meaningful-use, pp. 42-47.

								TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Facility ZIP Code (Treating)	ZIP Code of treating facility location	RE	O	[0..1]	USPS	If this data element is captured and maintained as part of the facility registration process, it may not be sent with every message. See ISDS recommendations, section 4.2, on Facility Registration.[5]	Example OBX segment: OBX|1|XAD|SS002^TREATING FACILITY LOCATION^PHINQUESTIONS|| 1234 Anywhere Street^^Doraville^13^30341^USA^C^^DEKALB||||||F|||20110209 1114
Facility County (Treating)	County of treating facility location	RE	O	[0..1]	The ISDS recommendations allow free text County designations.	If this data element is captured and maintained as part of the facility registration process, it may not be sent with every message. See ISDS recommendations, section 4.2, on Facility Registration.[5]	This data can also be accommodated in the Facility Registration process as defined by ISDS.

[5] International Society for Disease Surveillance. (2011, January). Final Recommendation: Core Processes and EHR Requirements for Public Health Syndromic Surveillance. Available online: www.syndromic.org/projects/meaningful-use, pp. 42-47.

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Facility State (Treating)	State of treating facility location	RE	O	[0..1]	2.16.840.1.114222.4.11.830 PHVS_State_FIPS_5-2	If this data element is captured and maintained as part of the facility registration process, it may not be sent with every message. See ISDS recommendations, section 4.2, on Facility Registration.[6]	
Message Date/Time	Date and time that the report is created / generated from original source (from treating facility)	R	R	[1..1]		If data flows through an intermediary or third party, the intermediary **must** keep the original date/time of transmission. HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S]]]] [+/-ZZZZ]	EVN-2 Example Report Date/Time: 1:01:59 AM EST on July 4, 2011 |20110704010159-0500|

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[6] International Society for Disease Surveillance. (2011, January). Final Recommendation: Core Processes and EHR Requirements for Public Health Syndromic Surveillance. Available online: www.syndromic.org/projects/meaningful-use, pp. 42-47.

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Unique Patient / Visit Identifier	Unique identifier for the patient or visit	R	R	[1..*]	2.16.840.1.114222.4.11.3597 PHVS_IdentifierType_SyndromicSurveillance	Unique Patient Identifiers related to individual identifiers found in the Value set/Value Set Domain column. A visit is defined as a discrete or unique clinical encounter within a service department or location. **Note**: Every UC and ED visit will generate a record. Every inpatient admission and inpatient discharge will also generate a record.	PID-3 The Unique Patient Identifier occurs in the 1st component of the CX data type. The 5th component, the Identifier Type Code, defines the type of identifier used in the 1st component. Example PID-3 Fields: Internal Identifier (PI) |95101100001^^^^PI| External Identifier (PT) |E95101100001^^^^PT| PV1-19 The Unique Visiting ID occurs in the 1st component of the CX data type. The 5th component, the Identifier Type Code, defines the identifier as the Visit Number (VN). Example PV1-19 Field: |VN101100001^^^^VN|

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Age	Numeric value of patient age at time of visit	RE	RE	[0..1]	For OBX-3, please use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 21612-7 Age – Reported (LOINC)	This element is represented by the LOINC code: 21612-7 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is Numeric as defined by the OBX Data Type NM. Data providers and receivers should determine specific data restrictions for their jurisdiction. Age units correspond to numeric value of patient age (e.g. Days, Month or Years) is populated in OBX-6	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (21612-7) Observation Identifier Example OBX Segment: OBX|4|NM|21612-7^AGE – REPORTED^LN||**43**|a^YEAR^UCUM|||||F|||20110217 Example OBX Segment when patient age is not known OBX|4|NM|21612-7^AGE – REPORTED^LN|||UNK^unknown^NULLFL|||||F|||20110217

					TABLE 2-5: DATA ELEMENTS OF INTEREST		
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Age Units	Unit corresponding to numeric value of patient age	CE	CE	[1..1]	For OBX-6 Please use: 2.16.840.1.114222.4.11.3402 PHVS_AgeUnit_SyndromicSurveillance	**Condition Predicate:** If OBX-3.1 = 21612-7 than OBX-6 must be valued. Relevant Age Unit values are defined in value set. Unknown has been added to the value set to allow for instances where the patient age may not be obtainable. OBX-6 Age units correspond to numeric value of patient age (e.g. Days, Month or Years) used in OBX-5	OBX Segment (CE Data Type, 6th field) Example OBX Segment: OBX|4|NM|21612-7^AGE – REPORTED^LN||43|**a^YEAR^UCUM**|||||F|||20110217 Example OBX Segment when patient age is not known OBX|4|NM|21612-7^AGE – REPORTED^LN|||UNK^unknown^NULLFL|||||F|||20110217
Sex	Stated sex of patient	RE	RE	[0..1]	2.16.840.1.114222.4.11.3403 PHVS_Sex_SyndromicSurveillance	Relevant Sex values are defined in value set.	PID-8
Race	Race of patient	RE	RE	[0..*]	2.16.840.1.114222.4.11.836 PHVS_RaceCategory_CDC	Relevant Race Category values are defined in value set.	PID-10
Ethnicity	Ethnicity of patient	RE	RE	[0..*]	2.16.840.1.114222.4.11.837 PHVS_EthnicityGroup_CDC	Relevant Ethnicity values are defined in value set.	PID-22

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Patient City/Town	City or town of patient residence	RE	RE	[0..1]	The ISDS recommendations allow free text City/Town designations.		PID-11.3
Patient ZIP Code	ZIP Code of patient residence	RE	RE	[0..1]		Provide a minimum of 5 digits for domestic ZIP codes. Foreign postal codes should be supported.	PID-11.5
Patient County	County of patient residence	RE	RE	[0..1]	2.16.840.1.114222.4.11.829 PHVS_County_FIPS_6-4	Patient's residence County	PID-11.9
Patient State	State of patient residence	RE	O	[0..1]	2.16.840.1.114222.4.11.830 PHVS_State_FIPS_5-2	It is recommended that the 2-digit (numeric) abbreviation be used for State of the patient domestic home address.	PID-11.4
Patient Country	Country of patient residence	RE	O	[0..1]	2.16.840.1.114222.4.11.828 PHVS_Country_ISO_3166-1	It is recommended that the 3-character country codes be used for Country of the patient home address.	PID-11.6
Chief Complaint / Reason for	Short description of the patient's self-reported	RE	RE	[0..*]	For OBX-3 Please use: 2.16.840.1.114222.4.11.3589	Chief Complaint, as a concept, is clinically supposed to represent the patient's reason for the	**Conformance Statement SS-005:** If patient's chief complaint is captured as an unstructured, free-text note, then chief

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Visit	chief complaint or reason for visit				PHVS_ObservationIdentifier_SyndromicSurveillance 8661-1 Chief complaint – Reported (LOINC) For OBX-5 Please use: Free text (Preferred) **Or** 2.16.840.1.114222.4.11.856 PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** 2.16.840.1.114222.4.11.3593 PHVS_CauseOfDeath_ICD-10_CDC **Or** 2.16.840.1.114222.4.11.909 PHVS_Disease_CDC (SNOMED Based Value set) For further guidance refer to the column – 'Recommended HL7	visit--in their own words This element is represented by the LOINC code: 8661-1 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX (OBX-5) segment and is Coded with Exception as defined by the OBX Data Type CWE. Using the CWE allows for the possibility of free text, while also allowing for the coded values listed. If data flows through an intermediary or third party, the intermediary **must** keep the original text (OBX-5: CWE.9) of the transmission. **Note:** Implementers should check with their local jurisdiction for version of adopted coding system. **Note:** Senders should send the most complete description of the patient's chief complaint. In some cases, this may entail sending multiple chief complaint values. If both the free text chief complaint text and drop down selection chief complaint text are available, send	complaint **SHALL** be valued in OBX- 5, CWE:9. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation Identifier Example OBX Segment (free text): OBX|3|CWE|8661-1^CHIEF COMPLAINT – REPORTED^LN||^^^^^^^^STOMACH ACHE||||||F|||201102171531 **Conformance Statement SS-006:** If patient's chief complaint is captured from a Coding System, then chief complaint **SHALL** be valued in OBX- 5, CWE:1, CWE:2, CWE:3. PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **or** PHVS_CauseOfDeath_ICD-10_CDC **or** PHVS_Disease_CDC **NOTE**: The implementation shall support all 3 value sets. Example OBX Segment (coded): OBX|3|CWE|8661-1^CHIEF COMPLAINT –

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
					Location' **Conformance Statement SS-004**: The implementation **SHALL** support all 3 value sets.	both	REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX||||||F|||20110217 **Conformance Statement SS-007:** If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX- 5, CWE:2. OBX|3|CWE|8661-1^CHIEF COMPLAINT – REPORTED^LN||^Dizziness and giddiness||||||F|||20110217 **Conformance Statement SS-008:** The implementation **SHALL** support a minimum of 70 characters for unstructured, free-text patient's chief complaint.

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Admit Reason	Short description of the provider's reason for admitting the patient	RE	RE	[0..1]	Free Text **Or** PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** PHVS_AdministrativeDiagnosis_ICD-10CM **Or** PHVS_Disease_CDC **Conformance Statement SS-009**: The implementation SHALL support all 3 value sets.	INPATIENT DATA ELEMENT OF INTEREST ONLY	PV2-3 Free Text Statements are documented in PV2-3.2 Text
Admit or Encounter Date / Time	Date and Time of encounter or admission	R	R	[1..1]		HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]	PV1-44 **Conformance Statement SS-010:** PV1-44 (Admit Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' Example Admit or Encounter Date/Time: 2:06:59 PM EST on April 1, 2011 |20110401140659-0500|

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Patient Class	Patient classification within facility	R	R	[1..1]	2.16.840.1.114222.4.11.3404 PHVS_PatientClass_SyndromicSurveillance	Relevant Patient Class values are defined in value set.	PV1-2
Hospital Unit	Hospital unit where patient is at the time the message is sent (admission and discharge)	RE	RE	[0..1]	For OBX-3 Please use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 56816-2 Patient location (LOINC) For OBX-5 Please use: 2.16.840.1.113883.13.19 NHSNHealthcareServiceLocationCode	INPATIENT DATA ELEMENT OF INTEREST ONLY	OBX Segment (CWE Data Type, 5th field) with (56816-2) Observation Identifier Example OBX Segment OBX|3|CWE|56816-2^PATIENT LOCATION^LN||1029-8^Medical/Surgical critical care unit^HSLOC||||||F|||20110217

	TABLE 2-5: DATA ELEMENTS OF INTEREST						
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Unique Physician Identifier	Unique identifier for the physician providing care	O	O	[0..*]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier	ED/UC DATA ELEMENT OF INTEREST ONLY	PV1-7
Diagnosis Type	Qualifier for Diagnosis / Injury Code specifying type of diagnosis	RE	RE	[0..*]	2.16.840.1.114222.4.11.827 PHVS_DiagnosisType_HL7_2x	It is critical to be able to distinguish among the diagnosis types when the syndromic system is receiving messages in real-time.	DG1-6 **Condition Predicate:** If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued.
Primary Diagnosis Additional Diagnosis	Primary diagnosis of the patient's condition Additional diagnoses of the patient's condition(s)	RE	RE	[0..*]	2.16.840.1.114222.4.11.856 PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** 2.16.840.1.114222.4.11.3593 PHVS_CauseOfDeath	**Note:** Include ICD-9-CM V-codes and E-codes. When the primary diagnosis code is an injury, also provide one or more supplemental external-cause-of-injury codes or E-codes. E-codes provide useful information on the mechanism and intent of injury, place of occurrence, and activity at	DG1-3 **Condition Predicate:** If the DG1 Segment is provided, DG1-3 (Diagnosis) is required to be valued. When sending data, Primary Diagnosis and Additional Diagnosis are reported using the same data field. The data elements are separated in the

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
					ICD-10_CDC **Or** 2.16.840.1.114222.4.11.909 PHVS_Disease_CDC (SNOMED Based Value set) **Conformance Statement SS-011**: The implementation **SHALL** support all 3 value sets.	the time of injury. This also applies to ICD-10-CM (when it is implemented) where V, W, X, Y and selected T codes represent external cause of injury codes. Data should be sent on a regular schedule and should not be delayed for diagnosis or verification procedures. Regular updating of data should be used to correct any errors or send data available later. This field is a repeatable field; multiple codes may be sent. The first diagnosis code should be the primary diagnosis.	ISDS Recommendations and Guidelines document in order to distinguish the PHA use/significance between the two data elements.

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Discharge Disposition	Patient's anticipated location or status following discharge	RE	RE	[0..1]	2.16.840.1.114222.4.11.915 PHVS_DischargeDisposition_HL7_2x The disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.).	It is expected that this field will update with multiple submissions. This data element is: Required in ADT^A03 message type/trigger event Required Empty in ADT^A08 message type/trigger event Not Supported in ADT^A01, ADT^A04 message type/trigger event	PV1-36

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location

Discharge Date/Time	Date and time of discharge	RE	RE	[0..1]		HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S S[S[S]]]]] [+/-ZZZZ]	PV1-45
							Conformance Statement SS-012: If present, PV1-45 (Discharge Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]]] [+/-ZZZZ]'
							Condition Predicate: This data element is:
							    Required in ADT^A03 message type/trigger event
							    Required Empty is ADT^A08 message type/trigger event
							    Not Supported in ADT^A01, ADT^A04 message type/trigger event
							Example Discharge Date/Time:
							4:45:12 PM EST on January 13, 2011
							|20110113164512-0500|

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Height	Height of the patient	RE	O	[0..1]	For OBX-3 Please use: 2.16.840.1.113883.3.88.12.80.62 PHVS_VitalSignResult_HITSP 8302-2 Body height (LOINC) For OBX-6 Please use: 2.16.840.1.114222.4.11.891 PHVS_HeightUnit_UCUM	INPATIENT DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 8302-2 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is Numeric as defined by the OBX Data Type NM. Height: Units of Measure must also be included in OBX-6.	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (8302-2) Observation Identifier Example OBX Segment: OBX|3|NM|8302-2 ^BODY HEIGHT^LN||69|[in_us]^ inch [length]^UCUM|||||F|||20110217 Units of measure (OBX-6, (CE Data Type) must be included defining the numeric value.

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Weight	Weight of the patient	RE	O	[0..1]	For OBX-3 Please use: 2.16.840.1.113883.3.88.12.80.62 PHVS_VitalSignResult_HITSP 3141-9 Body weight Measured (LOINC) For OBX-6 Please use: 2.16.840.1.114222.4.11.879 PHVS_WeightUnit_UCUM	INPATIENT DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 3141-9 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is Numeric as defined by the OBX Data Type NM. Weight: Units of Measure must also be included in OBX-6.	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (3141-9) Observation Identifier Example OBX Segment: OBX|3|NM|3141-9 ^BODY WEIGHT MEASURED^LN||120|[lb_av]^ pound [mass]^UCUM|||||F|||20110217 Units of measure (OBX-6, (CE Data Type) must be included defining the numeric value.

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Smoking Status	Smoking status of patient	RE	O	[0..1]	For OBX-3 Please use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 72166-2 Tobacco smoking status (LOINC) For OBX-5 Please use: 2.16.840.1.114222.4.11.6027 PHVS_SmokingStatus_MU	INPATIENT DATA ELEMENT OF INTEREST ONLY	OBX Segment (CWE Data Type, 5th field) with LOINC Code (72166-2) Observation Identifier Example OBX Segment: OBX|1|CWE|72166-2^TOBACCO SMOKING STATUS^LN||428071000124103 ^Current Heavy tobacco smoker ^SCT||||||F|||20110217

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Initial Temperature	Initial temperature of the patient	O	O	[0..1]	For OBX-3 Please use: 2.16.840.1.113883.3.88.12.80.62 PHVS_VitalSignResult_HITSP 8310-5 Body temperature (LOINC) OBX-6 Please use: 2.16.840.1.114222.4.11.919 PHVS_TemperatureUnit_UCUM	ED/UC DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 8310-5 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is Numeric as defined by the OBX Data Type NM. Temperature: Units of Measure must also be included in OBX-6. Fahrenheit and Celsius units of measure are included in the value set.	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (8310-5) Observation Identifier Example OBX Segment: OBX|3|NM|8310-5^BODY TEMPERATURE^LN||100.1|[deg F]^FARENHEIT^UCUM|||||F|||20110217 Units of measure (OBX-6, (CE Data Type) must be included defining the numeric value.

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Systolic and Diastolic Blood Pressure (SBP/DBP) – Most recent	Most recent Systolic and Diastolic Blood Pressure of the patient.	O	O	[0..1]	For OBX-3 Please use: 2.16.840.1.113883.3.88.12.80.62 PHVS_VitalSignResult_HITSP 8480-6 Systolic blood pressure (LOINC) 8462-4 Diastolic blood pressure (LOINC) OBX-6 Please use: 2.16.840.1.114222.4.11.920 PHVS_BloodPressureUnit_UCUM	BP is communicated using 2 distinct data elements for Systolic / Diastolic 8480-6 Systolic blood pressure (LOINC) 8462-4 Diastolic blood pressure (LOINC) BP Systolic: Units of Measure must also be included in OBX-6. BP Diastolic: Units of Measure must also be included in OBX-6.	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (8480-6) SYSTOLIC Observation Identifier Example OBX Segment: OBX|2|NM|8480-6^SYSTOLIC BLOOD PRESSURE^LN||120|mm(hg)|||||F|||20110217 OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (8462-4) DIASTOLIC Observation Identifier Example OBX Segment: OBX|1|NM|8462-4^DIASTOLIC BLOOD PRESSURE^LN||90|mm(hg)|||||F|
Procedure Code	Procedures administered to the patient	O	O	[0..1]	CPT-4 or free text	If a PR1segment is included in message then this is a required data element. **Note**: Each jurisdiction should define what procedure codes should be transmitted.	PR1-3

					TABLE 2-5: DATA ELEMENTS OF INTEREST		
Data Element Name	**Description of Field**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Value Set /Value Domain**	**Implementation Notes**	**Recommended HL7 Location**
Observation, symptoms, and clinical findings	Data element(s) describing the observation, symptoms, and clinical findings for a patient's condition	O	O	[0..1]		ED/UC DATA ELEMENT OF INTEREST ONLY The individual data elements related to observation, symptoms, and clinical findings have not been determined. If used, the specific data elements should be specified and agreed upon by individual jurisdictions and their data sharing partners.	OBX Segment

					TABLE 2-5: DATA ELEMENTS OF INTEREST		
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Triage Notes	Triage notes for the patient visit	O	O	[0..1]	For OBX-3 Please use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 54094-8 Emergency department Triage note (LOINC) For OBX-5 Please use: Free text For further guidance refer to the column – 'Recommended HL7 Location'	ED/UC DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 54094-8 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is Text as defined by the OBX Data Type TX. Triage Notes should be sent as free text. Triage notes may benefit from additional processing (e.g. negation processing, natural language processing, etc.) in order to maximize the utility of the data.	OBX Segment (TX Data Type, 5th field) with LOINC Code (54094-8) Observation Identifier Example OBX Segment: OBX|1|TX|54094-8^EMERGENCY DEPARTMENT TRIAGE NOTE^LN||Pain a recurrent cramping sensation.||||||F|||201102091114

TABLE 2-5: DATA ELEMENTS OF INTEREST
Data Element Name	**Description of Field**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Value Set /Value Domain**	**Implementation Notes**	**Recommended HL7 Location**
Clinical Impression	Clinical impression (free text) of the diagnosis	O	O	[0..1]	For OBX-3 Please use : 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 44833-2 Preliminary diagnosis (LOINC) For OBX-5 Please use: Free text For further guidance refer to the column – 'Recommended HL7 Location'	ED/UC DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 44833-2 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is Text as defined by the OBX Data Type TX.	OBX Segment (TX Data Type, 5th field) with LOINC Code (44833-2) Observation Identifier Example OBX Segment: OBX|1|TX|44833-2^PRELIMINARY DIAGNOSIS^LN||Pain consist with appendicitis||||||F|||20110209111
Date of onset	Date that the patient began having symptoms of condition being reported	O	O	[0..1]	For OBX-3 Please use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_ Syndromic Surveillance 11368-8 Illness or injury onset date and time (LOINC)	ED/UC DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 11368-8 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is a Timestamp as defined by the OBX Data Type TS.	OBX Segment (TS Data Type, 1st Component, 5th field) with LOINC Code (11368-8) Observation Identifier Example OBX Segment: OBX|7|TS|11368-8^ILLNESS OR INJURY ONSET DATE AND TIME^LN||20110215||||||F|||2011 02171658

TABLE 2-5: DATA ELEMENTS OF INTEREST							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Facility/Visit type	Type of facility that the patient visited for treatment	R	R	[1..1]	For OBX-3 Please use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance SS003 Facility / Visit Type (PHIN Questions) For OBX-5 Please use: 2.16.840.1.114222.4.11.3401 PHVS_FacilityVisitType_SyndromicSurveillance	ED/UC DATA ELEMENT OF INTEREST ONLY Relevant facility/visit type values are defined in value set. This data can also be accommodated in the Facility Registration process as defined by ISDS for facilities where a single facility/visit type is expected.	OBX Segment (CWE Data Type) with PHINQUESTIONS Code (SS003) Observation Identifier Example OBX segment: OBX|2|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTIONS|| 261QE0002X^Emergency Care^HCPTNUCC||||||F|||201102091114

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Medical Record #	Patient medical record number	O	O	[0..1]	2.16.840.1.114222.4.11.3597 PHVS_IdentifierType_SyndromicSurveillance	ED/UC DATA ELEMENT OF INTEREST ONLY It is recommended that data providers submit the patient medical record number to facilitate identification of the patient, in the event of a required follow-up investigation. Without the medical record number, the work required to follow-up on the records of interest greatly increases on the data provider and may cause unacceptable delays in public health response. In addition, the medical record number may aid in record de-duplication efforts and may often aid in the resolution of apparent transcription errors.	PID-3 The Medical Record # is a specific instance of a unique patient identifier. It occurs in the 1st component of the CX data type. The fifth component, the Identifier Type Code, defines the identifier as the Medical Record # (MR). Example PID-3 Field: |MR101100001^^^^MR|

					TABLE 2-5: DATA ELEMENTS OF INTEREST		
Data Element Name	**Description of Field**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Value Set /Value Domain**	**Implementation Notes**	**Recommended HL7 Location**
Initial Pulse Oximetry	1st recorded pulse oximetry value	O	O	[0..1]	For OBX-3 Please use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 59408-5 Oxygen saturation in Arterial blood by Pulse oximetry (LOINC) For OBX-6 Please use: 2.16.840.1.114222.4.11.3590 PHVS_PulseOximetryUnit_UCUM	ED/UC DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 59408-5 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is numeric as defined by the OBX Data Type NM. Units of measure must also be included. Percentage is the only value included in the value set.	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (59408-5) Observation Identifier Example OBX Segment: OBX|4|NM|59408-5^OXYGEN SATURATION IN ARTERIAL BLOOD BY PULSE OXIMETRY^LN||**91|%^PERCENT^UCUM**||A|||F|||20110217145139 Units of measure (OBX-6, (CE Data Type) must be included defining the numeric value.
Laboratory test/panel requested	The nature of a test ordered for a patient	O	O	[0..1]	For OBR-4 Please use: PHVS_LabTestOrderables_CDC	Must include code, text, coding system, and coding system version. **Note**: Each jurisdiction should decide which laboratory tests/panels should be transmitted.	ORU Message OBR-4

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Laboratory Result	The result of a test performed	O	O	[0..*]	For OBX-5, Please use one of the following: 2.16.840.1.114222.4.11.6054 PHVS_LabTestResult_ReportableConditions 2.16.840.1.114222.4.11.3359 PHVS_EvaluationFinding_CDC 2.16.840.1.114222.4.11.1009 PHVS_Microorganism_CDC 2.16.840.1.114222.4.11.1014 PHVS_ModifierOrQualifier_CDC OBX-6 Units of measure Please use: 2.16.840.1.114222.4.11.838 PHVS_UnitsOfMeasure_CDC	Must include code, text, coding system, and coding system version. **Note**: Each jurisdiction should decide which laboratory tests/panels should be transmitted..	ORU Message OBX Segment OBX-5 Drawn from SNOMED CT. At a minimum, it will contain the SNOMED CT® Laboratory Test Finding (118246004) hierarchy and the SNOMED CT® Microorganism (264395009) sub-tree. It may also need to contain various modifiers and qualifiers as identified in PHVS_ModifierOrQualifier_CDC value set. The HITSP C80 Laboratory Observation Value Set covers only the Laboratory Test Findings portion of this value set, and really needs to be expanded to cover at least microorganisms and commonly use qualifiers and modifiers.

TABLE 2-5: DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Laboratory test performed	The specific test performed / analyte measured	O	O	[0..1]	Please use : 2.16.840.1.114222.4.11.1002 PHVS_LabTestName_CDC 2.16.840.1.114222.4.11.6053 PHVS_LabTestName_ReportableConditions	Must include code, text, coding system, and coding system version. **Note**: Each jurisdiction should decide which laboratory tests/panels should be transmitted..	ORU Message OBX Segment OBX-3 Unique identifiers for the type of observations. Values must be drawn from LOINC. This value set is the union of the following value sets: • Laboratory Test Result Value Set • ELR Reportable Laboratory Observation Identifier Value Set
Date/time of laboratory test	The clinically-relevant date/time of the measurement, such as the time a procedure was performed on the patient or a sample was obtained.	O	O	[0..1]		HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S]]]] [+/-ZZZZ] **ELR Condition predicate**: For observations related to the testing of a specimen, OBX-14 (Date/Time of the Observation) shall contain specimen collection time and will be the same value as OBR-7 and SPM-17.1	ORU Message OBX Segment OBX-14

					TABLE 2-5: DATA ELEMENTS OF INTEREST		
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Laboratory Test Status	The release status of a lab result.	O	O	[0..1]	2.16.840.1.114222.4.11 .811 PHVS_ObservationResultStatus_HL7_2x		ORU Message OBX-11
Date of Lab Report	The date a result was reported by the performing lab	O	O	[0..1]		HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]	ORU Message OBR-22
Performing Organizati on	The organization or facility that performed a lab test	O	O	[0..1]		All tests performed reported by the same lab for the same customer SHOULD have identical values.. AssigningAuthority SHALL be globally unique and SHOULD be NPI.	ORU Message OBX23-24
Specimen Type	The type of specimen upon which a lab test was performed	O	O	[0..1]	2.16.840.1.114222.4.11 .6046 PHVS_SpecimenType_ HL7_2x	Must include code, text, coding system, and coding system version. **Note**: Each jurisdiction should decide which specimen types should be transmitted.	ORU Message SPM-4

CHAPTER 3 - MESSAGING INFRASTRUCTURE

HL7 (Health Level Seven) version 2 is the most widely used standard for computer communication of patient information in the United States Healthcare industry today. This guide is based on the HL7 version 2.5.1 messaging standard, published by Health Level Seven International, Inc., and approved as an ANSI standard on February 21, 2007, as an update to the version 2.5 standard released in 2003. This section describes the messages used for syndromic surveillance, and includes a very brief introduction to HL7 terms and concepts. The reader is referred to the full HL7 version 2.5.1 Standard for complete information and details of this background.

Basic HL7 Terms Attributes

TABLE 3-1: BASIC HL7 TERMS	
TERM	**DEFINITION**
Message	A message is the entire unit of data transferred between systems in a single transmission. It is a series of segments in a defined sequence, with a message type and a trigger event.
Segment	A segment is a logical grouping of data fields. Segments within a defined message may be required or optional and may occur only once or may be allowed to repeat. Each segment is named and is identified by a segment ID, a unique three-character code.
Field	A field is a string of characters. Each field has an element name. The segment it is in and its sequence within the segment identify each field. Usage and cardinality requirements are defined in the Segment Definitions.
Component	A component is one of a logical grouping of items that comprise the contents of a coded or composite field. Within a field having several components, not all components are necessarily required to be populated.
Data type	A data type restricts the contents and format of the data field. Data types are given a two- or three-letter code. Some data types are coded or composite types with several components. The applicable HL7 data type is listed in each field definition.
Delimiters	The delimiter values are defined in MSH-1 and MSH-2 and are used throughout the message. The default delimiters are: | - Field Separator

TABLE 3-1: BASIC HL7 TERMS	
TERM	DEFINITION
	^ - Component Separator
	& - Sub-Component Separator
	~ - Repetition Separator
	\ - Escape Character

CHAPTER 4 - DATA TYPE DEFINITIONS

The HL7 Standards define a large number of data types for use in HL7 messaging. Not all of these datatypes are required for the messages defined in this guide. Those datatypes that are used in this guide are defined and specified further in the table below.

TABLE 4-1: DATA TYPES UTILIZED IN SYNDROMIC SURVEILLANCE	
DATA TYPE	**DATA TYPE NAME**
CE	Coded Element
CWE	Coded with Exceptions
CX	Extended Composite ID with check Digit
DTM	Date/Time
EI	Entity Identifier
FN	Family Name
HD	Hierarchic Designator
ID	Coded Value for HL7-defined tables
IS	Coded Value for user-defined tables
MSG	Message Type
NM	Numeric
PL	Person Location
PT	Processing Type
SI	Sequence Identifier
ST	String Data
TX[7]	Text Data

---

[7] In this message specification, the only allowed escape sequences are those allowed in HL7 Version 2.5.1, Chapter 2, and Section 2.7.4 - Special Characters. These are the escape

TABLE 4-1: DATA TYPES UTILIZED IN SYNDROMIC SURVEILLANCE	
DATA TYPE	**DATA TYPE NAME**
TS	Timestamp
VID	Version Identifier
XAD	Extended Address
XCN	Extended Composite ID Number and Name for Persons
XPN	Extended Person Name

TABLE 4-2: HL7 DATA TYPE TABLE ATTRIBUTES	
ABBREVIATION	**DEFINITION**
SEQ	Sequence – The number of components for data type listed in numerical order.
LEN	Length of component for data type
DT	Data Type of component
OPT	Optionality – Please refer to the Sender Usage and Receiver Usage columns (see Table 5-2 for explanation, see Table 5-3A for example).
TBL #	Please refer to the Description/Comments column (see Table 5-3A for example).
COMPONENT NAME	Descriptive name of the component in data type.

CE - CODED ELEMENT

HL7 Component Table - CE – Coded Element

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	20	ST			Identifier
2	199	ST			Text
3	20	ID			Name of Coding System
4	20	ST	X		Alternate Identifier
5	199	ST	X		Alternate Text
6	20	ID	X		Name of Alternate Coding System

Definition: This data type transmits codes and the text associated with the code.

Example: PID-10 Race |2054-5^Black or African American^2.16.840.1.113883.6.238|

Usage Note on the Alternate components (4, 5, 6) for this messaging guide these are marked not

sequences for the message delimiters (i.e., "|" = \F\, "^" = \S\, "~" = \R\, "&" = \T\, and "\" = \E\).

supported

IDENTIFIER (ST)

Definition: Sequence of characters (the code) that uniquely identifies the item being referenced. Different coding schemes will have different elements here.

TEXT (ST)

Definition: The descriptive or textual name of the identifier, e.g., myocardial infarction or X-ray impression.

NAME OF CODING SYSTEM (ID)

Definition: Identifies the coding scheme being used in the identifier component. The combination of the **identifier** and **name of coding system** components will be a unique code for a data item. Each system has a unique identifier.

CWE – CODED WITH EXCEPTIONS

HL7 Component Table - CWE – Coded with Exceptions

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	20	ST			Identifier
2	199	ST			Text
3	20	ID			Name of Coding System
4	20	ST			Alternate Identifier
5	199	ST			Alternate Text
6	20	ID			Name of Alternate Coding System
7	10	ST			Coding System Version ID
8	10	ST			Alternate Coding System Version ID
9	199	ST			Original Text

Example: Chief Complaint / Reason for Visit:

|OBX|3|CWE|8661-1^CHIEF   COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX^^^^^^DIZZY||||||F|||201102171531|

Definition: Specifies a coded element and its associated detail. The CWE data type is used when 1) specified vocabulary is defined **or** 3) when text is in place, the code may be omitted.

Usage Notes: This is a field that is generally sent using a code, but where the code may

be omitted in exceptional instances or by site agreement. Exceptional instances arise when the coding system being used does not have a code to describe the concept in the text.

Components 1-3 & 7 are used in one of three ways:

    a) **Coded:** The identifier contains a valid code from a coding system. The coding system must be present and have a value from the set of allowed coding systems.

    b) **Uncoded:** Text is valued, the identifier has no value, and coding system and version ID follow the same rules as discussed for option 1.

> **Example 2**: OBX segment where the observation identifier is a LOINC code and the observation value is being sent as a CWE value, and the value is sent as text because the correct clinical value, "Wesnerian" was not found in the set of allowed values.
>
> Component 9:
>
> This is the original text that was available to an automated process or a human before a specific code was assigned. This field is optional.

IDENTIFIER (ST)

Definition: Sequence of characters (the code) that uniquely identifies the item being referenced. Different coding schemes will have different elements here.

TEXT (ST)

Definition: The descriptive or textual name of the identifier, e.g., myocardial infarction or X-ray impression.

NAME OF CODING SYSTEM (ID)

Definition: Identifies the coding scheme being used in the identifier component.

The combination of the **identifier** and **name of coding system** components will be a unique code for a data item. Each system has a unique identifier.

ALTERNATE IDENTIFIER (ST)

Definition: An alternate sequence of characters (the code) that uniquely identifies the item being referenced. Analogous to "Identifier" in component 1.

ALTERNATE TEXT (ST)

Definition: The descriptive or textual name of the alternate identifier. Analogous to "Text" in component 2.

NAME OF ALTERNATE CODING SYSTEM (ID)

Definition: Identifies the coding scheme being used in the alternate identifier component. Analogous to "Name of Coding System" above.

CODING SYSTEM VERSION ID (ST)

This is the version ID for the coding system identified by components 1-3. It belongs conceptually to the group of component 1-3 and appears here only for reasons of backward compatibility.

ALTERNATE CODING SYSTEM VERSION ID (ST)

This is the version ID for the coding system identified by components 4-6. It belongs conceptually to the group of alternate components (See usage note in section introduction) and appears here only for reasons of backward compatibility.

ORIGINAL TEXT (ST)

The original text that was available to an automated process or a human before a specific code was assigned.

CX - EXTENDED COMPOSITE ID WITH CHECK DIGIT

HL7 Component Table - CX – Extended Composite ID with Check Digit

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	15	ST			ID Number
2	1	ST			Check Digit
3	3	ID			Check Digit Scheme
4	227	HD			Assigning Authority
5	5	ID			Identifier Type Code
6	227	HD			Assigning Facility
7	8	DT			Effective Date
8	8	DT			Expiration Date
9	705	CWE			Assigning Jurisdiction
10	705	CWE			Assigning Agency or Department

Definition: This data type is used for specifying an identifier with its associated administrative detail.

Note: The check digit and check digit scheme are null if ID is alphanumeric.

Example: PID-3 Patient ID: |MD01059711^^^ADMITTING^MR^MID-CO HLTH CTR^9876543210^NPI |

ID (ST)

Definition: The value of the identifier itself.

CHECK DIGIT (ST)

The check digit in this data type is <u>not</u> an add-on produced by the message processor. It is the check digit that is part of the identifying number used in the sending application. If the sending application does not include a self-generated check digit in the identifying number, this component should be valued null.

CHECK DIGIT SCHEME (ID)

Definition: Contains the code identifying the check digit scheme employed.

ASSIGNING AUTHORITY (HD)

Definition: The assigning authority is a unique name of the system (or organization or agency or department) that creates the data.

IDENTIFIER TYPE CODE (ID)

Definition: It is a code corresponding to the type of identifier. In some cases, this code may be used as a qualifier to the "Assigning authority" component.

ASSIGNING FACILITY (HD)

Definition: The place or location identifier where the identifier was first assigned to the patient. This component is not an inherent part of the identifier but rather part of the history of the identifier: as part of this data type, its existence is a convenience for certain intercommunicating systems.

DTM - DATE/TIME

<p align="center">HL7 Component Table - DTM – Date/Time</p>

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
	24				Date/Time

Definition: Specifies a point in time using a 24-hour clock notation.

The number of characters populated (excluding the time zone specification) specifies the precision.

Example: |199904| specifies April 1999.

Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ].

Thus:

c) only the first four are used to specify a precision of "year"

d) the first six are used to specify a precision of "month"

e) the first eight are used to specify a precision of "day"

f) the first ten are used to specify a precision of "hour"

g) the first twelve are used to specify a precision of "minute"

h) the first fourteen are used to specify a precision of "second"

i) the first sixteen are used to specify a precision of "one tenth of a second"

j) the first nineteen are used to specify a precision of " one ten thousandths of a second"

EI - ENTITY IDENTIFIER

HL7 Component Table - EI – Entity Identifier

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	199	ST			Entity Identifier
2	20	IS			Namespace ID
3	199	ST			Universal ID
4	6	ID			Universal ID Type

Definition: The entity identifier defines a given entity within a specified series of identifiers.

Example: MSH-21 Message Profile: PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO

The EI is appropriate for, but not limited to, machine or software generated identifiers. The generated identifier goes in the first component. The remaining components: 2 through 4, are known as the assigning authority; they identify the machine/system responsible for generating the identifier in component 1.

The specified series, the assigning authority, is defined by components 2 through 4. The assigning authority is of the hierarchic designator (HD) data type, but it is defined as three separate components in the EI data type, rather than as a single component as would normally be the case. This is in order to maintain backward compatibility with the EI's use as a component in several existing data fields. Otherwise, the components 2 through 4 are as defined in "HD - hierarchic designator". Hierarchic designators (HD) are unique across a given HL7 implementation.

ENTITY IDENTIFIER (ST)

Definition: The first component, <entity identifier>, is usually defined to be unique within the series of identifiers created by the <assigning authority>, defined by a hierarchic designator, represented by components 2 through 4. See "HD - hierarchic designator".

NAMESPACE ID (IS)

Definition: See "Namespace ID" for definition.

The assigning authority is a unique identifier of the system (or organization or agency or department) that creates the data.

Note: When the HD is used as a part of another data type, in this case as part of the EI data type, this table may be re-defined (given a different user-defined table number and name) by the technical committee responsible for that segment.

UNIVERSAL ID (ST)

See "Universal ID" for definition.

UNIVERSAL ID TYPE (ID)

See "Universal ID Type" for definition.

FN - FAMILY NAME

HL7 Component Table - FN – Family Name

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	50	ST			Surname
2	20	ST	X		Own Surname Prefix
3	50	ST	X		Own Surname
4	20	ST	X		Surname Prefix From Partner/Spouse
5	50	ST	X		Surname From Partner/Spouse

Definition: This data type allows full specification of the surname of a person. Where appropriate, it differentiates the person's own surname from that of the person's partner or spouse, in cases where the person's name may contain elements from either name. It also permits messages to distinguish the surname prefix (such as "van" or "de") from the surname root.

SURNAME (ST)

Definition: This is the person's last name.

HD - HIERARCHIC DESIGNATOR

HL7 Component Table - HD – Hierarchic Designator

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	20	IS			Namespace ID

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
2	199	ST			Universal ID
3	6	ID			Universal ID Type

Definition: The basic definition of the HD is that it identifies an (administrative or system or application or other) entity that has responsibility for managing or assigning a defined set of instance identifiers (such as placer or filler number, patient identifiers, provider identifiers, etc.). This entity could be a particular health care application such as a registration system that assigns patient identifiers, a governmental entity such as a licensing authority that assigns professional identifiers or drivers' license numbers, or a facility where such identifiers are assigned.

Examples: EVN-7: CITY GENL HOSP^0133195934^NPI

NAMESPACE ID (IS)

UNIVERSAL ID (ST)

Definition: The HD's second component, <universal ID> (UID), is a string formatted according to the scheme defined by the third component, <universal ID type> (UID type). The UID is intended to be unique over time within the UID type. It is rigorously defined. Each UID must belong to one of the specifically enumerated schemes for constructing UIDs (defined by the UID type). The UID (second component) must follow the syntactic rules of the particular universal identifier scheme (defined by the third component). Note that these syntactic rules are not defined within HL7 but are defined by the rules of the particular universal identifier scheme (defined by the third component).

UNIVERSAL ID TYPE (ID)

Definition: The third component governs the interpretation of the second component of the HD.

ID - CODED VALUE FOR HL7 DEFINED TABLES

HL7 Component Table - ID – String Data

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
					Coded Value for HL7-Defined Tables

Maximum Length: Varies - dependent on length of longest code in code set.

Definition: The value of such a field follows the formatting rules for an ST field except that it is drawn from a table of legal values.

IS - CODED VALUE FOR USER-DEFINED TABLES

HL7 Component Table - IS – String Data

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
	20				Coded Value for User-Defined Tables

Definition: The value of such a field follows the formatting rules for a ST field except that it is drawn from a site-defined (or user-defined) table of legal values.

MSG - MESSAGE TYPE

HL7 Component Table - MSG – Message Type

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	3	ID	R	0076	Message Code
2	3	ID	R	0003	Trigger Event
3	7	ID	R	0354	Message Structure

Definition: This field contains the message type, trigger event, and the message structure ID for the message.

Example : MSH-9 Message Type: |ADT^A08^ADT_A01|

MESSAGE CODE (ID)

Definition: Specifies the message type code.

TRIGGER EVENT (ID)

Definition: Specifies the trigger event code.

MESSAGE STRUCTURE (ID)

Definition: Specifies the abstract message structure code.

NM - NUMERIC

HL7 Component Table - NM – Numeric

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
	16				Numeric

Definition: A number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point, the number is assumed to be an integer. Leading zeros, or trailing zeros after a decimal point, are not significant.

Examples: |999| |-123.792|

PL - PERSON LOCATION

HL7 Component Table - PL– Person Location

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	20	IS			Point of Care
2	20	IS			Room
3	20	IS			Bed
4	227	HD			Facility
5	20	IS			Location Status
6	20	IS			Person Location Type
7	20	IS			Building
8	20	IS			Floor
9	199	ST			Location Description
10	427	EI			Comprehensive Location Identifier
11	227	HD			Assigning Authority for Location

Definition: This data type is used to specify a patient location within a healthcare institution. Which components are valued depends on the needs of the site. For example for a patient treated at home, only the person location type is valued. It is most commonly used for specifying patient locations, but may refer to other types of persons within a healthcare setting.

Note: This data type contains several location identifiers that should be thought of in the following order from the most general to the most specific: facility, building, floor, point of care, room, bed. Additional data about any location defined by these components can be added in the following components: person location type, location description and location status.

Example: Nursing Unit

   A nursing unit at Community Hospital: 4 East, room 136, bed B

   4E^136^B^CommunityHospital^^N^^^

Example: Home

   The patient was treated at his home.

   ^^^^^H^^^

POINT OF CARE (IS)

Definition: This component specifies the code for the point where patient care is administered. It is conditional on PL.6 Person Location Type (e.g., nursing unit or department or clinic). After floor, it is the most general patient location designation.

ROOM (IS)

Definition: This component specifies the code for the patient's room. After point of care, it is the most general person location designation.

BED (IS)

Definition: This component specifies the code for the patient's bed. After room, it is the most general person location designation.

FACILITY (HD)

Definition: This component is subject to site interpretation but generally describes the highest level physical designation of an institution, medical center or enterprise. It is the most general person location designation.
See ""HD - hierarchic designator". HD - hierarchic designator" for discussion of data type

LOCATION STATUS (IS)

Definition: This component specifies the code for the status or availability of the location. For example, it may convey bed status.

PERSON LOCATION TYPE (IS)

Definition: Person location type is the categorization of the person's location defined by facility, building, floor, point of care, room or bed. Although not a required field, when used, it may be the only populated field. It usually includes values such as nursing unit, department, clinic, SNF, physician's office.

BUILDING (IS)

Definition: This component specifies the code for the building where the person is

located. After facility, it is the most general person location designation.

FLOOR (IS)

Definition: This component specifies the code for the floor where the person is located. After building, it is the most general person location designation.

LOCATION DESCRIPTION (ST)

Definition: This component describes the location in free text.

COMPREHENSIVE LOCATION IDENTIFIER (EI)

Definition: The unique identifier that represents the physical location as a whole without regard for the individual components. This definition accommodates sites that may have a different method of defining physical units or who may code at a less granular level. For example, point of care, room, and bed may be one indivisible code.

ASSIGNING AUTHORITY FOR LOCATION (HD)

Definition: The entity that creates the data for the individual physical location components. If populated, it should be the authority for all components populated.

PT - PROCESSING TYPE

HL7 Component Table - PT – Processing Type

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	1	ID			Processing ID
2	1	ID			Processing Mode

Definition: This data type indicates whether to process a message as defined in HL7 Application (level 7) Processing rules.

PROCESSING ID (ID)

Definition: It is a value that defines whether the message is part of a production, training, or debugging system.

PROCESSING MODE (ID)

Definition: It is a value that defines whether the message is part of an archival process or an initial load.

SI - SEQUENCE ID

HL7 Component Table - SI – Sequence ID

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
	4				Sequence ID

Definition: A non-negative integer in the form of a NM field.

ST - STRING DATA

HL7 Component Table - ST – String Data

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
	199				String Data

Definition: String data is left justified with trailing blanks optional.

Example: Chief Compliant: OBX-5, CWE:9 (Original Text) : |OBX|2|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^**HEADACHE FOR 2 DAYS|**

TX - TEXT DATA

HL7 Component Table - TX – Text Data

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
					Text Data

Definition**:** String data meant for user display (on a terminal or printer). Such data would not necessarily be left justified since leading spaces may contribute greatly to the clarity of the presentation to the user. Because this type of data is intended for display, it may contain certain escape character sequences designed to control the display. Leading spaces should be included. Trailing spaces should be removed.

Example OBX Segment: |OBX|1|TX|54094-8^TRIAGE NOTE:FIND:PT:EMERGENCY DEPARTMENT:DOC^LN||Pain and recurrent cramping sensation.||||||F|||201102091114|

TS - TIME STAMP

HL7 Component Table - TS – Time Stamp

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	24	DTM	R		Time
2	1	ID	X	X	Degree of Precision

Definition: Specifies a point in time.

Format: YYYY[MM[DD[HH[MM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]

TIME (DTM)

Definition: The point in time.

See "Date/Time" for the full description of this component.

VID – VERSION IDENTIFIER

HL7 Component Table - VID – Version Identifier

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	5	ID			Version ID
2	483	CE			Internationalization Code
3	483	CE			International Version ID

Example: MSH-12 Version ID: |2.5.1|

VERSION ID (ID)

Definition: This field is used to identify the HL7 version.

XAD - EXTENDED ADDRESS

HL7 Component Table - XAD – Extended Address

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	184	SAD			Street Address
2	120	ST			Other Designation
3	50	ST			City
4	50	ST			State or Province
5	12	ST			Zip or Postal Code
6	3	ID			Country
7	3	ID			Address Type
8	50	ST			Other Geographic Designation
9	20	IS			County/Parish Code
10	20	IS	X		Census Tract
11	1	ID	X		Address Representation Code
12	53	DR	X		Address Validity Range
13	26	TS	X		Effective Date
14	26	TS	X		Expiration Date

Definition: This data type specifies the address of a person, place or organization plus associated information.

Example OBX segment: FACILITY LOCATION

OBX|1|XAD|SS002^TREATING FACILITY
LOCATION^PHINQUESTION||^^^13^30341^USA^C^^DEKALB||||||F|||201102091114

STREET ADDRESS (SAD)

OTHER DESIGNATION (ST)

Definition: Second line of address. In US usage, it qualifies address. Examples: Suite 555 or Fourth Floor. When referencing an institution, this component specifies the street address.

CITY (ST)

Definition: This component specifies the city, or district or place where the addressee is located depending upon the national convention for formatting addresses for postal usage.

STATE OR PROVINCE (ST)

Definition: This component specifies the state or province where the addressee is located. State or province should be represented by the official postal service codes for that country.

ZIP OR POSTAL CODE (ST)

Definition: This component specifies the ZIP or postal code where the addressee is located.

COUNTRY (ID)

Definition: This component specifies the country where the addressee is located.

ADDRESS TYPE (ID)

Definition: This component specifies the kind or type of address.

OTHER GEOGRAPHIC DESIGNATION (ST)

Definition: This component specifies any other geographic designation.

COUNTY/PARISH CODE (IS)

Definition: This is a code that represents the county in which the specified address resides.

XCN - EXTENDED COMPOSITE ID NUMBER AND NAME FOR PERSONS

HL7 Component Table - XCN – Extended Composite ID Number and Name for Persons

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	15	ST	O		ID Number
2	194	FN	O		Family Name
3	30	ST	O		Given Name
4	30	ST	O		Second and Further Given Names or Initials Thereof
5	20	ST	O		Suffix (e.g., JR or III)
6	20	ST	O		Prefix (e.g., DR)
7	5	IS	B	0360	Degree (e.g., MD)
8	4	IS	C	0297	Source Table
9	227	HD	O	0363	Assigning Authority
10	1	ID	O	0200	Name Type Code
11	1	ST	O		Identifier Check Digit
12	3	ID	C	0061	Check Digit Scheme
13	5	ID	O	0203	Identifier Type Code
14	227	HD	O		Assigning Facility
15	1	ID	O	0465	Name Representation Code
16	483	CE	O	0448	Name Context
17	53	DR	B		Name Validity Range
18	1	ID	O	0444	Name Assembly Order
19	26	TS	O		Effective Date
20	26	TS	O		Expiration Date
21	199	ST	O		Professional Suffix
22	705	CWE	O		Assigning Jurisdiction
23	705	CWE	O		Assigning Agency or Department

Definition: This data type specifies the ID number and name of a person.

Example: 2231231234^Hippocrates^Harold^H^IV^Dr^MD^^&Provider Master.Community Health and Hospitals&NPI^L^9^M10^DN^&Good Health Hospital.Community Health and Hospitals&L^A

XPN - EXTENDED PERSON NAME

HL7 Component Table - XPN– Extended Person Name

SEQ	LEN	DT	OPT	TBL#	COMPONENT NAME
1	194	FN			Family Name
2	30	ST			Given Name
3	30	ST			Second and Further Given Names or Initials Thereof
4	20	ST			Suffix (e.g., JR or III)
5	20	ST			Prefix (e.g., DR)
6	6	IS			Degree (e.g., MD)
7	1	ID			Name Type Code
8	1	ID	X		Name Representation Code
9	483	CE	X		Name Context
10	53	DR	X		Name Validity Range
11	1	ID	X		Name Assembly Order
12	26	TS	X		Effective Date
13	26	TS	X		Expiration Date
14	199	ST	X		Professional Suffix

Example: PID-5 Patient Name: If Patient Name is known, but not desired to be sent, then the second occurrence of PID-5 is valued and only PID-5.7 (Name Type Code) is valued with the constant value "S"

|~^^^^^^S|

FAMILY NAME (FN)

Definition: This component allows full specification of the surname of a person.

GIVEN NAME (ST)

Definition: First name

SECOND AND FURTHER GIVEN NAMES OR INITIALS THEREOF (ST)

Definition: Multiple middle names may be included by separating them with spaces.

SUFFIX (ST)

Definition: This is used to specify a name suffix (e.g., Jr. or III).

PREFIX (ST)

Definition: This is used to specify a name prefix (e.g., Dr.).

DEGREE (IS)

NAME TYPE CODE (ID)

CHAPTER 5 - MESSAGE TYPE/TRIGGER EVENT AND SEGMENTS

ENCODING RULES

The following list details the encoding rules.

- Encode each segment in the order specified in the Message Structure.
- Begin each segment with the three-letter segment ID (e.g., PID).
- End each segment with the carriage return terminator (hex 0D). Note that in the examples in this guide, this character is illustrated as "<cr>". This character is a single ASCII character; the segment terminator is NOT the four-character sequence.
- Encode the data fields in the sequence given in the corresponding segment definition tables.
- Encode each data field according to the data type format listed in this guide.
- Components, subcomponents, or repetitions that are not valued at the end of a field need not be represented by component separators. Likewise, field separators are not required for empty fields at the end of a segment.

  For example, the data fields and segments below are equivalent:

  |^XXX&YYY&&^| is equal to |^XXX&YYY|

  |ABC^DEF^^| is equal to |ABC^DEF|
  and
  MSH|^~\&||Facillity_NPI^0131191934^NPI|||201009221330||
  　　　ADT^A04^ADT_A01|1|P|2.3.1|||||||||<cr>

  MSH|^~\&||Facillity_NPI^0131191934^NPI|||201009221330||
  　　　ADT^A04^ADT_A01|1|P|2.5.1|||||||||<cr>

  is equal to

  MSH|^~\&||Facility_NPI^0131191934^NPI|||201009221330||
  　　　ADT^A04^ADT_A01|1|P|2.3.1<cr>

  MSH|^~\&||Facility_NPI^0131191934^NPI|||201009221330||
  　　　ADT^A04^ADT_A01|1|P|2.5.1<cr>

- The Receiver should ignore undocumented segments that are sent and conform to the HL7 message structure.

STATIC MODEL - MESSAGE STRUCTURE

HL7 Message Structure Attributes

The structure of the supported messages in this guide are described in tabular format (refer to the following section). The columns of those tables are used as described in the table below.

TABLE 5-1. MESSAGE STRUCTURE ATTRIBUTES	
ABBREVIATION	**DEFINITION**
Segment	Three-character code for the segment and the abstract syntax (e.g., the square and curly braces) If a segment is not documented in this guide, it should not be sent. • [XXX] Optional • { XXX } Repeating • XXX Required • [{ XXX }] Optional and Repeating
Name	Name of the segment
Description	Explanation of the use of the segment
Usage	Use of the segment for syndromic surveillance Indicates if the segment is required, optional, or conditional in a message Legal values are: R – Required, Must always be populated RE – Required, but may be empty (segment is not sent). If the Sender has data, it must be sent. The Receiver must be capable of processing data if sent, and must not raise an error or warning if the data is not sent. O – Optional There is no specified conformance rules for either Sender or Receiver for this segment in this guide. As an implemented interface must follow known rules for populating segments, a specific interface for a particular Sender or Receiver must constrain this usage to either R, RE, C, CE, or X. This has been deliberately left unconstrained in this guide to support differing and sometimes mutually exclusive statutory requirements in different jurisdictions; this must be determined locally.
Cardinality	Minimum and maximum number of times the segment may appear [0..1] Segment may be omitted and can have, at most, one occurrence. [1..1] Segment must have exactly one occurrence. [0..*] Segment may be omitted or repeat an unlimited number of times. [1..*] Segment must appear at least once, and may repeat unlimited number of times.

Constrained Message Types

The HL7 message formats sent to public health agencies will be constrained versions of the 2.5.1 abstract message formats. Only the segments necessary for carrying the syndromic data, and certain structural message segments, are included. All of the General Acknowledgement (ACK) messages were placed in the final table (Table 5-7).

Message types that are NOT documented in this guide are considered NOT SUPPORTED.

HL7 ADT Message Types

The following HL7 ADT Messages have been identified for syndromic surveillance. Additional ADT trigger events not noted in this section may occur within the normal workflow of an EHR. The below ADT trigger events represent the core data elements of interest for public health authorities (PHAs) related to syndromic surveillance

- ADT^A01   Admit / Visit Notification
- ADT^A04   Register a Patient
- ADT^A08   Update Patient Information
- ADT^A03   Discharge / End Visit
- ACK^A01   General Acknowledgement
- ACK^A04   General Acknowledgement
- ACK^A08   General Acknowledgement
- ACK^A03   General Acknowledgement

HL7 ORU Message Types

ORU Messages may be sent for syndromic surveillance purposes. General business rules and interaction diagrams regarding lab data exchange using ORU message types are provided in Chapter 2. Further specifications are under development and will be included in future guide versions.

Static Model – Message Segments

Segment Profile Attributes

Fields or components that are NOT documented in this guide are considered NOT SUPPORTED. Inclusion of any field or component that is not supported should not result in failure of the entire message by the receiver, as per recommended receiver behaviors as defined in HL7.

The abbreviated terms and segment definitions used in the constrained message

formats are detailed in the following table.

ABBREVIATION	DEFINITION
TABLE 5-2: SEGMENT PROFILE ATTRIBUTES	
Field Name	Descriptive name of the data element
Sequence (Seq)	Sequence of the elements as they are numbered in the HL7 segment
Data type (DT)	Data type used for HL7 element
Length (Len)	Length of an element is calculated using the following rules: *Field length* = (Sum of all supported component lengths) + (component number of the last-supported component) – 1. *Component length* = (Sum of all supported sub-component lengths) + (sub-component number of the last-supported component) – 1.
Sender Usage Receiver Usage	Indicator of whether a data element is required, optional, or conditional in a message, set separately for Senders and Receivers. Legal values are: R – Required, Must always be populated by the Sender, and if not present, the Receiver may reject the message. RE[8] - Required, but may be empty (no value). If the Sender has data, the data must be sent. The Receiver must be capable of processing data if sent, and must not raise an error or warning if the data is not sent. O – Optional-There are no specified conformance rules for either Sender or Receiver for this field in this guide. As an implemented interface must follow known rules for populated fields and components, a specific interface for a particular Sender or Receiver must constrain this usage to either R, RE, C, CE, or X. This value has been deliberately left unconstrained in this guide to support differing and sometimes mutually exclusive statutory requirements in different jurisdictions; this must be determined locally. C – Conditional - When conditionality predicate evaluates to 'True', considered the same as 'R'. When condition evaluates to 'False', Senders must not populate the field, and Receivers may raise an error if the field is present but must not raise an error if the field is not present. CE - Conditionality Empty - When conditionality predicate evaluates

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[8] The element may be missing from the message, but must be sent by sending application if there is relevant data. A conforming sending application must be capable of providing all 'RE' elements. If conforming sending application knows required values for the element, it must send that element. If conforming sending application does not know the required values, then that element will be omitted.

TABLE 5-2: SEGMENT PROFILE ATTRIBUTES	
ABBREVIATION	**DEFINITION**
	to 'True', behaves the same as 'RE'. When conditionality predicate evaluates to 'False', the Sender should not populate the field, and the Receiver may raise an application error if the field is present.
	X - Not supported - Senders must not populate. Receivers may ignore the element if it is sent, or may raise an error if field is present.
	Note: A required field in an optional segment does not mean the segment must be present in the message. It means that if the segment is present, the required fields within that segment must be populated. The same applies to required components of optional fields. If the field is being populated, then the required components must be populated. The same applies to required sub-components of optional components. If a component is being populated, then the required sub-components of that component must be populated.
Cardinality	Minimum and maximum number of times the field may appear.
	[0..0] Field never present
	[0..1] Field may be omitted and can have, at most, one occurrence.
	[1..1] Field must have exactly one occurrence
	[0..n] Field may be omitted or may repeat up to *n* times
	[1..n] Field must appear at least once, and may repeat up to *n* time.
	[0..*] Field may be omitted or repeat an unlimited number of times.
	[1..*] Field must appear at least once, and may repeat unlimited number of times.
	[m..n] Field must appear at least *m* and at most *n* times.
Values / Value Set	Link to value set or literal value of data expected to be populated in the field. Numbers in this field denote the related vocabulary in that HL7 Table. Contains the name and/or the PHIN Value Set (accessible through PHIN VADS) when relevant as well as notes, condition rules and recommendations

- Fields shaded in yellow denote unsupported fields. The usage is also marked 'X'.

- Components and subcomponents of a single field are noted as a dotted decimal number.

ADMIT / VISIT NOTIFICATION MESSAGE (ADT^A01)

ADT^A01 messages are used to communicate syndromic surveillance data to PHAs in the event of a patient admission to a hospital inpatient facility. This may occur as a result of a patient transfer from another facility (e.g., an emergency department or another hospital), or from other places (e.g., home).

	TABLE 5-3 ADT^A01 ADMIT / VISIT NOTIFICATION			
SEG	**NAME**	**DESCRIPTION**	**USAGE**	**CARDINALITY**
MSH	Message Header	Information explaining how to parse and process the message Information includes identification of message delimiters, sender, receiver, message type, timestamp, etc.	R	[1..1]
EVN	Event Type	Trigger event information for receiving application	R	[1..1]
PID	Patient Identification	Patient identifying and demographic information	R	[1..1]
PV1	Patient Visit	Information related to this visit at this facility including the nature of the visit, critical timing information and a unique visit identifier.	R	[1..1]
[PV2]	Patient Visit Additional Information	Admit Reason information.	RE	[0..1]
{OBX}	Observation / Result	Information regarding the age, temperature, and other information	R	[1..*]
[{DG1}]	Diagnosis	Admitting Diagnosis and, optionally, Working and Final Diagnosis information	RE	[0..*]
[{PR1}]	Procedures	Information relative to various types of procedures performed	O	[0..*]

TABLE 5-3 ADT^A01 ADMIT / VISIT NOTIFICATION				
SEG	**NAME**	**DESCRIPTION**	**USAGE**	**CARDINALITY**
[{IN1}]	Insurance	Information about insurance policy coverage information	O	[0..*]

Message Header (MSH) Segment

The MSH Segment is used to define the intent, source, destination, and some specifics of the syntax of the message. This segment includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

TABLE 5-3A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Field Separator	1	ST	1	R	R	[1..1]	**Definition**: This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Default value is |, (ASCII 124).
Encoding Characters	2	ST	4	R	R	[1..1]	**Definition**: This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Default values are ^~\& (ASCII 94, 126, 92, and 38, respectively).
Sending Application	3	HD	227	O	O	[0..1]	**Definition**: This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.

TABLE 5-3A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Sending Facility	4	HD	227	R	R	[1..1]	National Provider Identifier. (10-digit identifier) **Definition**: This field further describes the sending application, MSH-3-sending application. This field uniquely identifies the facility associated with the application that sends the message. If Acknowledgements are in use, this facility will receive any related Acknowledgement message. **Note**: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field
Namespace ID	4.1	IS	20	RE	RE	[0..1]	
Universal ID	4.2	ST	199	R	R	[1..1]	
Universal ID Type	4.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance
Receiving Application	5	HD	227	O	O	[0..1]	HL7 table 0361: User-defined: Application **Definition**: This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.
Receiving Facility	6	HD	227	O	O	[0..1]	HL7 table 0362: User-defined: Facility **Definition**: This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations.

TABLE 5-3A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Date/Time Of Message	7	TS	26	R	R	[1..1]	**Conformance Statement SS-013:** MSH-7 (Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone. **Note**: MSH-7 (Date/Time of Message) does not have to equal EVN-2 (Message Date/Time)
Security	8	ST	40	X	X	[0..1]	
Message Type	9	MSG	15	R	R	[1..1]	**Conformance Statement SS-014:** MSH-9 (Message Type) **SHALL** be the literal value: 'ADT^A01^ADT_A01', **Definition**: This field contains the message type, trigger event, and the message structure ID for the message.
Message Code	9.1	ID	3	R	R	[1..1]	PHVS_MessageType_SyndromicSurveillance
Trigger Event	9.2	ID	3	R	R	[1..1]	PHVS_EventType_SyndromicSurveillance
Message Structure	9.3	ID	7	R	R	[1..1]	PHVS_MessageStructure_SyndromicSurveillance

TABLE 5-3A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Message Control ID	10	ST	199	R	R	[1..1]	**Definition**: This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA). **Note**: This field is a number or other identifier that uniquely identifies the message.
Processing ID	11	PT	3	R	R	[1..1]	**Conformance Statement SS-015:** MSH-11 (Processing ID) **SHALL** have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training. **Definition**: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. **Note**: Indicates how to process the message as defined in HL7 processing rules
Version ID	12	VID	5	R	R	[1..1]	**Conformance Statement SS-016:** MSH-12 (Version ID) **SHALL** have a value '2.5.1' **Definition**: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. For this message the value shall be 2.5.1 **Note**: HL7 version number used to interpret format and content of the message.
Sequence Number	13	NM	15	X	X	[0..1]	
Continuation Pointer	14	ST	180	X	X	[0..1]	

TABLE 5-3A: MESSAGE HEADER SEGMENT (MSH)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Accept Acknowledgement Type	15	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Application Acknowledgement Type	16	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Country Code	17	ID	3	X	X	[0..1]	HL7 table 0399: HL7 defined: Country code
Character Set	18	ID	16	X	X	[0..*]	HL7 table 0211: HL7 defined: Alternate character sets
Principal Language Of Message	19	CE	478	X	X	[0..1]	
Alternate Character Set Handling Scheme	20	ID	20	X	X	[0..1]	HL7 table 0356: HL7 defined: Alternate character set handling scheme

						TABLE 5-3A: MESSAGE HEADER SEGMENT (MSH)
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Message Profile Identifier	21	EI	427	R	R	[0..1]	**Conformance Statement SS-017:** An instance of MSH.21 (Message Profile Identifier) **SHALL** contain the constant value: PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-NoAck^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-Batch^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Batch^SS Receiver^2.16.840.1.114222.4.10.3^ISO **Definition**: Sites may use this field to assert adherence to, or reference, a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages.

Event Type (EVN) Segment

The EVN segment is used to communicate trigger event information to receiving applications.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-3B: EVENT TYPE SEGMENT (EVN)							
Event Type Code	1	ID	3	X	X	[0..0]	PHVS_EventType_SyndromicSurveillance
Recorded Date/Time	2	TS	26	R	R	[1..1]	**Conformance Statement SS-018:** EVN-2 (Recorded Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Note:** EVN-2 (Recorded Date/Time) does not have to equal MSH-7 (Date/Time of Message) **Note:** Most systems default to the system Date/Time when the transaction was entered. **Data Element of Interest:** Message Date/Time
Date/Time Planned Event	3	TS	26	X	X	[0..1]	
Event Reason Code	4	IS	3	X	X	[0..1]	HL7 table 0062: User defined: Event reason
Operator ID	5	XCN	309	X	X	[0..*]	HL7 table 0188: User defined: Operator ID
Event Occurred	6	TS	26	X	X	[0..1]	
Event Facility	7	HD	241	R	R	[1..1]	**Definition**: This field identifies the location where the patient was actually treated.

TABLE 5-3B: EVENT TYPE SEGMENT (EVN)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							Note: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field **Data Element of Interest:** Facility Identifier (Treating) (EVN-7.1) **Data Element of Interest:** Facility Name (Treating) (EVN-7.2)
Namespace ID	7.1	IS	20	RE	O	[0..1]	Recommend the use of the Organization Name Legal Business Name (LBN) associated with the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.
Universal ID	7.2	ST	199	R	R	[1..1]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.
Universal ID Type	7.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance

Patient Identification (PID) Segment

The PID Segment is used as the primary means of communicating patient identification information. This segment contains pertinent patient identifying and demographic information.

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - PID	1	SI	4	R	R	[1..1]	**Conformance Statement SS-019:** PID-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one.
Patient ID	2	CX	20	X	X	[0..0]	
Patient Identifier List	3	CX	478	R	R	[1..*]	Definition: PID.3 is a repeating field that can accommodate multiple patient identifiers**.** **Note:** Patient's unique identifier(s) from the facility that is submitting this report to public health officials Different jurisdictions use different identifiers and may often use a combination of identifiers to produce a unique patient identifier. Patient identifiers should be strong enough to remain a unique identifier across different data provider models, such as a networked data provider or State HIE. **Data Element of Interest:** Unique Patient Identifier
ID Number	3.1	ST	15	R	R		
Check Digit	3.2	ST	1	X	X	[0..1]	

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Check Digit Scheme	3.3	ID	3	X	X	[0..1]	HL7 table 0061: HL7 defined: Check digit scheme
Assigning Authority	3.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning authority
Identifier Type Code	3.5	ID	5	R	R	[1..1]	PHVS_IdentifierType_SyndromicSurveillance
Assigning Facility	3.6	HD	227	O	RE	[0..1]	
Effective Date	3.7	DT	8	X	X	[0..1]	
Expiration Date	3.8	DT	8	X	X	[0..1]	
Assigning Jurisdiction	3.9	CWE	705	X	X	[0..1]	
Assigning Facility	3.10	CWE	705	X	X	[0..1]	
Alternate Patient ID - PID	4	CX	20	X	X	[0..0]	
Patient Name	5	XPN	294	R	R	[1..*]	**Note:** Syndromic surveillance does not require the patient name. A Visit or Patient ID, as specified within this guide, shall be used by PHAs to join related visit data and for working with hospitals to find additional visit information for syndromic surveillance signal confirmation or investigation. Since, however, HL7 requires the patient name, the field must be populated even when data patient name shall not be sent. In such an instance (i.e., patient name is not sent), patient name shall be

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							presented in a pseudonymized manner. **Conformance Statement SS-020:** If **PID-5** (Patient Name) is unknown then the first occurrence of PID-5 **SHALL NOT** be valued. **Conformance Statement SS-021:** If **PID-5** (Patient Name) is unknown then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "U" (i.e., PID-5 shall be valued as |~^^^^^^U|). **Conformance Statement SS-022:** If **PID-5** (Patient Name) is known, but not desired to be sent, then the first occurrence of PID-5 **SHALL NOT** be valued. **Conformance Statement SS-023:** If **PID-5** (Patient Name) is known, but not desired to be sent, then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "S" (i.e., PID-5 shall be valued as ~^^^^^^S|). The second name field indicates that it is unspecified. **Definition**: This field contains the names of the patient; the primary or legal name of the patient is reported first. Therefore, the name type code in this field should be "L - Legal".
Family Name	5.1	FN	194	O	RE	[0..1]	
Given Name	5.2	ST	30	O	RE	[0..1]	

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Second Given Name or Initials	5.3	ST	30	O	RE	[0..1]	
Suffix	5.4	ST	20	O	RE	[0..1]	
Prefix	5.5	ST	20	O	RE	[0..1]	
Degree	5.6	IS	6	X	X	[0..0]	HL7 table 0360: User defined: Degree/license/certificate
Name Type Code	5.7	ID	1	R	R	[1..1]	PHVS_NameType_SyndromicSurveillance
Name Representation Code	5.8	ID	1	X	X	[0..1]	
Name Context	5.9	CE	483	X	X	[0..1]	
Name Validity Range	5.10	DR	53	X	X	[0..0]	
Name Assembly Order	5.11	ID	1	X	X	[0..1]	HL7 table 0444: HL7 defined: Name assembly order
Effective Date	5.12	TS	26	X	X	[0..1]	
Expiration Date	5.13	TS	26	X	X	[0..1]	
Professional Suffix	5.14	ST	199	X	X	[0..1]	
Mother's Maiden Name	6	XPN	294	X	X	[0..*]	

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Date/Time of Birth	7	TS	26	O	O	[0..1]	**Definition**: This field contains the patient's date and time of birth.
Administrative Sex	8	IS	1	RE	RE	[0..1]	PHVS_Sex_SyndromicSurveillance **Definition**: This field contains the patient's sex. **Data Element of Interest:** Sex
Patient Alias	9	XPN	294	X	X	[0..0]	
Race	10	CE	478	RE	RE	[0..*]	**Definition**: This field refers to the patient's race **Note**: Patient could have more than one race defined. **Data Element of Interest**: Race
Identifier	10.1	ST	20	RE	RE	[0..1]	PHVS_RaceCategory_CDC
Text	10.2	ST	199	O	RE	[0..1]	
Name of Coding System	10.3	ID	20	CE	C	[0..1]	**Condition Predicate:** If PID-10.1 (the identifier) is provided, then PID 10.3 is valued.
Alternate Identifier	10.4	ST	20	X	X	[0..1]	
Alternate Text	10.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	10.6	ID	20	X	X	[0..1]	

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Patient Address	11	XAD	513	RE	RE	[0..1]	**Definition**: This field contains the mailing address of the patient. **Note**: Expecting only the patient primary (current) address information in the supported components
Street Address	11.1	SAD	184	O	O	[0..1]	
Other Designation	11.2	ST	120	O	O	[0..1]	
City	11.3	ST	50	O	O	[0..1]	**Data Element of Interest:** Patient City/Town
State or Province	11.4	ST	50	O	O	[0..1]	PHVS_State_FIPS_5-2 **Data Element of Interest**: Patient State
ZIP or Postal Code	11.5	ST	12	RE	RE	[0..1]	USPS **Data Element of Interest**: Patient ZIP Code
Country	11.6	ID	3	O	O	[0..1]	PHVS_Country_ISO_3166-1 **Data Element of Interest**: Patient Country
Address Type	11.7	ID	3	O	O	[0..1]	PHVS_AddressType_HL7_2x
Other Geographic Designation	11.8	ST	50	O	O	[0..1]	
County/Parish Code	11.9	IS	20	RE	RE	[0..1]	PHVS_County_FIPS_6-4 **Data Element of Interest**: Patient County

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Census Tract	11.10	IS	20	X	X	[0..1]	
Address Representation Code	11.11	ID	1	X	X	[0..1]	
Address Validity Range	11.12	DR	53	X	X	[0..0]	
Effective Date	11.13	TS	26	X	X	[0..1]	
Expiration Date	11.14	TS	26	X	X	[0..1]	
County Code	12	IS	4	X	X	[0..0]	HL7 table 0289: User defined: County/parish
Phone Number - Home	13	XTN	250	X	X	[0..*]	
Phone Number - Business	14	XTN	250	X	X	[0..*]	
Primary Language	15	CE	478	X	X	[0..1]	HL7 table 0296: User defined: Primary Language
Marital Status	16	CE	478	X	X	[0..1]	HL7 table 0002: User defined: Marital Status
Religion	17	CE	478	X	X	[0..1]	HL7 table 0006: User defined: Religion
Patient Account Number	18	CX	250	O	O	[0..1]	**Definition**: This field contains the patient account number assigned by accounting to which all charges, payments, etc., are recorded. It is used to identify the patient's account.

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
SSN Number - Patient	19	ST	16	X	X	[0..0]	
Driver's License Number - Patient	20	DLN	64	X	X	[0..0]	
Mother's Identifier	21	CX	250	X	X	[0..*]	
Ethnic Group	22	CE	478	RE	RE	[0..1]	**Definition**: This field further defines the patient's ancestry. **Data Element of Interest**: Ethnicity
Identifier	22.1	ST	20	RE	RE	[0..1]	PHVS_EthnicityGroup_CDC
Text	22.2	ST	199	O	O	[0..1]	
Name of Coding System	22.3	ID	20	CE	CE	[0..1]	**Condition Predicate:** If PID-22.1 (the identifier) is provided then PID 22.3 is valued.
Alternate Identifier	22.4	ST	20	X	X	[0..1]	
Alternate Text	22.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	22.6	ID	20	X	X	[0..1]	
Birth Place	23	ST	250	X	X	[0..1]	
Multiple Birth Indicator	24	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Birth Order	25	NM	2	X	X	[0..1]	
Citizenship	26	CE	478	X	X	[0..*]	HL7 table 0171: User defined: Citizenship
Veterans Military Status	27	CE	478	X	X	[0..1]	HL7 table 0172: User defined: Veterans Military Status
Nationality	28	CE	478	X	X	[0..0]	HL7 table 0212: User defined: Nationality
Patient Death Date and Time	29	TS	26	X	X	[0..1]	**Definition**: This field shall not be populated on an admission message.
Patient Death Indicator	30	ID	1	X	X	[0..1]	**Definition**: This field shall not be populated on an admission message.
Identity Unknown Indicator	31	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Identity Reliability Code	32	IS	20	X	X	[0..*]	HL7 table 0445: User defined: Identity Reliability Code
Last Update Date/Time	33	TS	26	O	O	[0..1]	**Definition**: This field contains the last update date and time for the patient's/person's identifying and demographic data, as defined in the PID segment.
Last Update Facility	34	HD	241	O	O	[0..1]	**Definition**: This field identifies the facility of the last update to a patient's/person's identifying and demographic data, as defined in the PID segment.
Species Code	35	CE	478	X	X	[0..1]	HL7 table 0446: User defined: Species code

TABLE 5-3C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Breed Code	36	CE	478	X	X	[0..1]	HL7 table 0447: User defined: Breed code
Strain	37	ST	80	X	X	[0..1]	
Production Class Code	38	CE	478	X	X	[0..1]	HL7 table 0429: User defined: Production Class Code
Tribal Citizenship	39	CWE	697	X	X	[0..*]	HL7 table 0171: User defined: Citizenship

Patient Visit (PV1) Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on a visit-specific basis.

TABLE 5-3D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID - PV1	1	SI	4	RE	RE	[0..1]	**Conformance Statement SS-024:** PV1-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one
Patient Class	2	IS	1	R	R	[1..1]	PHVS_PatientClass_SyndromicSurveillance **Definition**: This field is used by systems to categorize patients by site. **Data Element of Interest**: Patient Class
Assigned Patient Location	3	PL	1220	O	O	[0..1]	**Definition**: This field contains the patient's initial assigned location or the location to which the patient is being moved. The first component may be the nursing station for inpatient locations, or clinic or department, for locations other than inpatient. .
Admission Type	4	IS	2	O	O	[0..1]	HL7 table 0007: User defined: Admission type **Definition**: This field indicates the circumstances under which the patient was or will be admitted.

TABLE 5-3D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Pre-admit Number	5	CX	250	X	X	[0..1]	
Prior Patient Location	6	PL	1220	X	X	[0..1]	
Attending Doctor	7	XCN	309	O	O	[0..*]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier **Data Element of Interest:** Unique Physician Identifier.
Referring Doctor	8	XCN	309	X	X	[0..*]	HL7 table 0010: User defined: Physician ID
Consulting Doctor	9	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Hospital Service	10	IS	3	O	O	[0..1]	HL7 table 0069: User defined: Hospital Service **Definition**: This field contains the treatment or type of surgery that the patient is scheduled to receive.
Temporary Location	11	PL	1220	X	X	[0..1]	

TABLE 5-3D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Preadmit Test Indicator	12	IS	2	X	X	[0..1]	HL7 table 0087: User defined: Pre-Admit Test Indicator
Re-admission Indicator	13	IS	2	X	X	[0..1]	HL7 table 0092: User defined: Re-admission Indicator
Admit Source	14	IS	6	O	O	[0..1]	HL7 table 0023: User defined: Admit Source **Definition**: This field indicates where the patient was admitted.
Ambulatory Status	15	IS	2	O	O	[0..*]	HL7 table 0009: User defined: Ambulatory Status **Definition:** This field indicates any permanent or transient handicapped conditions.
VIP Indicator	16	IS	2	X	X	[0..1]	HL7 table 0099: User defined: VIP Indicator
Admitting Doctor	17	XCN	309	X	X	[0..*]	HL7 table 0010: User defined: Physician ID
Patient Type	18	IS	2	X	X	[0..1]	HL7 table 0018: User defined: Patient Type
Visit Number	19	CX	478	R	R	[1..1]	**Definition**: This field contains the unique number assigned to each patient visit. **Note**: Unique identifier for a patient visit **Data Element of Interes**t: Unique Visit Identifier (PV1-19):
ID Number	19.1	ST	15	R	R	[1..1]	

				TABLE 5-3D: PATIENT VISIT SEGMENT (PV1)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Check Digit	19.2	ST	1	X	X	[0..1]	
Check Digit Scheme	19.3	ID	3	X	X	[0..1]	HL7 table 0061: HL7 defined: Check Digit Scheme
Assigning Authority	19.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning Authority
Identifier Type Code	19.5	ID	5	R	R	[1..1]	**Conformance Statement SS-025:** PV1-19.5 (Identifier Type Code) **SHALL** be valued to the Literal Value 'VN'. PHVS_IdentifierType_SyndromicSurveillance
Assigning Facility	19.6	HD	227	O	RE	[0..1]	
Effective Date	19.7	DT	8	X	X	[0..1]	
Expiration Date	19.8	DT	8	X	X	[0..1]	
Assigning Jurisdiction	19.9	CWE	705	X	X	[0..1]	
Assigning Facility	19.10	CWE	705	X	X	[0..1]	
Financial Class	20	FC	50	X	X	[0..*]	HL7 table 0064: User defined: Financial Class
Charge Price Indicator	21	IS	2	X	X	[0..1]	HL7 table 0032: User defined: Charge Price Indicator
Courtesy Code	22	IS	2	X	X	[0..1]	HL7 table 0045: User defined: Courtesy Code

TABLE 5-3D: PATIENT VISIT SEGMENT (PV1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Credit Rating	23	IS	2	X	X	[0..1]	HL7 table 0046: User defined: Credit rating
Contract Code	24	IS	2	X	X	[0..*]	HL7 table 0044: User defined: Contract code
Contract Effective Date	25	DT	8	X	X	[0..*]	
Contract Amount	26	NM	12	X	X	[0..*]	
Contract Period	27	NM	3	X	X	[0..*]	
Interest Code	28	IS	2	X	X	[0..1]	HL7 table 0073: User defined: Interest Code
Transfer to Bad Debt Code	29	IS	4	X	X	[0..1]	HL7 table 0110: User defined: Transfer to Bad Debt Code
Transfer to Bad Debt Date	30	DT	8	X	X	[0..1]	
Bad Debt Agency Code	31	IS	10	X	X	[0..1]	HL7 table 0021: User defined: Bad Debt Agency Code
Bad Debt Transfer Amount	32	NM	12	X	X	[0..1]	
Bad Debt Recovery Amount	33	NM	12	X	X	[0..1]	
Delete Account Indicator	34	IS	1	X	X	[0..1]	HL7 table 0111: User defined: Delete Account Indicator

				TABLE 5-3D: PATIENT VISIT SEGMENT (PV1)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Delete Account Date	35	DT	8	X	X	[0..1]	
Discharge Disposition	36	IS	3	X	X	[0..1]	**Definition**: This field shall not be populated in an Admission message
Discharged to Location	37	DLD	47	X	X	[0..1]	HL7 table 0113: User defined: Discharged to Location
Diet Type	38	CE	478	X	X	[0..1]	HL7 table 0114: User defined: Diet type
Servicing Facility	39	IS	2	X	X	[0..1]	HL7 table 0115: User defined: Servicing Facility
Bed Status	40	IS	1	X	X	[0..0]	HL7 table 0116: User defined: Bed Status
Account Status	41	IS	2	X	X	[0..1]	HL7 table 0117: User defined: Account Status
Pending Location	42	PL	1220	X	X	[0..1]	
Prior Temporary Location	43	PL	1220	X	X	[0..1]	

TABLE 5-3D: PATIENT VISIT SEGMENT (PV1)
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Admit Date/Time	44	TS	26	R	R	[1..1]	**Conformance Statement SS-010:** PV1-44 (Admit Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the admit date/time. This field is also used to reflect the date/time of an outpatient/emergency patient registration. **Note**: Date and time of the patient presentation. **Data Element of Interest**: Admit Date/Time
Discharge Date/Time	45	TS	26	X	X	[0..1]	**Definition**: This field shall not be populated in an Admission message
Current Patient Balance	46	NM	12	X	X	[0..1]	
Total Charges	47	NM	12	X	X	[0..1]	
Total Adjustments	48	NM	12	X	X	[0..1]	
Total Payments	49	NM	12	X	X	[0..1]	
Alternate Visit ID	50	CX	250	X	X	[0..1]	HL7 table 0203: User defined: Identifier type
Visit Indicator	51	IS	1	X	X	[0..1]	HL7 table 0326: User defined: Visit Indicator
Other Healthcare Provider	52	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID

Patient Visit – Additional Information (PV2) Segment

The PV2 segment is a continuation of visit-specific information and is the segment where the Admit Reason is passed.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-3E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Prior Pending Location	1	PL	1220	X	X	[0..1]	
Accommodation Code	2	CE	478	X	X	[0..1]	HL7 table 0129: User defined: Accommodation Code
Admit Reason	3	CE	478	RE	RE	[0..1]	**Definition**: This field contains the short description of the providers' reason for patient admission. **NOTE**: It may be coded (CE:1 and CE:3) or Free text (CE:2.) **Data Element of Intere**st: Admit Reason

Identifier	3.1	ST	20	RE	RE	[0..1]	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM
							        Or
							PHVS_AdministrativeDiagnosis_ICD-10CM
							        Or
							PHVS_Disease_CDC
							Conformance Statement SS-009: The implementation SHALL support all 3 value sets.

Text	3.2	ST	199	RE	RE	[0..1]	If only Free Text is used, it is communicated in this component.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-3E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Name of Coding System	3.3	ID	20	C	C	[0..1]	**Condition Predicate:** If PV2-3.1 (the identifier) is provided then PV2-3.3 is valued. **Conformance Statement SS-026:**PV2-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Transfer Reason	4	CE	478	X	X	[0..1]	
Patient Valuables	5	ST	25	X	X	[0..*]	
Patient Valuables Location	6	ST	25	X	X	[0..1]	
Visit User Code	7	IS	2	X	X	[0..*]	HL7 table 0130: User defined: Visit User Code
Expected Admit Date/Time	8	TS	26	X	X	[0..1]	
Expected Discharge Date/Time	9	TS	26	X	X	[0..1]	
Estimated Length of Inpatient Stay	10	NM	3	X	X	[0..1]	

TABLE 5-3E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Actual Length of Inpatient Stay	11	NM	3	X	X	[0..1]	
Visit Description	12	ST	50	X	X	[0..1]	
Referral Source Code	13	XCN	309	X	X	[0..*]	
Previous Service Date	14	DT	8	X	X	[0..1]	
Employment Illness Related Indicator	15	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Purge Status Code	16	IS	1	X	X	[0..1]	HL7 table 0213: User defined: Purge Status Code
Purge Status Date	17	DT	8	X	X	[0..1]	
Special Program Code	18	IS	2	X	X	[0..1]	HL7 table 0214: User defined: Special Program Code
Retention Indicator	19	ID	1	X	X	[0..1]	HL7 table 0136: User defined: Retention Indicator
Expected Number of Insurance Plans	20	NM	1	X	X	[0..1]	
Visit Publicity Code	21	IS	1	X	X	[0..1]	HL7 table 0215: User defined: Visit Publicity Code
Visit Protection Indicator	22	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

TABLE 5-3E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Clinic Organization Name	23	XON	250	X	X	[0..*]	
Patient Status Code	24	IS	2	X	X	[0..1]	HL7 table 0216: User defined: Patient Status code
Visit Priority Code	25	IS	1	X	X	[0..1]	HL7 table 0217: User defined: Visit Priority code
Previous Treatment Date	26	DT	8	X	X	[0..1]	
Expected Discharge Disposition	27	IS	2	X	X	[0..1]	HL7 table 0112: User defined: Discharge Disposition
Signature on File Date	28	DT	8	X	X	[0..1]	
First Similar Illness Date	29	DT	8	X	X	[0..1]	
Patient Charge Adjustment Code	30	CE	478	X	X	[0..1]	HL7 table 0218: User defined: Charge Adjustment Code
Recurring Service Code	31	IS	2	X	X	[0..1]	HL7 table 0219: User defined: Recurring Service Code
Billing Media Code	32	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Expected Surgery Date and Time	33	TS	26	X	X	[0..1]	
Military Partnership Code	34	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

TABLE 5-3E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Military Non-Availability Code	35	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Newborn Baby Indicator	36	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Baby Detained Indicator	37	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Mode of Arrival Code	38	CE	478	X	X	[0..1]	HL7 table 0430: User defined: Mode of Arrival Code
Recreational Drug Use Code	39	CE	478	X	X	[0..*]	HL7 table 0431: User defined: Recreational Drug Use Code
Admission Level of Care Code	40	CE	478	X	X	[0..1]	HL7 table 0432: User defined: Admission Level of Care Code
Precaution Code	41	CE	478	X	X	[0..*]	HL7 table 0433: User defined: Precaution Code
Patient Condition Code	42	CE	478	X	X	[0..1]	HL7 table 0434: User defined: Patient Condition Code
Living Will Code	43	IS	2	X	X	[0..1]	HL7 table 0315: User defined: Living Will Code
Organ Donor Code	44	IS	2	X	X	[0..1]	HL7 table 0316: User defined: Organ Donor Code
Advance Directive Code	45	CE	478	X	X	[0..*]	HL7 table 0435: User defined: Advance Directive Code
Patient Status Effective Date	46	DT	8	X	X	[0..1]	

TABLE 5-3E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Expected LOA Return Date/Time	47	TS	26	X	X	[0..1]	
Expected Pre-admission Testing Date/Time	48	TS	26	X	X	[0..1]	
Notify Clergy Code	49	IS	20	X	X	[0..*]	HL7 table 0534: User defined: Notify Clergy Code

Observation/Result (OBX) Segment

The OBX Segment in the ADT Message is used to transmit observations related to the patient and visit. In Table 2-5 if the data element is carried in an OBX and usage is 'Required', the segment and its fields must be populated. The data elements in Table 2.5 DATA ELEMENTS OF INTEREST that use OBX segments are not expected to utilize any specified Set ID number within a given set of OBX segments in a message. However, the Set IDs are required to be sequential.

TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - OBX	1	SI	4	R	R	[1..1]	**Note:** Set ID numbers the repetitions of the segments **Conformance Statement SS-027:** For the first repeat of the OBX segment, the sequence number **SHALL** be one (1), for the second repeat, the sequence number shall be two (2), etc. Example: OBX|1|…. OBX|2|…. OBX|3|…. **Definition**: This field contains the sequence number.

				TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Value Type	2	ID	3	R	R	[1..1]	**Conformance Statement SS-028:** OBX-2 **SHALL** be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD') PHVS_ValueType_SyndromicSurveillance **Definition**: This field contains the format of the observation value in OBX. Note: Identifies the structure of data in observation value (OBX.5)

TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Observation Identifier	3	CE	478	R	R	[1..1]	PHVS_ObservationIdentifier_SyndromicSurveillance **Definition**: This field contains a unique identifier for the observation. **Note**: Identifies data to be received in observation value (OBX.5) **Data Elements of Interest** communicated in OBX Segment may include: Facility Street address (Treating), Data Type: XAD:1, SAD:1 Facility City (Treating), Data Type: XAD:3 Facility State (Treating), Data Type: XAD:4 Facility ZIP Code (Treating), Data Type: XAD:5 Facility County (Treating), Data Type: XAD:9 Age, Data Type: NM Facility / Visit Type, Data Type: CWE (only for ED/UC) Chief Complaint/Reason for Visit, Data Type: CWE, (Free Text is preferred) Clinical Impression, Data Type: TX Initial Temperature, Data Type: NM Height, Data Type: NM, PHVS_HeightUnit_UCUM Weight, Data Type: NM, PHVS_WeightUnit_UCUM Smoking Status, PHVS_SmokingStatus_MU Triage Notes, Data Type: TX
Identifier	3.1	ST	20	R	R	[1..1]	
Text	3.2	ST	199	O	O	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-3.1 (the identifier) is provided then OBX-3.3 is valued.
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Observation Sub-ID	4	ST	20	X	X	[0..1]	
Observation Value	5	varies	99999	RE	RE	[0..*]	Listed below are the supported fields for each of the supported value types. **Definition**: This field contains the value observed by the observation producer. OBX-2-value type contains the data type for this field according to which observation value is formatted. **Note**: Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3). **Notes on Data Types:** TS Data Type: Unconstrained. Some values might be to the day, others to the year/ decade, etc. TX Data Type: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters). NM Data Type: A numeric data type is a number

TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer.
							CWE Data Type: Data Element: Facility / Visit Type (only for ED/UC)
							CWE-5:2 Text: It is strongly recommended that text be sent to accompany any identifier.
							CWE Data Type: Data Element: Chief Complaint / Reason for visit
							It is the short description of the patient's self-reported chief complaint or reason for visit.
							It is preferred that Free text is used.
							Free Text should appear in CWE:9
							XAD Data Type: Data Elements:
							Facility Street address (Treating), Data Type: XAD:1, SAD:1:
							Note: This is the first subcomponent of the SAD data type. This has the same effect as being the first component of the field, while limiting the length based on other subcomponents that are not supported.
							Facility City (Treating), Data Type: XAD:3
							Facility State (Treating), Data Type: XAD:4

TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							Facility ZIP Code (Treating), Data Type: XAD:5
							Facility County (Treating), Data Type: XAD:9
Beginning of OBX-5 Observation Value Usage Based on Data Type in OBX-2							
TS Data Type							
Time	5.1	DTM	24	RE	RE	[0..1]	
Degree of Precision	5.2	ST	1	X	X	[0..0]	
TX Data Type							
Text Data	5.1	TX	65536	RE	RE	[0..1]	
NM Data Type							
Numeric Value	5.1	ST	16	RE	RE	[0..1]	
CWE Data Type: Data Element #7 Facility / Visit Type (only for ED/UC)							
Identifier	5.1	ST	20	R	R	[1..1]	PHVS_FacilityVisitType_SyndromicSurveillance
Text	5.2	ST	199	RE	RE	[0..1]	
Name of Coding System	5.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.

TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	
Alternate Text	5.5	ST	199	RE	RE	[0..1]	.
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
Coding System Version ID	5.7	ST	10	O	O	[0..1]	
Alternate Coding System Version ID	5.8	ST	10	O	O	[0..1]	
Original Text	5.9	ST	199	RE	RE	[0..1]	Free text goes here
CWE Data Type: Data Element #25 Chief Complaint / Reason for visit- Free Text is preferred							
Identifier	5.1	ST	20	RE	RE	[0..1]	**Conformance Statement SS-005:** If patient's chief complaint is captured as an unstructured, free-text note, then chief complaint **SHALL** be valued in OBX-5, CWE:9. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation Identifier Example OBX Segment (free text): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^STOMACH ACHE||||||F|||201102171531 **Conformance Statement SS-006:** If patient's chief

TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							complaint is captured from a Coding System, then chief complaint **SHALL** be valued in OBX- 5, CWE:1, CWE:2, CWE:3. PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **or** PHVS_CauseOfDeath_ICD-10_CDC **or** PHVS_Disease_CDC **Conformance Statement SS-004**: The implementation **SHALL** support all 3 value sets. Example OBX Segment (coded): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX||||||F|||20110217 **Conformance Statement SS-007:** If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX- 5, CWE:2. OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^Dizziness and giddiness||||||F|||20110217 **Conformance Statement SS-008:** The implementation **SHALL** support a minimum of 70 characters for unstructured, free-text patient's chief complaint.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Text	5.2	ST	199	RE	RE	[0..1]	
Name of Coding System	5.3	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	
Alternate Text	5.5	ST	199	RE	RE	[0..1]	
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
Coding System Version ID	5.7	ST	10	O	O	[0..1]	
Alternate Coding System Version ID	5.8	ST	10	O	O	[0..1]	
Original Text	5.9	ST	199	RE	RE	[0..1]	Free text is Preferred and it goes here
XAD Data Type							
Street Address	5.1	SAD	184	O	O	[0..1]	
Street or Mailing Address	5.1.1	ST	120	O	O	[0..1]	
Street Name	5.1.2	ST	50	O	O	[0..1]	
Dwelling Number	5.1.3	ST	12	O	O	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)							
Other Designation	5.2	ST	120	O	O	[0..1]	
City	5.3	ST	50	O	O	[0..1]	The ISDS recommendations recommend free text City/Town designations.
State or Province	5.4	ST	50	O	O	[0..1]	PHVS_State_FIPS_5-2
ZIP or Postal Code	5.5	ST	12	O	O	[0..1]	USPS
Country	5.6	ID	3	O	O	[0..1]	PHVS_Country_ISO_3166-1
Address Type	5.7	ID	3	O	O	[0..1]	PHVS_AddressType_HL7_2x
Other Geographic Designation	5.8	ST	50	O	O	[0..1]	
County/Parish Code	5.9	IS	20	O	O	[0..1]	The ISDS recommendations allow free text County designations.
Census Tract	5.10	IS	20	X	X	[0..1]	
Address Representation Code	5.11	ID	1	X	X	[0..1]	
Address Validity Range	5.12	DR	53	X	X	[0..0]	
Effective Date	5.13	TS	26	X	X	[0..1]	
Expiration Date	5.14	TS	26	X	X	[0..1]	

TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
End of OBX-5 Observation Value Usage Based on Data Type in OBX-2						
Units	6	CE	62	C	C	[0..1]	**Condition Predicate:** If OBX.2 (Value Type) is valued "NM" **Background**: When an observation's value is measured on a continuous scale, one must report the measurement units within the unit's field of the OBX segment. **Data Elements of Interest:** Age units Initial Temperature units Height units Weight Units PHVS_AgeUnit_SyndromicSurveillance
Identifier	6.1	ST	20	R	R	[1..1]	**Conformance Statement SS-029:** If OBX 3.1 is valued with 21612-7, then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance **Conformance Statement SS-030:** If OBX 3.1 = is valued with 11289-6 then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_TemperatureUnit_UCUM **Conformance Statement SS-031:** If OBX 3.1 is valued with 59408-5 then OBX6.1 (Identifier) **SHALL** be valued to a member of the set PHVS_PulseOximetryUnit_UCUM
Text	6.2	ST	20	O	O	[0..1]	

			TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)				
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Name of Coding System	6.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-6.1 (the identifier) is provided then OBX-6.3 is valued.
Alternate Identifier	6.4	ST	20	X	X	[0..1]	
Alternate Text	6.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	6.6	ID	20	X	X	[0..1]	
References Range	7	ST	60	X	X	[0..1]	
Abnormal Flags	8	IS	5	X	X	[0..*]	
Probability	9	NM	5	X	X	[0..1]	
Nature of Abnormal Test	10	ID	2	X	X	[0..*]	HL7 table 0080: HL7 defined: Nature of Abnormal Test
Observation Result Status	11	ID	1	R	R	[1..1]	HL7 table 0085: HL7 defined: Observation Result Status **Definition**: This field contains the observation result status. This field reflects the current completion status of the results for one Observation Identifier.
Effective Date of Reference Range	12	TS	26	X	X	[0..1]	
User Defined Access Checks	13	ST	20	X	X	[0..1]	

TABLE 5-3F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Date/Time of the Observation	14	TS	26	O	O	[0..1]	**Definition**: This field is the observation date-time is the physiologically relevant date-time or the closest approximation to that date-time
Producer's ID	15	CE	478	X	X	[0..1]	
Responsible Observer	16	XCN	309	X	X	[0..*]	
Observation Method	17	CE	478	X	X	[0..*]	
Equipment Instance Identifier	18	EI	424	X	X	[0..*]	
Date/Time of the Analysis	19	TS	26	X	X	[0..1]	

Diagnosis (DG1) Segment

The DG1 segment contains patient diagnosis information of various types. syndromic surveillance supports Admitting, Working and Final Diagnosis types.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-3G: DIAGNOSIS SEGMENT (DG1)
Set ID - DG1	1	SI	4	R	R	[1..1]	**Conformance Statement SS-032:** DG1-1 (Set ID) for the first occurrence of a DG1 Segment **SHALL** have the Literal Value of '1'. Each following occurrence **SHALL** be numbered consecutively **Definition**: This field contains the number that identifies this transaction. For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc.
Diagnosis Coding Method	2	ID	2	X	X	[0..1]	HL7 table 0053: User defined: Diagnosis Coding Method
Diagnosis Code - DG1	3	CE	478	R	R	[1..1]	**Definition**: This contains the diagnosis code assigned to this diagnosis. **Data Element of Interest**: Diagnosis **Condition Predicate:** If the DG1 Segment is provided, DG1-3 (Diagnosis) is required to be valued.

Identifier	3.1	ST	20	R	RE	[0..1]	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM
							        Or
							PHVS_AdministrativeDiagnosis_ICD-10CM
							        Or
							PHVS_Disease_CDC
							
							Conformance Statement SS-011: The implementation **SHALL** support all 3 value sets.

TABLE 5-3G: DIAGNOSIS SEGMENT (DG1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Text	3.2	ST	199	RE	RE	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If DG1-3.1 (the identifier) is provided then DG1-3.3 is valued. **Conformance Statement SS-033:** DG1-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Diagnosis Description	4	ST	40	X	X	[0..0]	
Diagnosis Date/Time	5	TS	26	O	O	[0..1]	**Definition**: This field contains the date/time that the diagnosis was determined
Diagnosis Type	6	IS	2	R	R	[1..1]	PHVS_DiagnosisType_HL7_2x **Definition**: This field contains a code that identifies the type of diagnosis being sent **Note**: Identifies the type of diagnosis being sent. **Data Element of Interest:** Diagnosis type **Condition Predicate:** If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued.

				TABLE 5-3G: DIAGNOSIS SEGMENT (DG1)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Major Diagnostic Category	7	CE	478	X	X	[0..0]	HL7 table 0118: User defined: Major Diagnostic Category
Diagnostic Related Group	8	CE	478	X	X	[0..0]	HL7 table 0055: User defined: Diagnostic Related Group
DRG Approval Indicator	9	ID	1	X	X	[0..0]	HL7 table 0136: HL7 defined: Yes/no Indicator
DRG Grouper Review Code	10	IS	2	X	X	[0..0]	HL7 table 0056: User defined: DRG Grouper Review Code
Outlier Type	11	CE	478	X	X	[0..0]	HL7 table 0083: User defined: Outlier Type
Outlier Days	12	NM	3	X	X	[0..0]	
Outlier Cost	13	CP	538	X	X	[0..0]	
Grouper Version And Type	14	ST	4	X	X	[0..0]	
Diagnosis Priority	15	ID	2	X	X	[0..1]	HL7 table 0359: HL7 defined: Diagnosis Priority
Diagnosing Clinician	16	XCN	309	X	X	[0..*]	
Diagnosis Classification	17	IS	3	X	X	[0..1]	HL7 table 0228: User defined: Diagnosis Classification
Confidential Indicator	18	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator

TABLE 5-3G: DIAGNOSIS SEGMENT (DG1)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Attestation Date/Time	19	TS	26	X	X	[0..1]	
Diagnosis Identifier	20	EI	427	X	X	[0..1]	
Diagnosis Action Code	21	ID	1	X	X	[0..1]	HL7 table 0206: HL7 defined: Segment Action Code

Procedures (PR1) Segment

The PR1 segment is used to carry information relative to various types of procedures performed.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-3H: PROCEDURES SEGMENT (PR1)
Set ID – PR1	1	SI	4	R	R	[1..1]	**Conformance Statement SS-034:** For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc. **Definition**: This field contains the number that identifies this transaction.
Procedure Coding Method	2	IS	3	X	X	[0..1]	HL7 table 0089: User defined: Procedure Coding Method
Procedure Code	3	CE	478	R	R	[1..1]	**Definition**: This field contains a unique identifier assigned to the procedure **Data Element of Interest**: Procedure Code
Identifier	3.1	ST	20	RE	RE	[0..1]	CPT-4
Text	3.2	ST	199	O	O	[0..1]	Free Text
Name of Coding System	3.3	ID	20	CE	CE	[1..1]	**Condition Predicate:** If PR1-3.1 (the identifier) is provided then PR1-3.3 is valued.
Procedure Description	4	ST	40	X	X	[0..0]	
Procedure Date/Time	5	TS	26	R	R	[1..1]	**Definition**: This field contains the date/time that the procedure was performed.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Procedure Functional Type	6	IS	2	X	X	[0..1]	HL7 table 0230: User defined: Procedure Functional Type
Procedure Minutes	7	NM	4	X	X	[0..1]	
Anesthesiologist	8	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Anesthesia Code	9	IS	2	X	X	[0..1]	HL7 table 0019: User defined: Anesthesia Code
Anesthesia Minutes	10	NM	4	X	X	[0..1]	
Surgeon	11	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Procedure Practitioner	12	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Consent Code	13	CE	478	X	X	[0..1]	HL7 table 0059: User defined: Consent code
Procedure Priority	14	ID	2	X	X	[0..1]	HL7 table 0418: HL7 defined: Procedure Priority
Associated Diagnosis Code	15	CE	478	X	X	[0..1]	HL7 table 0051: User defined: Diagnosis Code
Procedure Code Modifier	16	CE	478	X	X	[0..*]	HL7 table 0340: User defined: Procedure Code Modifier
Procedure DRG Type	17	IS	20	X	X	[0..1]	HL7 table 0416: User defined: Procedure DRG Type
Tissue Type Code	18	CE	478	X	X	[0..*]	HL7 table 0417: User defined: Tissue Type Code

TABLE 5-3H: PROCEDURES SEGMENT (PR1)

TABLE 5-3H: PROCEDURES SEGMENT (PR1)							
Field Name	**Seq**	**DT**	**Lengt h**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Procedure Identifier	19	EI	427	X	X	[0..1]	
Procedure Action Code	20	ID	1	X	X	[0..1]	HL7 table 0206: HL7 defined: Segment Action Code

Insurance (IN1) Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.

TABLE 5-3I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID – IN1	1	SI	4	R	R	[1..1]	**Definition**: The Set ID in the IN1 segment is used to aggregate the grouping of insurance segments. **Note**: SET ID numbers the repetitions of the segments.
Insurance Plan ID	2	CE	478	R	R	[1..1]	HL7 table 0072: User defined: Insurance Plan ID **Definition**: This field contains a unique identifier for the insurance plan.
Insurance Company ID	3	CX	250	R	R	[1..*]	**Definition**: This field contains unique identifiers for the insurance company. The assigning authority and identifier type code are strongly recommended for all CX data types.
Insurance Company Name	4	XON	250	X	X	[0..*]	
Insurance Company Address	5	XAD	513	X	X	[0..*]	
Insurance Co Contact Person	6	XPN	294	X	X	[0..*]	
Insurance Co Phone Number	7	XTN	250	X	X	[0..*]	
Group Number	8	ST	12	X	X	[0..1]	

TABLE 5-3I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Group Name	9	XON	250	X	X	[0..*]	
Insured_s Group Emp ID	10	CX	250	X	X	[0..*]	
Insured_s Group Emp Name	11	XON	250	X	X	[0..*]	
Plan Effective Date	12	DT	8	X	X	[0..1]	
Plan Expiration Date	13	DT	8	X	X	[0..1]	
Authorization Information	14	AUI	239	X	X	[0..1]	
Plan Type	15	IS	3	O	O	[0..1]	HL7 table 0086: User defined: Plan Type **Definition**: This field contains the coding structure that identifies the various plan types, for example, Medicare, Medicaid, Blue Cross, HMO, etc.
Name Of Insured	16	XPN	294	X	X	[0..*]	
Insured_ Relationship To Patient	17	CE	478	X	X	[0..1]	HL7 table 0063: User defined: Relationship
Insured_ Date Of Birth	18	TS	26	X	X	[0..1]	
Insured_ Address	19	XAD	513	X	X	[0..*]	
Assignment Of Benefits	20	IS	2	X	X	[0..1]	HL7 table 0135: User defined: Assignment of Benefits

TABLE 5-3I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Coordination Of Benefits	21	IS	2	X	X	[0..1]	HL7 table 0173: User defined: Coordination of Benefits
Coord Of Ben. Priority	22	ST	2	X	X	[0..1]	
Notice Of Admission Flag	23	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator
Notice Of Admission Date	24	DT	8	X	X	[0..1]	
Report Of Eligibility Flag	25	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator
Report Of Eligibility Date	26	DT	8	X	X	[0..1]	
Release Information Code	27	IS	2	X	X	[0..1]	HL7 table 0093: User defined: Release of Information Code
Pre-Admit Cert (PAC)	28	ST	15	X	X	[0..1]	
Verification Date/Time	29	TS	26	X	X	[0..1]	
Verification By	30	XCN	309	X	X	[0..*]	
Type Of Agreement Code	31	IS	2	X	X	[0..1]	HL7 table 0098: User defined: Type Of Agreement Code
Billing Status	32	IS	2	X	X	[0..1]	HL7 table 0022: User defined: Billing Status
Lifetime Reserve Days	33	NM	4	X	X	[0..1]	

TABLE 5-3I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Delay Before L.R. Day	34	NM	4	X	X	[0..1]	
Company Plan Code	35	IS	8	X	X	[0..1]	HL7 table 0042: User defined: Company Plan Code
Policy Number	36	ST	15	X	X	[0..1]	
Policy Deductible	37	CP	538	X	X	[0..1]	
Policy Limit - Amount	38	CP	538	X	X	[0..0]	
Policy Limit - Days	39	NM	4	X	X	[0..1]	
Room Rate - Semi-Private	40	CP	538	X	X	[0..0]	
Room Rate - Private	41	CP	538	X	X	[0..0]	
Insured_ Employment Status	42	CE	478	X	X	[0..1]	HL7 table 0066: User defined: Employment Status
Insured_ Administrative Sex	43	IS	1	X	X	[0..1]	HL7 table 0001: User defined: Administrative Sex
Insured_ Employer_s Address	44	XAD	513	X	X	[0..*]	
Verification Status	45	ST	2	X	X	[0..1]	
Prior Insurance Plan ID	46	IS	8	X	X	[0..1]	HL7 Table 0072: User defined: Insurance Plan ID
Coverage Type	47	IS	3	X	X	[0..1]	HL7 Table 0309: User defined: Coverage Type

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
				TABLE 5-3I: INSURANCE SEGMENT (IN1)			
Handicap	48	IS	2	X	X	[0..1]	HL7 Table 0295: User defined: Handicap
Insured_ ID Number	49	CX	250	X	X	[0..*]	
Signature Code	50	IS	1	X	X	[0..1]	HL7 Table 0535: User defined: Signature Code
Signature Code Date	51	DT	8	X	X	[0..1]	
Insured_ Birth Place	52	ST	250	X	X	[0..1]	
VIP Indicator	53	IS	2	X	X	[0..1]	HL7 Table 0099: User defined: VIP Indicator

REGISTER A PATIENT MESSAGE (ADT^A04)

ADT^A04 messages are used to communicate syndromic surveillance data to PHAs in the event of a patient visit registration to an emergency department or urgent care facility.

SEG	NAME	DESCRIPTION	USAGE	CARDINALITY
TABLE 5-4: ADT^A04 REGISTER A PATIENT				
MSH	Message Header	Information explaining how to parse and process the message Information includes identification of message delimiters, sender, receiver, message type, timestamp, etc.	R	[1..1]
EVN	Event Type	Trigger event information for receiving application	R	[1..1]
PID	Patient Identification	Patient identifying and demographic information	R	[1..1]
PV1	Patient Visit	Information related to this visit at this facility including the nature of the visit, critical timing information and a unique visit identifier.	R	[1..1]
[PV2]	Patient Visit Additional Information	Admit Reason information.	RE	[0..1]
{OBX}	Observation / Result	Information regarding the age, temperature, and other information	R	[1..*]
[{DG1}]	Diagnosis	Admitting Diagnosis and, optionally, Working and Final Diagnosis information	RE	[0..*]
[{PR1}]	Procedures	Information relative to various types of procedures performed	O	[0..*]

		TABLE 5-4: ADT^A04 REGISTER A PATIENT		
SEG	**NAME**	**DESCRIPTION**	**USAGE**	**CARDINALITY**
[{IN1}]	Insurance	Information about insurance policy coverage information	O	[0..*]

Message Header (MSH) Segment

The MSH Segment is used to define the intent, source, destination, and some specifics of the syntax of the message. This segment includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

TABLE 5-4A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Field Separator	1	ST	1	R	R	[1..1]	**Definition**: This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such, the field serves as the separator and defines the character to be used as a separator for the rest of the message. Default value is |, (ASCII 124).
Encoding Characters	2	ST	4	R	R	[1..1]	**Definition**: This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Default values are ^~\& (ASCII 94, 126, 92, and 38, respectively).
Sending Application	3	HD	227	O	O	[0..1]	**Definition**: This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.

				TABLE 5-4A: MESSAGE HEADER SEGMENT (MSH)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Sending Facility	4	HD	227	R	R	[1..1]	National Provider Identifier. (10-digit identifier) **Definition**: This field further describes the sending application, MSH-3-sending application. This field uniquely identifies the facility associated with the application that sends the message. If Acknowledgements are in use, this facility will receive any related Acknowledgement message. **Note**: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field
Namespace ID	4.1	IS	20	RE	RE	[0..1]	
Universal ID	4.2	ST	199	R	R	[1..1]	
Universal ID Type	4.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance
Receiving Application	5	HD	227	O	O	[0..1]	HL7 table 0361: User-defined: Application **Definition**: This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.
Receiving Facility	6	HD	227	O	O	[0..1]	HL7 table 0362: User-defined: Facility **Definition**: This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations

TABLE 5-4A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Date/Time Of Message	7	TS	26	R	R	[1..1]	**Conformance Statement SS-013:** MSH-7 (Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone. **Note**: MSH-7 (Date/Time of Message) does not have to equal EVN-2 (Message Date/Time)
Security	8	ST	40	X	X	[0..1]	
Message Type	9	MSG	15	R	R	[1..1]	**Conformance Statement SS-014:** MSH-9 (Message Type) **SHALL** be the literal value: 'ADT^A04^ADT_A01'', **Definition**: This field contains the message type, trigger event, and the message structure ID for the message.
Message Code	9.1	ID	3	R	R	[1..1]	PHVS_MessageType_SyndromicSurveillance
Trigger Event	9.2	ID	3	R	R	[1..1]	PHVS_EventType_SyndromicSurveillance
Message Structure	9.3	ID	7	R	R	[1..1]	PHVS_MessageStructure_SyndromicSurveillance

TABLE 5-4A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Message Control ID	10	ST	199	R	R	[1..1]	**Definition**: This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA). **Note**: This field is a number or other identifier that uniquely identifies the message.
Processing ID	11	PT	3	R	R	[1..1]	**Conformance Statement SS-015:** MSH-11 (Processing ID) **SHALL** have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training. **Definition**: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. **Note**: Indicates how to process the message as defined in HL7 processing rules
Version ID	12	VID	5	R	R	[1..1]	**Conformance Statement SS-016:** MSH-12 (Version ID) **SHALL** have a value '2.5.1' **Definition**: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. For this message the value shall be 2.5.1 **Note**: HL7 version number used to interpret format and content of the message.
Sequence Number	13	NM	15	X	X	[0..1]	
Continuation Pointer	14	ST	180	X	X	[0..1]	

TABLE 5-4A: MESSAGE HEADER SEGMENT (MSH)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Accept Acknowledgement Type	15	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Application Acknowledgement Type	16	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Country Code	17	ID	3	X	X	[0..1]	HL7 table 0399: HL7 defined: Country code
Character Set	18	ID	16	X	X	[0..*]	HL7 table 0211: HL7 defined: Alternate character sets
Principal Language Of Message	19	CE	478	X	X	[0..1]	
Alternate Character Set Handling Scheme	20	ID	20	X	X	[0..1]	HL7 table 0356: HL7 defined: Alternate character set handling scheme

TABLE 5-4A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Message Profile Identifier	21	EI	427	R	R	[0..1]	**Conformance Statement SS-017:** An instance of MSH.21 (Message Profile Identifier) **SHALL** contain the constant value: PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-NoAck^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-Batch^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Batch^SS Receiver^2.16.840.1.114222.4.10.3^ISO **Definition**: Sites may use this field to assert adherence to, or reference, a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages.

Event Type (EVN) Segment

The EVN segment is used to communicate trigger event information to receiving applications.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Event Type Code	1	ID	3	X	X	[0..0]	PHVS_EventType_SyndromicSurveillance
Recorded Date/Time	2	TS	26	R	R	[1..1]	**Conformance Statement SS-018:** EVN-2 (Recorded Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Note:** EVN-2 (Recorded Date/Time) does not have to equal MSH-7 (Date/Time of Message) **Note:** Most systems default to the system Date/Time when the transaction was entered. **Data Element of Interest:** Message Date/Time
Date/Time Planned Event	3	TS	26	X	X	[0..1]	
Event Reason Code	4	IS	3	X	X	[0..1]	HL7 table 0062: User defined: Event reason
Operator ID	5	XCN	309	X	X	[0..*]	HL7 table 0188: User defined: Operator ID
Event Occurred	6	TS	26	X	X	[0..1]	

TABLE 5-4B: EVENT TYPE SEGMENT (EVN)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Event Facility	7	HD	241	R	R	[1..1]	**Definition**: This field identifies the location where the patient was actually treated. **Note**: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field. **Data Element of Interest**: Facility Identifier (Treating) (EVN-7.1) **Data Element of Interest**: Facility Name (Treating) (EVN-7.2)
Namespace ID	7.1	IS	20	RE	RE	[0..1]	Recommend the use of the Organization Name Legal Business Name (LBN) associated with the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.

TABLE 5-4B: EVENT TYPE SEGMENT (EVN)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Universal ID	7.2	ST	199	R	R	[1..1]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.
Universal ID Type	7.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance

Patient Identification (PID) Segment

The PID Segment is used as the primary means of communicating patient identification information. This segment contains pertinent patient identifying and demographic information.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - PID	1	SI	4	R	R	[1..1]	**Conformance Statement SS-019:** PID-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one.
Patient ID	2	CX	20	X	X	[0..0]	
Patient Identifier List	3	CX	478	R	R	[1..*]	**Definition**: PID.3 is a repeating field that can accommodate multiple patient identifiers. **Note**: Patient's unique identifier(s) from the facility that is submitting this report to public health officials Different jurisdictions use different identifiers and may often use a combination of identifiers to produce a unique patient identifier. Patient identifiers should be strong enough to remain a unique identifier across different data provider models, such as a networked data provider or State HIE. **Data Element of Interest:** Unique Patient Identifier
ID Number	3.1	ST	15	R	R		

TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Check Digit	3.2	ST	1	X	X	[0..1]	
Check Digit Scheme	3.3	ID	3	X	X	[0..1]	HL7 table 0061: HL7 defined: Check digit scheme
Assigning Authority	3.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning authority
Identifier Type Code	3.5	ID	5	R	R	[1..1]	PHVS_IdentifierType_SyndromicSurveillance
Assigning Facility	3.6	HD	227	O	RE	[0..1]	
Effective Date	3.7	DT	8	X	X	[0..1]	
Expiration Date	3.8	DT	8	X	X	[0..1]	
Assigning Jurisdiction	3.9	CWE	705	X	X	[0..1]	
Assigning Facility	3.10	CWE	705	X	X	[0..1]	
Alternate Patient ID - PID	4	CX	20	X	X	[0..0]	
Patient Name	5	XPN	294	R	R	[1..*]	**Note:** Syndromic surveillance does not require the patient name. A Visit or Patient ID, as specified within this guide, shall be used by PHAs to join related visit data and for working with hospitals to find additional visit information for syndromic surveillance signal confirmation or investigation. Since, however, HL7 requires the patient name, the field must be populated even when data patient

TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							name shall not be sent. In such an instance (i.e., patient name is not sent), patient name shall be presented in a pseudonymized manner.
							Conformance Statement SS-020: If **PID-5** (Patient Name) is unknown then the first occurrence of PID-5 **SHALL NOT** be valued.
							Conformance Statement SS-021: If **PID-5** (Patient Name) is unknown then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "U" (i.e., PID-5 shall be valued as |~^^^^^^U|).
							Conformance Statement SS-022: If **PID-5** (Patient Name) is known, but not desired to be sent, then the first occurrence of PID-5 **SHALL NOT** be valued.
							Conformance Statement SS-023: If **PID-5** (Patient Name) is known, but not desired to be sent, then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "S" (i.e., PID-5 shall be valued as ~^^^^^^S|). The second name field indicates that it is unspecified.
							Definition: This field contains the names of the patient; the primary or legal name of the patient is reported first. Therefore, the name type code in this field should be "L - Legal".
Family Name	5.1	FN	194	O	RE	[0..1]	

TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Given Name	5.2	ST	30	O	RE	[0..1]	
Second Given Name or Initials	5.3	ST	30	O	RE	[0..1]	
Suffix	5.4	ST	20	O	RE	[0..1]	
Prefix	5.5	ST	20	O	RE	[0..1]	
Degree	5.6	IS	6	X	X	[0..0]	HL7 table 0360: User defined: Degree/license/certificate
Name Type Code	5.7	ID	1	R	R	[1..1]	PHVS_NameType_SyndromicSurveillance
Name Representation Code	5.8	ID	1	X	X	[0..1]	
Name Context	5.9	CE	483	X	X	[0..1]	
Name Validity Range	5.10	DR	53	X	X	[0..0]	
Name Assembly Order	5.11	ID	1	X	X	[0..1]	HL7 table 0444: HL7 defined: Name assembly order
Effective Date	5.12	TS	26	X	X	[0..1]	
Expiration Date	5.13	TS	26	X	X	[0..1]	
Professional Suffix	5.14	ST	199	X	X	[0..1]	

TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Mother's Maiden Name	6	XPN	294	X	X	[0..*]	
Date/Time of Birth	7	TS	26	O	O	[0..1]	**Definition**: This field contains the patient's date and time of birth.
Administrative Sex	8	IS	1	RE	RE	[0..1]	PHVS_Sex_SyndromicSurveillance **Definition**: This field contains the patient's sex. **Data Element of Interest**: Sex
Patient Alias	9	XPN	294	X	X	[0..0]	
Race	10	CE	478	RE	RE	[0..*]	**Definition**: This field refers to the patient's race **Note**: Patient could have more than one race defined. **Data Element of Interest**: Race
Identifier	10.1	ST	20	RE	RE	[0..1]	PHVS_RaceCategory_CDC
Text	10.2	ST	199	O	RE	[0..1]	
Name of Coding System	10.3	ID	20	CE	C	[0..1]	**Condition Predicate:** If PID-10.1 (the identifier) is provided, then PID 10.3 is valued.
Alternate Identifier	10.4	ST	20	X	X	[0..1]	
Alternate Text	10.5	ST	199	X	X	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)							
Name of Alternate Coding System	10.6	ID	20	X	X	[0..1]	
Patient Address	11	XAD	513	RE	RE	[0..1]	**Definition**: This field contains the mailing address of the patient. **Note**: Expecting only the patient primary (current) address information in the supported components
Street Address	11.1	SAD	184	O	O	[0..1]	
Other Designation	11.2	ST	120	O	O	[0..1]	
City	11.3	ST	50	O	O	[0..1]	**Data Element of Interest:** Patient City/Town
State or Province	11.4	ST	50	O	O	[0..1]	PHVS_State_FIPS_5-2 **Data Element of Interest:** Patient State
ZIP or Postal Code	11.5	ST	12	RE	RE	[0..1]	USPS **Data Element of Interest**: Patient ZIP Code
Country	11.6	ID	3	O	O	[0..1]	PHVS_Country_ISO_3166-1 **Data Element of Interest:** Patient Country
Address Type	11.7	ID	3	O	O	[0..1]	PHVS_AddressType_HL7_2x
Other Geographic Designation	11.8	ST	50	O	O	[0..1]	

TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
County/Parish Code	11.9	IS	20	RE	RE	[0..1]	PHVS_County_FIPS_6-4 **Data Element of Interest**: Patient County
Census Tract	11.10	IS	20	X	X	[0..1]	
Address Representation Code	11.11	ID	1	X	X	[0..1]	
Address Validity Range	11.12	DR	53	X	X	[0..0]	
Effective Date	11.13	TS	26	X	X	[0..1]	
Expiration Date	11.14	TS	26	X	X	[0..1]	
County Code	12	IS	4	X	X	[0..0]	HL7 table 0289: User defined: County/parish
Phone Number - Home	13	XTN	250	X	X	[0..*]	
Phone Number - Business	14	XTN	250	X	X	[0..*]	
Primary Language	15	CE	478	X	X	[0..1]	HL7 table 0296: User defined: Primary Language
Marital Status	16	CE	478	X	X	[0..1]	HL7 table 0002: User defined: Marital Status
Religion	17	CE	478	X	X	[0..1]	HL7 table 0006: User defined: Religion
Patient Account Number	18	CX	250	O	O	[0..1]	**Definition**: This field contains the patient account number assigned by accounting to which all

TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**

Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							charges, payments, etc., are recorded. It is used to identify the patient's account.
SSN Number - Patient	19	ST	16	X	X	[0..0]	
Driver's License Number - Patient	20	DLN	64	X	X	[0..0]	
Mother's Identifier	21	CX	250	X	X	[0..*]	
Ethnic Group	22	CE	478	RE	RE	[0..1]	**Definition**: This field further defines the patient's ancestry. **Data Element of Interest**: Ethnicity
Identifier	22.1	ST	20	RE	RE	[0..1]	PHVS_EthnicityGroup_CDC
Text	22.2	ST	199	O	O	[0..1]	
Name of Coding System	22.3	ID	20	CE	CE	[0..1]	**Condition Predicate:** If PID-22.1 (the identifier) is provided then PID 22.3 is valued.
Alternate Identifier	22.4	ST	20	X	X	[0..1]	
Alternate Text	22.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	22.6	ID	20	X	X	[0..1]	
Birth Place	23	ST	250	X	X	[0..1]	

TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Multiple Birth Indicator	24	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Birth Order	25	NM	2	X	X	[0..1]	
Citizenship	26	CE	478	X	X	[0..*]	HL7 table 0171: User defined: Citizenship
Veterans Military Status	27	CE	478	X	X	[0..1]	HL7 table 0172: User defined: Veterans Military Status
Nationality	28	CE	478	X	X	[0..0]	HL7 table 0212: User defined: Nationality
Patient Death Date and Time	29	TS	26	X	X	[0..1]	**Definition**: This field shall not be populated on a registration message.
Patient Death Indicator	30	ID	1	X	X	[0..1]	**Definition**: This field shall not be populated on a registration message.
Identity Unknown Indicator	31	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Identity Reliability Code	32	IS	20	X	X	[0..*]	HL7 table 0445: User defined: Identity Reliability Code
Last Update Date/Time	33	TS	26	O	O	[0..1]	**Definition**: This field contains the last update date and time for the patient's/person's identifying and demographic data, as defined in the PID segment.
Last Update Facility	34	HD	241	O	O	[0..1]	**Definition**: This field identifies the facility of the last update to a patient's/person's identifying and demographic data, as defined in the PID segment.

TABLE 5-4C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Species Code	35	CE	478	X	X	[0..1]	HL7 table 0446: User defined: Species code
Breed Code	36	CE	478	X	X	[0..1]	HL7 table 0447: User defined: Breed code
Strain	37	ST	80	X	X	[0..1]	
Production Class Code	38	CE	478	X	X	[0..1]	HL7 table 0429: User defined: Production Class Code
Tribal Citizenship	39	CWE	697	X	X	[0..*]	HL7 table 0171: User defined: Citizenship

Patient Visit (PV1) Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on a visit-specific basis.

TABLE 5-4D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID - PV1	1	SI	4	RE	RE	[0..1]	**Conformance Statement SS-024:** PV1-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one
Patient Class	2	IS	1	R	R	[1..1]	PHVS_PatientClass_SyndromicSurveillance **Definition**: This field is used by systems to categorize patients by site. **Data Element of Interest**: Patient Class
Assigned Patient Location	3	PL	1220	O	O	[0..1]	**Definition**: This field contains the patient's initial assigned location or the location to which the patient is being moved. The first component may be the nursing station for inpatient locations, or clinic or department, for locations other than inpatient.
Admission Type	4	IS	2	O	O	[0..1]	HL7 table 0007: User defined: Admission type **Definition**: This field indicates the circumstances under which the patient was or will be admitted.
Pre-admit Number	5	CX	250	X	X	[0..1]	

							TABLE 5-4D: PATIENT VISIT SEGMENT (PV1)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Prior Patient Location	6	PL	1220	X	X	[0..1]	
Attending Doctor	7	XCN	309	O	O	[0..*]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier **Data Element of Interest:** Unique Physician Identifier.
Referring Doctor	8	XCN	309	X	X	[0..*]	HL7 table 0010: User defined: Physician ID
Consulting Doctor	9	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Hospital Service	10	IS	3	O	O	[0..1]	HL7 table 0069: User defined: Hospital Service **Definition**: This field contains the treatment or type of surgery that the patient is scheduled to receive.
Temporary Location	11	PL	1220	X	X	[0..1]	
Preadmit Test Indicator	12	IS	2	X	X	[0..1]	HL7 table 0087: User defined: Pre-Admit Test Indicator
Re-admission Indicator	13	IS	2	X	X	[0..1]	HL7 table 0092: User defined: Re-admission Indicator

TABLE 5-4D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Admit Source	14	IS	6	O	O	[0..1]	HL7 table 0023: User defined: Admit Source **Definition**: This field indicates where the patient was admitted.
Ambulatory Status	15	IS	2	O	O	[0..*]	HL7 table 0009: User defined: Ambulatory Status **Definition**: This field indicates any permanent or transient handicapped conditions.
VIP Indicator	16	IS	2	X	X	[0..1]	HL7 table 0099: User defined: VIP Indicator
Admitting Doctor	17	XCN	309	X	X	[0..*]	HL7 table 0010: User defined: Physician ID
Patient Type	18	IS	2	X	X	[0..1]	HL7 table 0018: User defined: Patient Type
Visit Number	19	CX	478	R	R	[1..1]	**Definition**: This field contains the unique number assigned to each patient visit. **Note**: Unique identifier for a patient visit **Data Element of Interest**: Unique Visit Identifier
ID Number	19.1	ST	15	R	R	[1..1]	
Check Digit	19.2	ST	1	X	X	[0..1]	
Check Digit Scheme	19.3	ID	3	X	X	[0..1]	HL7 table 0061: HL7 defined: Check Digit Scheme
Assigning Authority	19.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning Authority

TABLE 5-4D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Identifier Type Code	19.5	ID	5	R	R	[1..1]	**Conformance Statement SS-025:** PV1-19.5 (Identifier Type Code) **SHALL** be valued to the Literal Value 'VN'. PHVS_IdentifierType_SyndromicSurveillance
Assigning Facility	19.6	HD	227	O	RE	[0..1]	
Effective Date	19.7	DT	8	X	X	[0..1]	
Expiration Date	19.8	DT	8	X	X	[0..1]	
Assigning Jurisdiction	19.9	CWE	705	X	X	[0..1]	
Assigning Facility	19.10	CWE	705	X	X	[0..1]	
Financial Class	20	FC	50	X	X	[0..*]	HL7 table 0064: User defined: Financial Class
Charge Price Indicator	21	IS	2	X	X	[0..1]	HL7 table 0032: User defined: Charge Price Indicator
Courtesy Code	22	IS	2	X	X	[0..1]	HL7 table 0045: User defined: Courtesy Code
Credit Rating	23	IS	2	X	X	[0..1]	HL7 table 0046: User defined: Credit rating
Contract Code	24	IS	2	X	X	[0..*]	HL7 table 0044: User defined: Contract code
Contract Effective Date	25	DT	8	X	X	[0..*]	

TABLE 5-4D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Contract Amount	26	NM	12	X	X	[0..*]	
Contract Period	27	NM	3	X	X	[0..*]	
Interest Code	28	IS	2	X	X	[0..1]	HL7 table 0073: User defined: Interest Code
Transfer to Bad Debt Code	29	IS	4	X	X	[0..1]	HL7 table 0110: User defined: Transfer to Bad Debt Code
Transfer to Bad Debt Date	30	DT	8	X	X	[0..1]	
Bad Debt Agency Code	31	IS	10	X	X	[0..1]	HL7 table 0021: User defined: Bad Debt Agency Code
Bad Debt Transfer Amount	32	NM	12	X	X	[0..1]	
Bad Debt Recovery Amount	33	NM	12	X	X	[0..1]	
Delete Account Indicator	34	IS	1	X	X	[0..1]	HL7 table 0111: User defined: Delete Account Indicator
Delete Account Date	35	DT	8	X	X	[0..1]	
Discharge Disposition	36	IS	3	X	X	[0..1]	**Definition**: This field shall not be populated in an Registration message
Discharged to Location	37	DLD	47	X	X	[0..1]	HL7 table 0113: User defined: Discharged to Location

TABLE 5-4D: PATIENT VISIT SEGMENT (PV1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Diet Type	38	CE	478	X	X	[0..1]	HL7 table 0114: User defined: Diet type
Servicing Facility	39	IS	2	X	X	[0..1]	HL7 table 0115: User defined: Servicing Facility
Bed Status	40	IS	1	X	X	[0..0]	HL7 table 0116: User defined: Bed Status
Account Status	41	IS	2	X	X	[0..1]	HL7 table 0117: User defined: Account Status
Pending Location	42	PL	1220	X	X	[0..1]	
Prior Temporary Location	43	PL	1220	X	X	[0..1]	
Admit Date/Time	44	TS	26	R	R	[1..1]	**Conformance Statement SS-010:** PV1-44 (Admit Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the admit date/time. This field is also used to reflect the date/time of an outpatient/emergency patient registration. **Note**: Date and time of the patient presentation. **Data Element of Interest**: Admit Date/Time
Discharge Date/Time	45	TS	26	X	X	[0..1]	**Definition**: This field shall not be populated in a Registration message
Current Patient Balance	46	NM	12	X	X	[0..1]	

TABLE 5-4D: PATIENT VISIT SEGMENT (PV1)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Total Charges	47	NM	12	X	X	[0..1]	
Total Adjustments	48	NM	12	X	X	[0..1]	
Total Payments	49	NM	12	X	X	[0..1]	
Alternate Visit ID	50	CX	250	X	X	[0..1]	HL7 table 0203: User defined: Identifier type
Visit Indicator	51	IS	1	X	X	[0..1]	HL7 table 0326: User defined: Visit Indicator
Other Healthcare Provider	52	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID

Patient Visit – Additional Information (PV2) Segment

The PV2 segment is a continuation of visit-specific information and is the segment where the Admit Reason is passed.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-4E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Prior Pending Location	1	PL	1220	X	X	[0..1]	
Accommodation Code	2	CE	478	X	X	[0..1]	HL7 table 0129: User defined: Accommodation Code
Admit Reason	3	CE	478	RE	RE	[0..1]	**Definition**: This field contains the short description of the reason for patient's registration. **NOTE**: It may be coded (CE:1 and CE:3) or Free text (CE:2.) **Data Element of Interest:** Admit Reason

Identifier	3.1	ST	20	RE	RE	[0..1]	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM
							    Or
							PHVS_AdministrativeDiagnosis_ICD-10CM
							    Or
							PHVS_Disease_CDC
							Conformance Statement SS-009: The implementation SHALL support all 3 value sets.

Text	3.2	ST	199	RE	RE	[0..1]	If only Free Text is used, it is communicated in this component.

| | | | | | | | TABLE 5-4E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2) |

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Name of Coding System	3.3	ID	20	C	C	[0..1]	**Condition Predicate:** If PV2-3.1 (the identifier) is provided then PV2-3.3 is valued. **Conformance Statement SS-026:** PV2-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Transfer Reason	4	CE	478	X	X	[0..1]	
Patient Valuables	5	ST	25	X	X	[0..*]	
Patient Valuables Location	6	ST	25	X	X	[0..1]	
Visit User Code	7	IS	2	X	X	[0..*]	HL7 table 0130: User defined: Visit User Code
Expected Admit Date/Time	8	TS	26	X	X	[0..1]	
Expected Discharge Date/Time	9	TS	26	X	X	[0..1]	
Estimated Length of Inpatient Stay	10	NM	3	X	X	[0..1]	

TABLE 5-4E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Actual Length of Inpatient Stay	11	NM	3	X	X	[0..1]	
Visit Description	12	ST	50	X	X	[0..1]	
Referral Source Code	13	XCN	309	X	X	[0..*]	
Previous Service Date	14	DT	8	X	X	[0..1]	
Employment Illness Related Indicator	15	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Purge Status Code	16	IS	1	X	X	[0..1]	HL7 table 0213: User defined: Purge Status Code
Purge Status Date	17	DT	8	X	X	[0..1]	
Special Program Code	18	IS	2	X	X	[0..1]	HL7 table 0214: User defined: Special Program Code
Retention Indicator	19	ID	1	X	X	[0..1]	HL7 table 0136: User defined: Retention Indicator
Expected Number of Insurance Plans	20	NM	1	X	X	[0..1]	
Visit Publicity Code	21	IS	1	X	X	[0..1]	HL7 table 0215: User defined: Visit Publicity Code
Visit Protection Indicator	22	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

TABLE 5-4E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Clinic Organization Name	23	XON	250	X	X	[0..*]	
Patient Status Code	24	IS	2	X	X	[0..1]	HL7 table 0216: User defined: Patient Status code
Visit Priority Code	25	IS	1	X	X	[0..1]	HL7 table 0217: User defined: Visit Priority code
Previous Treatment Date	26	DT	8	X	X	[0..1]	
Expected Discharge Disposition	27	IS	2	X	X	[0..1]	HL7 table 0112: User defined: Discharge Disposition
Signature on File Date	28	DT	8	X	X	[0..1]	
First Similar Illness Date	29	DT	8	X	X	[0..1]	
Patient Charge Adjustment Code	30	CE	478	X	X	[0..1]	HL7 table 0218: User defined: Charge Adjustment Code
Recurring Service Code	31	IS	2	X	X	[0..1]	HL7 table 0219: User defined: Recurring Service Code
Billing Media Code	32	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Expected Surgery Date and Time	33	TS	26	X	X	[0..1]	
Military Partnership Code	34	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

TABLE 5-4E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Military Non-Availability Code	35	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Newborn Baby Indicator	36	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Baby Detained Indicator	37	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Mode of Arrival Code	38	CE	478	X	X	[0..1]	HL7 table 0430: User defined: Mode of Arrival Code
Recreational Drug Use Code	39	CE	478	X	X	[0..*]	HL7 table 0431: User defined: Recreational Drug Use Code
Admission Level of Care Code	40	CE	478	X	X	[0..1]	HL7 table 0432: User defined: Admission Level of Care Code
Precaution Code	41	CE	478	X	X	[0..*]	HL7 table 0433: User defined: Precaution Code
Patient Condition Code	42	CE	478	X	X	[0..1]	HL7 table 0434: User defined: Patient Condition Code
Living Will Code	43	IS	2	X	X	[0..1]	HL7 table 0315: User defined: Living Will Code
Organ Donor Code	44	IS	2	X	X	[0..1]	HL7 table 0316: User defined: Organ Donor Code
Advance Directive Code	45	CE	478	X	X	[0..*]	HL7 table 0435: User defined: Advance Directive Code
Patient Status Effective Date	46	DT	8	X	X	[0..1]	

TABLE 5-4E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Expected LOA Return Date/Time	47	TS	26	X	X	[0..1]	
Expected Pre-admission Testing Date/Time	48	TS	26	X	X	[0..1]	
Notify Clergy Code	49	IS	20	X	X	[0..*]	HL7 table 0534: User defined: Notify Clergy Code

Observation/Result (OBX) Segment

The OBX Segment in the ADT Message is used to transmit observations related to the patient and visit. In Table 2-5 if the data element is carried in an OBX and usage is 'Required', the segment and its fields must be populated. The data elements in Table 2.5 DATA ELEMENTS OF INTEREST that use OBX segments are not expected to utilize any specified Set ID number within a given set of OBX segments in a message. However, the Set IDs are required to be sequential.

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - OBX	1	SI	4	R	R	[1..1]	**Note:** Set ID numbers the repetitions of the segments **Conformance Statement SS-027:** For the first repeat of the OBX segment, the sequence number **SHALL** be one (1), for the second repeat, the sequence number shall be two (2), etc. Example: OBX|1|…. OBX|2|…. OBX|3|…. **Definition**: This field contains the sequence number.

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Value Type	2	ID	3	R	R	[1..1]	**Conformance Statement SS-028:** OBX-2 **SHALL** be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD') PHVS_ValueType_SyndromicSurveillance **Definition**: This field contains the format of the observation value in OBX. Note: Identifies the structure of data in observation value (OBX.5)

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Observation Identifier	3	CE	478	R	R	[1..1]	PHVS_ObservationIdentifier_SyndromicSurveillance **Definition**: This field contains a unique identifier for **the** observation. **Note**: Identifies data to be received in observation value (OBX.5) **Data Elements of Interest** communicated in OBX Segment may include: Facility Street address (Treating), Data Type: XAD:1, SAD:1 Facility City (Treating), Data Type: XAD:3 Facility State (Treating), Data Type: XAD:4 Facility ZIP Code (Treating), Data Type: XAD:5 Facility County (Treating), Data Type: XAD:9 Age, Data Type: NM Facility / Visit Type, Data Type: CWE (only for ED/UC) Chief Complaint/Reason for Visit, Data Type: CWE, (Free Text is preferred) Clinical Impression, Data Type: TX Initial Temperature, Data Type: NM Height, Data Type: NM Weight, Data Type: NM Smoking Status, PHVS_SmokingStatus_MU Triage Notes, Data Type: TX
Identifier	3.1	ST	20	R	R	[1..1]	
Text	3.2	ST	199	O	O	[0..1]	

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-3.1 (the identifier) is provided then OBX-3.3 is valued.
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Observation Sub-ID	4	ST	20	X	X	[0..1]	
Observation Value	5	varies	99999	RE	RE	[0..*]	Listed below are the supported fields for each of the supported value types. **Definition**: This field contains the value observed by the observation producer. OBX-2-value type contains the data type for this field according to which observation value is formatted. **Note**: Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3). **Notes on Data Types**: TS Data Type: Unconstrained. Some values might be to the day, others to the year/ decade, etc. TX Data Type: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters). NM Data Type: A numeric data type is a number

				TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer.
							CWE Data Type: Data Element: Facility / Visit Type (only for ED/UC)
							CWE:2 Text: It is strongly recommended that text be sent to accompany any identifier.
							CWE Data Type: Data Element: Chief Complaint / Reason for visit
							It is the short description of the patient's self-reported chief complaint or reason for visit. It is preferred that Free text is used.
							Free Text should appear in CWE:9
							XAD Data Type: Data Elements:
							Facility Street address (Treating), Data Type: XAD:1, SAD:1:
							Note: This is the first subcomponent of the SAD data type. This has the same effect as being the first component of the field, while limiting the length based on other subcomponents that are not supported.
							Facility City (Treating), Data Type: XAD:3
							Facility State (Treating), Data Type: XAD:4
							Facility ZIP Code (Treating), Data Type: XAD:5

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							Facility County (Treating), Data Type: XAD:9
Beginning of OBX-5 Observation Value Usage Based on Data Type in OBX-2							
TS Data Type							
Time	5.1	DTM	24	RE	RE	[0..1]	
Degree of Precision	5.2	ST	1	X	X	[0..0]	
TX Data Type							
Text Data	5.1	TX	65536	RE	RE	[0..1]	
NM Data Type							
Numeric Value	5.1	ST	16	RE	RE	[0..1]	
CWE Data Type: Data Element #7 Facility / Visit Type (only for ED/UC)							
Identifier	5.1	ST	20	R	R	[1..1]	PHVS_FacilityVisitType_SyndromicSurveillance
Text	5.2	ST	199	RE	RE	[0..1]	
Name of Coding System	5.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	

				TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Alternate Text	5.5	ST	199	RE	RE	[0..1]	.
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
Coding System Version ID	5.7	ST	10	O	O	[0..1]	
Alternate Coding System Version ID	5.8	ST	10	O	O	[0..1]	
Original Text	5.9	ST	199	RE	RE	[0..1]	Free text goes here
CWE Data Type: Data Element #25 Chief Complaint / Reason for visit- Free Text is preferred							
Identifier	5.1	ST	20	RE	RE	[0..1]	**Conformance Statement SS-005:** If patient's chief complaint is captured as an unstructured, free-text note, then chief complaint **SHALL** be valued in OBX-5, CWE:9. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation Identifier Example OBX Segment (free text): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^STOMACH ACHE||||||F|||201102171531 **Conformance Statement SS-006:** If patient's chief complaint is captured from a Coding System, then chief complaint **SHALL** be valued in OBX- 5, CWE:1,

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							CWE:2, CWE:3. PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **or** PHVS_CauseOfDeath_ICD-10_CDC **or** PHVS_Disease_CDC **Conformance Statement SS-004**: The implementation **SHALL** support all 3 value sets. Example OBX Segment (coded): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX||||||F|||20110217 **Conformance Statement SS-007:** If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX- 5, CWE:2. OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^Dizziness and giddiness||||||F|||20110217 **Conformance Statement SS-008:** The implementation **SHALL** support a minimum of 70 characters for unstructured, free-text patient's chief complaint.
Text	5.2	ST	199	RE	RE	[0..1]	

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Name of Coding System	5.3	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	
Alternate Text	5.5	ST	199	RE	RE	[0..1]	
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
Coding System Version ID	5.7	ST	10	O	O	[0..1]	
Alternate Coding System Version ID	5.8	ST	10	O	O	[0..1]	
Original Text	5.9	ST	199	RE	RE	[0..1]	Free text is Preferred and it goes here
XAD Data Type							
Street Address	5.1	SAD	184	O	O	[0..1]	
Street or Mailing Address	5.1.1	ST	120	O	O	[0..1]	
Street Name	5.1.2	ST	50	O	O	[0..1]	
Dwelling Number	5.1.3	ST	12	O	O	[0..1]	
Other Designation	5.2	ST	120	O	O	[0..1]	

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
City	5.3	ST	50	O	O	[0..1]	The ISDS recommendations recommend free text City/Town designations.
State or Province	5.4	ST	50	O	O	[0..1]	PHVS_State_FIPS_5-2
ZIP or Postal Code	5.5	ST	12	O	O	[0..1]	USPS
Country	5.6	ID	3	O	O	[0..1]	PHVS_Country_ISO_3166-1
Address Type	5.7	ID	3	O	O	[0..1]	PHVS_AddressType_HL7_2x
Other Geographic Designation	5.8	ST	50	O	O	[0..1]	
County/Parish Code	5.9	IS	20	O	O	[0..1]	The ISDS recommendations allow free text County designations.
Census Tract	5.10	IS	20	X	X	[0..1]	
Address Representation Code	5.11	ID	1	X	X	[0..1]	
Address Validity Range	5.12	DR	53	X	X	[0..0]	
Effective Date	5.13	TS	26	X	X	[0..1]	
Expiration Date	5.14	TS	26	X	X	[0..1]	
End of OBX-5 Observation Value Usage Based on Data Type in OBX-2							

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Units	6	CE	62	C	C	[0..1]	**Condition Predicate:** If OBX.2 (Value Type) is valued "NM" **Background**: When an observation's value is measured on a continuous scale, one must report the measurement units within the unit's field of the OBX segment. **Data Elements of Interest:** Age units Initial Temperature units Height units Weight Units PHVS_AgeUnit_SyndromicSurveillance
Identifier	6.1	ST	20	R	R	[1..1]	**Conformance Statement SS-029:** If OBX 3.1 is valued with 21612-7, then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance **Conformance Statement SS-030:** If OBX 3.1 = is valued with 11289-6 then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_TemperatureUnit_UCUM **Conformance Statement SS-031:** If OBX 3.1 is valued with 59408-5 then OBX6.1 (Identifier) **SHALL** be valued to a member of the set PHVS_PulseOximetryUnit_UCUM
Text	6.2	ST	20	O	O	[0..1]	

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Name of Coding System	6.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-6.1 (the identifier) is provided then OBX-6.3 is valued.
Alternate Identifier	6.4	ST	20	X	X	[0..1]	
Alternate Text	6.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	6.6	ID	20	X	X	[0..1]	
References Range	7	ST	60	X	X	[0..1]	
Abnormal Flags	8	IS	5	X	X	[0..*]	HL7 table 0078: User defined: Abnormal Flags
Probability	9	NM	5	X	X	[0..1]	
Nature of Abnormal Test	10	ID	2	X	X	[0..*]	HL7 table 0080: HL7 defined: Nature of Abnormal Test
Observation Result Status	11	ID	1	R	R	[1..1]	HL7 table 0085: HL7 defined: Observation Result Status **Definition**: This field contains the observation result status. This field reflects the current completion status of the results for one Observation Identifier.
Effective Date of Reference Range	12	TS	26	X	X	[0..1]	
User Defined Access Checks	13	ST	20	X	X	[0..1]	

TABLE 5-4F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Date/Time of the Observation	14	TS	26	O	O	[0..1]	**Definition**: This field is the observation date-time is the physiologically relevant date-time or the closest approximation to that date-time.
Producer's ID	15	CE	478	X	X	[0..1]	
Responsible Observer	16	XCN	309	X	X	[0..*]	
Observation Method	17	CE	478	X	X	[0..*]	
Equipment Instance Identifier	18	EI	424	X	X	[0..*]	
Date/Time of the Analysis	19	TS	26	X	X	[0..1]	

Diagnosis (DG1) Segment

The DG1 segment contains patient diagnosis information of various types. syndromic surveillance supports Admitting, Working and Final Diagnosis types.

TABLE 5-4G: DIAGNOSIS SEGMENT (DG1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID - DG1	1	SI	4	R	R	[1..1]	**Conformance Statement SS-032:** DG1-1 (Set ID) for the first occurrence of a DG1 Segment **SHALL** have the Literal Value of '1'. Each following occurrence **SHALL** be numbered consecutively **Definition**: This field contains the number that identifies this transaction. For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc.
Diagnosis Coding Method	2	ID	2	X	X	[0..1]	HL7 table 0053: User defined: Diagnosis Coding Method
Diagnosis Code - DG1	3	CE	478	R	R	[1..1]	**Definition**: This contains the diagnosis code assigned to this diagnosis. **Data Element of Interest**: Diagnosis **Condition Predicate:** If the DG1 Segment is provided, DG1-3 (Diagnosis) is required to be valued.
Identifier	3.1	ST	20	R	RE	[0..1]	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM Or PHVS_AdministrativeDiagnosis_ICD-10CM Or PHVS_Disease_CDC **Conformance Statement SS-011**: The implementation **SHALL** support all 3 value sets.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-4G: DIAGNOSIS SEGMENT (DG1)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Text	3.2	ST	199	RE	RE	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If DG1-3.1 (the identifier) is provided then DG1-3.3 is valued. **Conformance Statement SS-033:** DG1-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Diagnosis Description	4	ST	40	X	X	[0..0]	
Diagnosis Date/Time	5	TS	26	O	O	[0..1]	**Definition**: This field contains the date/time that the diagnosis was determined.
Diagnosis Type	6	IS	2	R	R	[1..1]	PHVS_DiagnosisType_HL7_2x **Definition**: This field contains a code that identifies the type of diagnosis being sent **Note**: Identifies the type of diagnosis being sent. **Data Element of Interest:** Diagnosis type **Condition Predicate:** If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued.

							TABLE 5-4G: DIAGNOSIS SEGMENT (DG1)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Major Diagnostic Category	7	CE	478	X	X	[0..0]	HL7 table 0118: User defined: Major Diagnostic Category
Diagnostic Related Group	8	CE	478	X	X	[0..0]	HL7 table 0055: User defined: Diagnostic Related Group
DRG Approval Indicator	9	ID	1	X	X	[0..0]	HL7 table 0136: HL7 defined: Yes/no Indicator
DRG Grouper Review Code	10	IS	2	X	X	[0..0]	HL7 table 0056: User defined: DRG Grouper Review Code
Outlier Type	11	CE	478	X	X	[0..0]	HL7 table 0083: User defined: Outlier Type
Outlier Days	12	NM	3	X	X	[0..0]	
Outlier Cost	13	CP	538	X	X	[0..0]	
Grouper Version And Type	14	ST	4	X	X	[0..0]	
Diagnosis Priority	15	ID	2	X	X	[0..1]	HL7 table 0359: HL7 defined: Diagnosis Priority
Diagnosing Clinician	16	XCN	309	X	X	[0..*]	
Diagnosis Classification	17	IS	3	X	X	[0..1]	HL7 table 0228: User defined: Diagnosis Classification
Confidential Indicator	18	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator

TABLE 5-4G: DIAGNOSIS SEGMENT (DG1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Attestation Date/Time	19	TS	26	X	X	[0..1]	
Diagnosis Identifier	20	EI	427	X	X	[0..1]	
Diagnosis Action Code	21	ID	1	X	X	[0..1]	HL7 table 0206: HL7 defined: Segment Action Code

Procedures (PR1) Segment

The PR1 segment is used to carry information relative to various types of procedures performed.

TABLE 5-4H: PROCEDURES SEGMENT (PR1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID – PR1	1	SI	4	R	R	[1..1]	**Conformance Statement SS-034:** For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc. **Definition**: This field contains the number that identifies this transaction.
Procedure Coding Method	2	IS	3	X	X	[0..1]	HL7 table 0089: User defined: Procedure Coding Method
Procedure Code	3	CE	478	R	R	[1..1]	**Definition**: This field contains a unique identifier assigned to the procedure **Data Element of Interest**: Procedure Code
Identifier	3.1	ST	20	RE	RE	[0..1]	CPT-4
Text	3.2	ST	199	O	O	[0..1]	Free Text
Name of Coding System	3.3	ID	20	CE	CE	[1..1]	**Condition Predicate:** If PR1-3.1 (the identifier) is provided then PR1-3.3 is valued.
Procedure Description	4	ST	40	X	X	[0..0]	

TABLE 5-4H: PROCEDURES SEGMENT (PR1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Procedure Date/Time	5	TS	26	R	R	[1..1]	**Definition**: This field contains the date/time that the procedure was performed.
Procedure Functional Type	6	IS	2	X	X	[0..1]	HL7 table 0230: User defined: Procedure Functional Type
Procedure Minutes	7	NM	4	X	X	[0..1]	
Anesthesiologist	8	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Anesthesia Code	9	IS	2	X	X	[0..1]	HL7 table 0019: User defined: Anesthesia Code
Anesthesia Minutes	10	NM	4	X	X	[0..1]	
Surgeon	11	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Procedure Practitioner	12	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Consent Code	13	CE	478	X	X	[0..1]	HL7 table 0059: User defined: Consent code
Procedure Priority	14	ID	2	X	X	[0..1]	HL7 table 0418: HL7 defined: Procedure Priority
Associated Diagnosis Code	15	CE	478	X	X	[0..1]	HL7 table 0051: User defined: Diagnosis Code
Procedure Code Modifier	16	CE	478	X	X	[0..*]	HL7 table 0340: User defined: Procedure Code Modifier

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
						TABLE 5-4H: PROCEDURES SEGMENT (PR1)	
Procedure DRG Type	17	IS	20	X	X	[0..1]	HL7 table 0416: User defined: Procedure DRG Type
Tissue Type Code	18	CE	478	X	X	[0..*]	HL7 table 0417: User defined: Tissue Type Code
Procedure Identifier	19	EI	427	X	X	[0..1]	
Procedure Action Code	20	ID	1	X	X	[0..1]	HL7 table 0206: HL7 defined: Segment Action Code

Insurance (IN1) Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-4I: INSURANCE SEGMENT (IN1)
Set ID – IN1	1	SI	4	R	R	[1..1]	**Definition**: The Set ID in the IN1 segment is used to aggregate the grouping of insurance segments. **Note**: SET ID numbers the repetitions of the segments.
Insurance Plan ID	2	CE	478	R	R	[1..1]	HL7 table 0072: User defined: Insurance Plan ID **Definition**: This field contains a unique identifier for the insurance plan.
Insurance Company ID	3	CX	250	R	R	[1..*]	**Definition**: This field contains unique identifiers for the insurance company. The assigning authority and identifier type code are strongly recommended for all CX data types.
Insurance Company Name	4	XON	250	X	X	[0..*]	
Insurance Company Address	5	XAD	513	X	X	[0..*]	
Insurance Co Contact Person	6	XPN	294	X	X	[0..*]	
Insurance Co Phone Number	7	XTN	250	X	X	[0..*]	
Group Number	8	ST	12	X	X	[0..1]	

				TABLE 5-4I: INSURANCE SEGMENT (IN1)		

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Group Name	9	XON	250	X	X	[0..*]	
Insured_s Group Emp ID	10	CX	250	X	X	[0..*]	
Insured_s Group Emp Name	11	XON	250	X	X	[0..*]	
Plan Effective Date	12	DT	8	X	X	[0..1]	
Plan Expiration Date	13	DT	8	X	X	[0..1]	
Authorization Information	14	AUI	239	X	X	[0..1]	
Plan Type	15	IS	3	O	O	[0..1]	HL7 table 0086: User defined: Plan Type **Definition**: This field contains the coding structure that identifies the various plan types, for example, Medicare, Medicaid, Blue Cross, HMO, etc.
Name Of Insured	16	XPN	294	X	X	[0..*]	
Insured_ Relationship To Patient	17	CE	478	X	X	[0..1]	HL7 table 0063: User defined: Relationship
Insured_ Date Of Birth	18	TS	26	X	X	[0..1]	
Insured_ Address	19	XAD	513	X	X	[0..*]	
Assignment Of Benefits	20	IS	2	X	X	[0..1]	HL7 table 0135: User defined: Assignment of Benefits

TABLE 5-4I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Coordination Of Benefits	21	IS	2	X	X	[0..1]	HL7 table 0173: User defined: Coordination of Benefits
Coord Of Ben. Priority	22	ST	2	X	X	[0..1]	
Notice Of Admission Flag	23	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator
Notice Of Admission Date	24	DT	8	X	X	[0..1]	
Report Of Eligibility Flag	25	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator
Report Of Eligibility Date	26	DT	8	X	X	[0..1]	
Release Information Code	27	IS	2	X	X	[0..1]	HL7 table 0093: User defined: Release of Information Code
Pre-Admit Cert (PAC)	28	ST	15	X	X	[0..1]	
Verification Date/Time	29	TS	26	X	X	[0..1]	
Verification By	30	XCN	309	X	X	[0..*]	
Type Of Agreement Code	31	IS	2	X	X	[0..1]	HL7 table 0098: User defined: Type Of Agreement Code
Billing Status	32	IS	2	X	X	[0..1]	HL7 table 0022: User defined: Billing Status
Lifetime Reserve Days	33	NM	4	X	X	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
					TABLE 5-4I: INSURANCE SEGMENT (IN1)		
Delay Before L.R. Day	34	NM	4	X	X	[0..1]	
Company Plan Code	35	IS	8	X	X	[0..1]	HL7 table 0042: User defined: Company Plan Code
Policy Number	36	ST	15	X	X	[0..1]	
Policy Deductible	37	CP	538	X	X	[0..1]	
Policy Limit - Amount	38	CP	538	X	X	[0..0]	
Policy Limit - Days	39	NM	4	X	X	[0..1]	
Room Rate - Semi-Private	40	CP	538	X	X	[0..0]	
Room Rate - Private	41	CP	538	X	X	[0..0]	
Insured_ Employment Status	42	CE	478	X	X	[0..1]	HL7 table 0066: User defined: Employment Status
Insured_ Administrative Sex	43	IS	1	X	X	[0..1]	HL7 table 0001: User defined: Administrative Sex
Insured_ Employer_s Address	44	XAD	513	X	X	[0..*]	
Verification Status	45	ST	2	X	X	[0..1]	
Prior Insurance Plan ID	46	IS	8	X	X	[0..1]	HL7 Table 0072: User defined: Insurance Plan ID
Coverage Type	47	IS	3	X	X	[0..1]	HL7 Table 0309: User defined: Coverage Type

TABLE 5-4I: INSURANCE SEGMENT (IN1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Handicap	48	IS	2	X	X	[0..1]	HL7 Table 0295: User defined: Handicap
Insured_ ID Number	49	CX	250	X	X	[0..*]	
Signature Code	50	IS	1	X	X	[0..1]	HL7 Table 0535: User defined: Signature Code
Signature Code Date	51	DT	8	X	X	[0..1]	
Insured_ Birth Place	52	ST	250	X	X	[0..1]	
VIP Indicator	53	IS	2	X	X	[0..1]	HL7 Table 0099: User defined: VIP Indicator

UPDATE PATIENT INFORMATION (ADT^A08)

ADT^A08 messages are used to communicate syndromic surveillance data to PHAs in the event of an update to a patient's visit record during an emergency department or urgent care center visit.

		TABLE 5-5: ADT^A08 UPDATE PATIENT INFORMATION		
SEG	**NAME**	**DESCRIPTION**	**USAGE**	**CARDINALITY**
MSH	Message Header	Information explaining how to parse and process the message Information includes identification of message delimiters, sender, receiver, message type, timestamp, etc.	R	[1..1]
EVN	Event Type	Trigger event information for receiving application	R	[1..1]
PID	Patient Identification	Patient identifying and demographic information	R	[1..1]
PV1	Patient Visit	Information related to this visit at this facility including the nature of the visit, critical timing information and a unique visit identifier.	R	[1..1]
[PV2]	Patient Visit Additional Information	Admit Reason information.	RE	[0..1]
{OBX}	Observation / Result	Information regarding the age, temperature, and other information	R	[1..*]
[{DG1}]	Diagnosis	Admitting Diagnosis and, optionally, Working and Final Diagnosis information	RE	[0..*]
[{PR1}]	Procedures	Information relative to various types of procedures performed	O	[0..*]

		TABLE 5-5: ADT^A08 UPDATE PATIENT INFORMATION		
SEG	**NAME**	**DESCRIPTION**	**USAGE**	**CARDINALITY**
[{IN1}]	Insurance	Information about insurance policy coverage information	O	[0..*]

Message Header (MSH) Segment

The MSH Segment is used to define the intent, source, destination, and some specifics of the syntax of the message. This segment includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-5A: MESSAGE HEADER SEGMENT (MSH)
Field Separator	1	ST	1	R	R	[1..1]	**Definition**: This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such, it serves as the separator and defines the character to be used as a separator for the rest of the message. Default value is |, (ASCII 124).
Encoding Characters	2	ST	4	R	R	[1..1]	**Definition**: This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Default values are ^~\& (ASCII 94, 126, 92, and 38, respectively).
Sending Application	3	HD	227	O	O	[0..1]	**Definition**: This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.

TABLE 5-5A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Sending Facility	4	HD	227	R	R	[1..1]	National Provider Identifier. (10-digit identifier) **Definition**: This field further describes the sending application, MSH-3-sending application. This field uniquely identifies the facility associated with the application that sends the message. If Acknowledgements are in use, this facility will receive any related Acknowledgement message. **Note**: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field
Namespace ID	4.1	IS	20	RE	RE	[0..1]	
Universal ID	4.2	ST	199	R	R	[1..1]	
Universal ID Type	4.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance
Receiving Application	5	HD	227	O	O	[0..1]	HL7 table 0361: User-defined: Application **Definition**: This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.
Receiving Facility	6	HD	227	O	O	[0..1]	HL7 table 0362: User-defined: Facility **Definition**: This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations.

TABLE 5-5A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Date/Time Of Message	7	TS	26	R	R	[1..1]	**Conformance Statement SS-013:** MSH-7 (Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone. **Note**: MSH-7 (Date/Time of Message) does not have to equal EVN-2 (Message Date/Time)
Security	8	ST	40	X	X	[0..1]	
Message Type	9	MSG	15	R	R	[1..1]	**Conformance Statement SS-035:** MSH-9 (Message Type) **SHALL** be the literal value: 'ADT^A08^ADT_A01', **Definition**: This field contains the message type, trigger event, and the message structure ID for the message.
Message Code	9.1	ID	3	R	R	[1..1]	PHVS_MessageType_SyndromicSurveillance
Trigger Event	9.2	ID	3	R	R	[1..1]	PHVS_EventType_SyndromicSurveillance
Message Structure	9.3	ID	7	R	R	[1..1]	PHVS_MessageStructure_SyndromicSurveillance

TABLE 5-5A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Message Control ID	10	ST	199	R	R	[1..1]	**Definition**: This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA). **Note**: This field is a number or other identifier that uniquely identifies the message.
Processing ID	11	PT	3	R	R	[1..1]	**Conformance Statement SS-015:** MSH-11 (Processing ID) **SHALL** have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training. **Definition**: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. **Note**: Indicates how to process the message as defined in HL7 processing rules
Version ID	12	VID	5	R	R	[1..1]	**Conformance Statement SS-016:** MSH-12 (Version ID) **SHALL** have a value '2.5.1' **Definition**: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. For this message the value shall be 2.5.1 **Note**: HL7 version number used to interpret format and content of the message.
Sequence Number	13	NM	15	X	X	[0..1]	
Continuation Pointer	14	ST	180	X	X	[0..1]	

TABLE 5-5A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Accept Acknowledgement Type	15	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Application Acknowledgement Type	16	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Country Code	17	ID	3	X	X	[0..1]	HL7 table 0399: HL7 defined: Country code
Character Set	18	ID	16	X	X	[0..*]	HL7 table 0211: HL7 defined: Alternate character sets
Principal Language Of Message	19	CE	478	X	X	[0..1]	
Alternate Character Set Handling Scheme	20	ID	20	X	X	[0..1]	HL7 table 0356: HL7 defined: Alternate character set handling scheme
Message Profile Identifier	21	EI	427	R	R	[0..1]	**Conformance Statement SS-017:** An instance of MSH.21 (Message Profile Identifier) **SHALL** contain the constant value: PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-NoAck^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-Batch^SS Sender^2.16.840.1.114222.4.10.3^ISO

TABLE 5-5A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							or PH_SS-Batch^SS Receiver^2.16.840.1.114222.4.10.3^ISO **Definition**: Sites may use this field to assert adherence to, or reference, a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages.

Event Type (EVN) Segment

The EVN segment is used to communicate trigger event information to receiving applications.

<table>
<tr><td colspan="8" align="center">TABLE 5-5B: EVENT TYPE SEGMENT (EVN)</td></tr>
<tr>
<th>Field Name</th>
<th>Seq</th>
<th>DT</th>
<th>Length</th>
<th>Sender Usage</th>
<th>Receiver Usage</th>
<th>Cardinality</th>
<th>Description/Comments</th>
</tr>
<tr>
<td>Event Type Code</td>
<td>1</td>
<td>ID</td>
<td>3</td>
<td>X</td>
<td>X</td>
<td>[0..0]</td>
<td>PHVS_EventType_SyndromicSurveillance</td>
</tr>
<tr>
<td>Recorded Date/Time</td>
<td>2</td>
<td>TS</td>
<td>26</td>
<td>R</td>
<td>R</td>
<td>[1..1]</td>
<td>Conformance Statement SS-018: EVN-2 (Recorded Date/Time of Message) SHALL be expressed with a minimum precision of the nearest minute, and be represented in the following format:

'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]'

Note: EVN-2 (Recorded Date/Time) does not have to equal MSH-7 (Date/Time of Message)

Note: Most systems default to the system Date/Time when the transaction was entered.

Data Element of Interest: Message Date/Time</td>
</tr>
<tr>
<td>Date/Time Planned Event</td>
<td>3</td>
<td>TS</td>
<td>26</td>
<td>X</td>
<td>X</td>
<td>[0..1]</td>
<td></td>
</tr>
<tr>
<td>Event Reason Code</td>
<td>4</td>
<td>IS</td>
<td>3</td>
<td>X</td>
<td>X</td>
<td>[0..1]</td>
<td>HL7 table 0062: User defined: Event reason</td>
</tr>
<tr>
<td>Operator ID</td>
<td>5</td>
<td>XCN</td>
<td>309</td>
<td>X</td>
<td>X</td>
<td>[0..*]</td>
<td>HL7 table 0188: User defined: Operator ID</td>
</tr>
<tr>
<td>Event Occurred</td>
<td>6</td>
<td>TS</td>
<td>26</td>
<td>X</td>
<td>X</td>
<td>[0..1]</td>
<td></td>
</tr>
</table>

TABLE 5-5B: EVENT TYPE SEGMENT (EVN)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Event Facility	7	HD	241	R	R	[1..1]	**Definition**: This field identifies the location where the patient was actually treated. **Note**: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field **Data Element of Interest**: Facility Identifier (Treating) (EVN-7.1) **Data Element of Interest**: Facility Name (Treating) (EVN-7.2)
Namespace ID	7.1	IS	20	RE	RE	[0..1]	Recommend the use of the Organization Name Legal Business Name (LBN) associated with the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.
Universal ID	7.2	ST	199	R	R	[1..1]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-5B: EVENT TYPE SEGMENT (EVN)							
Universal ID Type	7.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance

Patient Identification (PID) Segment

The PID Segment is used as the primary means of communicating patient identification information. This segment contains pertinent patient identifying and demographic information.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)
Set ID - PID	1	SI	4	R	R	[1..1]	**Conformance Statement SS-019:** PID-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one.
Patient ID	2	CX	20	X	X	[0..0]	
Patient Identifier List	3	CX	478	R	R	[1..*]	**Definition**: PID.3 is a repeating field that can accommodate multiple patient identifiers. **Note**: Patient's unique identifier(s) from the facility that is submitting this report to public health officials Different jurisdictions use different identifiers and may often use a combination of identifiers to produce a unique patient identifier. Patient identifiers should be strong enough to remain a unique identifier across different data provider models, such as a networked data provider or State HIE. **Data Element of Interest**: Unique Patient Identifier
ID Number	3.1	ST	15	R	R		

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Check Digit	3.2	ST	1	X	X	[0..1]	
Check Digit Scheme	3.3	ID	3	X	X	[0..1]	HL7 table 0061: HL7 defined: Check digit scheme
Assigning Authority	3.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning authority
Identifier Type Code	3.5	ID	5	R	R	[1..1]	PHVS_IdentifierType_SyndromicSurveillance
Assigning Facility	3.6	HD	227	O	RE	[0..1]	
Effective Date	3.7	DT	8	X	X	[0..1]	
Expiration Date	3.8	DT	8	X	X	[0..1]	
Assigning Jurisdiction	3.9	CWE	705	X	X	[0..1]	
Assigning Facility	3.10	CWE	705	X	X	[0..1]	
Alternate Patient ID - PID	4	CX	20	X	X	[0..0]	
Patient Name	5	XPN	294	R	R	[1..*]	**Note:** Syndromic surveillance does not require the patient name. A Visit or Patient ID, as specified within this guide, shall be used by PHAs to join related visit data and for working with hospitals to find additional visit information for syndromic surveillance signal confirmation or investigation. Since, however, HL7 requires the patient name, the field must be populated even when data patient

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							name shall not be sent. In such an instance (i.e., patient name is not sent), patient name shall be presented in a pseudonymized manner. **Conformance Statement SS-020:** If **PID-5** (Patient Name) is unknown then the first occurrence of PID-5 **SHALL NOT** be valued. **Conformance Statement SS-021:** If **PID-5** (Patient Name) is unknown then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "U" (i.e., PID-5 shall be valued as |~^^^^^^U|). **Conformance Statement SS-022:** If **PID-5** (Patient Name) is known, but not desired to be sent, then the first occurrence of PID-5 **SHALL NOT** be valued. **Conformance Statement SS-023:** If **PID-5** (Patient Name) is known, but not desired to be sent, then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "S" (i.e., PID-5 shall be valued as ~^^^^^^S|). The second name field indicates that it is unspecified. **Definition**: This field contains the names of the patient; the primary or legal name of the patient is reported first. Therefore, the name type code in this field should be "L - Legal".
Family Name	5.1	FN	194	O	RE	[0..1]	

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Given Name	5.2	ST	30	O	RE	[0..1]	
Second Given Name or Initials	5.3	ST	30	O	RE	[0..1]	
Suffix	5.4	ST	20	O	RE	[0..1]	
Prefix	5.5	ST	20	O	RE	[0..1]	
Degree	5.6	IS	6	X	X	[0..0]	HL7 table 0360: User defined: Degree/license/certificate
Name Type Code	5.7	ID	1	R	R	[1..1]	PHVS_NameType_SyndromicSurveillance
Name Representation Code	5.8	ID	1	X	X	[0..1]	
Name Context	5.9	CE	483	X	X	[0..1]	
Name Validity Range	5.10	DR	53	X	X	[0..0]	
Name Assembly Order	5.11	ID	1	X	X	[0..1]	HL7 table 0444: HL7 defined: Name assembly order
Effective Date	5.12	TS	26	X	X	[0..1]	
Expiration Date	5.13	TS	26	X	X	[0..1]	
Professional Suffix	5.14	ST	199	X	X	[0..1]	

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Mother's Maiden Name	6	XPN	294	X	X	[0..*]	
Date/Time of Birth	7	TS	26	O	O	[0..1]	**Definition**: This field contains the patient's date and time of birth.
Administrative Sex	8	IS	1	RE	RE	[0..1]	PHVS_Sex_SyndromicSurveillance **Definition**: This field contains the patient's sex. **Data Element of Interest**: Sex
Patient Alias	9	XPN	294	X	X	[0..0]	
Race	10	CE	478	RE	RE	[0..*]	**Definition**: This field refers to the patient's race **Note**: Patient could have more than one race defined. **Data Element of Interest**: Race
Identifier	10.1	ST	20	RE	RE	[0..1]	PHVS_RaceCategory_CDC
Text	10.2	ST	199	O	RE	[0..1]	
Name of Coding System	10.3	ID	20	CE	C	[0..1]	**Condition Predicate:** If PID-10.1 (the identifier) is provided, then PID 10.3 is valued.
Alternate Identifier	10.4	ST	20	X	X	[0..1]	
Alternate Text	10.5	ST	199	X	X	[0..1]	

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Name of Alternate Coding System	10.6	ID	20	X	X	[0..1]	
Patient Address	11	XAD	513	RE	RE	[0..1]	**Definition**: This field contains the mailing address of the patient. **Note**: Expecting only the patient primary (current) address information in the supported components
Street Address	11.1	SAD	184	O	O	[0..1]	
Other Designation	11.2	ST	120	O	O	[0..1]	
City	11.3	ST	50	O	O	[0..1]	**Data Element of Interest:** Patient City/Town
State or Province	11.4	ST	50	O	O	[0..1]	PHVS_State_FIPS_5-2 **Data Element of Interest:** Patient State
ZIP or Postal Code	11.5	ST	12	RE	RE	[0..1]	USPS **Data Element of Interest:** Patient ZIP Code
Country	11.6	ID	3	O	O	[0..1]	PHVS_Country_ISO_3166-1 **Data Element of Interest:** Patient Country
Address Type	11.7	ID	3	O	O	[0..1]	PHVS_AddressType_HL7_2x
Other Geographic Designation	11.8	ST	50	O	O	[0..1]	

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
County/Parish Code	11.9	IS	20	RE	RE	[0..1]	PHVS_County_FIPS_6-4 **Data Element of Interest:** Patient County
Census Tract	11.10	IS	20	X	X	[0..1]	
Address Representation Code	11.11	ID	1	X	X	[0..1]	
Address Validity Range	11.12	DR	53	X	X	[0..0]	
Effective Date	11.13	TS	26	X	X	[0..1]	
Expiration Date	11.14	TS	26	X	X	[0..1]	
County Code	12	IS	4	X	X	[0..0]	HL7 table 0289: User defined: County/parish
Phone Number - Home	13	XTN	250	X	X	[0..*]	
Phone Number - Business	14	XTN	250	X	X	[0..*]	
Primary Language	15	CE	478	X	X	[0..1]	HL7 table 0296: User defined: Primary Language
Marital Status	16	CE	478	X	X	[0..1]	HL7 table 0002: User defined: Marital Status
Religion	17	CE	478	X	X	[0..1]	HL7 table 0006: User defined: Religion

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Patient Account Number	18	CX	250	O	O	[0..1]	**Definition**: This field contains the patient account number assigned by accounting to which all charges, payments, etc., are recorded. It is used to identify the patient's account.
SSN Number - Patient	19	ST	16	X	X	[0..0]	
Driver's License Number - Patient	20	DLN	64	X	X	[0..0]	
Mother's Identifier	21	CX	250	X	X	[0..*]	
Ethnic Group	22	CE	478	RE	RE	[0..1]	**Definition**: This field further defines the patient's ancestry. **Data Element of Interest**: Ethnicity
Identifier	22.1	ST	20	RE	RE	[0..1]	PHVS_EthnicityGroup_CDC
Text	22.2	ST	199	O	O	[0..1]	
Name of Coding System	22.3	ID	20	CE	CE	[0..1]	**Condition Predicate:** If PID-22.1 (the identifier) is provided then PID 22.3 is valued.
Alternate Identifier	22.4	ST	20	X	X	[0..1]	
Alternate Text	22.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	22.6	ID	20	X	X	[0..1]	

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Birth Place	23	ST	250	X	X	[0..1]	
Multiple Birth Indicator	24	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Birth Order	25	NM	2	X	X	[0..1]	
Citizenship	26	CE	478	X	X	[0..*]	HL7 table 0171: User defined: Citizenship
Veterans Military Status	27	CE	478	X	X	[0..1]	HL7 table 0172: User defined: Veterans Military Status
Nationality	28	CE	478	X	X	[0..0]	HL7 table 0212: User defined: Nationality
Patient Death Date and Time	29	TS	26	CE	CE	[0..1]	**Conformance Statement SS-036:** If valued, PID-29 (Patient Death and Time), **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Condition Predicate:** If valued, PID-30 (Patient Death Indicator) **SHALL** be valued to the Literal Value 'Y'. **Condition Predicate:** If PV1-36 is valued with any of the following: '20', '40', '41', '42' then PID-29 (Patient Death and Time) **SHALL** be populated. **Definition**: This field contains the date and time at which the patient death occurred.

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Patient Death Indicator	30	ID	1	CE	CE	[0..1]	**Conformance Statement SS-037:** If valued, PID-30 (Patient Death Indicator) **SHALL** be valued to the Literal Value 'Y'. **Condition Predicate:** If PV1-36 (Discharge Disposition) is valued with any of the following: '20', '40', '41', '42' and PID-29 (Patient Death and Time) **SHALL** be populated. **Definition**: This field indicates whether the patient is deceased. Y the patient is deceased N the patient is not deceased
Identity Unknown Indicator	31	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Identity Reliability Code	32	IS	20	X	X	[0..*]	HL7 table 0445: User defined: Identity Reliability Code
Last Update Date/Time	33	TS	26	O	O	[0..1]	**Definition**: This field contains the last update date and time for the patient's/person's identifying and demographic data, as defined in the PID segment.
Last Update Facility	34	HD	241	O	O	[0..1]	**Definition**: This field identifies the facility of the last update to a patient's/person's identifying and demographic data, as defined in the PID segment.
Species Code	35	CE	478	X	X	[0..1]	HL7 table 0446: User defined: Species code
Breed Code	36	CE	478	X	X	[0..1]	HL7 table 0447: User defined: Breed code

TABLE 5-5C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Strain	37	ST	80	X	X	[0..1]	
Production Class Code	38	CE	478	X	X	[0..1]	HL7 table 0429: User defined: Production Class Code
Tribal Citizenship	39	CWE	697	X	X	[0..*]	HL7 table 0171: User defined: Citizenship

Patient Visit (PV1) Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on a visit-specific basis.

TABLE 5-5D: PATIENT VISIT SEGMENT (PV1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID - PV1	1	SI	4	RE	RE	[0..1]	**Conformance Statement SS-024:** PV1-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one
Patient Class	2	IS	1	R	R	[1..1]	PHVS_PatientClass_SyndromicSurveillance **Definition**: This field is used by systems to categorize patients by site. **Data Element of Interest:** Patient Class
Assigned Patient Location	3	PL	1220	O	O	[0..1]	**Definition**: This field contains the patient's initial assigned location or the location to which the patient is being moved. The first component may be the nursing station for inpatient locations, or clinic or department, for locations other than inpatient.
Admission Type	4	IS	2	O	O	[0..1]	HL7 table 0007: User defined: Admission type **Definition**: This field indicates the circumstances under which the patient was or will be admitted.
Pre-admit Number	5	CX	250	X	X	[0..1]	

TABLE 5-5D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Prior Patient Location	6	PL	1220	X	X	[0..1]	
Attending Doctor	7	XCN	309	O	O	[0..*]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier **Data Element of Interest:** Unique Physician Identifier.
Referring Doctor	8	XCN	309	X	X	[0..*]	HL7 table 0010: User defined: Physician ID
Consulting Doctor	9	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Hospital Service	10	IS	3	O	O	[0..1]	HL7 table 0069: User defined: Hospital Service **Definition**: This field contains the treatment or type of surgery that the patient is scheduled to receive.
Temporary Location	11	PL	1220	X	X	[0..1]	
Preadmit Test Indicator	12	IS	2	X	X	[0..1]	HL7 table 0087: User defined: Pre-Admit Test Indicator
Re-admission Indicator	13	IS	2	X	X	[0..1]	HL7 table 0092: User defined: Re-admission Indicator

TABLE 5-5D: PATIENT VISIT SEGMENT (PV1)
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Admit Source	14	IS	6	O	O	[0..1]	HL7 table 0023: User defined: Admit Source **Definition**: This field indicates where the patient was admitted.
Ambulatory Status	15	IS	2	O	O	[0..*]	HL7 table 0009: User defined: Ambulatory Status **Definition**: This field indicates any permanent or transient handicapped conditions.
VIP Indicator	16	IS	2	X	X	[0..1]	HL7 table 0099: User defined: VIP Indicator
Admitting Doctor	17	XCN	309	X	X	[0..*]	HL7 table 0010: User defined: Physician ID
Patient Type	18	IS	2	X	X	[0..1]	HL7 table 0018: User defined: Patient Type
Visit Number	19	CX	478	R	R	[1..1]	**Definition**: This field contains the unique number assigned to each patient visit. **Note**: Unique identifier for a patient visit **Data Element of Interest**: Unique Visit Identifier
ID Number	19.1	ST	15	R	R	[1..1]	
Check Digit	19.2	ST	1	X	X	[0..1]	
Check Digit Scheme	19.3	ID	3	X	X	[0..1]	HL7 table 0061: HL7 defined: Check Digit Scheme
Assigning Authority	19.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning Authority

TABLE 5-5D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Identifier Type Code	19.5	ID	5	R	R	[1..1]	**Conformance Statement SS-025:** PV1-19.5 (Identifier Type Code) **SHALL** be valued to the Literal Value 'VN'. PHVS_IdentifierType_SyndromicSurveillance
Assigning Facility	19.6	HD	227	O	RE	[0..1]	
Effective Date	19.7	DT	8	X	X	[0..1]	
Expiration Date	19.8	DT	8	X	X	[0..1]	
Assigning Jurisdiction	19.9	CWE	705	X	X	[0..1]	
Assigning Facility	19.10	CWE	705	X	X	[0..1]	
Financial Class	20	FC	50	X	X	[0..*]	HL7 table 0064: User defined: Financial Class
Charge Price Indicator	21	IS	2	X	X	[0..1]	HL7 table 0032: User defined: Charge Price Indicator
Courtesy Code	22	IS	2	X	X	[0..1]	HL7 table 0045: User defined: Courtesy Code
Credit Rating	23	IS	2	X	X	[0..1]	HL7 table 0046: User defined: Credit rating
Contract Code	24	IS	2	X	X	[0..*]	HL7 table 0044: User defined: Contract code
Contract Effective Date	25	DT	8	X	X	[0..*]	

TABLE 5-5D: PATIENT VISIT SEGMENT (PV1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Contract Amount	26	NM	12	X	X	[0..*]	
Contract Period	27	NM	3	X	X	[0..*]	
Interest Code	28	IS	2	X	X	[0..1]	HL7 table 0073: User defined: Interest Code
Transfer to Bad Debt Code	29	IS	4	X	X	[0..1]	HL7 table 0110: User defined: Transfer to Bad Debt Code
Transfer to Bad Debt Date	30	DT	8	X	X	[0..1]	
Bad Debt Agency Code	31	IS	10	X	X	[0..1]	HL7 table 0021: User defined: Bad Debt Agency Code
Bad Debt Transfer Amount	32	NM	12	X	X	[0..1]	
Bad Debt Recovery Amount	33	NM	12	X	X	[0..1]	
Delete Account Indicator	34	IS	1	X	X	[0..1]	HL7 table 0111: User defined: Delete Account Indicator
Delete Account Date	35	DT	8	X	X	[0..1]	

						TABLE 5-5D: PATIENT VISIT SEGMENT (PV1)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Discharge Disposition	36	IS	3	RE	RE	[0..1]	PHVS_DischargeDisposition_HL7_2x **Definition**: This field contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.). **Data Element of Interest:** Discharge Disposition
Discharged to Location	37	DLD	47	X	X	[0..1]	HL7 table 0113: User defined: Discharged to Location
Diet Type	38	CE	478	X	X	[0..1]	HL7 table 0114: User defined: Diet type
Servicing Facility	39	IS	2	X	X	[0..1]	HL7 table 0115: User defined: Servicing Facility
Bed Status	40	IS	1	X	X	[0..0]	HL7 table 0116: User defined: Bed Status
Account Status	41	IS	2	X	X	[0..1]	HL7 table 0117: User defined: Account Status
Pending Location	42	PL	1220	X	X	[0..1]	
Prior Temporary Location	43	PL	1220	X	X	[0..1]	

TABLE 5-5D: PATIENT VISIT SEGMENT (PV1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Admit Date/Time	44	TS	26	R	R	[1..1]	**Conformance Statement SS-010:** PV1-44 (Admit Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the admit date/time. This field is also used to reflect the date/time of an outpatient/emergency patient registration. **Note**: Date and time of the patient presentation. **Data Element of Interest**: Admit Date/Time
Discharge Date/Time	45	TS	26	RE	RE	[0..1]	**Conformance Statement SS-012:** If present, PV1-45 (Discharge Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the discharge date/time. This field is also used to reflect the date/time of an outpatient/emergency patient discharge. **Data Element of Interest**: Discharge Date/Time
Current Patient Balance	46	NM	12	X	X	[0..1]	
Total Charges	47	NM	12	X	X	[0..1]	
Total Adjustments	48	NM	12	X	X	[0..1]	

TABLE 5-5D: PATIENT VISIT SEGMENT (PV1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Total Payments	49	NM	12	X	X	[0..1]	
Alternate Visit ID	50	CX	250	X	X	[0..1]	HL7 table 0203: User defined: Identifier type
Visit Indicator	51	IS	1	X	X	[0..1]	HL7 table 0326: User defined: Visit Indicator
Other Healthcare Provider	52	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID

Patient Visit – Additional Information (PV2) Segment

The PV2 segment is a continuation of visit-specific information and is the segment where the Admit Reason is passed.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-5E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Prior Pending Location	1	PL	1220	X	X	[0..1]	
Accommodation Code	2	CE	478	X	X	[0..1]	HL7 table 0129: User defined: Accommodation Code
Admit Reason	3	CE	478	RE	RE	[0..1]	**Definition**: This field contains the short description of the reason for patient's registration. **NOTE**: It may be coded (CE:1 and CE:3) or Free text (CE:2.) **Data Element of Interest**: Admit Reason (PV2-3)
Identifier	3.1	ST	20	RE	RE	[0..1]	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** PHVS_AdministrativeDiagnosis_ICD-10CM **Or** PHVS_Disease_CDC **Conformance Statement SS-009**: The implementation SHALL support all 3 value sets.
Text	3.2	ST	199	RE	RE	[0..1]	If only Free Text is used, it is communicated in this component.

TABLE 5-5E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Name of Coding System	3.3	ID	20	C	C	[0..1]	**Condition Predicate:** If PV2-3.1 (the identifier) is provided then PV2-3.3 is valued. **Conformance Statement SS-026:**PV2-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Transfer Reason	4	CE	478	X	X	[0..1]	
Patient Valuables	5	ST	25	X	X	[0..*]	
Patient Valuables Location	6	ST	25	X	X	[0..1]	
Visit User Code	7	IS	2	X	X	[0..*]	HL7 table 0130: User defined: Visit User Code
Expected Admit Date/Time	8	TS	26	X	X	[0..1]	
Expected Discharge Date/Time	9	TS	26	X	X	[0..1]	
Estimated Length of Inpatient Stay	10	NM	3	X	X	[0..1]	

TABLE 5-5E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Actual Length of Inpatient Stay	11	NM	3	X	X	[0..1]	
Visit Description	12	ST	50	X	X	[0..1]	
Referral Source Code	13	XCN	309	X	X	[0..*]	
Previous Service Date	14	DT	8	X	X	[0..1]	
Employment Illness Related Indicator	15	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Purge Status Code	16	IS	1	X	X	[0..1]	HL7 table 0213: User defined: Purge Status Code
Purge Status Date	17	DT	8	X	X	[0..1]	
Special Program Code	18	IS	2	X	X	[0..1]	HL7 table 0214: User defined: Special Program Code
Retention Indicator	19	ID	1	X	X	[0..1]	HL7 table 0136: User defined: Retention Indicator
Expected Number of Insurance Plans	20	NM	1	X	X	[0..1]	
Visit Publicity Code	21	IS	1	X	X	[0..1]	HL7 table 0215: User defined: Visit Publicity Code
Visit Protection Indicator	22	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

	TABLE 5-5E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)						
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Clinic Organization Name	23	XON	250	X	X	[0..*]	
Patient Status Code	24	IS	2	X	X	[0..1]	HL7 table 0216: User defined: Patient Status code
Visit Priority Code	25	IS	1	X	X	[0..1]	HL7 table 0217: User defined: Visit Priority code
Previous Treatment Date	26	DT	8	X	X	[0..1]	
Expected Discharge Disposition	27	IS	2	X	X	[0..1]	HL7 table 0112: User defined: Discharge Disposition
Signature on File Date	28	DT	8	X	X	[0..1]	
First Similar Illness Date	29	DT	8	X	X	[0..1]	
Patient Charge Adjustment Code	30	CE	478	X	X	[0..1]	HL7 table 0218: User defined: Charge Adjustment Code
Recurring Service Code	31	IS	2	X	X	[0..1]	HL7 table 0219: User defined: Recurring Service Code
Billing Media Code	32	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Expected Surgery Date and Time	33	TS	26	X	X	[0..1]	
Military Partnership Code	34	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

TABLE 5-5E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Military Non-Availability Code	35	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Newborn Baby Indicator	36	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Baby Detained Indicator	37	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Mode of Arrival Code	38	CE	478	X	X	[0..1]	HL7 table 0430: User defined: Mode of Arrival Code
Recreational Drug Use Code	39	CE	478	X	X	[0..*]	HL7 table 0431: User defined: Recreational Drug Use Code
Admission Level of Care Code	40	CE	478	X	X	[0..1]	HL7 table 0432: User defined: Admission Level of Care Code
Precaution Code	41	CE	478	X	X	[0..*]	HL7 table 0433: User defined: Precaution Code
Patient Condition Code	42	CE	478	X	X	[0..1]	HL7 table 0434: User defined: Patient Condition Code
Living Will Code	43	IS	2	X	X	[0..1]	HL7 table 0315: User defined: Living Will Code
Organ Donor Code	44	IS	2	X	X	[0..1]	HL7 table 0316: User defined: Organ Donor Code
Advance Directive Code	45	CE	478	X	X	[0..*]	HL7 table 0435: User defined: Advance Directive Code
Patient Status Effective Date	46	DT	8	X	X	[0..1]	

TABLE 5-5E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Expected LOA Return Date/Time	47	TS	26	X	X	[0..1]	
Expected Pre-admission Testing Date/Time	48	TS	26	X	X	[0..1]	
Notify Clergy Code	49	IS	20	X	X	[0..*]	HL7 table 0534: User defined: Notify Clergy Code

Observation/Result (OBX) Segment

The OBX Segment in the ADT Message is used to transmit observations related to the patient and visit. In Table 2-5 if the data element is carried in an OBX and usage is 'Required', the segment and its fields must be populated. The data elements in Table 2.5 DATA ELEMENTS OF INTEREST that use OBX segments are not expected to utilize any specified Set ID number within a given set of OBX segments in a message. However, the Set IDs are required to be sequential.

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID - OBX	1	SI	4	R	R	[1..1]	**Note:** Set ID numbers the repetitions of the segments **Conformance Statement SS-027:** For the first repeat of the OBX segment, the sequence number **SHALL** be one (1), for the second repeat, the sequence number shall be two (2), etc. Example: OBX|1|…. OBX|2|…. OBX|3|…. **Definition**: This field contains the sequence number.

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Value Type	2	ID	3	R	R	[1..1]	**Conformance Statement SS-028:** OBX-2 **SHALL** be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD') PHVS_ValueType_SyndromicSurveillance **Definition**: This field contains the format of the observation value in OBX. Note: Identifies the structure of data in observation value (OBX.5)

Observation Identifier	3	CE	478	R	R	[1..1]	PHVS_ObservationIdentifier_SyndromicSurveillance
							
							Definition: This field contains a unique identifier for the observation.
							
							Note: Identifies data to be received in observation value (OBX.5)
							
							Data Elements of Interest communicated in OBX Segment may include:
							
							    Facility Street address (Treating), Data Type: XAD:1, SAD:1
							
							    Facility City (Treating), Data Type: XAD:3
							
							    Facility State (Treating), Data Type: XAD:4
							
							    Facility ZIP Code (Treating), Data Type: XAD:5
							
							    Facility County (Treating), Data Type: XAD:9
							
							    Age, Data Type: NM
							
							    Facility / Visit Type, Data Type: CWE (only for ED/UC)

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							Chief Complaint/Reason for Visit, Data Type: CWE, (Free Text is preferred)
							Clinical Impression, Data Type: TX
							Initial Temperature, Data Type: NM
							Height, Data Type: NM
							Weight, Data Type: NM
							Smoking Status, PHVS_SmokingStatus_MU
							Triage Notes, Data Type: TX
Identifier	3.1	ST	20	R	R	[1..1]	
Text	3.2	ST	199	O	O	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-3.1 (the identifier) is provided then OBX-3.3 is valued.
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Observation Sub-ID	4	ST	20	X	X	[0..1]	
Observation Value	5	varies	99999	RE	RE	[0..*]	Listed below are the supported fields for each of the supported value types.

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							Definition: This field contains the value observed by the observation producer. OBX-2-value type contains the data type for this field according to which observation value is formatted.
							Note: Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3).
							Notes on Data Types:
							TS Data Type: Unconstrained. Some values might be to the day, others to the year/ decade, etc.
							TX Data Type: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters).
							NM Data Type: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer.
							CWE Data Type: Data Element: Facility / Visit Type (only for ED/UC) CWE-5:2 Text: It is strongly recommended that text be sent to accompany any identifier.
							CWE Data Type: Data Element: Chief Complaint / Reason for visit It is the short description of the patient's self-reported chief complaint or reason for visit. It is preferred that Free text is used.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							Free Text should appear in CWE:9
							XAD Data Type: Data Elements:
							Facility Street address (Treating), Data Type: XAD:1, SAD:1:
							Note: This is the first subcomponent of the SAD data type. This has the same effect as being the first component of the field, while limiting the length based on other subcomponents that are not supported.
							Facility City (Treating), Data Type: XAD:3
							Facility State (Treating), Data Type: XAD:4
							Facility ZIP Code (Treating), Data Type: XAD:5
							Facility County (Treating), Data Type: XAD:9
Beginning of OBX-5 Observation Value Usage Based on Data Type in OBX-2							
TS Data Type							
Time	5.1	DTM	24	RE	RE	[0..1]	
Degree of Precision	5.2	ST	1	X	X	[0..0]	
TX Data Type							
Text Data	5.1	TX	65536	RE	RE	[0..1]	

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
NM Data Type							
Numeric Value	5.1	ST	16	RE	RE	[0..1]	
CWE Data Type: Data Element #7 Facility / Visit Type (only for ED/UC)							
Identifier	5.1	ST	20	R	R	[1..1]	PHVS_FacilityVisitType_SyndromicSurveillance
Text	5.2	ST	199	RE	RE	[0..1]	
Name of Coding System	5.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	
Alternate Text	5.5	ST	199	RE	RE	[0..1]	.
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
Coding System Version ID	5.7	ST	10	O	O	[0..1]	
Alternate Coding System Version ID	5.8	ST	10	O	O	[0..1]	
Original Text	5.9	ST	199	RE	RE	[0..1]	Free text goes here

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
CWE Data Type: Data Element #25 Chief Complaint / Reason for visit- Free Text is preferred							
Identifier	5.1	ST	20	RE	RE	[0..1]	**Conformance Statement SS-005:** If patient's chief complaint is captured as an unstructured, free-text note, then chief complaint **SHALL** be valued in OBX-5, CWE:9. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation Identifier Example OBX Segment (free text): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^^STOMACH ACHE||||||F|||201102171531 **Conformance Statement SS-006:** If patient's chief complaint is captured from a Coding System, then chief complaint **SHALL** be valued in OBX- 5, CWE:1, CWE:2, CWE:3. PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **or** PHVS_CauseOfDeath_ICD-10_CDC **or** PHVS_Disease_CDC **NOTE**: The implementation shall support all 3 value sets. Example OBX Segment (coded): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX||||||F|||20110217

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
							Conformance Statement SS-007: If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX- 5, CWE:2. OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^Dizziness and giddiness||||||F|||20110217 **Conformance Statement SS-008:** The implementation **SHALL** support a minimum of 70 characters for unstructured, free-text patient's chief complaint.
Text	5.2	ST	199	RE	RE	[0..1]	
Name of Coding System	5.3	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	
Alternate Text	5.5	ST	199	RE	RE	[0..1]	
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
Coding System Version ID	5.7	ST	10	O	O	[0..1]	

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Alternate Coding System Version ID	5.8	ST	10	O	O	[0..1]	
Original Text	5.9	ST	199	RE	RE	[0..1]	Free text is Preferred and it goes here
XAD Data Type							
Street Address	5.1	SAD	184	O	O	[0..1]	
Street or Mailing Address	5.1.1	ST	120	O	O	[0..1]	
Street Name	5.1.2	ST	50	O	O	[0..1]	
Dwelling Number	5.1.3	ST	12	O	O	[0..1]	
Other Designation	5.2	ST	120	O	O	[0..1]	
City	5.3	ST	50	O	O	[0..1]	The ISDS recommendations recommend free text City/Town designations.
State or Province	5.4	ST	50	O	O	[0..1]	PHVS_State_FIPS_5-2
ZIP or Postal Code	5.5	ST	12	O	O	[0..1]	USPS
Country	5.6	ID	3	O	O	[0..1]	PHVS_Country_ISO_3166-1
Address Type	5.7	ID	3	O	O	[0..1]	PHVS_AddrefssType_HL7_2x

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Other Geographic Designation	5.8	ST	50	O	O	[0..1]	
County/Parish Code	5.9	IS	20	O	O	[0..1]	The ISDS recommendations allow free text County designations.
Census Tract	5.10	IS	20	X	X	[0..1]	
Address Representation Code	5.11	ID	1	X	X	[0..1]	
Address Validity Range	5.12	DR	53	X	X	[0..0]	
Effective Date	5.13	TS	26	X	X	[0..1]	
Expiration Date	5.14	TS	26	X	X	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)							
End of OBX-5 Observation Value Usage Based on Data Type in OBX-2							

Units	6	CE	62	C	C	[0..1]	**Condition Predicate:** If OBX.2 (Value Type) is valued "NM"
							
							Background: When an observation's value is measured on a continuous scale, one must report the measurement units within the unit's field of the OBX segment.
							
							Data Elements of Interest:
							    Age units
							    Initial Temperature units
							    Height units
							    Weight Units
							PHVS_AgeUnit_SyndromicSurveillance

Identifier	6.1	ST	20	R	R	[1..1]	**Conformance Statement SS-029:** If OBX 3.1 is valued with 21612-7, then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance **Conformance Statement SS-030:** If OBX 3.1 = is valued with 11289-6 then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_TemperatureUnit_UCUM **Conformance Statement SS-031:** If OBX 3.1 is valued with 59408-5 then OBX6.1 (Identifier) **SHALL** be valued to a member of the set PHVS_PulseOximetryUnit_UCUM

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Text	6.2	ST	20	O	O	[0..1]	
Name of Coding System	6.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-6.1 (the identifier) is provided then OBX-6.3 is valued.
Alternate Identifier	6.4	ST	20	X	X	[0..1]	
Alternate Text	6.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	6.6	ID	20	X	X	[0..1]	
References Range	7	ST	60	X	X	[0..1]	
Abnormal Flags	8	IS	5	X	X	[0..*]	HL7 table 0078: User defined: Abnormal Flags
Probability	9	NM	5	X	X	[0..1]	
Nature of Abnormal Test	10	ID	2	X	X	[0..*]	HL7 table 0080: HL7 defined: Nature of Abnormal Test
Observation Result Status	11	ID	1	R	R	[1..1]	HL7 table 0085: HL7 defined: Observation Result Status **Definition**: This field contains the observation result status. This field reflects the current completion status of the results for one Observation Identifier.
Effective Date of Reference Range	12	TS	26	X	X	[0..1]	

TABLE 5-5F: OBSERVATION / RESULT SEGMENT (OBX)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
User Defined Access Checks	13	ST	20	X	X	[0..1]	
Date/Time of the Observation	14	TS	26	O	O	[0..1]	**Definition**: This field is the observation date-time is the physiologically relevant date-time or the closest approximation to that date-time.
Producer's ID	15	CE	478	X	X	[0..1]	
Responsible Observer	16	XCN	309	X	X	[0..*]	
Observation Method	17	CE	478	X	X	[0..*]	
Equipment Instance Identifier	18	EI	424	X	X	[0..*]	
Date/Time of the Analysis	19	TS	26	X	X	[0..1]	

Diagnosis (DG1) Segment

The DG1 segment contains patient diagnosis information of various types. syndromic surveillance supports Admitting, Working and Final Diagnosis types.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-5G: DIAGNOSIS SEGMENT (DG1)
Set ID - DG1	1	SI	4	R	R	[1..1]	**Conformance Statement SS-032:** DG1-1 (Set ID) for the first occurrence of a DG1 Segment **SHALL** have the Literal Value of '1'. Each following occurrence **SHALL** be numbered consecutively **Definition**: This field contains the number that identifies this transaction. For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc.
Diagnosis Coding Method	2	ID	2	X	X	[0..1]	HL7 table 0053: User defined: Diagnosis Coding Method
Diagnosis Code - DG1	3	CE	478	R	R	[1..1]	**Definition**: This contains the diagnosis code assigned to this diagnosis. **Data Element of Interest:** Diagnosis **Condition Predicate:** If the DG1 Segment is provided, DG1-3 (Diagnosis) is required to be valued.
Identifier	3.1	ST	20	R	RE	[0..1]	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM Or PHVS_AdministrativeDiagnosis_ICD-10CM Or PHVS_Disease_CDC **Conformance Statement SS-011**: The implementation **SHALL** support all 3 value sets.

TABLE 5-5G: DIAGNOSIS SEGMENT (DG1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Text	3.2	ST	199	RE	RE	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If DG1-3.1 (the identifier) is provided then DG1-3.3 is valued. **Conformance Statement SS-033:** DG1-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Diagnosis Description	4	ST	40	X	X	[0..0]	
Diagnosis Date/Time	5	TS	26	O	O	[0..1]	**Definition**: This field contains the date/time that the diagnosis was determined.
Diagnosis Type	6	IS	2	R	R	[1..1]	PHVS_DiagnosisType_HL7_2x **Definition**: This field contains a code that identifies the type of diagnosis being sent **Note**: Identifies the type of diagnosis being sent. **Data Element of Interest:** Diagnosis type **Condition Predicate:** If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued.

TABLE 5-5G: DIAGNOSIS SEGMENT (DG1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Major Diagnostic Category	7	CE	478	X	X	[0..0]	HL7 table 0118: User defined: Major Diagnostic Category
Diagnostic Related Group	8	CE	478	X	X	[0..0]	HL7 table 0055: User defined: Diagnostic Related Group
DRG Approval Indicator	9	ID	1	X	X	[0..0]	HL7 table 0136: HL7 defined: Yes/no Indicator
DRG Grouper Review Code	10	IS	2	X	X	[0..0]	HL7 table 0056: User defined: DRG Grouper Review Code
Outlier Type	11	CE	478	X	X	[0..0]	HL7 table 0083: User defined: Outlier Type
Outlier Days	12	NM	3	X	X	[0..0]	
Outlier Cost	13	CP	538	X	X	[0..0]	
Grouper Version And Type	14	ST	4	X	X	[0..0]	
Diagnosis Priority	15	ID	2	X	X	[0..1]	HL7 table 0359: HL7 defined: Diagnosis Priority
Diagnosing Clinician	16	XCN	309	X	X	[0..*]	
Diagnosis Classification	17	IS	3	X	X	[0..1]	HL7 table 0228: User defined: Diagnosis Classification
Confidential Indicator	18	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator

TABLE 5-5G: DIAGNOSIS SEGMENT (DG1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Attestation Date/Time	19	TS	26	X	X	[0..1]	
Diagnosis Identifier	20	EI	427	X	X	[0..1]	
Diagnosis Action Code	21	ID	1	X	X	[0..1]	HL7 table 0206: HL7 defined: Segment Action Code

Procedures (PR1) Segment

The PR1 segment is used to carry information relative to various types of procedures performed.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID – PR1	1	SI	4	R	R	[1..1]	**Conformance Statement SS-034:** For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc. **Definition**: This field contains the number that identifies this transaction.
Procedure Coding Method	2	IS	3	X	X	[0..1]	HL7 table 0089: User defined: Procedure Coding Method
Procedure Code	3	CE	478	R	R	[1..1]	**Definition**: This field contains a unique identifier assigned to the procedure **Data Element of Interest:** Procedure Code
Identifier	3.1	ST	20	RE	RE	[0..1]	CPT-4
Text	3.2	ST	199	RE	RE	[0..1]	Free Text
Name of Coding System	3.3	ID	20	CE	CE	[1..1]	**Condition Predicate:** If PR1-3.1 (the identifier) is provided then PR1-3.3 is valued.
Procedure Description	4	ST	40	X	X	[0..0]	
Procedure Date/Time	5	TS	26	R	R	[1..1]	**Definition**: This field contains the date/time that the procedure was performed.

TABLE 5-5H: PROCEDURES SEGMENT (PR1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Procedure Functional Type	6	IS	2	X	X	[0..1]	HL7 table 0230: User defined: Procedure Functional Type
Procedure Minutes	7	NM	4	X	X	[0..1]	
Anesthesiologist	8	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Anesthesia Code	9	IS	2	X	X	[0..1]	HL7 table 0019: User defined: Anesthesia Code
Anesthesia Minutes	10	NM	4	X	X	[0..1]	
Surgeon	11	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Procedure Practitioner	12	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Consent Code	13	CE	478	X	X	[0..1]	HL7 table 0059: User defined: Consent code
Procedure Priority	14	ID	2	X	X	[0..1]	HL7 table 0418: HL7 defined: Procedure Priority
Associated Diagnosis Code	15	CE	478	X	X	[0..1]	HL7 table 0051: User defined: Diagnosis Code
Procedure Code Modifier	16	CE	478	X	X	[0..*]	HL7 table 0340: User defined: Procedure Code Modifier
Procedure DRG Type	17	IS	20	X	X	[0..1]	HL7 table 0416: User defined: Procedure DRG Type
Tissue Type Code	18	CE	478	X	X	[0..*]	HL7 table 0417: User defined: Tissue Type Code

TABLE 5-5H: PROCEDURES SEGMENT (PR1)							
Field Name	**Seq**	**DT**	**Lengt h**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Procedure Identifier	19	EI	427	X	X	[0..1]	
Procedure Action Code	20	ID	1	X	X	[0..1]	HL7 table 0206: HL7 defined: Segment Action Code

Insurance (IN1) Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-5I: INSURANCE SEGMENT (IN1)
Set ID – IN1	1	SI	4	R	R	[1..1]	**Definition**: The Set ID in the IN1 segment is used to aggregate the grouping of insurance segments. **Note**: SET ID numbers the repetitions of the segments.
Insurance Plan ID	2	CE	478	R	R	[1..1]	HL7 table 0072: User defined: Insurance Plan ID **Definition**: This field contains a unique identifier for the insurance plan.
Insurance Company ID	3	CX	250	R	R	[1..*]	**Definition**: This field contains unique identifiers for the insurance company. The assigning authority and identifier type code are strongly recommended for all CX data types.
Insurance Company Name	4	XON	250	X	X	[0..*]	
Insurance Company Address	5	XAD	513	X	X	[0..*]	
Insurance Co Contact Person	6	XPN	294	X	X	[0..*]	
Insurance Co Phone Number	7	XTN	250	X	X	[0..*]	
Group Number	8	ST	12	X	X	[0..1]	

TABLE 5-5I: INSURANCE SEGMENT (IN1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Group Name	9	XON	250	X	X	[0..*]	
Insured_s Group Emp ID	10	CX	250	X	X	[0..*]	
Insured_s Group Emp Name	11	XON	250	X	X	[0..*]	
Plan Effective Date	12	DT	8	X	X	[0..1]	
Plan Expiration Date	13	DT	8	X	X	[0..1]	
Authorization Information	14	AUI	239	X	X	[0..1]	
Plan Type	15	IS	3	O	O	[0..1]	HL7 table 0086: User defined: Plan Type **Definition**: This field contains the coding structure that identifies the various plan types, for example, Medicare, Medicaid, Blue Cross, HMO, etc.
Name Of Insured	16	XPN	294	X	X	[0..*]	
Insured_ Relationship To Patient	17	CE	478	X	X	[0..1]	HL7 table 0063: User defined: Relationship
Insured_ Date Of Birth	18	TS	26	X	X	[0..1]	
Insured_ Address	19	XAD	513	X	X	[0..*]	
Assignment Of Benefits	20	IS	2	X	X	[0..1]	HL7 table 0135: User defined: Assignment of Benefits

TABLE 5-5I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Coordination Of Benefits	21	IS	2	X	X	[0..1]	HL7 table 0173: User defined: Coordination of Benefits
Coord Of Ben. Priority	22	ST	2	X	X	[0..1]	
Notice Of Admission Flag	23	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator
Notice Of Admission Date	24	DT	8	X	X	[0..1]	
Report Of Eligibility Flag	25	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator
Report Of Eligibility Date	26	DT	8	X	X	[0..1]	
Release Information Code	27	IS	2	X	X	[0..1]	HL7 table 0093: User defined: Release of Information Code
Pre-Admit Cert (PAC)	28	ST	15	X	X	[0..1]	
Verification Date/Time	29	TS	26	X	X	[0..1]	
Verification By	30	XCN	309	X	X	[0..*]	
Type Of Agreement Code	31	IS	2	X	X	[0..1]	HL7 table 0098: User defined: Type Of Agreement Code
Billing Status	32	IS	2	X	X	[0..1]	HL7 table 0022: User defined: Billing Status
Lifetime Reserve Days	33	NM	4	X	X	[0..1]	

TABLE 5-5I: INSURANCE SEGMENT (IN1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Delay Before L.R. Day	34	NM	4	X	X	[0..1]	
Company Plan Code	35	IS	8	X	X	[0..1]	HL7 table 0042: User defined: Company Plan Code
Policy Number	36	ST	15	X	X	[0..1]	
Policy Deductible	37	CP	538	X	X	[0..1]	
Policy Limit - Amount	38	CP	538	X	X	[0..0]	
Policy Limit - Days	39	NM	4	X	X	[0..1]	
Room Rate - Semi-Private	40	CP	538	X	X	[0..0]	
Room Rate - Private	41	CP	538	X	X	[0..0]	
Insured_ Employment Status	42	CE	478	X	X	[0..1]	HL7 table 0066: User defined: Employment Status
Insured_ Administrative Sex	43	IS	1	X	X	[0..1]	HL7 table 0001: User defined: Administrative Sex
Insured_ Employer_s Address	44	XAD	513	X	X	[0..*]	
Verification Status	45	ST	2	X	X	[0..1]	
Prior Insurance Plan ID	46	IS	8	X	X	[0..1]	HL7 Table 0072: User defined: Insurance Plan ID
Coverage Type	47	IS	3	X	X	[0..1]	HL7 Table 0309: User defined: Coverage Type

TABLE 5-5I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Handicap	48	IS	2	X	X	[0..1]	HL7 Table 0295: User defined: Handicap
Insured_ ID Number	49	CX	250	X	X	[0..*]	
Signature Code	50	IS	1	X	X	[0..1]	HL7 Table 0535: User defined: Signature Code
Signature Code Date	51	DT	8	X	X	[0..1]	
Insured_ Birth Place	52	ST	250	X	X	[0..1]	
VIP Indicator	53	IS	2	X	X	[0..1]	HL7 Table 0099: User defined: VIP Indicator

DISCHARGE / END VISIT (ADT^A03)

	TABLE 5-6: ADT^A03 DISCHARGE / END VISIT			
SEG	**NAME**	**DESCRIPTION**	**USAGE**	**CARDINALITY**
MSH	Message Header	Information explaining how to parse and process the message This information includes identification of message delimiters, sender, receiver, message type, timestamp, etc.	R	[1..1]
EVN	Event Type	Trigger event information for receiving application	R	[1..1]
PID	Patient Identification	Patient identification and demographic information	R	[1..1]
PV1	Patient Visit	Information related to this visit at this facility including the nature of the visit, critical timing information and a unique visit identifier.	R	[1..1]
[PV2]	Patient Visit Additional Information	Admit Reason information.	RE	[0..1]
[{DG1}]	Diagnosis	Admitting Diagnosis and, optionally, Working and Final Diagnosis information	RE	[0..*]
[{PR1}]	Procedures	Information relative to various types of procedures performed	O	[0..*]
{OBX}	Observation / Result	Information regarding the age, temperature, and other information	R	[1..*]
[{IN1}]	Insurance	Information about insurance policy coverage information	O	[0..*]

Message Header (MSH) Segment

The MSH Segment is used to define the intent, source, destination, and some specifics of the syntax of the message. This segment includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

TABLE 5-6A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Field Separator	1	ST	1	R	R	[1..1]	**Definition**: This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such, it serves as the separator and defines the character to be used as a separator for the rest of the message. Default value is |, (ASCII 124).
Encoding Characters	2	ST	4	R	R	[1..1]	**Definition**: This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Default values are ^~\\& (ASCII 94, 126, 92, and 38, respectively).
Sending Application	3	HD	227	O	O	[0..1]	**Definition**: This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.

TABLE 5-6A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Sending Facility	4	HD	227	R	R	[1..1]	National Provider Identifier. (10-digit identifier) **Definition**: This field further describes the sending application, MSH-3-sending application. This field uniquely identifies the facility associated with the application that sends the message. If Acknowledgements are in use, this facility will receive any related Acknowledgement message. **Note**: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field
Namespace ID	4.1	IS	20	RE	RE	[0..1]	
Universal ID	4.2	ST	199	R	R	[1..1]	
Universal ID Type	4.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance
Receiving Application	5	HD	227	O	O	[0..1]	HL7 table 0361: User-defined: Application **Definition**: This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.
Receiving Facility	6	HD	227	O	O	[0..1]	HL7 table 0362: User-defined: Facility **Definition**: This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations.

TABLE 5-6A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Date/Time Of Message	7	TS	26	R	R	[1..1]	**Conformance Statement SS-013:** MSH-7 (Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone. **Note**: MSH-7 (Date/Time of Message) does not have to equal EVN-2 (Message Date/Time)
Security	8	ST	40	X	X	[0..1]	
Message Type	9	MSG	15	R	R	[1..1]	**Conformance Statement SS-038:** MSH-9 (Message Type) **SHALL** the literal value: 'ADT^A03^ADT_A03'', **Definition**: This field contains the message type, trigger event, and the message structure ID for the message.
Message Code	9.1	ID	3	R	R	[1..1]	PHVS_MessageType_SyndromicSurveillance
Trigger Event	9.2	ID	3	R	R	[1..1]	PHVS_EventType_SyndromicSurveillance
Message Structure	9.3	ID	7	R	R	[1..1]	PHVS_MessageStructure_SyndromicSurveillance

TABLE 5-6A: MESSAGE HEADER SEGMENT (MSH)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Message Control ID	10	ST	199	R	R	[1..1]	**Definition**: This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA). **Note**: This field is a number or other identifier that uniquely identifies the message.
Processing ID	11	PT	3	R	R	[1..1]	**Conformance Statement SS-015:** MSH-11 (Processing ID) **SHALL** have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training. **Definition**: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. **Note**: Indicates how to process the message as defined in HL7 processing rules
Version ID	12	VID	5	R	R	[1..1]	**Conformance Statement SS-016:** MSH-12 (Version ID) **SHALL** have a value '2.5.1' **Definition**: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. For this message the value shall be 2.5.1 **Note**: HL7 version number used to interpret format and content of the message.
Sequence Number	13	NM	15	X	X	[0..1]	
Continuation Pointer	14	ST	180	X	X	[0..1]	

TABLE 5-6A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Accept Acknowledgement Type	15	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Application Acknowledgement Type	16	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Country Code	17	ID	3	X	X	[0..1]	HL7 table 0399: HL7 defined: Country code
Character Set	18	ID	16	X	X	[0..*]	HL7 table 0211: HL7 defined: Alternate character sets
Principal Language Of Message	19	CE	478	X	X	[0..1]	
Alternate Character Set Handling Scheme	20	ID	20	X	X	[0..1]	HL7 table 0356: HL7 defined: Alternate character set handling scheme

TABLE 5-6A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Message Profile Identifier	21	EI	427	R	R	[1..1]	**Conformance Statement SS-017:** An instance of MSH.21 (Message Profile Identifier) **SHALL** contain the constant value: PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-NoAck^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-Batch^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Batch^SS Receiver^2.16.840.1.114222.4.10.3^ISO **Definition**: Sites may use this field to assert adherence to, or reference, a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages.

Event Type (EVN) Segment

The EVN segment is used to communicate trigger event information to receiving applications.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Event Type Code	1	ID	3	X	X	[0..0]	PHVS_EventType_SyndromicSurveillance
Recorded Date/Time	2	TS	26	R	R	[1..1]	**Conformance Statement SS-018:** EVN-2 (Recorded Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Note:** EVN-2 (Recorded Date/Time) does not have to equal MSH-7 (Date/Time of Message) **Note:** Most systems default to the system Date/Time when the transaction was entered. Data Element of Interest: Message Date/Time
Date/Time Planned Event	3	TS	26	X	X	[0..1]	
Event Reason Code	4	IS	3	X	X	[0..1]	HL7 table 0062: User defined: Event reason
Operator ID	5	XCN	309	X	X	[0..*]	HL7 table 0188: User defined: Operator ID
Event Occurred	6	TS	26	X	X	[0..1]	

TABLE 5-6B: EVENT TYPE SEGMENT (EVN)

TABLE 5-6B: EVENT TYPE SEGMENT (EVN)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Event Facility	7	HD	241	R	R	[1..1]	**Definition**: This field identifies the location where the patient was actually treated. **Note**: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field **Data Element of Interest**: Facility Identifier (Treating) (EVN-7.1) **Data Element of Interest**: Facility Name (Treating) (EVN-7.2)
Namespace ID	7.1	IS	20	RE	RE	[0..1]	Recommend the use of the Organization Name Legal Business Name (LBN) associated with the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.
Universal ID	7.2	ST	199	R	R	[1..1]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.

				TABLE 5-6B: EVENT TYPE SEGMENT (EVN)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Universal ID Type	7.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance

Patient Identification (PID) Segment

The PID Segment is used as the primary means of communicating patient identification information. This segment contains pertinent patient identifying and demographic information.

TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID - PID	1	SI	4	R	R	[1..1]	**Conformance Statement SS-019:** PID-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one.
Patient ID	2	CX	20	X	X	[0..0]	
Patient Identifier List	3	CX	478	R	R	[1..*]	**Definition**: PID.3 is a repeating field that can accommodate multiple patient identifiers. **Note**: Patient's unique identifier(s) from the facility that is submitting this report to public health officials Different jurisdictions use different identifiers and may often use a combination of identifiers to produce a unique patient identifier. Patient identifiers should be strong enough to remain a unique identifier across different data provider models, such as a networked data provider or State HIE. **Data Element of Interest**: Unique Patient Identifier
ID Number	3.1	ST	15	R	R		

TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Check Digit	3.2	ST	1	X	X	[0..1]	
Check Digit Scheme	3.3	ID	3	X	X	[0..1]	HL7 table 0061: HL7 defined: Check digit scheme
Assigning Authority	3.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning authority
Identifier Type Code	3.5	ID	5	R	R	[1..1]	PHVS_IdentifierType_SyndromicSurveillance
Assigning Facility	3.6	HD	227	O	RE	[0..1]	
Effective Date	3.7	DT	8	X	X	[0..1]	
Expiration Date	3.8	DT	8	X	X	[0..1]	
Assigning Jurisdiction	3.9	CWE	705	X	X	[0..1]	
Assigning Facility	3.10	CWE	705	X	X	[0..1]	
Alternate Patient ID - PID	4	CX	20	X	X	[0..0]	
Patient Name	5	XPN	294	R	R	[1..*]	**Note:** Syndromic surveillance does not require the patient name. A Visit or Patient ID, as specified within this guide, shall be used by PHAs to join related visit data and for working with hospitals to find additional visit information for syndromic surveillance signal confirmation or investigation. Since, however, HL7 requires the patient name, the field must be populated even when data patient

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							name shall not be sent. In such an instance (i.e., patient name is not sent), patient name shall be presented in a pseudonymized manner.
							Conformance Statement SS-020: If **PID-5** (Patient Name) is unknown then the first occurrence of PID-5 **SHALL NOT** be valued.
							Conformance Statement SS-021: If **PID-5** (Patient Name) is unknown then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "U" (i.e., PID-5 shall be valued as |~^^^^^^U|).
							Conformance Statement SS-022: If **PID-5** (Patient Name) is known, but not desired to be sent, then the first occurrence of PID-5 **SHALL NOT** be valued.
							Conformance Statement SS-023: If **PID-5** (Patient Name) is known, but not desired to be sent, then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "S" (i.e., PID-5 shall be valued as ~^^^^^^S|). The second name field indicates that it is unspecified.
							Definition: This field contains the names of the patient; the primary or legal name of the patient is reported first. Therefore, the name type code in this field should be "L - Legal".
Family Name	5.1	FN	194	O	RE	[0..1]	

			TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)				
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Given Name	5.2	ST	30	O	RE	[0..1]	
Second Given Name or Initials	5.3	ST	30	O	RE	[0..1]	
Suffix	5.4	ST	20	O	RE	[0..1]	
Prefix	5.5	ST	20	O	RE	[0..1]	
Degree	5.6	IS	6	X	X	[0..0]	HL7 table 0360: User defined: Degree/license/certificate
Name Type Code	5.7	ID	1	R	R	[1..1]	PHVS_NameType_SyndromicSurveillance
Name Representation Code	5.8	ID	1	X	X	[0..1]	
Name Context	5.9	CE	483	X	X	[0..1]	
Name Validity Range	5.10	DR	53	X	X	[0..0]	
Name Assembly Order	5.11	ID	1	X	X	[0..1]	HL7 table 0444: HL7 defined: Name assembly order
Effective Date	5.12	TS	26	X	X	[0..1]	
Expiration Date	5.13	TS	26	X	X	[0..1]	
Professional Suffix	5.14	ST	199	X	X	[0..1]	

TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Mother's Maiden Name	6	XPN	294	X	X	[0..*]	
Date/Time of Birth	7	TS	26	O	O	[0..1]	**Definition**: This field contains the patient's date and time of birth.
Administrative Sex	8	IS	1	RE	RE	[0..1]	PHVS_Sex_SyndromicSurveillance **Definition**: This field contains the patient's sex. **Data Element of Interest:** Sex
Patient Alias	9	XPN	294	X	X	[0..0]	
Race	10	CE	478	RE	RE	[0..*]	**Definition**: This field refers to the patient's race **Note**: Patient could have more than one race defined. **Data Element of Interest**: Race
Identifier	10.1	ST	20	RE	RE	[0..1]	PHVS_RaceCategory_CDC
Text	10.2	ST	199	O	RE	[0..1]	
Name of Coding System	10.3	ID	20	CE	C	[0..1]	**Condition Predicate:** If PID-10.1 (the identifier) is provided, then PID 10.3 is valued.
Alternate Identifier	10.4	ST	20	X	X	[0..1]	
Alternate Text	10.5	ST	199	X	X	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)							
Name of Alternate Coding System	10.6	ID	20	X	X	[0..1]	
Patient Address	11	XAD	513	RE	RE	[0..1]	**Definition**: This field contains the mailing address of the patient. **Note**: Expecting only the patient primary (current) address information in the supported components
Street Address	11.1	SAD	184	O	O	[0..1]	
Other Designation	11.2	ST	120	O	O	[0..1]	
City	11.3	ST	50	O	O	[0..1]	**Data Element of Interest**: Patient City/Town
State or Province	11.4	ST	50	O	O	[0..1]	PHVS_State_FIPS_5-2 **Data Element of Interest:** Patient State
ZIP or Postal Code	11.5	ST	12	RE	RE	[0..1]	USPS **Data Element of Interest:** Patient ZIP Code
Country	11.6	ID	3	O	O	[0..1]	PHVS_Country_ISO_3166-1 **Data Element of Interest:** Patient Country
Address Type	11.7	ID	3	O	O	[0..1]	PHVS_AddressType_HL7_2x
Other Geographic Designation	11.8	ST	50	O	O	[0..1]	

TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
County/Parish Code	11.9	IS	20	RE	RE	[0..1]	PHVS_County_FIPS_6-4 **Data Element of Interest:** Patient County
Census Tract	11.10	IS	20	X	X	[0..1]	
Address Representation Code	11.11	ID	1	X	X	[0..1]	
Address Validity Range	11.12	DR	53	X	X	[0..0]	
Effective Date	11.13	TS	26	X	X	[0..1]	
Expiration Date	11.14	TS	26	X	X	[0..1]	
County Code	12	IS	4	X	X	[0..0]	HL7 table 0289: User defined: County/parish
Phone Number - Home	13	XTN	250	X	X	[0..*]	
Phone Number - Business	14	XTN	250	X	X	[0..*]	
Primary Language	15	CE	478	X	X	[0..1]	HL7 table 0296: User defined: Primary Language
Marital Status	16	CE	478	X	X	[0..1]	HL7 table 0002: User defined: Marital Status
Religion	17	CE	478	X	X	[0..1]	HL7 table 0006: User defined: Religion

TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Patient Account Number	18	CX	250	O	O	[0..1]	**Definition**: This field contains the patient account number assigned by accounting to which all charges, payments, etc., are recorded. It is used to identify the patient's account.
SSN Number - Patient	19	ST	16	X	X	[0..0]	
Driver's License Number - Patient	20	DLN	64	X	X	[0..0]	
Mother's Identifier	21	CX	250	X	X	[0..*]	
Ethnic Group	22	CE	478	RE	RE	[0..1]	**Definition**: This field further defines the patient's ancestry. **Data Element of Interest**: Ethnicity
Identifier	22.1	ST	20	RE	RE	[0..1]	PHVS_EthnicityGroup_CDC
Text	22.2	ST	199	O	O	[0..1]	
Name of Coding System	22.3	ID	20	CE	CE	[0..1]	**Condition Predicate:** If PID-22.1 (the identifier) is provided then PID 22.3 is valued.
Alternate Identifier	22.4	ST	20	X	X	[0..1]	
Alternate Text	22.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	22.6	ID	20	X	X	[0..1]	

TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Birth Place	23	ST	250	X	X	[0..1]	
Multiple Birth Indicator	24	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Birth Order	25	NM	2	X	X	[0..1]	
Citizenship	26	CE	478	X	X	[0..*]	HL7 table 0171: User defined: Citizenship
Veterans Military Status	27	CE	478	X	X	[0..1]	HL7 table 0172: User defined: Veterans Military Status
Nationality	28	CE	478	X	X	[0..0]	HL7 table 0212: User defined: Nationality
Patient Death Date and Time	29	TS	26	CE	CE	[0..1]	**Conformance Statement SS-036:** If valued, PID-29 (Patient Death and Time), **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Condition Predicate:** If valued, PID-30 (Patient Death Indicator) **SHALL** be valued to the Literal Value 'Y'. **Condition Predicate:** If PV1-36 is valued with any of the following: '20', '40', '41', '42' then PID-29 (Patient Death and Time) **SHALL** be populated. **Definition**: This field contains the date and time at which the patient death occurred.

TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Patient Death Indicator	30	ID	1	CE	CE	[0..1]	**Conformance Statement SS-037:** If valued, PID-30 (Patient Death Indicator) **SHALL** be valued to the Literal Value 'Y'. **Condition Predicate:** If PV1-36 (Discharge Disposition) is valued with any of the following: '20', '40', '41', '42' and PID-29 (Patient Death and Time) **SHALL** be populated. **Definition**: This field indicates whether the patient is deceased. Y the patient is deceased N the patient is not deceased
Identity Unknown Indicator	31	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Identity Reliability Code	32	IS	20	X	X	[0..*]	HL7 table 0445: User defined: Identity Reliability Code
Last Update Date/Time	33	TS	26	O	O	[0..1]	**Definition**: This field contains the last update date and time for the patient's/person's identifying and demographic data, as defined in the PID segment.
Last Update Facility	34	HD	241	O	O	[0..1]	**Definition**: This field identifies the facility of the last update to a patient's/person's identifying and demographic data, as defined in the PID segment.
Species Code	35	CE	478	X	X	[0..1]	HL7 table 0446: User defined: Species code
Breed Code	36	CE	478	X	X	[0..1]	HL7 table 0447: User defined: Breed code

TABLE 5-6C. PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Strain	37	ST	80	X	X	[0..1]	
Production Class Code	38	CE	478	X	X	[0..1]	HL7 table 0429: User defined: Production Class Code
Tribal Citizenship	39	CWE	697	X	X	[0..*]	HL7 table 0171: User defined: Citizenship

Patient Visit (PV1) Segment

The PV1 segment is used by Registration/Patient Administration applications to communicate information on a visit-specific basis.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-6D: PATIENT VISIT SEGMENT (PV1)
Set ID - PV1	1	SI	4	RE	RE	[0..1]	**Conformance Statement SS-024:** PV1-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one
Patient Class	2	IS	1	R	R	[1..1]	PHVS_PatientClass_SyndromicSurveillance **Definition**: This field is used by systems to categorize patients by site. **Data Element of Interest:** Patient Class
Assigned Patient Location	3	PL	1220	O	O	[0..1]	**Definition**: This field contains the patient's initial assigned location or the location to which the patient is being moved. The first component may be the nursing station for inpatient locations, or clinic or department, for locations other than inpatient. .
Admission Type	4	IS	2	O	O	[0..1]	HL7 table 0007: User defined: Admission type **Definition**: This field indicates the circumstances under which the patient was or will be admitted.
Pre-admit Number	5	CX	250	X	X	[0..1]	

TABLE 5-6D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Prior Patient Location	6	PL	1220	X	X	[0..1]	
Attending Doctor	7	XCN	309	O	O	[0..*]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier **Data Element of Interest:** Unique Physician Identifier.
Referring Doctor	8	XCN	309	X	X	[0..*]	HL7 table 0010: User defined: Physician ID
Consulting Doctor	9	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Hospital Service	10	IS	3	O	O	[0..1]	HL7 table 0069: User defined: Hospital Service **Definition**: This field contains the treatment or type of surgery that the patient is scheduled to receive.
Temporary Location	11	PL	1220	X	X	[0..1]	
Preadmit Test Indicator	12	IS	2	X	X	[0..1]	HL7 table 0087: User defined: Pre-Admit Test Indicator
Re-admission Indicator	13	IS	2	X	X	[0..1]	HL7 table 0092: User defined: Re-admission Indicator

TABLE 5-6D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Admit Source	14	IS	6	O	O	[0..1]	HL7 table 0023: User defined: Admit Source **Definition**: This field indicates where the patient was admitted.
Ambulatory Status	15	IS	2	O	O	[0..*]	HL7 table 0009: User defined: Ambulatory Status **Definition**: This field indicates any permanent or transient handicapped conditions.
VIP Indicator	16	IS	2	X	X	[0..1]	HL7 table 0099: User defined: VIP Indicator
Admitting Doctor	17	XCN	309	X	X	[0..*]	HL7 table 0010: User defined: Physician ID
Patient Type	18	IS	2	X	X	[0..1]	HL7 table 0018: User defined: Patient Type
Visit Number	19	CX	478	R	R	[1..1]	**Definition**: This field contains the unique number assigned to each patient visit. **Note**: Unique identifier for a patient visit **Data Element of Interest**: Unique Visit Identifier
ID Number	19.1	ST	15	R	R	[1..1]	
Check Digit	19.2	ST	1	X	X	[0..1]	
Check Digit Scheme	19.3	ID	3	X	X	[0..1]	HL7 table 0061: HL7 defined: Check Digit Scheme
Assigning Authority	19.4	HD	227	O	RE	[0..1]	HL7 table 0363: User defined: Assigning Authority

TABLE 5-6D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Identifier Type Code	19.5	ID	5	R	R	[1..1]	**Conformance Statement SS-025:** PV1-19.5 (Identifier Type Code) **SHALL** be valued to the Literal Value 'VN'. PHVS_IdentifierType_SyndromicSurveillance
Assigning Facility	19.6	HD	227	O	RE	[0..1]	
Effective Date	19.7	DT	8	X	X	[0..1]	
Expiration Date	19.8	DT	8	X	X	[0..1]	
Assigning Jurisdiction	19.9	CWE	705	X	X	[0..1]	
Assigning Facility	19.10	CWE	705	X	X	[0..1]	
Financial Class	20	FC	50	X	X	[0..*]	HL7 table 0064: User defined: Financial Class
Charge Price Indicator	21	IS	2	X	X	[0..1]	HL7 table 0032: User defined: Charge Price Indicator
Courtesy Code	22	IS	2	X	X	[0..1]	HL7 table 0045: User defined: Courtesy Code
Credit Rating	23	IS	2	X	X	[0..1]	HL7 table 0046: User defined: Credit rating
Contract Code	24	IS	2	X	X	[0..*]	HL7 table 0044: User defined: Contract code
Contract Effective Date	25	DT	8	X	X	[0..*]	

				TABLE 5-6D: PATIENT VISIT SEGMENT (PV1)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Contract Amount	26	NM	12	X	X	[0..*]	
Contract Period	27	NM	3	X	X	[0..*]	
Interest Code	28	IS	2	X	X	[0..1]	HL7 table 0073: User defined: Interest Code
Transfer to Bad Debt Code	29	IS	4	X	X	[0..1]	HL7 table 0110: User defined: Transfer to Bad Debt Code
Transfer to Bad Debt Date	30	DT	8	X	X	[0..1]	
Bad Debt Agency Code	31	IS	10	X	X	[0..1]	HL7 table 0021: User defined: Bad Debt Agency Code
Bad Debt Transfer Amount	32	NM	12	X	X	[0..1]	
Bad Debt Recovery Amount	33	NM	12	X	X	[0..1]	
Delete Account Indicator	34	IS	1	X	X	[0..1]	HL7 table 0111: User defined: Delete Account Indicator
Delete Account Date	35	DT	8	X	X	[0..1]	

TABLE 5-6D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Discharge Disposition	36	IS	3	R	R	[0..1]	PHVS_DischargeDisposition_HL7_2x **Definition**: This field contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.) and shall be populated in a Discharge message. **Data Element of Interest:** Discharge Disposition
Discharged to Location	37	DLD	47	X	X	[0..1]	HL7 table 0113: User defined: Discharged to Location
Diet Type	38	CE	478	X	X	[0..1]	HL7 table 0114: User defined: Diet type
Servicing Facility	39	IS	2	X	X	[0..1]	HL7 table 0115: User defined: Servicing Facility
Bed Status	40	IS	1	X	X	[0..0]	HL7 table 0116: User defined: Bed Status
Account Status	41	IS	2	X	X	[0..1]	HL7 table 0117: User defined: Account Status
Pending Location	42	PL	1220	X	X	[0..1]	
Prior Temporary Location	43	PL	1220	X	X	[0..1]	

TABLE 5-6D: PATIENT VISIT SEGMENT (PV1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Admit Date/Time	44	TS	26	R	R	[1..1]	**Conformance Statement SS-010:** PV1-44 (Admit Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]] [+/-ZZZZ]' **Definition**: This field contains the admit date/time. This field is also used to reflect the date/time of an outpatient/emergency patient registration. **Note**: Date and time of the patient presentation. **Data Element of Interest**: Admit Date/Time
Discharge Date/Time	45	TS	26	R	R	[1..1]	**Conformance Statement SS-045:** PV1-45 (Discharge Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]] [+/-ZZZZ]' **Definition**: This field contains the discharge date/time and shall be populated in a Discharge message.. This field is also used to reflect the date/time of an outpatient/emergency patient discharge. **Data Element of Interest:** Discharge Date/Time
Current Patient Balance	46	NM	12	X	X	[0..1]	
Total Charges	47	NM	12	X	X	[0..1]	
Total Adjustments	48	NM	12	X	X	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-6D: PATIENT VISIT SEGMENT (PV1)
Total Payments	49	NM	12	X	X	[0..1]	
Alternate Visit ID	50	CX	250	X	X	[0..1]	HL7 table 0203: User defined: Identifier type
Visit Indicator	51	IS	1	X	X	[0..1]	HL7 table 0326: User defined: Visit Indicator
Other Healthcare Provider	52	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID

Patient Visit – Additional Information (PV2) Segment

The PV2 segment is a continuation of visit-specific information and is the segment where the Admit Reason is passed.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-6E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Prior Pending Location	1	PL	1220	X	X	[0..1]	
Accommodation Code	2	CE	478	X	X	[0..1]	HL7 table 0129: User defined: Accommodation Code
Admit Reason	3	CE	478	RE	RE	[0..1]	**Definition**: This field contains the short description of the providers' reason for patient admission. **NOTE**: It may be coded (CE:1 and CE:3) or Free text (CE:2.) **Data Element of Interest:** Admit Reason
Identifier	3.1	ST	20	RE	RE	[0..1]	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** PHVS_AdministrativeDiagnosis_ICD-10CM **Or** PHVS_Disease_CDC **Conformance Statement SS-009**: The implementation SHALL support all 3 value sets.
Text	3.2	ST	199	RE	RE	[0..1]	If only Free Text is used, it is communicated in this component.

TABLE 5-6E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Name of Coding System	3.3	ID	20	C	C	[0..1]	**Condition Predicate:** If PV2-3.1 (the identifier) is provided then PV2-3.3 is valued. **Conformance Statement SS-026:**PV2-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Transfer Reason	4	CE	478	X	X	[0..1]	
Patient Valuables	5	ST	25	X	X	[0..*]	
Patient Valuables Location	6	ST	25	X	X	[0..1]	
Visit User Code	7	IS	2	X	X	[0..*]	HL7 table 0130: User defined: Visit User Code
Expected Admit Date/Time	8	TS	26	X	X	[0..1]	
Expected Discharge Date/Time	9	TS	26	X	X	[0..1]	
Estimated Length of Inpatient Stay	10	NM	3	X	X	[0..1]	

TABLE 5-6E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Actual Length of Inpatient Stay	11	NM	3	X	X	[0..1]	
Visit Description	12	ST	50	X	X	[0..1]	
Referral Source Code	13	XCN	309	X	X	[0..*]	
Previous Service Date	14	DT	8	X	X	[0..1]	
Employment Illness Related Indicator	15	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Purge Status Code	16	IS	1	X	X	[0..1]	HL7 table 0213: User defined: Purge Status Code
Purge Status Date	17	DT	8	X	X	[0..1]	
Special Program Code	18	IS	2	X	X	[0..1]	HL7 table 0214: User defined: Special Program Code
Retention Indicator	19	ID	1	X	X	[0..1]	HL7 table 0136: User defined: Retention Indicator
Expected Number of Insurance Plans	20	NM	1	X	X	[0..1]	
Visit Publicity Code	21	IS	1	X	X	[0..1]	HL7 table 0215: User defined: Visit Publicity Code
Visit Protection Indicator	22	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

TABLE 5-6E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Clinic Organization Name	23	XON	250	X	X	[0..*]	
Patient Status Code	24	IS	2	X	X	[0..1]	HL7 table 0216: User defined: Patient Status code
Visit Priority Code	25	IS	1	X	X	[0..1]	HL7 table 0217: User defined: Visit Priority code
Previous Treatment Date	26	DT	8	X	X	[0..1]	
Expected Discharge Disposition	27	IS	2	X	X	[0..1]	HL7 table 0112: User defined: Discharge Disposition
Signature on File Date	28	DT	8	X	X	[0..1]	
First Similar Illness Date	29	DT	8	X	X	[0..1]	
Patient Charge Adjustment Code	30	CE	478	X	X	[0..1]	HL7 table 0218: User defined: Charge Adjustment Code
Recurring Service Code	31	IS	2	X	X	[0..1]	HL7 table 0219: User defined: Recurring Service Code
Billing Media Code	32	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Expected Surgery Date and Time	33	TS	26	X	X	[0..1]	
Military Partnership Code	34	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator

TABLE 5-6E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Military Non-Availability Code	35	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Newborn Baby Indicator	36	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Baby Detained Indicator	37	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no indicator
Mode of Arrival Code	38	CE	478	X	X	[0..1]	HL7 table 0430: User defined: Mode of Arrival Code
Recreational Drug Use Code	39	CE	478	X	X	[0..*]	HL7 table 0431: User defined: Recreational Drug Use Code
Admission Level of Care Code	40	CE	478	X	X	[0..1]	HL7 table 0432: User defined: Admission Level of Care Code
Precaution Code	41	CE	478	X	X	[0..*]	HL7 table 0433: User defined: Precaution Code
Patient Condition Code	42	CE	478	X	X	[0..1]	HL7 table 0434: User defined: Patient Condition Code
Living Will Code	43	IS	2	X	X	[0..1]	HL7 table 0315: User defined: Living Will Code
Organ Donor Code	44	IS	2	X	X	[0..1]	HL7 table 0316: User defined: Organ Donor Code
Advance Directive Code	45	CE	478	X	X	[0..*]	HL7 table 0435: User defined: Advance Directive Code
Patient Status Effective Date	46	DT	8	X	X	[0..1]	

				TABLE 5-6E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Expected LOA Return Date/Time	47	TS	26	X	X	[0..1]	
Expected Pre-admission Testing Date/Time	48	TS	26	X	X	[0..1]	
Notify Clergy Code	49	IS	20	X	X	[0..*]	HL7 table 0534: User defined: Notify Clergy Code

Diagnosis (DG1) Segment

The DG1 segment contains patient diagnosis information of various types. syndromic surveillance supports Admitting, Working and Final Diagnosis types.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-6G: DIAGNOSIS SEGMENT (DG1)							
Set ID - DG1	1	SI	4	R	R	[1..1]	**Conformance Statement SS-032:** DG1-1 (Set ID) for the first occurrence of a DG1 Segment **SHALL** have the Literal Value of '1'. Each following occurrence **SHALL** be numbered consecutively **Definition**: This field contains the number that identifies this transaction. For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc.
Diagnosis Coding Method	2	ID	2	X	X	[0..1]	HL7 table 0053: User defined: Diagnosis Coding Method
Diagnosis Code - DG1	3	CE	478	R	R	[1..1]	**Definition**: This contains the diagnosis code assigned to this diagnosis. **Data Element of Interest**: Diagnosis **Condition Predicate:** If the DG1 Segment is provided, DG1-3 (Diagnosis) is required to be valued.

Identifier	3.1	ST	20	R	RE	[0..1]	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM
							     Or
							PHVS_AdministrativeDiagnosis_ICD-10CM
							     Or
							PHVS_Disease_CDC
							
							Conformance Statement SS-011: The implementation **SHALL** support all 3 value sets.

							TABLE 5-6G: DIAGNOSIS SEGMENT (DG1)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Text	3.2	ST	199	RE	RE	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If DG1-3.1 (the identifier) is provided then DG1-3.3 is valued. **Conformance Statement SS-033:** DG1-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Diagnosis Description	4	ST	40	X	X	[0..0]	
Diagnosis Date/Time	5	TS	26	O	O	[0..1]	**Definition**: This field contains the date/time that the diagnosis was determined.
Diagnosis Type	6	IS	2	R	R	[1..1]	PHVS_DiagnosisType_HL7_2x **Definition**: This field contains a code that identifies the type of diagnosis being sent **Note**: Identifies the type of diagnosis being sent. **Data Element of Interest**: Diagnosis type **Condition Predicate:** If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							TABLE 5-6G: DIAGNOSIS SEGMENT (DG1)
Major Diagnostic Category	7	CE	478	X	X	[0..0]	HL7 table 0118: User defined: Major Diagnostic Category
Diagnostic Related Group	8	CE	478	X	X	[0..0]	HL7 table 0055: User defined: Diagnostic Related Group
DRG Approval Indicator	9	ID	1	X	X	[0..0]	HL7 table 0136: HL7 defined: Yes/no Indicator
DRG Grouper Review Code	10	IS	2	X	X	[0..0]	HL7 table 0056: User defined: DRG Grouper Review Code
Outlier Type	11	CE	478	X	X	[0..0]	HL7 table 0083: User defined: Outlier Type
Outlier Days	12	NM	3	X	X	[0..0]	
Outlier Cost	13	CP	538	X	X	[0..0]	
Grouper Version And Type	14	ST	4	X	X	[0..0]	
Diagnosis Priority	15	ID	2	X	X	[0..1]	HL7 table 0359: HL7 defined: Diagnosis Priority
Diagnosing Clinician	16	XCN	309	X	X	[0..*]	
Diagnosis Classification	17	IS	3	X	X	[0..1]	HL7 table 0228: User defined: Diagnosis Classification
Confidential Indicator	18	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator

TABLE 5-6G: DIAGNOSIS SEGMENT (DG1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Attestation Date/Time	19	TS	26	X	X	[0..1]	
Diagnosis Identifier	20	EI	427	X	X	[0..1]	
Diagnosis Action Code	21	ID	1	X	X	[0..1]	HL7 table 0206: HL7 defined: Segment Action Code

Procedures (PR1) Segment

The PR1 segment is used to carry information relative to various types of procedures performed.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Set ID – PR1	1	SI	4	R	R	[1..1]	**Conformance Statement SS-034:** For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc. **Definition**: This field contains the number that identifies this transaction.
Procedure Coding Method	2	IS	3	X	X	[0..1]	HL7 table 0089: User defined: Procedure Coding Method
Procedure Code	3	CE	478	R	R	[1..1]	**Definition**: This field contains a unique identifier assigned to the procedure **Data Element of Interest**: Procedure Code
Identifier	3.1	ST	20	RE	RE	[0..1]	CPT-4
Text	3.2	ST	199	O	O	[0..1]	Free Text
Name of Coding System	3.3	ID	20	CE	CE	[1..1]	**Condition Predicate:** If PR1-3.1 (the identifier) is provided then PR1-3.3 is valued.
Procedure Description	4	ST	40	X	X	[0..0]	

TABLE 5-6H. PROCEDURES SEGMENT (PR1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Procedure Date/Time	5	TS	26	R	R	[1..1]	**Definition**: This field contains the date/time that the procedure was performed.
Procedure Functional Type	6	IS	2	X	X	[0..1]	HL7 table 0230: User defined: Procedure Functional Type
Procedure Minutes	7	NM	4	X	X	[0..1]	
Anesthesiologist	8	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Anesthesia Code	9	IS	2	X	X	[0..1]	HL7 table 0019: User defined: Anesthesia Code
Anesthesia Minutes	10	NM	4	X	X	[0..1]	
Surgeon	11	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Procedure Practitioner	12	XCN	309	X	X	[0..0]	HL7 table 0010: User defined: Physician ID
Consent Code	13	CE	478	X	X	[0..1]	HL7 table 0059: User defined: Consent code
Procedure Priority	14	ID	2	X	X	[0..1]	HL7 table 0418: HL7 defined: Procedure Priority
Associated Diagnosis Code	15	CE	478	X	X	[0..1]	HL7 table 0051: User defined: Diagnosis Code
Procedure Code Modifier	16	CE	478	X	X	[0..*]	HL7 table 0340: User defined: Procedure Code Modifier

	TABLE 5-6H. PROCEDURES SEGMENT (PR1)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Procedure DRG Type	17	IS	20	X	X	[0..1]	HL7 table 0416: User defined: Procedure DRG Type
Tissue Type Code	18	CE	478	X	X	[0..*]	HL7 table 0417: User defined: Tissue Type Code
Procedure Identifier	19	EI	427	X	X	[0..1]	
Procedure Action Code	20	ID	1	X	X	[0..1]	HL7 table 0206: HL7 defined: Segment Action Code

Observation/Result (OBX) Segment

The OBX Segment in the ADT Message is used to transmit observations related to the patient and visit. In Table 2-5 if the data element is carried in an OBX and usage is 'Required', the segment and its fields must be populated. The data elements in Table 2.5 DATA ELEMENTS OF INTEREST that use OBX segments are not expected to utilize any specified Set ID number within a given set of OBX segments in a message. However, the Set IDs are required to be sequential.

TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID - OBX	1	SI	4	R	R	[1..1]	**Note:** Set ID numbers the repetitions of the segments **Conformance Statement SS-027:** For the first repeat of the OBX segment, the sequence number **SHALL** be one (1), for the second repeat, the sequence number shall be two (2), etc. Example: OBX|1|…. OBX|2|…. OBX|3|…. **Definition**: This field contains the sequence number.

TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Value Type	2	ID	3	R	R	[1..1]	**Conformance Statement SS-028:** OBX-2 **SHALL** be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD') PHVS_ValueType_SyndromicSurveillance **Definition**: This field contains the format of the observation value in OBX. Note: Identifies the structure of data in observation value (OBX.5)

TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Observation Identifier	3	CE	478	R	R	[1..1]	PHVS_ObservationIdentifier_SyndromicSurveillance **Definition**: This field contains a unique identifier for the observation. **Note**: Identifies data to be received in observation value (OBX.5) **Data Elements of Interest communicated in OBX Segment may include:** Facility Street address (Treating), Data Type: XAD:1, SAD:1 Facility City (Treating), Data Type: XAD:3 Facility State (Treating), Data Type: XAD:4 Facility ZIP Code (Treating), Data Type: XAD:5 Facility County (Treating), Data Type: XAD:9 Age, Data Type: NM Facility / Visit Type, Data Type: CWE (only for ED/UC) Chief Complaint/Reason for Visit, Data Type: CWE, (Free Text is preferred) Clinical Impression, Data Type: TX Initial Temperature, Data Type: NM Height, Data Type: NM Weight, Data Type: NM Smoking Status, PHVS_SmokingStatus_MU Triage Notes, Data Type: TX
Identifier	3.1	ST	20	R	R	[1..1]	
Text	3.2	ST	199	O	O	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-3.1 (the identifier) is provided then OBX-3.3 is valued.

				TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Observation Sub-ID	4	ST	20	X	X	[0..1]	
Observation Value	5	varies	99999	RE	RE	[0..*]	Listed below are the supported fields for each of the supported value types. **Definition**: This field contains the value observed by the observation producer. OBX-2-value type contains the data type for this field according to which observation value is formatted. **Note**: Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3). **Notes on Data Types**: TS Data Type: Unconstrained. Some values might be to the day, others to the year/ decade, etc. TX Data Type: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters). NM Data Type: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign,

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments

							the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer.
							
							CWE Data Type: Data Element: Facility / Visit Type (only for ED/UC)
							
							    CWE-5:2 Text: It is strongly recommended that text be sent to accompany any identifier.
							
							CWE Data Type: Data Element: Chief Complaint / Reason for visit
							
							    It is the short description of the patient's self-reported chief complaint or reason for visit. It is preferred that Free text is used.
							
							    Free Text should appear in CWE:9
							
							XAD Data Type: Data Elements:
							
							    Facility Street address (Treating), Data Type: XAD:1, SAD:1:
							
							        Note: This is the first subcomponent of the SAD data type. This has the same effect as being the first component of the field, while limiting the length based on other subcomponents that are not supported.
							
							    Facility City (Treating), Data Type: XAD:3
							
							    Facility State (Treating), Data Type: XAD:4
							
							    Facility ZIP Code (Treating), Data Type: XAD:5
							
							    Facility County (Treating), Data Type: XAD:9

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Beginning of OBX-5 Observation Value Usage Based on Data Type in OBX-2							
TS Data Type							
Time	5.1	DTM	24	RE	RE	[0..1]	
Degree of Precision	5.2	ST	1	X	X	[0..0]	
TX Data Type							
Text Data	5.1	TX	65536	RE	RE	[0..1]	
NM Data Type							
Numeric Value	5.1	ST	16	RE	RE	[0..1]	
CWE Data Type: Data Element #7 Facility / Visit Type (only for ED/UC)							
Identifier	5.1	ST	20	R	R	[1..1]	PHVS_FacilityVisitType_SyndromicSurveillance
Text	5.2	ST	199	RE	RE	[0..1]	
Name of Coding System	5.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	

TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Alternate Text	5.5	ST	199	RE	RE	[0..1]	.
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
Coding System Version ID	5.7	ST	10	O	O	[0..1]	
Alternate Coding System Version ID	5.8	ST	10	O	O	[0..1]	
Original Text	5.9	ST	199	RE	RE	[0..1]	Free text goes here
CWE Data Type: Data Element #25 Chief Complaint / Reason for visit- Free Text is preferred							
Identifier	5.1	ST	20	RE	RE	[0..1]	**Conformance Statement SS-005:** If patient's chief complaint is captured as an unstructured, free-text note, then chief complaint **SHALL** be valued in OBX-5, CWE:9. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation Identifier Example OBX Segment (free text): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^^STOMACH ACHE||||||F|||201102171531 **Conformance Statement SS-006:** If patient's chief complaint is captured from a Coding System, then chief complaint **SHALL** be valued in OBX- 5, CWE:1,

TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
							CWE:2, CWE:3. PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **or** PHVS_CauseOfDeath_ICD-10_CDC **or** PHVS_Disease_CDC **NOTE**: The implementation shall support all 3 value sets. Example OBX Segment (coded): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX||||||F|||20110217 **Conformance Statement SS-007:** If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX- 5, CWE:2. OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^Dizziness and giddiness||||||F|||20110217 **Conformance Statement SS-008:** The implementation **SHALL** support a minimum of 70 characters for unstructured, free-text patient's chief complaint.
Text	5.2	ST	199	RE	RE	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Name of Coding System	5.3	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	
Alternate Text	5.5	ST	199	RE	RE	[0..1]	
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
Coding System Version ID	5.7	ST	10	O	O	[0..1]	
Alternate Coding System Version ID	5.8	ST	10	O	O	[0..1]	
Original Text	5.9	ST	199	RE	RE	[0..1]	Free text is Preferred and it goes here
XAD Data Type							
Street Address	5.1	SAD	184	O	O	[0..1]	
Street or Mailing Address	5.1.1	ST	120	O	O	[0..1]	
Street Name	5.1.2	ST	50	O	O	[0..1]	
Dwelling Number	5.1.3	ST	12	O	O	[0..1]	
Other Designation	5.2	ST	120	O	O	[0..1]	

				TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
City	5.3	ST	50	O	O	[0..1]	The ISDS recommendations recommend free text City/Town designations.
State or Province	5.4	ST	50	O	O	[0..1]	PHVS_State_FIPS_5-2
ZIP or Postal Code	5.5	ST	12	O	O	[0..1]	USPS
Country	5.6	ID	3	O	O	[0..1]	PHVS_Country_ISO_3166-1
Address Type	5.7	ID	3	O	O	[0..1]	PHVS_AddressType_HL7_2x
Other Geographic Designation	5.8	ST	50	O	O	[0..1]	
County/Parish Code	5.9	IS	20	O	O	[0..1]	The ISDS recommendations allow free text County designations.
Census Tract	5.10	IS	20	X	X	[0..1]	
Address Representation Code	5.11	ID	1	X	X	[0..1]	
Address Validity Range	5.12	DR	53	X	X	[0..0]	
Effective Date	5.13	TS	26	X	X	[0..1]	
Expiration Date	5.14	TS	26	X	X	[0..1]	

TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
End of OBX-5 Observation Value Usage Based on Data Type in OBX-2							

Units	6	CE	62	C	C	[0..1]	**Condition Predicate:** If OBX.2 (Value Type) is valued "NM"
							
							Background: When an observation's value is measured on a continuous scale, one must report the measurement units within the unit's field of the OBX segment.
							
							Data Elements of Interest:
							    Age units
							    Initial Temperature units
							    Height units
							    Weight Units
							PHVS_AgeUnit_SyndromicSurveillance

Identifier	6.1	ST	20	R	R	[1..1]	**Conformance Statement SS-029:** If OBX 3.1 is valued with 21612-7, then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance **Conformance Statement SS-030:** If OBX 3.1 = is valued with 11289-6 then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_TemperatureUnit_UCUM **Conformance Statement SS-031:** If OBX 3.1 is valued with 59408-5 then OBX6.1 (Identifier) **SHALL** be valued to a member of the set PHVS_PulseOximetryUnit_UCUM

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Text	6.2	ST	20	O	O	[0..1]	
Name of Coding System	6.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-6.1 (the identifier) is provided then OBX-6.3 is valued.
Alternate Identifier	6.4	ST	20	X	X	[0..1]	
Alternate Text	6.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	6.6	ID	20	X	X	[0..1]	
References Range	7	ST	60	X	X	[0..1]	
Abnormal Flags	8	IS	5	X	X	[0..*]	HL7 table 0078: User defined: Abnormal Flags
Probability	9	NM	5	X	X	[0..1]	
Nature of Abnormal Test	10	ID	2	X	X	[0..*]	HL7 table 0080: HL7 defined: Nature of Abnormal Test
Observation Result Status	11	ID	1	R	R	[1..1]	HL7 table 0085: HL7 defined: Observation Result Status **Definition**: This field contains the observation result status. This field reflects the current completion status of the results for one Observation Identifier.
Effective Date of Reference Range	12	TS	26	X	X	[0..1]	

TABLE 5-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
User Defined Access Checks	13	ST	20	X	X	[0..1]	
Date/Time of the Observation	14	TS	26	O	O	[0..1]	**Definition**: This field is the observation date-time is the physiologically relevant date-time or the closest approximation to that date-time.
Producer's ID	15	CE	478	X	X	[0..1]	
Responsible Observer	16	XCN	309	X	X	[0..*]	
Observation Method	17	CE	478	X	X	[0..*]	
Equipment Instance Identifier	18	EI	424	X	X	[0..*]	
Date/Time of the Analysis	19	TS	26	X	X	[0..1]	

Insurance (IN1) Segment

The IN1 segment contains insurance policy coverage information necessary to produce properly pro-rated and patient and insurance bills.

TABLE 5-6I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Set ID – IN1	1	SI	4	R	R	[1..1]	**Definition**: The Set ID in the IN1 segment is used to aggregate the grouping of insurance segments. **Note**: SET ID numbers the repetitions of the segments.
Insurance Plan ID	2	CE	478	R	R	[1..1]	HL7 table 0072: User defined: Insurance Plan ID **Definition**: This field contains a unique identifier for the insurance plan.
Insurance Company ID	3	CX	250	R	R	[1..*]	**Definition**: This field contains unique identifiers for the insurance company. The assigning authority and identifier type code are strongly recommended for all CX data types.
Insurance Company Name	4	XON	250	X	X	[0..*]	
Insurance Company Address	5	XAD	513	X	X	[0..*]	
Insurance Co Contact Person	6	XPN	294	X	X	[0..*]	
Insurance Co Phone Number	7	XTN	250	X	X	[0..*]	
Group Number	8	ST	12	X	X	[0..1]	

TABLE 5-6I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Group Name	9	XON	250	X	X	[0..*]	
Insured_s Group Emp ID	10	CX	250	X	X	[0..*]	
Insured_s Group Emp Name	11	XON	250	X	X	[0..*]	
Plan Effective Date	12	DT	8	X	X	[0..1]	
Plan Expiration Date	13	DT	8	X	X	[0..1]	
Authorization Information	14	AUI	239	X	X	[0..1]	
Plan Type	15	IS	3	O	O	[0..1]	HL7 table 0086: User defined: Plan Type **Definition**: This field contains the coding structure that identifies the various plan types, for example, Medicare, Medicaid, Blue Cross, HMO, etc.
Name Of Insured	16	XPN	294	X	X	[0..*]	
Insured_ Relationship To Patient	17	CE	478	X	X	[0..1]	HL7 table 0063: User defined: Relationship
Insured_ Date Of Birth	18	TS	26	X	X	[0..1]	
Insured_ Address	19	XAD	513	X	X	[0..*]	
Assignment Of Benefits	20	IS	2	X	X	[0..1]	HL7 table 0135: User defined: Assignment of Benefits

TABLE 5-6I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Coordination Of Benefits	21	IS	2	X	X	[0..1]	HL7 table 0173: User defined: Coordination of Benefits
Coord Of Ben. Priority	22	ST	2	X	X	[0..1]	
Notice Of Admission Flag	23	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator
Notice Of Admission Date	24	DT	8	X	X	[0..1]	
Report Of Eligibility Flag	25	ID	1	X	X	[0..1]	HL7 table 0136: HL7 defined: Yes/no Indicator
Report Of Eligibility Date	26	DT	8	X	X	[0..1]	
Release Information Code	27	IS	2	X	X	[0..1]	HL7 table 0093: User defined: Release of Information Code
Pre-Admit Cert (PAC)	28	ST	15	X	X	[0..1]	
Verification Date/Time	29	TS	26	X	X	[0..1]	
Verification By	30	XCN	309	X	X	[0..*]	
Type Of Agreement Code	31	IS	2	X	X	[0..1]	HL7 table 0098: User defined: Type Of Agreement Code
Billing Status	32	IS	2	X	X	[0..1]	HL7 table 0022: User defined: Billing Status
Lifetime Reserve Days	33	NM	4	X	X	[0..1]	

TABLE 5-6I: INSURANCE SEGMENT (IN1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Delay Before L.R. Day	34	NM	4	X	X	[0..1]	
Company Plan Code	35	IS	8	X	X	[0..1]	HL7 table 0042: User defined: Company Plan Code
Policy Number	36	ST	15	X	X	[0..1]	
Policy Deductible	37	CP	538	X	X	[0..1]	
Policy Limit - Amount	38	CP	538	X	X	[0..0]	
Policy Limit - Days	39	NM	4	X	X	[0..1]	
Room Rate - Semi-Private	40	CP	538	X	X	[0..0]	
Room Rate - Private	41	CP	538	X	X	[0..0]	
Insured_ Employment Status	42	CE	478	X	X	[0..1]	HL7 table 0066: User defined: Employment Status
Insured_ Administrative Sex	43	IS	1	X	X	[0..1]	HL7 table 0001: User defined: Administrative Sex
Insured_ Employer_s Address	44	XAD	513	X	X	[0..*]	
Verification Status	45	ST	2	X	X	[0..1]	
Prior Insurance Plan ID	46	IS	8	X	X	[0..1]	HL7 Table 0072: User defined: Insurance Plan ID
Coverage Type	47	IS	3	X	X	[0..1]	HL7 Table 0309: User defined: Coverage Type

					TABLE 5-6I: INSURANCE SEGMENT (IN1)	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Handicap	48	IS	2	X	X	[0..1]	HL7 Table 0295: User defined: Handicap
Insured_ ID Number	49	CX	250	X	X	[0..*]	
Signature Code	50	IS	1	X	X	[0..1]	HL7 Table 0535: User defined: Signature Code
Signature Code Date	51	DT	8	X	X	[0..1]	
Insured_ Birth Place	52	ST	250	X	X	[0..1]	
VIP Indicator	53	IS	2	X	X	[0..1]	HL7 Table 0099: User defined: VIP Indicator

ACKNOWLEDGEMENT MESSAGE (ACK^A01) (ACK^A04) (ACK^A08) (ACK^A03)

TABLE 5-7: ACK^A01 ACK^A04 ACK^A08 ACK^A03 ACKNOWLEDGEMENT MESSAGE				
SEG	NAME	DESCRIPTION	USAGE	CARDINALITY
MSH	Message Header	Information explaining how to parse and process the message. This includes identification of message delimiters, sender, receiver, message type, timestamp, etc.	R	[1..1]
MSA	Message Acknowledgement	Acknowledgement information identifying the ability of a receiver to accept a message transmitted	R	[1..1]

Message Header (MSH) Segment

The MSH Segment is used to define the intent, source, destination, and some specifics of the syntax of the message. This segment includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

TABLE 5-7A: MESSAGE HEADER SEGMENT (MSH)						
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Field Separator	1	ST	1	R	R	[1..1]	**Definition**: This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Default value is |, (ASCII 124).
Encoding Characters	2	ST	4	R	R	[1..1]	**Definition**: This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Default values are ^~\& (ASCII 94, 126, 92, and 38, respectively).
Sending Application	3	HD	227	O	O	[0..1]	**Definition**: This field uniquely identifies the sending application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise.

			TABLE 5-7A: MESSAGE HEADER SEGMENT (MSH)				
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Sending Facility	4	HD	227	R	R	[1..1]	National Provider Identifier. (10-digit identifier) **Definition**: This field further describes the sending application, MSH-3-sending application. This field uniquely identifies the facility associated with the application that sends the message. If Acknowledgements are in use, this facility will receive any related Acknowledgement message. **Note**: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field
Namespace ID	4.1	IS	20	RE	RE	[0..1]	
Universal ID	4.2	ST	199	R	R	[1..1]	
Universal ID Type	4.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance
Receiving Application	5	HD	227	O	O	[0..1]	HL7 table 0361: User-defined: Application **Definition**: This field uniquely identifies the receiving application among all other applications within the network enterprise. The network enterprise consists of all those applications that participate in the exchange of HL7 messages within the enterprise

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
				TABLE 5-7A: MESSAGE HEADER SEGMENT (MSH)			
Receiving Facility	6	HD	227	O	O	[0..1]	HL7 table 0362: User-defined: Facility **Definition**: This field identifies the receiving application among multiple identical instances of the application running on behalf of different organizations
Date/Time Of Message	7	TS	26	R	R	[1..1]	**Conformance Statement SS-013:** MSH-7 (Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone. **Note**: MSH-7 (Date/Time of Message) does not have to equal EVN-2 (Message Date/Time)
Security	8	ST	40	X	X	[0..1]	

TABLE 5-7A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Message Type	9	MSG	15	R	R	[1..1]	**Conformance Statement SS-039:** MSH-9 (Message Type) **SHALL** be constrained to be a value in the set: 'ACK^A01^ACK', 'ACK^A03^ACK', 'ACK^A04^ACK', 'ACK^A08^ACK' **Definition**: This field contains the message type, trigger event, and the message structure ID for the message.
Message Code	9.1	ID	3	R	R	[1..1]	PHVS_MessageType_SyndromicSurveillance
Trigger Event	9.2	ID	3	R	R	[1..1]	PHVS_EventType_SyndromicSurveillance
Message Structure	9.3	ID	7	R	R	[1..1]	PHVS_MessageStructure_SyndromicSurveillance
Message Control ID	10	ST	199	R	R	[1..1]	**Definition**: This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA). **Note**: This field is a number or other identifier that uniquely identifies the message.

TABLE 5-7A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Processing ID	11	PT	3	R	R	[1..1]	**Conformance Statement SS-015:** MSH-11 (Processing ID) **SHALL** have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training. **Definition**: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. **Note**: Indicates how to process the message as defined in HL7 processing rules
Version ID	12	VID	5	R	R	[1..1]	**Conformance Statement SS-016:** MSH-12 (Version ID) **SHALL** have a value '2.5.1' **Definition**: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. For this message the value shall be 2.5.1 **Note**: HL7 version number used to interpret format and content of the message.
Sequence Number	13	NM	15	X	X	[0..1]	
Continuation Pointer	14	ST	180	X	X	[0..1]	
Accept Acknowledgement Type	15	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Application Acknowledgement Type	16	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions

TABLE 5-7A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Country Code	17	ID	3	X	X	[0..1]	HL7 table 0399: HL7 defined: Country code
Character Set	18	ID	16	X	X	[0..*]	HL7 table 0211: HL7 defined: Alternate character sets
Principal Language Of Message	19	CE	478	X	X	[0..1]	
Alternate Character Set Handling Scheme	20	ID	20	X	X	[0..1]	HL7 table 0356: HL7 defined: Alternate character set handling scheme

TABLE 5-7A: MESSAGE HEADER SEGMENT (MSH)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Message Profile Identifier	21	EI	427	O	O	[0..*]	**Conformance Statement SS-017:** An instance of MSH.21 (Message Profile Identifier) **SHALL** contain the constant value: PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-NoAck^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-Batch^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Batch^SS Receiver^2.16.840.1.114222.4.10.3^ISO **Definition**: Sites may use this field to assert adherence to, or reference, a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages.

Message Acknowledgement (MSA) Segment

In order to acknowledge a correct receipt of a message, message receivers use the MSA segment.

TABLE 5-7A: MESSAGE ACKNOWLEDGEMENT SEGMENT (MSA)							
Field Name	**Seq**	**DT**	**Len**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Acknowledgement Code	1	ID	2	R	R	[1..1]	PHVS_AcknowledgmentCode_HL7_2x **Definition**: This field contains an acknowledgment code, see message processing rules.
Message Control ID	2	ST	20	R	R	[1..1]	Specifies the value in MSH-10 of the message being acknowledged **Definition**: This field contains the message control ID of the message sent by the sending system. It allows the sending system to associate this response with the message for which it is intended.
Text Message	3	ST	80	X	X	[0..1]	
Expected Sequence Number	4	NM	15	X	X	[0..1]	
Delayed Acknowledgement Type	5			X	X	[0..0]	

TABLE 5-7A: MESSAGE ACKNOWLEDGEMENT SEGMENT (MSA)							
Field Name	Seq	DT	Len	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Error Condition	6	CE	250	RE	RE	[0..1]	HL7 Table 0357: HL7 defined: Message Error Code **Definition**: This field allows the acknowledging system to use a user-defined error code to further specify AR or AE type acknowledgments. The MSA-6 was deprecated as of v2.4. The reader is referred to the ERR segment. The ERR segment allows for richer descriptions of the erroneous conditions.

HL7 Batch Protocol

The HL7 Batch Protocol can be used to allow for periodic reporting. The HL7 file and batch header and trailer segments are defined in exactly the same manner as the HL7 message segments; hence, the same HL7 message construction rules used for individual messages can be used to encode and decode HL7 batch files. One batch of messages per file is supported.

HL7 BATCH FILE STRUCTURE

The structure of the batch file is constrained as follows:

TABLE 3-7: BATCH SIMPLE FILE STRUCTURE				
SEGMENT	**NAME**	**DESCRIPTION**	**USAGE**	**CARDINALITY**
FHS	File Header Segment	Information explaining how to parse and process the file. This information includes identification of file delimiters, sender, receiver, timestamp, etc.	R	[1..1]
BHS	Batch Header Segment	Trigger event information for receiving application. One batch per file is supported.	R	[1..1]
{ HL7 messages }			R	[1..*]
BTS	Batch Trailer Segment		R	[1..1]
FTS	File Trailer Segment		R	[1..1]

FILE HEADER (FHS) SEGMENT

This segment is used as the lead-in to a file (group of batches).

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
TABLE 3-7A: FILE HEADER SEGMENT (FHS)							
File Field Separator	1	ST	1	R	R	[1..1]	Default Value "|" (ASCII 124).
File Encoding Characters	2	ST	4	R	R	[1..1]	Default Values "^~\&" (ASCII 94, 126, 92, and 38).
File Sending Application	3	HD	227	O	O	[0..1]	
File Sending Facility	4	HD	227	O	RE	[0..1]	
File Receiving Application	5	HD	227	O	O	[0..1]	
File Receiving Facility	6	HD	227	O	O	[0..1]	
File Creation Date/Time	7	TS	26	O	RE	[0..1]	
File Security	8	ST	40	X	X	[0..1]	
File Name/ID	9	ST	20	O	RE	[0..1]	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
File Header Comment	10	ST	80	O	O	[0..1]	
File Control ID	11	ST	199	O	RE	[0..1]	
Reference File Control ID	12	ST	20	O	RE	[0..1]	

Example: FHS|^~\&

FILE TRAILER (FTS) SEGMENT

The FTS segment defines the end of a file (group of batches).

TABLE 3-7B. FILE TRAILER SEGMENT (FTS)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
File Batch Count	1	NM	10	R	RE	[0..1]	The number of batches contained in this file. Since this interface is constrained to one batch per file, this number should always be '1'.
File Trailer Comment	2	ST	80	O	O	[0..1]	

Example: FTS|1

BATCH HEADER (BHS) SEGMENT

The BHS segment is used to head a group of messages that comprise a batch.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
			TABLE 3-7C: BATCH HEADER SEGMENT (BHS)				
Batch Field Separator	1	ST	1	R	R	[1..1]	Default Value "|" (ASCII 124).
Batch Encoding Characters	2	ST	4	R	R	[1..1]	Default Values "^~\&" (ASCII 94,126,92, and 38).
Batch Sending Application	3	HD	227	R	R	[1..1]	
Batch Sending Facility	4	HD	227	R	R	[1..1]	
Batch Receiving Application	5	HD	227	R	R	[1..1]	
Batch Receiving Facility	6	HD	227	R	R	[1..1]	
Batch Creation Date/Time	7	TS	26	R	R	[1..1]	
Batch Security	8	ST	40	X	X	[0..1]	
Batch Name/ID	9	ST	20	O	RE	[0..1]	
Batch Header Comment	10	ST	80	O	RE	[0..1]	

TABLE 3-7C: BATCH HEADER SEGMENT (BHS)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Description/Comments
Batch Control ID	11	ST	20	O	RE	[0..1]	
Reference Batch Control ID	12	ST	20	O	RE	[0..1]	

Example: BHS|^~\&|ER1^2.16.840.1.113883.19.3.1.1^ISO
|CITY_GENERAL^2.16.840.1.113883.19.3.1^ISO|SS_APP^2.16.840.1.113883.19.3.2.1^ISO|SPH^2.16.840.1.113883.19.3.
2^ISO|20080723123558-0400

BATCH TRAILER (BTS) SEGMENT

The BTS segment defines the end of a batch of messages.

TABLE 3-7D: BATCH TRAILER SEGMENT (BTS)							
Field Name	**Sequence**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Description/Comments**
Batch Message Count	1	NM	10	R	RE	[0..1]	The number of messages contained in the preceding batch.
Batch Comment	2	ST	80	O	RE	[0..1]	
Batch Totals	3	NM	100	X	X	[0..*]	

Example: BTS|100|Facility reporting for 2-1-2011

APPENDIX A - CODE TABLES

All the value sets associated with PHIN Syndromic Surveillance Messaging Guide (MG) can also be downloaded using the following link:

http://phinvads.cdc.gov/vads/ViewView.action?name=Syndromic%20Surveillance

The following table provides the mapping between the value set information present in Syndromic Surveillance MG and the VADS value set. More detailed version of this mapping table and all the value set concepts can be downloaded from PHIN VADS home page (http://phinvads.cdc.gov) under hot topics "**Syndromic Surveillance**".

CDC vocabulary / PHIN VADS team can be contacted for support at PHINVS@CDC.GOV

PHIN Messaging Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Message Structure	MSH 9.3	0354	HL70354	PHVS_MessageStructure_SyndromicSurveillance	2.16.840.1.114222.4.11.6047	Constrained HL7 Table 0354
Message Type	MSH 9	0076	HL70076	PHVS_MessageType_SyndromicSurveillance	2.16.840.1.114222.4.11.6049	Constrained HL7 Table 0076
Universal ID Type	MSH 4.3	0301	HL70301, HL70203	PHVS_UniversalIDType_SyndromicSurveillance	2.16.840.1.114222.4.11.6050	Constrained HL7 Table 0301

PHIN Messaging Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Patient Class	PV1-2	PHVS_PatientClass_SyndromicSurveillance	HL70004	PHVS_PatientClass_SyndromicSurveillance	2.16.840.1.114222.4.11.3404	It is recommended that PHA constrain the transmitted data from the source using the patient class code set (e.g., only transmit records where patient class = E, Emergency
Value Type	OBX-2	Value Type	HL70125	PHVS_ValueType_SyndromicSurveillance	2.16.840.1.114222.4.11.6057	Constrained value set of Hl7 Table 0125 Value Type for Syndromic Surveillance (ED).
Address Type	PID- 11.7		HL70190	PHVS_AddressType_HL7_2x	2.16.840.1.114222.4.11.801	Unconstrained HL7 Table
Race	PID - 10	PHVS_RaceCategory_CDC	CDCREC	PHVS_RaceCategory_CDC	2.16.840.1.114222.4.11.836	Based upon CDCREC code system.
Facility State (Treating)	OBX - XAD.4	PHVS_State_FIPS_5-2	FIPS5_2	PHVS_State_FIPS_5-2	2.16.840.1.114222.4.11.830	Numeric FIPS codes are preferred. VADS download includes alpha codes as "alternate codes".
Patient State	PID-11.4	PHVS_State_FIPS_5-2	FIPS5_2	PHVS_State_FIPS_5-2	2.16.840.1.114222.4.11.830	It is recommended that the 2-digit (numeric) abbreviation be used for State of the patient domestic home address. VADS download includes alpha codes as "alternate codes".
Patient Country	PID - 11.6	PHVS_Country_ISO_3166-1	ISO3166_1	PHVS_Country_ISO_3166-1	2.16.840.1.114222.4.11.828	It is recommended that the 3-character country codes be used for Country of the patient home address.

PHIN Messaging Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Patient County	PID-11.9	PHVS_County_FIPS_6-4	FIPS6_4	PHVS_County_FIPS_6-4	2.16.840.1.114222.4.11.829	Use numeric codes. FIPS codes syntax (2 character numeric state code + 2 character numeric county code)
Discharge Disposition	PV1-36	PHVS_Discharge Disposition_HL7_2x	HL70112	PHVS_DischargeDisposition_HL7_2x	2.16.840.1.114222.4.11.915	User-defined Table 0112 - Discharge Disposition. Refer to UB-04 form for more implementation guidance.
Ethnicity	PID-22	PHVS_EthnicityGroup_CDC	CDCREC	PHVS_EthnicityGroup_CDC	2.16.840.1.114222.4.11.837	Based upon CDCREC code system.
Facility / Visit Type	OBX.5	PHVS_FacilityVisitType_SyndromicSurveillance	HCPTNUCC	PHVS_FacilityVisitType_SyndromicSurveillance	2.16.840.1.114222.4.11.3401	Relevant facility/visit type values are defined in value. OBX.3=SS003 (PHINQUESTIONS)
Sex	PID-8	PHVS_Sex_SyndromicSurveillance	HL70001	PHVS_Sex_SyndromicSurveillance	2.16.840.1.114222.4.11.3403	Constrained value set of Administrative Sex (HL7 Table 001)
Unique Patient / Visit Identifier	PID-3 5th component - Identifier Type Code	PHVS_IdentifierType_SyndromicSurveillance	HL70203	PHVS_IdentifierType_SyndromicSurveillance	2.16.840.1.114222.4.11.3597	The Unique Patient / Visit Identifier occurs in the 1st component of the CX data type. The 5th component, the Identifier Type Code, defines the type of identifier used in the 1st component

Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Medical Record #	PID-3 5th component - Identifier Type Code	PHVS_IdentifierType_SyndromicSurveillance	HL70203	PHVS_IdentifierType_SyndromicSurveillance	2.16.840.1.114222.4.11.3597	The Medical Record # is a specific instance of a unique patient identifier. It occurs in the 1st component of the CX data type. The fifth component, the Identifier Type Code, defines the identifier as the Medical Record # (MR).
Identifier Type Code	PID 3.5	0203	HL70203	PHVS_IdentifierType_SyndromicSurveillance	2.16.840.1.114222.4.11.3597	Constrained HL7 Table 0203
Name Type	PID 5.7		HL70200	PHVS_NameType_SyndromicSurveillance	2.16.840.1.114222.4.11.6056	Constrained Table
Age Units	OBX-6 for Age Units (CE data type) and OBX-3=21612-7 (LOINC Code)	PHVS_AgeUnit_SyndromicSurveillance	UCUM, NULLFL	PHVS_AgeUnit_SyndromicSurveillance	2.16.840.1.114222.4.11.3402	OBX-3 uses LOINC code (21612-7) as data element for Age, with numeric values in OBX-5 and UCUM age units in OBX-6
Diagnosis Type	DG1-6	PHVS_DiagnosisType_HL7_2x	HL70052	PHVS_DiagnosisType_HL7_2x	2.16.840.1.114222.4.11.827	

PHIN Messaging Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Chief Complaint / Reason for visit	OBX-5	PHVS_Disease_CDC	SCT	PHVS_Disease_CDC	2.16.840.1.114222.4.11.909	SNOMED value set based on disorder domain. Problem list uses SNOMED disorder domain concepts. This value set is quite big and may not fit in excel 2003. PHIN VADS download includes text, excel 97 - 2003 and excel 2010 format.
Chief Complaint / Reason for visit	OBX-5 and OBX-3=8661-1	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM	I9CDX	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM	2.16.840.1.114222.4.11.856	ICD-9 CM value set - Volume 1 and 2 (Diagnosis) codes. Value set includes ICD-9 codes with and without decimals. For electronic transaction, it is recommended to use without decimals.
Chief Complaint / Reason for visit	OBX-5	PHVS_CauseOfDeath_ICD-10_CDC	I10	PHVS_CauseOfDeath_ICD-10_CDC	2.16.840.1.114222.4.11.3593	ICD-10 CM implementation date is Oct 1st, 2014. This value set is for future use. This value set is made from CDC NCHS ICD-10 subset that has been used for reporting mortality (WHO mandate).

PHIN Messaging Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Diagnosis / Injury Code	DG1-3	PHVS_Administrative Diagnosis_CDC_ICD-9CM	I9CDX	PHVS_Administrative Diagnosis_CDC_ICD-9CM	2.16.840.1.114222.4.11.856	ICD-9 CM value set - Volume 1 and 2 (Diagnosis) codes. Value set includes ICD-9 codes with and without decimals. For electronic transaction, it is recommended to use without decimals. **Note**: Include ICD-9-CM V-codes and E-codes. When the primary diagnosis code is an injury, also provide one or more supplemental external-cause-of-injury codes or E-codes. E-codes provide useful information on the mechanism and intent of injury, place of occurrence, and activity at the time of injury. This also applies to ICD-10-CM (when it is implemented) where V, W, X, Y and selected T codes represent external cause of injury codes.

PHIN Messaging Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Diagnosis / Injury Code	DG1-3	PHVS_CauseOfDeath_ICD-10_CDC	I10	PHVS_CauseOfDeath_ICD-10_CDC	2.16.840.1.114222.4.11.3593	ICD-10 CM implementation date is Oct 1st, 2014. This value set is for future use. This value set is made from CDC NCHS ICD-10 subset that has been used for reporting mortality (WHO mandate). **Note**: Include ICD-9-CM V-codes and E-codes. When the primary diagnosis code is an injury, also provide one or more supplemental external-cause-of-injury codes or E-codes. E-codes provide useful information on the mechanism and intent of injury, place of occurrence, and activity at the time of injury. This also applies to ICD-10-CM (when it is implemented) where V, W, X, Y and selected T codes represent external cause of injury codes.

PHIN Messaging Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Diagnosis / Injury Code	DG1-3	PHVS_Disease_CDC	SCT	PHVS_Disease_CDC	2.16.840.1.114222.4.11.909	SNOMED value set based on disorder domain. Problem list uses SNOMED disorder domain concepts. This value set is quite big and may not fit in excel 2003. PHIN VADS download includes text, excel 97 - 2003 and excel 2010 format. **Note**: Include ICD-9-CM V-codes and E-codes. When the primary diagnosis code is an injury, also provide one or more supplemental external-cause-of-injury codes or E-codes. E-codes provide useful information on the mechanism and intent of injury, place of occurrence, and activity at the time of injury. This also applies to ICD-10-CM (when it is implemented) where V, W, X, Y and selected T codes represent external cause of injury codes.
Initial Pulse Oximetry	OBX-6 for Temperature Units (CE data type) and OBX-3= 59408-5 (LOINC Code)	PHVS_PulseOximetryUnit_UCUM	UCUM	PHVS_PulseOximetryUnit_UCUM	2.16.840.1.114222.4.11.3590	OBX-3 uses LOINC code (59408-5) as data element for pulse oximetry with numeric values in OBX-5 and UCUM pulse oximetry unit in OBX-6 (% - percentage)

PHIN Messaging Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from PHIN MG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Initial Temperature	OBX-6 for Temperature Units (CE data type) and OBX-3=11289-6 (LOINC Code)	PHVS_TemperatureUnit_UCUM	UCUM	PHVS_TemperatureUnit_UCUM	2.16.840.1.114222.4.11.919	OBX-3 uses LOINC code (11289-6) as data element for temperature with numeric values in OBX-5 and UCUM temperature units in OBX-6 (Celsius and Fahrenheit)
Coded Data Elements	OBX-3	PHVS_ObservationIdentifier_SyndromicSurveillance	LN, PHINQUESTIONS	PHVS_ObservationIdentifier_SyndromicSurveillance	2.16.840.1.114222.4.11.3589	List of observation identifiers associated with syndromic surveillance that would be coming in the observation identifier field (OBX-3) in HL7 2.x messaging. (Age, Date of Onset, Chief Complaint, Triage notes, Clinical Impression, Temperature, Pulse Oximetry, Facility - Location, Identifier, Type)

APPENDIX B - SYNDROMIC SURVEILLANCE MESSAGING EXAMPLES

This appendix presents six (6) case studies to illustrate how this Guide should be used for messaging syndromic surveillance information about a patient visit.

A minimal amount of data is used in each case study to emphasize important aspects of the message structure. Among the case studies, variations in the data elements of interest are made to stress clinical or administrative concepts that are important to syndromic surveillance.

Some additional ADT trigger events not noted in this section may occur within the normal workflow of an EHR. The below ADT trigger events represent the core data elements of interest for Public Health Authorities (PHAs) related to syndromic surveillance.

Case 1 - Brief Urgent Care or Emergency Department Visit

Case Study 1 provides an example of a brief patient visit that could take place in either urgent care or emergency department clinical settings. The patient's chief complaint is captured as an unstructured, free-text value using the patient's own words. ADT A04 and A03 messages are generated and sent to the PHA about this visit.

Step 1: Registration Trigger - ADT A04

A 35 year old female walks into Midtown Urgent Care on August 17, 2012 at 12:00 pm. The patient is registered by a clerical assistant who records the patient's name, date of birth, residence information, race, ethnicity, and records that the patient's reason for visit is, "Fever, chills, smelly urine with burning during urination."

At 12:30 PM on August 17, 2012, the facilities electronic health record module for syndromic surveillance data assembles and transmits a Registration message to Big City Health Department about this visit.

Example Message - Step 1, Case 1:

MSH|^~\&||DownTownProcessing^2231237890^NPI|||201208171230||ADT^A04^ADT_A01|NIST-SS-001.12|P|2.5.1|||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO

```
EVN||201208171230|||||MidTwnUrgentC^2231231234^NPI
PID|1||2222^^^^MR||^^^^^~^^^^^S|||F||2106-3^^CDCREC|^^^30303^^^^13121|||||||||||2135-
2^^CDCREC
PV1|1|||||||||||||||||||2222_001^^^^VN||||||||||||||||||||||||201208171200
OBX|1|CWE|SS003^^PHINQUESTION||261QU0200X^Urgent Care^HCPTNUCC||||||F
OBX|2|NM|21612-7^^LN||35|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^Fever, chills, smelly urine with burning during urination||||||F
```

Step 2: Discharge Trigger: ADT A03

At 12:35 PM a nurse practitioner examines the patient and diagnoses the patient with urinary tract infection. The nurse assigns an ICD-9-CM diagnosis code of 599.0 within the EHR, and orders a course of antibiotics for the patient. The patient is discharged from the Urgent Care Center at 12:45 PM.

At 2:30 pm on August 17, 2012 the facility's electronic health record module for syndromic surveillance data assembles and transmits a Discharge message to Big City Health Department about this visit.

Example Message - Step 2, Case 1:

```
MSH|^~\&||DownTownProcessing^2231237890^NPI|||201208171430||ADT^A03^ADT_A03|NIST-SS-
001.22|P|2.5.1|||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||201208171430|||||MidTwnUrgentC^2231231234^NPI
PID|1||2222^^^^MR||^^^^^~^^^^^S|||F||2106-3^^CDCREC|^^^30303^^^^13121|||||||||||2135-
2^^CDCREC
PV1|1|||||||||||||||||||2222_001^^^^VN||||||||||||||||||01|||||||||201208171200
DG1|1||599^Urinary tract infection, site not specified^I9CDX|||F
OBX|1|CWE|SS003^^PHINQUESTION||261QU0200X^Urgent Care^HCPTNUCC||||||F
OBX|2|NM|21612-7^^LN||35|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^Fever, chills, smelly urine with burning during urination||||||F
```

Case 2 - Unconscious Patient Dies in Emergency Department

Case Study 2 provides an example of a hospital emergency department visit where the patient's demographic information is unavailable at registration, chief complaint is captured as a coded value, ICD-9-CM ECODEs are captured as part of the working diagnoses, and the patient dies. ADT A04, A08, and A03 messages are generated and sent to the PHA about this visit.

Step 1: Registration Trigger - ADT A04

An unconscious white male with no visible injuries is brought by ambulance to Pacific Northwest Hospital's Emergency Department at 11:45 PM on August 2, 2012. The paramedics report that firefighters responding to a house fire found the patient unconscious in a bedroom. The patient was not breathing when he was found. Once resuscitated, the paramedics performed an intubation and placed on a ventilator. Unable to find any identification, the patient is registered without his true name, date of birth, or ethnicity. His reason for visit is logged as ICD-9-CM code of E890 (conflagration in private dwelling).

At 2:00 AM on August 3, 2012, the hospital's electronic health record module for syndromic surveillance data assembles and transmits an ADT A04 message to the state health department about this encounter.

Example Message - Step 1, Case 2:

```
MSH|^~\&||DownTownProcessing^2231237890^NPI|||201208031400||ADT^A04^ADT_A01|NIST-SS-
001.12|P|2.5.1||||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||201208021145|||||PacificNWHospitalED^2231231234^NPI
PID|1||3333^^^^MR||^^^^^^~^^^^^^U|||M||2106-3^^CDCREC|||||||||||||2186-5^^CDCREC
PV1|1|E|||||||||||||||||||3333_001^^^^VN||||||||||||||||||||||||||201208021145
PV2|||E890^conflagration in private dwelling^IC9DX
OBX|1|CWE|SS003^^PHINQUESTION|| 261QE0002X ^Emergency Care^HCPTNUCC||||||F
```

Step 2: Record Update Trigger: ADT A08

ED physicians perform a physical examination and blood work and find extremely abnormal blood gas numbers. While these tests are being performed a woman shows up in the ED stating that she is the man's wife. She provides the clinicians with the name and date of birth of the patient. At 2:30 AM on August 3, 2012, a working ICD-9-CM diagnosis code of 518.81 (acute respiratory failure) is entered into the patient record along with updated name and date of birth information.

At 4:00 AM on August 3, 2012, the hospital's electronic health record module for syndromic surveillance data assembles and transmits an ADT A08 message to the state health department about this encounter.

Example Message - Step 2, Case 2:

MSH|^~\&||DownTownProcessing^2231237890^NPI|||2012080311600||ADT^A08^ADT_A01|NIST-SS-001.12|P|2.5.1|||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||201208030230|||||PacificNWHospitalED^2231231234^NPI
PID|1||3333^^^^MR||^^^^^~^^^^^S|||M||2106-3^^CDCREC|||||||||||||2186-5^^CDCREC
PV1|1|E||||||||||||||||3333_001^^^^VN|||||||||||||||||||||||||201208031430
PV2|||E890^conflagration in private dwelling^IC9DX
DG1|1||518.81^acute respiratory failure^I9CDX||201208030230|W^Working^2.16.840.1.114222.4.11.827
OBX|1|CWE|SS003^^PHINQUESTION|| 261QE0002X ^Emergency Care^HCPTNUCC||||||F

Step 3: Discharge Trigger: ADT A03

At 8:30 AM the patient's heart suddenly stops beating. After several minutes of resuscitation attempts the patient is determined to have died of cardiopulmonary arrest. Time of patient death is 8:55 AM. Final ICD-9-CM diagnosis of 427.50 is assigned to the patient's medical record.

At 10:00 AM on August 3, 2012, the hospital's electronic health record module for syndromic surveillance data assembles and transmits an ADT A03 message to the state health department about this encounter.

Example Message - Step 3, Case 2:

MSH|^~\&||DownTownProcessing^2231237890^NPI|||201208031000||ADT^A03^ADT_A03|NIST-SS-001.12|P|2.5.1|||||||||PH_SS-NoAck^SSSender^2.16.840.1.114222.4.10.3^ISO
EVN||201208030830|||||PacificNWHospitalED^2231231234^NPI
PID|1||3333^^^^MR||^^^^^~^^^^^S|||M||2106-3^^CDCREC|||||||||||||2186-5^^CDCREC||||||||201208030830|Y|
PV1|1|E||||||||||||||||3333_001^^^^VN|||||||||||||||||41|||||||||201208031000
DG1|1||427.50^Cardiac arrest^I9CDX||201208030830|F^Final^2.16.840.1.114222.4.11.827
OBX|1|CWE|SS003^^PHINQUESTION|| 261QE0002X ^Emergency Care^HCPTNUCC||||||F

Case 3 - Patient Admitted from Emergency Department

Case Study 3 provides an example of a hospital emergency department visit is captured as an unstructured, free-text chief complaint, and the patient is discharged from the ED and admitted for inpatient care. ADT A04, A08, A03, and A01 messages are generated and sent to the PHA about this visit.

Step 1: Registration Trigger - ADT A04

A 10 year-old boy is brought to the emergency department (ED) at Southwest Corner Hospital by his parents at 3:30 PM on December 27, 2010. The patient is complaining of fever, cough and difficulty breathing. A clerical assistant registers the patient with the parent's help. She records the patient's name, date of birth, race, ethnicity, and residence and insurance information. The clerical assistant also enters the patient's chief complaint as, "fever, cough, difficulty breathing."

At 4:00 PM on December 27, 2010, the hospital's electronic health record module for syndromic surveillance data assembles and transmits a Registration message about this encounter to the state health department.

Example Message - Step 1, Case 3:

```
MSH|^~\&||DownTownProcessing^2231237890^NPI|||201012271600||ADT^A04^ADT_A01|NIST-SS-
001.12|P|2.5.1||||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||201212271530|||||SWCornerHospitalED^2231231234^NPI
PID|1||4444^^^^MR||^^^^^~^^^^^S|||M|||^^^30303^^^^13121|||||||||||||2186-5^^CDCREC
PV1|1|E|||||||||||||||||||4444_001^^^^VN|||||||||||||||||||||||||||201212271530
OBX|1|CWE|SS003^^PHINQUESTION|| 261QE0002X^Emergency Care^HCPTNUCC||||||F
OBX|2|NM|21612-7^^LN||10|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^ fever, cough and difficulty breathing ||||||F
```

Step 2: Record Update Trigger - ADT A08

The attending physician orders treatment and diagnostic tests for influenza and pneumonia. At 5:00 PM, she updates the patient's clinical record with *working ICD-9-CM diagnosis codes of 786.05 (shortness of breath) and 786.2 (cough). Shortness of breath is the primary diagnosis.*

At *5:15 PM on December 27, 2010*, the hospital's electronic health record module for syndromic surveillance data assembles and transmits an Update message about to this encounter to the state health department.

Example Message - Step 2, Case 3

```
MSH|^~\&||DownTownProcessing^2231237890^NPI|||201212271715||ADT^A08^ADT_A01|NI
ST-SS-001.12|P|2.5.1|||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||201212271700|||||SWCornerHospitalED^2231231234^NPI
PID|1||4444^^^^MR||^^^^^~^^^^^S|||M|||^^^^30303^^^^13121|||||||||||2186-5^^CDCREC
PV1|1|E|||||||||||||||||4444_001^^^^VN||||||||||||||||||||||||||201212271700
OBX|1|CWE|SS003^^PHINQUESTION|| 261QE0002X ^Emergency Care^HCPTNUCC|||||||F
OBX|2|NM|21612-7^^LN||10|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^ fever, cough and difficulty breathing |||||||F
DG1|1||786.05^shortness of
breath^I9CDX||201012271700|W^Working^2.16.840.1.114222.4.11.827
DG1|2||786.2^(cough)^I9CDX||201012271700|W^Working^2.16.840.1.114222.4.11.827
```

Step 3: Discharge Trigger - ADT A03

At 7:00 PM, radiology tests indicate that the patient has pneumonia and a rapid influenza test is positive. The physician orders treatment and hospital admission. At 7:30 PM, ED staff complete the patient record and administratively discharge the patient from the ED. The patient's final ICD-9-CM diagnoses codes are 487.0 (influenza with pneumonia).

At 7:40 PM on December 27, 2010, the hospital's electronic health record module for syndromic surveillance data assembles and transmits a Discharge message about this encounter to the state health department.

Example Message - Step 3, Case 3:

```
MSH|^~\&||DownTownProcessing^2231237890^NPI|||201012271940||ADT^A03^ADT_A03|NI
ST-SS-001.12|P|2.5.1|||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||201012271900|||||SWCornerHospitalED^2231231234^NPI
PID|1||4444^^^^MR||^^^^^~^^^^^S|||M|||^^^^30303^^^^13121|||||||||||2186-5^^CDCREC|||||||||
PV1|1|||||||||||||||||||4444_001^^^^VN|||||||||||||||||09|||||||||201012271930
DG1|1||487.0^influenza with
pneumonia^I9CDX||201012271700|F^Final^2.16.840.1.114222.4.11.827
OBX|1|CWE|SS003^^PHINQUESTION|| 261QE0002X ^Emergency Care^HCPTNUCC|||||||F
OBX|2|NM|21612-7^^LN||10|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^ fever, cough and difficulty breathing |||||||F
```

Step 4: Admission Trigger - ADT A01

At 8:00 PM the patient is transported to a hospital room in the Pediatric ICU Unit. Clinical staff complete an admission record with the admit reason recorded as ICD-9-CM diagnosis code 487.0 (influenza with pneumonia).

At 8:15 PM on December 27, 2010, the hospital's electronic health record module for syndromic surveillance data assembles and transmits an Admission message about to this encounter to the state health department.

Example Message - Step 4, Case 3:

MSH|^~\&||DownTownProcessing^2231237890^NPI|||201012272015||ADT^A01^ADT_A01|NI
ST-SS-001.12|P|2.5.1|||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||201012272000|||||SWCornerHospital^2231231234^NPI
PID|1||4444^^^^MR||^^^^^~^^^^^S|||M|||^^^30303^^^^13121|||||||||||2186-5^^CDCREC|||||||||
PV1|1|I|Pediatric ICU
Unit^^^^^^^^^^||||||||||||||||4444_001^^^^VN||||||||||||||||||09|||||||||20101227200
PV2|||487.0^ influenza with pneumonia ^IC9DX
DG1|1||487.0^influenza with
pneumonia^I9CDX||201012271700|F^Final^2.16.840.1.114222.4.11.827
OBX|1|CWE|SS003^^PHINQUESTION|| 261QE0002X ^Emergency Care^HCPTNUCC|||||||F
OBX|2|NM|21612-7^^LN||10|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^ fever, cough and difficulty breathing ||||||F

Step 5: Discharge Trigger: ADT A03

At 7:30 pm on December 28. 2010, the patient is feeling better and is transferred to the general Pediatrics unit. On January 2, 2010 at 3:00 pm the patient is discharged to his home. The final discharge diagnosis is ICD-9-CM diagnosis code 487.0 (influenza with pneumonia).

The next day, at 12:00 PM on December 3, 2010, the hospital's electronic health record module for syndromic surveillance data assembles and transmits a Discharge message about this encounter to the state health department.

Example Message - Step 5, Case 3:

MSH|^~\&||DownTownProcessing^2231237890^NPI|||201001031200||ADT^A03^ADT_A03|NI
ST-SS-001.12|P|2.5.1|||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||201012281930|||||SWCornerHospitalED^2231231234^NPI
PID|1||4444^^^^MR||^^^^^~^^^^^S|||M|||^^^30303^^^^13121|||||||||||2186-5^^CDCREC|||||||||

PV1|1|I|Pediatric||||||||||||||||||4444_001^^^^VN||||||||||||||||||01|||||||||201012281930
DG1|1||487.0^influenza with
pneumonia^I9CDX||201012271700|F^Final^2.16.840.1.114222.4.11.827
OBX|1|CWE|SS003^^PHINQUESTION|| 261QE0002X ^Emergency Care^HCPTNUCC||||||F
OBX|2|NM|21612-7^^LN||10|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^ fever, cough and difficulty breathing ||||||F

Case 4: Inpatient Visit

Case 4 presents an example of direct hospital admission containing all of the hospital inpatient data elements of interest with a Receiver Usage of R or RE. ADT A01 and A03 messages are generated and sent to the PHA about this visit.

Step 1: Admission Trigger - ADT A01

On June 7, 2009 at 12:30 pm a black, non-Hispanic 86 year old male shows up to Greater North Medical Center (Facility Identifier: 4356012945) with a request from his physician to admit him for complications from influenza. During registration the patient's address is recorded as Billings, Yellowstone County, Zip Code 59101. He tells the physician that he is suffering from a fever, chills and body aches as well as worsening shortness of breath. These symptoms are recorded as the patient's chief complaint. At 1:00 pm on June 7, 2009 the patient is admitted to an inpatient respiratory unit with an Admit Reason of ICD-9-CM 487.1 (Influenza with other respiratory manifestations). The diagnosis type is recorded as an admitting diagnosis. The patient's bank account number, 123451247, is used to uniquely identify the patient.

At 2:00 pm on June 7, 2009, the hospital's electronic health record module for syndromic surveillance data assembles and transmits an Admission message about this encounter to the state health department.

Example Message - Step 1, Case 4

MSH|^~\&||DownTownProcessing^2231237890^NPI|||200906071400||ADT^A01^ADT_A01|NIST-SS-001.12|P|2.5.1|||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||200906071300|||||GreaterNorthMedCtr^4356012945^NPI
PID|1|I|123451247^^^^MR||^^^^^~^^^^^S|||M||2054-
5^^CDCREC|^^^^59101^^^30111|||||||||||||2186-5^^CDCREC|||||||||||

PV1|1|I|||||||||||||||||123451247^^^^VN|||||||||||||||||||||||||200906071300
PV2|||487.1^Influenza with other respiratory manifestations^IC9DX
DG1|1||487.1^ Influenza with other respiratory manifestations
^I9CDX||201012271700|W^Working^2.16.840.1.114222.4.11.827
OBX|1|CWE|SS003^^PHINQUESTION||363L00000X^General Acute Care
Hospital^HCPTNUCC||||||F
OBX|2|NM|21612-7^^LN||86|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^ fever, chills and body aches as well as worsening shortness of
breath||||||

Step 2: Discharge Trigger: ADT A03

After admission the patient is treated for influenza and, over the course of the next 7 days, begins to recover from the respiratory complications of his influenza. After laboratory testing the physicians confirm that the patient was suffering from the H1N1 strain of influenza, possibly accounting for its severe manifestations. *On June 15, 2009 at 3:45 pm* the patient is discharged from the hospital to his home with a final discharge diagnosis of *ICD-9-CM 488.19 (Influenza due to identified 2009 H1N1 influenza virus with other manifestations)*. The final discharge message is ready 3 days after discharge.

At 2:15 pm on June 18, 2009, the hospital's electronic health record module for syndromic surveillance data assembles and transmits a Discharge message about this encounter to the state health department.

Example Message - Step 2, Case 4:

MSH|^~\&||DownTownProcessing^2231237890^NPI|||200906181415||ADT^A03^ADT_A03|NI
ST-SS-001.12|P|2.5.1||||||||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||200906151545|||||GreaterNorthMedCtr^4356012945^NPI
PID|1||123451247^^^^MR||^^^^^~^^^^^S|||M||2054-5^^CDCREC
|^^^59101^^^30111|||||||||||2186-5^^CDCREC||||||||||
PV1|1|I| |||||||||||||||123451247^^^^VN||||||||||||||||||01|||||||||200906151545
DG1|1||488.19^Influenza due to identified 2009 H1N1 influenza virus with other manifestations
^I9CDX||200906151534|F^Final^2.16.840.1.114222.4.11.827
OBX|1|CWE|SS003^^PHINQUESTION||363L00000X^General Acute Care
Hospital^HCPTNUCC||||||F
OBX|2|NM|21612-7^^LN||86|a^^UCUM|||||F
OBX|3|CWE|8661-1^^LN||^ fever, chills and body aches as well as worsening shortness of
breath||||||F

Case 5: Batch Messaging Example

Case Study 5 presents an example of batch messaging.

Mid-Co Health Center sends their syndromic data to their state public health authority. Mid-Co sends the messages that have gathered over the last 12 hour period in batch message format. There are 240 messages.

Example Batch Message - Case 5

```
FHS|^~\&
BHS|^~\&|ER1|MID-
CO_HLTH_CTR^9876543210^NPI|SS_APP^2.16.840.1.113883.19.3.2.1^ISO|SPH^2.16.840.
1.113883.19.3.2^ISO|201010123123558
MSH|^~\&|ER1|MID-CO HLTH
CTR^9876543210^NPI|SS_APP^2.16.840.1.113883.19.3.2.1^ISO|SPH^2.16.840.1.113883.19
.3.2^ISO |20110123003938||ADT^A01^ADT_A01|ER1-20110123-001|P|2.5.1
PID|... (Continue 240 messages)...
BTS|240|Mid-Co reporting 1-23-2011: 0000 – 1200 hrs
FTS|1
```
Case 6: Sample International Address Formats

Case 6 provides examples of how international addresses are messaged.

Countries Bordering the United States

Mexico

Super Manzana 3 – 403 [street name + building number - apartment number] Puerto Juarez [village] 77520 CANCUN, Q. ROO [postcode + locality name, province abbreviation MEXICO [country name]

Example PID Segment - Mexico Address, Case 6:

PID|1||MX01059711||~^^^^^^U|||M||||Super Manzana 3 - 403^Puerto Juarez^CANCUN^Q. ROO^77520^MEX

Canada

111 FAIRFORD STREET EAST MOOSE JAW SK S6H 2X1 CANADA

Example PID Segment - Canada Address, Case 6:

PID|1||CA01059711||~^^^^^^U|||M|||111 FAIRFORD STREET EAST^^MOOSE JAW^SK^S6H 2X1^CAN

APPENDIX C - FUTURE DATA ELEMENTS OF INTEREST

This appendix presents data elements that have potential value to syndromic surveillance in ED, UC and inpatient settings but are not technically feasible or of high enough utility for most PHAs at this time. As public health practice and health information technologies continue to evolve these data elements will likely be important to public health in the future.

APPENDIX C: FUTURE DATA ELEMENTS						
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Problem List	Problem list of the patient condition(s)	O	O	[0..*]	The certification criterion specifies that ICD-9CM or SNOMED-CT® are the code sets which must be included in Certified EHR Technology, and are therefore the code sets that would be used to record entries as structured data	ISDS Recommendation document: [9]: Rationale: Can provide co-morbidity, pregnancy status, and indications of severity and chronic disease conditions, and medical and surgical histories.	PPR/ACK - Patient Problem Message (Events PC1, PC2, PC3) The patient problem message is used to send problems from one application to another (e.g., a point of care system to a clinical repository). Many of the segments associated with this event are optional. This optionality allows systems in need of this information to set up transactions that fulfill their requirements.

[9] International Society for Disease Surveillance. Electronic Syndromic Surveillance Using Hospital Inpatient and Ambulatory Clinical Care Electronic Health Record Data: Recommendations from the ISDS Meaningful Use Workgroup. 2012. Available online:

	APPENDIX C: FUTURE DATA ELEMENTS						
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Industry	Patient's Industry of employment	O		[0..*]	**U.S. CENSUS BUREAU INDUSTRY CODES**	Occupation and Industry are currently under consideration as certification data elements for the EHR (Demographics). ISDS recommendations for these data elements will be revisited as Meaningful Use Requirements change.	TBD
Occupa-tion	Patient's occupation	O		[0..*]	**U.S. CENSUS BUREAU OCCUPATION CODES**	Occupation and Industry are currently under consideration as certification data elements for the EHR (Demographics). ISDS recommendations for these data elements will be revisited as Meaningful Use Requirements change.	TBD

http://www.syndromic.org/meaningfuluse/IAData/Recommendations.

APPENDIX C: FUTURE DATA ELEMENTS							
Data Element Name	Description of Field	Sender Usage	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Insurance Coverage	The type of insurance coverage that the patient carries	O		[0..*]	TBD		IN1-15
Lab Orders	Lab tests ordered for the patient	O				The individual data elements related to laboratory orders have not yet been determined. If used, the specific data elements should be specified and agreed upon by individual jurisdictions and their data sharing partners.

Laboratory order data elements help identify possible health conditions of interest to public health.

Due to the possible high volume of data, jurisdictions may wish to limit the type of laboratory order data that is transmitted. | Recommendation requires further analysis and has not yet been determined |

	APPENDIX C: FUTURE DATA ELEMENTS						
Data Element Name	**Description of Field**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Value Set /Value Domain**	**Implementation Notes**	**Recommended HL7 Location**
Medications Prescribed or Dispensed	Medications Prescribed or Dispensed to the patient	O			TBD	Rationale: Data element is categorized as future because more understanding is needed on the usefulness of the data provided. Collecting all medications prescribed of dispensed for all patients is anticipated to be large in number. The relevance of all data, routine use, analysis and interpretation, especially with an unfiltered approach, is not clear at this time. Collection of this data may be relevant to more in-depth analyses, individual patient follow-up or other surveillance process.	**OBX Segment**

APPENDIX D - TRANSLATION OF DATA ELEMENTS BETWEEN HL7 2.5.1 AND 2.3.1

This guide follows the HL7 Standard rules to ensure backward-compatibility of interfaces. As a result, properly implemented version 2.3.1 interfaces for syndromic surveillance should be able to accept without producing errors. Section 4.2 DATA ELEMENTS OF INTEREST FOR SYNDROMIC SURVEILLANCE describes the Data Elements of Interests. The format of this section has been designed to accommodate differences of HL7 versions 2.3.1 and 2.5.1. The reader is referred to the full HL7 version 2.3.1 Standard for complete information and details of this background.

The differences are found in the following HL7 Segment tables (Section 3.6) and Data Elements of Interest table (Section 4.2)):
MSH-12 Version ID
Facility Identifier
Facility Name

In HL7 version 2.5.1 these best presented in the Event Type segment, 7th field. However, this field was not defined as part of version 2.3.1 for an Event Type segment.

MESSAGE HEADER (MSH) SEGMENT

The MSH Segment is used to define the intent, source, destination, and some specifics of the syntax of the message. This segment includes identification of message delimiters, sender, receiver, message type, timestamp, etc.

APPENDIX D: TABLE A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Field Separator	1	ST	1	R	R	[1..1]	Default Value "|" (ASCII 124).

APPENDIX D: TABLE A: MESSAGE HEADER SEGMENT (MSH)						

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Encoding Characters	2	ST	4	R	R	[1..1]	Default Values "^~\&" (ASCII 94,126, 92, and 38).
Sending Application	3	HD	227	O	O	[0..1]	
Sending Facility	4	HD	227	R	R	[1..1]	Field that uniquely identifies the facility associated with the application that sends the message If Acknowledgements are in use, this facility will receive any related Acknowledgement message. National Provider Identifier. (10-digit identifier) **Note:** The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field
Namespace ID	4.1	IS	20	RE	RE	[0..1]	HL7 table 0362: User-defined: Facility
Universal ID	4.2	ST	199	R	R	[1..1]	
Universal ID Type	4.3	ID	6	R	R	[1..1]	PHVS_UniversalIDType_SyndromicSurveillance
Receiving Application	5	HD	227	O	O	[0..1]	HL7 table 0361: User-defined: Application
Receiving Facility	6	HD	227	O	O	[0..1]	HL7 table 0362: User-defined: Facility

APPENDIX D: TABLE A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Date/Time Of Message	7	TS	26	R	R	[1..1]	**Conformance Statement SS-013:** MSH-7 (Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone. **Note**: MSH-7 (Date/Time of Message) does not have to equal EVN-2 (Message Date/Time)
Security	8	ST	40	X	X	[0..1]	

APPENDIX D: TABLE A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Message Type	9	MSG	15	R	R	[1..1]	**Note:** All messages will be Admit-Discharge-Transfer (ADT) or General acknowledgment message (ACK) message types. The triggering event is a real-world circumstance causing the message to be sent. Supported trigger events are A01 (Inpatient Admission), A04 (Emergency Department Registration) and A08 (Update) and A03 (Discharge). **Conformance Statement SS-041:** MSH-9 (Message Type) **SHALL** be constrained to be a value in the set: 'ADT^A01^ADT_A01', 'ADT^A03^ADT_A03', 'ADT^A04^ADT_A01', 'ADT^A08^ADT_A01', 'ACK^A01^ACK', 'ACK^A03^ACK', 'ACK^A04^ACK', 'ACK^A08^ACK'
Message Code	9.1	ID	3	R	R	[1..1]	Literal Value 'ADT' or 'ACK' PHVS_MessageType_SyndromicSurveillance
Trigger Event	9.2	ID	3	R	R	[1..1]	One of the following literal values: 'A01', 'A03', 'A04', or 'A08' PHVS_EventType_SyndromicSurveillance

APPENDIX D: TABLE A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Message Structure	9.3	ID	7	R	R	[1..1]	Trigger events A01, A04, and A08 share the same 'ADT_A01' Message Structure. Valid values are: 'ADT_A01' or 'ADT_A03' or 'ACK' PHVS_MessageStructure_SyndromicSurveillance
Message Control ID	10	ST	199	R	R	[1..1]	**Definition**: This field contains a number or other identifier that uniquely identifies the message. The receiving system echoes this ID back to the sending system in the Message acknowledgment segment (MSA). **Note**: This field is a number or other identifier that uniquely identifies the message.
Processing ID	11	PT	3	R	R	[1..1]	**Conformance Statement SS-015:** MSH-11 (Processing ID) **SHALL** have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training. **Definition**: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. **Note**: Indicates how to process the message as defined in HL7 processing rules

APPENDIX D: TABLE A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Version ID	12	VID	5	R	R	[1..1]	**Conformance Statement SS-042:**MSH-12 (Version ID) **SHALL** have a value '2.3.1' **Definition**: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. For this message the value shall be 2.3.1 **Note**: HL7 version number used to interpret format and content of the message.
Sequence Number	13	NM	15	X	X	[0..1]	
Continuation Pointer	14	ST	180	X	X	[0..1]	
Accept Acknowledgement Type	15	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Application Acknowledgement Type	16	ID	2	X	X	[0..1]	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions
Country Code	17	ID	3	X	X	[0..1]	HL7 table 0399: HL7 defined: Country code
Character Set	18	ID	16	X	X	[0..*]	HL7 table 0211: HL7 defined: Alternate character sets
Principal Language Of Message	19	CE	478	X	X	[0..1]	
Alternate Character Set Handling Scheme	20	ID	20	X	X	[0..1]	HL7 table 0356: HL7 defined: Alternate character set handling scheme

EVENT TYPE (EVN) SEGMENT

The EVN segment is used to communicate trigger event information to receiving applications.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
APPENDIX D: TABLE B: EVENT TYPE SEGMENT (EVN)							
Event Type Code	1	ID	3	X	X	[0..0]	PHVS_EventType_SyndromicSurveillance
Recorded Date/Time	2	TS	26	R	R	[1..1]	**Conformance Statement SS-018:** EVN-2 (Recorded Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Note:** EVN-2 (Recorded Date/Time) does not have to equal MSH-7 (Date/Time of Message) **Note:** Most systems default to the system Date/Time when the transaction was entered. Data Element of Interest: Message Date/Time
Date/Time Planned Event	3	TS	26	X	X	[0..1]	
Event Reason Code	4	IS	3	X	X	[0..1]	HL7 table 0062: User defined: Event reason
Operator ID	5	XCN	309	X	X	[0..*]	HL7 table 0188: User defined: Operator ID
Event Occurred	6	TS	26	X	X	[0..1]	

OBSERVATION/RESULT (OBX) SEGMENT

The OBX Segment in the ADT Message is used to transmit observations related to the patient and visit. In Section 4.2.1 if the data element is carried in an OBX and usage is 'Required', the segment and its fields must be populated. The data elements from Section 4.2 DATA ELEMENTS OF INTEREST FOR SYNDROMIC SURVEILLANCE that use OBX segments are not expected to utilize any specified Set ID number within a message. However, the Set IDs are required to be sequential.

APPENDIX D: TABLE C:: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Set ID - OBX	1	SI	4	R	R	[1..1]	**Note:** Set ID numbers the repetitions of the segments **Conformance Statement SS-027:** For the first repeat of the OBX segment, the sequence number **SHALL** be one (1), for the second repeat, the sequence number shall be two (2), etc. Example: OBX|1|…. OBX|2|…. OBX|3|…. **Definition**: This field contains the sequence number.

APPENDIX D: TABLE C:: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Value Type	2	ID	3	R	R	[1..1]	**Conformance Statement SS-028:** OBX-2 **SHALL** be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD') PHVS_ValueType_SyndromicSurveillance **Definition**: This field contains the format of the observation value in OBX. Note: Identifies the structure of data in observation value (OBX.5)
Observation Identifier	3	CE	478	R	R	[1..1]	**Note:** Identifies data to be received in observation value (OBX.5) PHVS_ObservationIdentifier_SyndromicSurveillance
Identifier	3.1	ST	20	R	R	[1..1]	
Text	3.2	ST	199	O	O	[0..1]	
Name of Coding System	3.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-3.1 (the identifier) is provided then OBX-3.3 is valued.
Alternate Identifier	3.4	ST	20	X	X	[0..1]	
Alternate Text	3.5	ST	199	X	X	[0..1]	
Name of Alternate Coding System	3.6	ID	20	X	X	[0..1]	
Observation Sub-ID	4	ST	20	X	X	[0..1]	

APPENDIX D: TABLE C:: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Observation Value	5	varies	99999	RE	RE	[0..*]	**Note:** Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3).
Units	6	CE	62	C	C	[0..1]	**Condition Predicate:** If OBX.2 (Value Type) is valued "NM"
Identifier	6.1	ST	20	R	R	[1..1]	**Conformance Statement SS-029:** If OBX 3.1 is valued with 21612-7, then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance **Conformance Statement SS-030:** If OBX 3.1 = is valued with 11289-6 then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_TemperatureUnit_UCUM **Conformance Statement SS-031:** If OBX 3.1 is valued with 59408-5 then OBX6.1 (Identifier) **SHALL** be valued to a member of the set PHVS_PulseOximetryUnit_UCUM
Text	6.2	ST	20	O	O	[0..1]	
Name of Coding System	6.3	ID	20	R	R	[1..1]	**Condition Predicate:** If OBX-6.1 (the identifier) is provided then OBX-6.3 is valued.
Alternate Identifier	6.4	ST	20	X	X	[0..1]	
Alternate Text	6.5	ST	199	X	X	[0..1]	

APPENDIX D: TABLE C:: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Name of Alternate Coding System	6.6	ID	20	X	X	[0..1]	
References Range	7	ST	60	X	X	[0..1]	
Abnormal Flags	8	IS	5	X	X	[0..*]	
Probability	9	NM	5	X	X	[0..1]	
Nature of Abnormal Test	10	ID	2	X	X	[0..*]	
Observation Result Status	11	ID	1	R	R	[1..1]	
Effective Date of Reference Range	12	TS	26	X	X	[0..1]	
User Defined Access Checks	13	ST	20	X	X	[0..1]	
Date/Time of the Observation	14	TS	26	O	O	[0..1]	
Producer's ID	15	CE	478	X	X	[0..1]	
Responsible Observer	16	XCN	309	X	X	[0..*]	
Observation Method	17	CE	478	X	X	[0..*]	
Equipment Instance Identifier	18	EI	424	X	X	[0..*]	

APPENDIX D: TABLE C:: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Date/Time of the Analysis	19	TS	26	X	X	[0..1]	

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APPENDIX D: TABLE D: HL7 2.3.1 DATA ELEMENTS OF INTEREST

Data Element Name	Description of Field	Receiver Usage	Cardinality	Value Set /Value Domain	Implementation Notes	Recommended HL7 Location
Facility Identifier (Treating)	Unique facility identifier of facility where the patient is treated (original provider of the data)	R	[1..1]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. Final Rule establishing NPI as standard unique health identifier for health care providers NPI Final Rule	This number should be specific for each facility location (not a number representing an umbrella business) It is recommended that National Provider Identifier (NPI) be used for the Facility Identifier. National Provider Identifier. (10-digit identifier) **Note:** The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field	**HL7 Version 2.3.1:** OBX Segment (HD Data Type, 2nd Component of 5th field) with PHINQUESTION Code (SS001) Observation Identifier **Example OBX Segment:** OBX|2|HD|SS001^TREATING FACILITY IDENTIFIER^PHINQUESTION||OTHER_REG_MEDCTR^1234567890^**NPI**||||||F|||201102171531<cr>

APPENDIX D: TABLE D: HL7 2.3.1 DATA ELEMENTS OF INTEREST						
Facility Name (Treating)	Name of the treating facility where the patient is treated	RE	[0..1]	Recommend the use of the Organization Name Legal Business Name (LBN) associated with the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. Final Rule establishing NPI as standard unique health identifier for health care providers NPI Final Rule	If this data element is captured and maintained as part of the facility registration process, it may not be sent with every message. See ISDS recommendations, section 4.2, on Facility Registration ISDS.	**HL7 Version 2.3.1:** OBX Segment (HD Data Type, 1st Component, 5th field) with PHINQUESTION Code (SS001) Observation Identifier Example OBX Segment: OBX|2|HD|SS001^TREATING FACILITY IDENTIFIER^PHINQUESTION||OTHER REG MED CTR^1234567890^NPI|||||F|||201102171531<cr>

EXAMPLES

A minimal amount of data was intentionally used to provide emphasis on the syndromic surveillance data elements of interest.

A04 EMERGENCY DEPT REGISTRATION; A01 INPATIENT ADMISSION; A03 DISCHARGE INCLUDING PATIENT DEATH

In the next example, a non-Hispanic white female, 43 years old, visits the Other Regular Medical Center emergency department with a chief complaint of a stomachache. The chief complaint was sent as free text.

MSH|^~\&||OTHER REG MED CTR^1234567890^NPI|||201102171531||ADT^**A04^ADT_A01**|201102171531956|P|2.3.1<cr>

EVN||201102171531<cr>

PID|1||FL01059711^^^^PI||~^^^^^^U|||F||2106-3^White^CDCREC|^^^12^33821|||||||||||2186-5^**Not Hispanic**^CDCREC<cr>

PV1||E||E|||||||||7|||||V20220217-00274^^^^VN|||||||||||||||||||||||||201102171522<cr>

PV2|||78907^ABDOMINAL PAIN, GENERALIZED^I9CDX<cr>

OBX|1|HD|SS001^TREATING FACILITY IDENTIFIER^PHINQUESTION||OTHER REG MED CTR^1234567890^NPI|||||||F|||201102171531<cr>

OBX|2|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^**STOMACH ACHE|||||||F|||201102171531**<cr>

OBX|3|NM|21612-7^AGE TIME PATIENT REPORTED^LN||43|a^YEAR^UCUM|||||F|||201102171531<cr>

OBX|4|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION||261QE0002X^Emergency Care^ HCPTNUCC|||||||F|||201102091114 cr>

DG1|1||78900^ABDMNAL PAIN UNSPCF SITE^I9CDX|||A<cr>

Continuing the example, the same non-Hispanic white female, 43 years old, visits the Other Regular Medical Center emergency department with a chief complaint of a stomach ache. The patient is suspect for appendicitis and is admitted as an inpatient. The patient has also reported that she has had a stomach ache since the 15th of February. The patient class (PV1.2) is changed to Inpatient. Admit Date/Time (PV1.44) is updated with the admission date and time.

In this particular case, visit number (PV1.19) has remained the same. However, it is recognized that some insurance companies require the visit number to be changed when a patient is admitted from the Emergency Department.

MSH|^~\&||OTHER REG MED CTR^1234567890^NPI|||201102171658||ADT^**A01^ADT_A01**|201102171658076|P|2.3.1<cr>

EVN||201102171658<cr>

PID|1||FL01059711^^^^PI||~^^^^^^U|||F||2106-3^White^CDCREC|^^^12^33821|||||||||||2186-5^Not Hispanic^CDCREC<cr>

PV1||**I**||E|||||||||7|||||**V20220217-00274**^^^^VN|||||||||||||||||**09**|||||||**201102171656**<cr>

PV2|||78907^ABDOMINAL PAIN, GENERALIZED^I9CDX<cr>

OBX|1|HD|SS001^TREATING FACILITY IDENTIFIER^PHINQUESTION||OTHER REG MED CTR^1234567890^NPI||||||F|||201102171531<cr>

OBX|2|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^STOMACH ACHE||||||F|||201102171531<cr>

OBX|3|NM|21612-7^AGE TIME PATIENT REPORTED^LN||43|a^YEAR^UCUM|||||F|||201102171531<cr>

OBX|4|NM|11289-6^BODY TEMPERATURE:TEMP:ENCTRFIRST:PATIENT:QN^LN||99.1|[degF]^FARENHEIT^UCUM||A|||F|||201102171658<cr>

OBX|5|NM|59408-5^OXYGEN SATURATION:MFR:PT:BLDA:QN:PULSE OXIMETRY^LN||95|%^PERCENT^UCUM||A|||F|||201102171658<cr>

OBX|6|TS|11368-8^ILLNESS OR INJURY ONSET DATE AND TIME:TMSTP:PT:PATIENT:QN^LN||20110215||||||F|||201102171658<cr>

OBX|7|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION|| 261QP2300X^Primary Care^ HCPTNUCC||||||F|||201102091114 cr>

DG1|1||78900^ABDMNAL PAIN UNSPCF SITE^I9CDX|||A<cr>

DG1|2||5409^ACUTE APPENDICITIS NOS^I9CDX|||W<cr>

_____

Continuing the example, the same non-Hispanic white female, 43 years old, visits the Other Regular Medical Center emergency department with a chief complaint of a stomach ache. The patient has expired and this is indicated in PV1.36 (Code=20). A final diagnosis is also sent. It is also indicated by the "Y" in PID-30 and the Date and Time of Death in PID-29. The discharge date/time (PV1.45) is sent with the A03 message type.

MSH|^~\&| |OTHER REG MED CTR^1234567890^NPI|||201102172334||ADT^**A03^ADT_A03**|201102172334640|P|2.3.1<cr>

EVN||201102172334

PID|1||FL01059711^^^^PI||~^^^^^^U|||F||2106-3^White^CDCREC|^^^12^33821|||||||||||2186-5^Not Hispanic^CDCREC|||||||**201102172334|Y**<cr>

PV1||I||E|||||||||7|||||V20220217-00274^^^^VN|||||||||||||||||**20**|||||||201102171656|**201102172334**<cr>

PV2|||78907^ABDOMINAL PAIN, GENERALIZED^I9CDX<cr>

DG1|1||78900^ABDMNAL PAIN UNSPCF SITE^I9CDX|||A<cr>

DG1|2||5409^ACUTE APPENDICITIS NOS^I9CDX|||W<cr>

DG1|3||5400^AC APPEND W PERITONITIS^I9CDX|||F<cr>

OBX|1|HD||SS001^TREATING FACILITY IDENTIFIER^PHINQUESTION||OTHER REG MED CTR^1234567890^NPI||||||F|||201102171531<cr>

OBX|2|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^STOMACH ACHE||||||F|||201102171531<cr>

OBX|3|NM|21612-7^AGE TIME PATIENT REPORTED^LN||43|a^YEAR^UCUM|||||F|||201102171531<cr>

OBX|4|NM|11289-6^BODY TEMPERATURE:TEMP:ENCTRFIRST:PATIENT:QN^LN||99.1|[degF]^FARENHEIT^UCUM||A|||F|||201102171658<cr>

OBX|5|NM|59408-5^OXYGEN SATURATION:MFR:PT:BLDA:QN:PULSE OXIMETRY^LN||95|%^PERCENT^UCUM||A|||F|||201102171658<cr>

OBX|6|TS|11368-8^ILLNESS OR INJURY ONSET DATE AND TIME:TMSTP:PT:PATIENT:QN^LN||20110215||||||F|||201102171658<cr>

OBX|7|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION|| 261QP2300X^Primary Care^ HCPTNUCC||||||F|||201102091114 cr>

A01 INPATIENT ADMISSION; NO UPDATES

In the following example, a Hispanic white male, age currently 20, is admitted as an inpatient to the Mid-Co Health Center emergency department after falling down the stairs. The Medical Record Number is sent for the patient identifier and the patient account number is sent for the visit number.

MSH|^~\&||MID-CO HLTH CTR^9876543210^NPI|||201110090314||ADT^**A01^ADT_A01**|201110090314-0017|P|2.3.1<cr>

EVN||201110090314<cr>

PID|1||MD01059711^^^ADMITTING^MR^MID-CO HLTH CTR^9876543210^NPI||~^^^^^^U|||M||2106-3^White^CDCREC|^^^24^21502|||||||||||2135-2^**Hispanic or Latino**^CDCREC<cr>

PV1||I||E||||||||||6|||||20111009_0034^^^^AN^MID-CO HLTH CTR&9876543210&NPI ||||||||||||||||||||||||20111009025915<cr>

OBX|1|NM|21612-7^AGE PATIENT QN REPORTED^LN||20|a^YEAR^UCUM|||||F|||201102171531<cr>

OBX|2|HD|SS001^TREATING FACILITY IDENTIFIER^PHINQUESTION||MID-CO HLTH CTR^9876543210^NPI||||||F|||201102171531<cr>

OBX|3|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION|| 261QP2300X^Primary Care^ HCPTNUCC||||||F|||201102091114 cr>

DG1|1||E8809^FALL ON STAIR/STEP NEC^I9CDX|||A<cr>

APPENDIX E - REVISION HISTORY

The revisions noted in the guide is the GAP between this Guide, Release 1.9, and the following additional Messaging Guide documents that it replaces: Release 1.1, Addendum V1.1, and Testing Clarification document.

- The title and scope of this messaging guide has been updated to include inpatient visits

- The messaging guide has been reformatted to be more consistent with Immunization Guide

- The HL7 portion of this messaging guide is structured per HL7 Message type and Trigger Event with HL7 Segment tables constrained according to specific Message Type/Trigger Event

- Minimum Data Elements and Extended Data Elements are now one table and are renamed 'Data Elements of Interest'. Future Data Elements are located in the Appendix C in this document.

Location	Field Name	Change	Existing	Corrected
Chapter 1 Introduction (page 8)		Added , emergency department and urgent care services are definition from the Centers for Medicare and Medicaid Services (CMS)		For the purposes of this Messaging Guide, emergency department and urgent care services are defined using the following definition from the Centers for Medicare and Medicaid Services (CMS) : Emergency services are defined as being services furnished to an individual who has an emergency medical condition as defined in 42 CFR 424.101. The CMS has adopted the definition of emergency medical condition in that section of the Code of Federal Regulations (CFR). However, it seemed clear that Congress intended that the term "emergency or urgent care services" not be

Location	Field Name	Change	Existing	Corrected
				limited to emergency services since they also included "urgent care services." Urgent Care Services are defined in 42 CFR 405.400 as services furnished within 12 hours in order to avoid the likely onset of an emergency medical condition. For example, if a beneficiary has an ear infection with significant pain, CMS would view that as requiring treatment to avoid the adverse consequences of continued pain and perforation of the eardrum. The patient's condition would not meet the definition of emergency medical condition because immediate care is not needed to avoid placing the health of the individual in serious jeopardy or to avoid serious impairment or dysfunction. However, although it does not meet the definition of emergency care, the beneficiary needs care within a relatively short period of time (which CMS defines as 12 hours) to avoid adverse consequences, and the beneficiary may not be able to find another physician or practitioner to provide treatment within 12 hours.

Location	Field Name	Change	Existing	Corrected
Chapter 2 Use Case Model (page 12)	Table 2-1: Use Case: Electronic Emergency Department And Urgent Care Health Record Syndromic Data To Public Health Under Assumptions and Limitations	Updated scope and added clarifying text		The following assumptions are preconditions for the use of this profile: 3. Syndromic surveillance data senders are responsible for providing data that are syntactically and semantically consistent with the syndromic surveillance data receiver's requirements. 4. Prior to sending syndromic data, the data sender and receiver have completed all the necessary legal and administrative work for syndromic surveillance data exchange. The scope of data exchange is limited to hospital (ED and inpatient) and urgent care (UC) patient visits information captured by electronic medical record systems and sent to a PHA.
Chapter 2 Use Case Model (page 12)	Table 2-1: Use Case: Electronic Emergency Department And Urgent Care Health Record Syndromic Data To Public Health Under Business Rules.	Added Conformance Statements	The following Business Rule applies to the use of this profile: 1. Data must be timely for syndromic surveillance. Therefore, data transmission frequency should be at least once every 24 hours. 2. When data elements are updated in the provider's system, the entire record (i.e., all specified elements) shall be resent. Message receivers will use unique identifiers to match and reconcile records. 3. Batch processing may optionally be used as described in section 3.7.	For emergency department (ED), urgent care (UC), and hospital inpatient settings (Inpatient): • Data must be timely for syndromic surveillance. Therefore, data transmission frequency should be at least once every 24 hours... • Batch processing may optionally be used as shown in figures 2.1.3 and 2.1.5 and table 2-3. The statements below are conformance requirements for the application as a whole during the sending of multiple messages. a. **Conformance Statement SS-001:** ALL messages constrained by this guide that are produced as a

Location	Field Name	Change	Existing	Corrected
				result of a single patient encounter for the purpose of syndromic surveillance, **SHALL** have the same value for PV1-19.1 (Visit ID). b. **Conformance Statement SS-002:** Messages constrained by this guide that are produced as a result of **different** patient encounters for the purpose of syndromic surveillance, **SHALL NOT** have the same value for PV1-19.1 (Visit ID). For ED and UC settings **only**: • When data elements are updated in the sender's system, the entire record (i.e., all specified elements) shall be resent. Message receivers will use unique identifiers to match and reconcile records. • Provide syndromic surveillance data for all face-to-face clinical encounters • Provide with each syndromic surveillance record, de-identified data that can be securely used to lookup additional information about a patient visit of public health concern For inpatient setting **only**: • At minimum, syndromic surveillance inpatient data providers should: • Provide syndromic surveillance data

Location	Field Name	Change	Existing	Corrected
				for all new hospital inpatient admissions (a.k.a., syndromic surveillance admission records) • Provide syndromic surveillance data at least once for all hospital discharges (a.k.a., syndromic surveillance post-discharge records) • Provide with each syndromic surveillance admission and post-discharge record de-identified data that can be used to join records for the same visit, and securely used to lookup additional information about a patient visit of public health concern. **If and only if senders are providing syndromic surveillance laboratory results data to PHA, the following business rules apply** • In all cases, the dynamic interaction model for laboratory reporting is the same as that for ADT messages. In particular, lab reports may be sent in an acknowledged or unacknowledged mode. • Lab reports are always to be sent without regards to synchronization with any other messages including ADT messages. While it is acceptable to send laboratory messages either synchronously with or in the same message, batch, or file as their corresponding ADT messages, and data receiver systems must be able to correctly process all of these variations,

Location	Field Name	Change	Existing	Corrected
				there is no requirement or even suggestion that this be done. • **Conformance Statement SS-003:** Laboratory results should be sent as soon as they're available with a minimum delay. They shall be sent within a maximum 24 hours of receipt by the data center. There is no need to delay either ADT or laboratory messages, and this should not be done. • It is understood that laboratory data may well originate from different systems or even different facilities than the corresponding ADT data. However, as listed in the specification, it is essential that matching PID segments or, at a minimum, patient identifier fields, be sent. This may require additional logic on the data sender end. Note that, as with ADT segments, patient names should generally not be sent.
Chapter 2 Use Case Model (page 15)	Dynamic Interaction Models	Added laboratory activity diagrams		Send syndromic surveillance laboratory results with acknowledgement Send syndromic surveillance laboratory results without acknowledgement Send syndromic surveillance laboratory results without acknowledgement
Data Elements of Interest	Facility Name (Treating)	Changed Sender Usage	O	RE

Location	Field Name	Change	Existing	Corrected
Data Elements of Interest	Treatment Facility Identifiers	Added instructions for value set / value domain for when NPI is not available.	Final Rule establishing NPI as standard unique health identifier for health care providers NPI Final Rule	If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.
Data Elements of Interest	Facility/Visit Type	Correction to OBX-5 example in sample message:	OBX|2|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION||**1108-0^EMERGENCY DEPARTMENT^HSLOC**||||||F|||201102091114 To:	OBX|2|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION|| 261QE0002X^Emergency Care^ HCPTNUCC||||||F|||201102091114
Data Elements of Interest	Age	Added HL7 example for unknown age	Example OBX Segment: OBX|4|NM|21612-7^AGE TIME PATIENT REPORTED^LN||**43**|a^YEAR^UCUM|||||F|||201102171531<cr>	Example OBX Segment: OBX|4|NM|21612-7^AGE – REPORTED^LN||**43**|a^YEAR^UCUM|||||F|||20110217 Example OBX Segment when patient age is not known OBX|4|NM|21612-7^AGE – REPORTED^LN|||UNK^unknown^NULLFL||||F|||20110217
Data Elements of Interest	Age Units	Added HL7 example for unknown age	Example OBX Segment: OBX|4|NM|21612-7^AGE TIME PATIENT REPORTED^LN||**43**|a^YEAR^UCUM|||||F|||201102171531<cr>	Example OBX Segment: OBX|4|NM|21612-7^AGE – REPORTED^LN||43|**a^YEAR^UCUM**|||||F|||20110217 Example OBX Segment when patient age is not known OBX|4|NM|21612-7^AGE – REPORTED^LN|||UNK^unknown^NULLFL||||F|||20110217
Data Elements of Interest	Chief Complaint / Reason for visit	Added implementation note to "Value Set / Value Domain"		The implementation shall support all 3 value sets

Location	Field Name	Change	Existing	Corrected
Data Elements of Interest	Chief Complaint / Reason for visit	Change of verbiage of 'Implementation Notes'	This element is represented by the LOINC code: 8661-1 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is Coded with Exception as defined by the OBX Data Type CWE. Using the CWE allows for the possibility of free text, while also allowing for the coded values listed. If data flows through an intermediary or third party, the intermediary **must** keep the original text (CWE-9) of the transmission. **Note:** Implementers should check with their local jurisdiction for version of adopted coding system.	Chief Complaint, as a concept, is clinically supposed to represent the patient's reason for the visit--in their own words This element is represented by the LOINC code: 8661-1 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX (OBX-5) segment and is Coded with Exception as defined by the OBX Data Type CWE. Using the CWE allows for the possibility of free text, while also allowing for the coded values listed. If data flows through an intermediary or third party, the intermediary **must** keep the original text (OBX-5: CWE.9) of the transmission. **Note:** Implementers should check with their local jurisdiction for version of adopted coding system. **Note:** Senders should send the most complete description of the patient's chief complaint. In some cases, this may entail sending multiple chief complaint values. If both the free text chief complaint text and drop down selection chief complaint text are available, send both.
Data Elements of Interest	Chief Complaint / Reason for visit	Change of verbiage of 'Recommended HL7 Location"	**HL7 Version 2.5.1:** EVN-7.2 Example EVN-7: |OTH_REG_MEDCTR^1234567890^NPI|	**Conformance Statement SS-005:** If patient's chief complaint is captured as an unstructured, free-text note, then chief complaint **SHALL** be valued in OBX- 5, CWE:9. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation Identifier Example OBX Segment (free text):

Location	Field Name	Change	Existing	Corrected
			HL7 Version 2.3.1: OBX Segment (HD Data Type, 2nd Component of 5th field) with PHINQUESTION Code (SS001) Observation Identifier **Example OBX Segment:** OBX|2|HD|SS001^TREATING FACILITY IDENTIFIER^PHINQUESTION||OTHER_REG_MEDCTR^1234567890^**NPI**|||||F|||201102171531<cr>	OBX|3|CWE|8661-1^CHIEF COMPLAINT – REPORTED^LN||^^^^^^^STOMACH ACHE||||||F|||201102171531 **Conformance Statement SS-006:** If patient's chief complaint is captured from a Coding System, then chief complaint **SHALL** be valued in OBX- 5, CWE:1, CWE:2, CWE:3. PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **or** PHVS_CauseOfDeath_ICD-10_CDC **or** PHVS_Disease_CDC **NOTE**: The implementation shall support all 3 value sets. Example OBX Segment (coded): OBX|3|CWE|8661-1^CHIEF COMPLAINT – REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX||||||F|||20110217 **Conformance Statement SS-007:** If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX- 5, CWE:2. OBX|3|CWE|8661-1^CHIEF COMPLAINT – REPORTED^LN||^Dizziness and giddiness||||||F|||20110217 **Conformance Statement SS-008:** The implementation **SHALL** support a minimum of 70 characters for unstructured, free-text patient's chief complaint.

Location	Field Name	Change	Existing	Corrected
Data Elements of Interest	Chief Complaint / Reason for visit	Added implementation note to "Value Set / Value Domain"		The implementation shall support all 3 value sets
Data Elements of Interest	Admit Reason	Added inpatient element of interest		
Data Elements of Interest	Hospital Unit	Added inpatient element of interest		
Data Elements of Interest	Visit Date / Time	Changed data element name and description	Visit Date / Time Date/Time of patient presentation	Admit or Encounter Date / Time Date and Time of encounter or admission
Data Elements of Interest	Unique Physician Identifier	Added inpatient element of interest		

Location	Field Name	Change	Existing	Corrected
Data Elements of Interest	Primary Diagnosis Additional Diagnosis	Added implementation note of "Value Set / Value Domain"	2.16.840.1.114222.4.11.856 PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** 2.16.840.1.114222.4.11.3593 PHVS_CauseOfDeath_ICD-10_CDC **Or** 2.16.840.1.114222.4.11.909 PHVS_Disease_CDC (SNOMED Based Valueset)	For OBX-3 Please use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance For OBX-5 Please use: Free text (Preferred) **Or** 2.16.840.1.114222.4.11.856 PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** 2.16.840.1.114222.4.11.3593 PHVS_CauseOfDeath_ICD-10_CDC **Or** 2.16.840.1.114222.4.11.909 PHVS_Disease_CDC (SNOMED Based Value set) For further guidance refer to the column – 'Recommended HL7 Location' **NOTE**: The implementation shall support all 3 value sets.
Data Elements of Interest	Primary Diagnosis Additional Diagnosis	Change of verbiage of 'Implementation Notes'	Data should be sent on a regular schedule and should not be delayed for diagnosis or verification procedures. Regular updating of data should be used to correct any errors or send data available later. Include V-codes and E-codes	**Conformance Statement SS-005:** If patient's chief complaint is captured as an unstructured, free-text note, then chief complaint **SHALL** be valued in OBX- 5, CWE:9. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation

Location	Field Name	Change	Existing	Corrected
			This field is a repeatable field; multiple codes may be sent. The first diagnosis code should be the primary / diagnosis.	Identifier Example OBX Segment (free text): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^^STOMACH ACHE||||||F|||201102171531 **Conformance Statement SS-006:** If patient's chief complaint is captured from a Coding System, then chief complaint **SHALL** be valued in OBX- 5, CWE:1, CWE:2, CWE:3. PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **or** PHVS_CauseOfDeath_ICD-10_CDC **or** PHVS_Disease_CDC **NOTE**: The implementation shall support all 3 value sets. Example OBX Segment (coded): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX||||||F|||20110217 **Conformance Statement SS-007:** If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX- 5, CWE:2. OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^Dizziness and giddiness||||||F|||20110217 **Conformance Statement SS-008:** The

Location	Field Name	Change	Existing	Corrected
				implementation **SHALL** support a minimum of 70 characters for unstructured, free-text patient's chief complaint.
Data Elements of Interest	Report Date/Time	Changed element name	Report Date/Time Date and time of report transmission from original source (from treating facility)	Message Date/Time Date and time that the report is created / generated from original source (from treating facility)
Data Elements of Interest	Diagnosis Date/Time	Moved from future element of interest		
Data Elements of Interest	Observation, symptoms, and clinical findings	Moved from future element of interest		
Data Elements of Interest	Smoking Status	Moved from future element of interest		
Data Elements of Interest	Initial Temperature	Moved from future element of interest		
Data Elements of Interest	Height	Moved from future element of interest		
Data Elements of Interest	Weight	Moved from future element of interest		
Data Elements of Interest	Initial Temperature	Moved from future element of interest		

Location	Field Name	Change	Existing	Corrected
Data Elements of Interest	Systolic and Diastolic Blood Pressure (SBP/DBP) – Most recent	Moved from future element of interest		
Data Elements of Interest	Procedure Code	Moved from future element of interest and changed verbiage in 'implementation note'	Procedure code is useful in distinguishing whether the patient received a vaccination for a disease or treatment for the actual disease. This is applicable to primary care settings.	IF A PR1SEGMENT IS INCLUDED IN MESSAGE THEN THIS IS A REQUIRED DATA ELEMENT. **Note**: Each jurisdiction should define what procedure codes should be transmitted.
Data Elements of Interest	Laboratory Order data set	Moved to Future Elements of Interest		
Data Elements of Interest	Laboratory Results data set	Expanded elements:	Laboratory Results data set	Laboratory test/panel requested Laboratory Result Laboratory test performed Date/time of laboratory test Laboratory Test Status Date of Lab Report Performing Organization Specimen Type
Data Elements of Interest	Unique Physician Identifier	Added element of interest		
Future Data Elements of Interest	Patient Street Address	Removed		

Location	Field Name	Change	Existing	Corrected
Future Data Elements of Interest	Patient Date of Birth	Removed		
Future Data Elements of Interest	Problem List	Added		
Future Data Elements of Interest	Medications Prescribed or Dispensed	Added		
XCN Data Type	Extended Composite ID Number and Name for Persons	Added		
Chapter 5, Message Type/Trigger Event And Segments	Encoding Rules	Corrected example	MSH|^~\&||Facillity_NPI^0131191934^NPI|||201009221330||ADT^A04^ADT_A011|P|2.3.1|||||||<cr>	MSH|^~\&||Facillity_NPI^0131191934^NPI|||201009221330||ADT^A04^ADT_A01|1|P|2.3.1||||||||<cr>
Chapter 5, Message Type/Trigger Event And Segments	HL7 ORU Message Types	Added		**HL7 ORU Message Types** ORU Messages may be sent for syndromic surveillance purposes. General business rules and interaction diagrams regarding lab data exchange using ORU message types are provided in Chapter 2. Further specifications are under development and will be included in future guide versions.
MSH-4.3	Sending Facility. Universal ID Type	Changed Value Set and added a hyperlink to constrained Syndromic Surveillance Universal ID Type Value Set Code	HL7 0301	PHVS_UniversalIDType_SyndromicSurveillance

Location	Field Name	Change	Existing	Corrected
MSH-7	Date/Time Of Message	Added further clarification about date field population Added Conformance Statement Added missing '['	**Note:** Date/Time the sending system created the message in the following format: YYYYMMDDHHMMSS[.S[S[S[S]]]] [+/-ZZZZ] The minimum acceptable precision is to the nearest minute; seconds are desirable. If Coordinated Universal Time (UTC) offset is not sent, it is assumed to be offset of the receiver.	**Conformance Statement SS-013:** MSH-7 (Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the date/time that the sending system created the message. If the time zone is specified, it will be used throughout the message as the default time zone. **Note**: MSH-7 (Date/Time of Message) does not have to equal EVN-2 (Message Date/Time)
MSH-9	Message Type	Trigger Event A03 added as it was omitted in previous versions Further explanation for the constraint of Value Set added Added Conformance Statements for each trigger event.	**Note:** All messages will be Admit-Discharge-Transfer (ADT) or General acknowledgment message (ACK) message types. The triggering event is a real-world circumstance causing the message to be sent. Supported trigger events are Supported trigger events are A01 (Inpatient Admission), A04 (Emergency Department Registration) and A08 (Update).	**Conformance Statement SS-014:** MSH-9 (Message Type) **SHALL** be the literal value: 'ADT^A01^ADT_A01', **Definition**: This field contains the message type, trigger event, and the message structure ID for the message.
MSH-9.1	Message Code	Added Value Set Code and a hyperlink to Syndromic Surveillance Message Type Value Set Code	Literal Value "ADT" or "ACK"	PHVS_MessageType_SyndromicSurveillance
MSH-9.2	Trigger Event	Added Value Set Code and a hyperlink to Syndromic Surveillance Event Type Value Set Code	One of the following literal values: "A01", "A03", "A04", or "A08"	PHVS_EventType_SyndromicSurveillance

Location	Field Name	Change	Existing	Corrected
MSH-9.3	Message Structure	Added Value Set Code and a hyperlink to Syndromic Surveillance Message Structure Value Set Code	Trigger events A01, A04, and A08 share the same "ADT_A01" Message Structure One of the following literal values: "ADT_A01" or "ADT_A03", or "ACK"	PHVS_MessageStructure_SyndromicSurveillance
MSH-11	Processing ID	Added Conformance Statement	**Note:** Indicates how to process the message as defined in HL7 processing rules Literal values: "P" for Production, "D" for Debug or "T" for Training.	**Conformance Statement SS-015:** MSH-11 (Processing ID) **SHALL** have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training. **Definition**: This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. **Note**: Indicates how to process the message as defined in HL7 processing rules
MSH-12	Processing ID	Added Conformance Statement	**Note:** HL7 version number used to interpret format and content of the message. Literal value: "2.3.1" or "2.5.1"	**Conformance Statement SS-016:** MSH-12 (Version ID) **SHALL** have a value '2.5.1' **Definition**: This field is matched by the receiving system to its own version to be sure the message will be interpreted correctly. For this message the value shall be 2.5.1 **Note**: HL7 version number used to interpret format and content of the message.

Location	Field Name	Change	Existing	Corrected
MSH-21	Message Profile Identifier	MSH-21.2 added a space between SS Sender and SS Receiver Usage/Cardinality changed	PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SSReceiver^2.16.840.1.114222.4.10.3^ISO PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-NoAck^SSReceiver^2.16.840.1.114222.4.10.3^ISO PH_SS-Batch^SSR Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Batch^SSReceiver^2.16.840.1.114222.4.10.3^ISO **Usage = O**	**Conformance Statement SS-017:** An instance of MSH.21 (Message Profile Identifier) **SHALL** contain the constant value: PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-NoAck^SS Receiver^2.16.840.1.114222.4.10.3^ISO PH_SS-Batch^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Batch^SS Receiver^2.16.840.1.114222.4.10.3^ISO **Definition**: Sites may use this field to assert adherence to, or reference, a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages.

Location	Field Name	Change	Existing	Corrected
EVN-2	Recorded Date/Time	Data Element name change Added further clarification about date field population Added Conformance Statement	Recorded Date/Time **Note:** Most systems default to the system Date/Time when the transaction was entered. YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ] The minimum acceptable precision is to the nearest minute; seconds and microseconds are desirable; the Coordinated Universal Time (UTC) offset is not required.	**Conformance Statement SS-018:** EVN-2 (Recorded Date/Time of Message) **SHALL** be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Note:** EVN-2 (Recorded Date/Time) does not have to equal MSH-7 (Date/Time of Message) **Note:** Most systems default to the system Date/Time when the transaction was entered. Data Element of Interest: Message Date/Time
EVN-7.3	Event Facility. Universal ID Type	Added Value Set Code and a hyperlink to constrained Syndromic Surveillance Universal ID Type Value Set Code	Expecting Value "NPI"	PHVS_UniversalIDType_SyndromicSurveillance
PID-1	Set ID	Added Conformance Statement Changed Usage (Sender/Receiver) Changed Cardinality	**Note:** This Set ID numbers the repetitions of the segments. Only one patient per message is supported. Literal value: "1" O [0..1]	**Conformance Statement SS-019:** PID-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one.

Location	Field Name	Change	Existing	Corrected
PID-3.5	Patient Identifier List. Identifier Type Code	Added Value Set Code and a hyperlink to constrained Syndromic Surveillance Identifier Type Code	Identifier Type (Syndromic Surveillance) **Note:** Use the Identifier Type Code that corresponds to the type of ID Number specified in PID-3.1. For Medical Record Number, use literal value "MR".	PHVS_IdentifierType_SyndromicSurveillance
PID-5	Patient Name	Changed verbiage in Value column	**Note:** Syndromic Surveillance does not require the patient name. The Patient ID number will be used to identify uniquely the patient. HL7 does require the patient name field for a PID segment. The patient name field must still be populated even when reporting de-identified data. The first field name contains the primary or legal name of the patient. Therefore, the name type code (PID.5.7) should be "L "(Legal), when populated. When the name of the patient is known, but not desired to be sent, HL7 recommends the following: |~^^^^^^S|. The "S" for the name type code (PID.5.7) in the second name field indicates that it is a pseudonym. When the name of the patient is not known, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code (PID.5.7) in the second name field indicates that it is unspecified.	**Note:** Syndromic surveillance does not require the patient name. A Visit or Patient ID, as specified within this guide, shall be used by PHAs to join related visit data and for working with hospitals to find additional visit information for syndromic surveillance signal confirmation or investigation. Since, however, HL7 requires the patient name, the field must be populated even when data patient name shall not be sent. In such an instance (i.e., patient name is not sent), patient name shall be presented in a pseudonymized manner. **Conformance Statement SS-020:** If **PID-5** (Patient Name) is unknown then the first occurrence of PID-5 **SHALL NOT** be valued. **Conformance Statement SS-021:** If **PID-5** (Patient Name) is unknown then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "U" (i.e., PID-5 shall be valued as |~^^^^^^U|). **Conformance Statement SS-022:** If **PID-5** (Patient Name) is known, but not desired to be sent, then the first occurrence of PID-5 **SHALL NOT** be valued. **Conformance Statement SS-023:** If **PID-5** (Patient Name) is known, but not desired to

Location	Field Name	Change	Existing	Corrected
				be sent, then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "S" (i.e., PID-5 shall be valued as ~^^^^^^S|). The second name field indicates that it is unspecified. **Definition**: This field contains the names of the patient; the primary or legal name of the patient is reported first. Therefore, the name type code in this field should be "L - Legal".
PID-5.7	Patient Name.Name Type Code	Added a hyperlink to the constrained Syndromic Surveillance Name Type Code	0200 Expected Values: "L" (Legal) – used for patient legal name "S" (Pseudonym) – used for de-identification of patient name "U" (Unspecified) – used when patient name is not known	PHVS_NameType_SyndromicSurveillance
PID-8	Administrative Sex	Changed Value Set Added a hyperlink to the constrained Syndromic Surveillance Sex	Administrative Sex (HL7)	PHVS_Sex_SyndromicSurveillance **Definition**: This field contains the patient's sex. Data Element of Interest: Sex
PID-10	Race	Changed from the Value Set Name to Value Set Code. Added a hyperlink	Race Category (CDC) **Note:** Patient could have more than one race defined.	**Definition**: This field refers to the patient's race **Note**: Patient could have more than one race defined. **Data Element of Interest**: Race
PID-10.3	Race.Name of Coding System	Changed verbiage in 'Value Column'	**Condition Rule:** Required if an identifier is provided in component 1.	**Condition Predicate:** If PID-10.1 (the identifier) is provided, then PID 10.3 is valued.
PID-11.4	State or Province	Changed Value Set Code Added a hyperlink	FIPS 5-2	PHVS_State_FIPS_5-2 **Data Element of Interest**: Patient State

Location	Field Name	Change	Existing	Corrected
PID-11.6	Country	Changed to Value Set Code Added a hyperlink	ISO 3166-1	PHVS_Country_ISO_3166-1 **Data Element of Interest**: Patient Country
PID-11.7	Address Type	Changed to Value Set Code Added a hyperlink	0190 Expecting value: 'C'	PHVS_AddressType_HL7_2x
PID-11.9	County	Changed to Value Set Code Added a hyperlink		PHVS_County_FIPS_6-4 **Data Element of Interest**: Patient County
PID-22	Ethnic Group	Changed from the Value Set Name to Value Set Code Added a hyperlink	Ethnicity Group (CDC)	PHVS_EthnicityGroup_CDC
PID-22.3	Ethnic Group.Name of Coding System	Changed verbiage in 'Value Column' Condition Predicate added	**Condition Rule:** Required if an identifier is provided in component 1.	**Condition Predicate:** If PID-22.1 (the identifier) is provided then PID 22.3 is valued.

Location	Field Name	Change	Existing	Corrected
PID-29	Patient Death and Time	Changed verbiage in 'Value Column' Condition Predicate added	**Condition Rule:** If the patient expired, this field should contain the patient death date and time. (PV1-36 denotes patient expiration) The minimum acceptable precision is to the nearest minute; seconds are desirable. (meaning if you have/know it send it) If Coordinated Universal Time (UTC) offset is not sent, it is assumed to be offset of the receiver.	**Conformance Statement SS-036:** If valued, PID-29 (Patient Death and Time), **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]] [+/-ZZZZ]' **Condition Predicate:** If valued, PID-30 (Patient Death Indicator) **SHALL** be valued to the Literal Value 'Y'. **Condition Predicate:** If PV1-36 is valued with any of the following: '20', '40', '41', '42' then PID-29 (Patient Death and Time) **SHALL** be populated. **Definition**: This field contains the date and time at which the patient death occurred.
PID-30	Patient Death Indicator	Changed verbiage in 'Value Column' Condition Predicate added	**Condition Rule:** If the patient expired, this field should contain the patient death indicator. (PV1-36 denotes patient disposition)	**Conformance Statement SS-037:** If valued, PID-30 (Patient Death Indicator) **SHALL** be valued to the Literal Value 'Y'. **Condition Predicate:** If PV1-36 (Discharge Disposition) is valued with any of the following: '20', '40', '41', '42' and PID-29 (Patient Death and Time) **SHALL** be populated. **Definition**: This field indicates whether the patient is deceased. Y the patient is deceased N the patient is not deceased

Location	Field Name	Change	Existing	Corrected
PV1-1	Set ID – PV1	Added Conformance Statement	**Note:** Set ID numbers the repetitions of the segments Only one patient per message is supported. Literal value: "1"	**Conformance Statement SS-024:** PV1-1 (Set ID) **SHALL** have the Literal Value of '1' **Definition**: This field contains the number that identifies this transaction. The sequence number shall be one
PV1-2	Patient Class	Changed from the Value Set Name to Value Set Code Added a hyperlink	Patient Class (Syndromic Surveillance)	PHVS_PatientClass_SyndromicSurveillance **Definition**: This field is used by systems to categorize patients by site. **Data Element of Interest**: Patient Class
PV1-7	Attending Physician	Changed sender/receiver usage from not support to optional	X X	O O
PV1-19.5	Visit Number.Identifier Type Code	Added Conformance Statement Changed from the Value Set Name to Value Set Code Added a hyperlink	Identifier Type (Syndromic Surveillance) **Note:** Use the Identifier Type Code that corresponds to the type of ID Number specified in PV1-19.1.	**Conformance Statement SS-025:** PV1-19.5 (Identifier Type Code) **SHALL** be valued to the Literal Value 'VN'. PHVS_IdentifierType_SyndromicSurveillance
PV1-36	Discharge Disposition	Changed from the Value Set Name to Value Set Code Added a hyperlink	Discharge Disposition (HL7)	PHVS_DischargeDisposition_HL7_2x **Definition**: This field contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.). **Data Element of Interest:** Discharge Disposition

Location	Field Name	Change	Existing	Corrected
PV1-44	Admit Date/Time	Added Conformance Statement	**Note:** Date and time of the patient presentation. YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ] The minimum acceptable precision is to the nearest minute; seconds are desirable. (meaning if you have/know it send it) If Coordinated Universal Time (UTC) offset is not sent, it is assumed to be offset of the receiver.	**Conformance Statement SS-010:** PV1-44 (Admit Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the admit date/time. This field is also used to reflect the date/time of an outpatient/emergency patient registration. **Note**: Date and time of the patient presentation. **Data Element of Interest**: Admit Date/Time
PV1-45	Discharge Date/Time	Added Conformance Statement	**Note:** Date and time of the patient discharge. YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ] The minimum acceptable precision is to the nearest minute; seconds are desirable. (meaning if you have/know it send it) If Coordinated Universal Time (UTC) offset is not sent, it is assumed to be offset of the receiver	**Conformance Statement SS-012:** If present, PV1-45 (Discharge Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Definition**: This field contains the discharge date/time. This field is also used to reflect the date/time of an outpatient/emergency patient discharge. **Data Element of Interest**: Discharge Date/Time

Location	Field Name	Change	Existing	Corrected
PV2-3	Admit Reason	Changed from the Value Set Name to Value Set Code Added a hyperlink	ICD-9 Clinical Modification diagnosis code (including E-codes and V-codes) **Or** ICD-10 Clinical Modification diagnosis code **Or** SNOMED Disorder/ Disease domain	**Definition**: This field contains the short description of the providers' reason for patient admission. **NOTE**: It may be coded (CE:1 and CE:3) or Free text (CE:2.) **Data Element of Intere**st: Admit Reason (PV2-3

PV2-3.3	Admit Reason.Name of Coding System	Changed verbiage in Value Column
		
		Conformance Statement added
			Condition Rule: Required if an identifier is provided in component 1	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM
				     Or
				PHVS_AdministrativeDiagnosis_ICD-10CM
				     Or
				PHVS_Disease_CDC
				Conformance Statement SS-009: The implementation SHALL support all 3 value sets.

OBX	OBX Segment table 3.6.7 Observation/Result (OBX) Segment	Added clarification	**3.6.7 OBSERVATION/RESULT (OBX) SEGMENT** The OBX Segment in the ADT Message is used to transmit observations related to the patient and visit. In Section 4.2.1 if the data element is carried in an OBX and usage is 'Required', the segment and its fields must be populated	The OBX Segment in the ADT Message is used to transmit observations related to the patient and visit. In Table 2-5 if the data element is carried in an OBX and usage is 'Required', the segment and its fields must be populated. The data elements in Table 2.5 DATA ELEMENTS OF INTEREST that use OBX segments are not expected to utilize any specified Set ID number within a given set of OBX segments in a message. However, the Set IDs are required to be sequential.

Location	Field Name	Change	Existing	Corrected
OBX-1	Set ID	Changed Usage (Sender/Receiver) Changed Cardinality Added conformance statement	O [0..1]	R/R [1..1] **Note:** Set ID numbers the repetitions of the segments **Conformance Statement SS-027:** For the first repeat of the OBX segment, the sequence number **SHALL** be one (1), for the second repeat, the sequence number shall be two (2), etc. Example: OBX|1|…. OBX|2|…. OBX|3|…. **Definition**: This field contains the sequence number.
OBX-2	Value Type	Changed Value Set Code Added a hyperlink Added Conformance Statement	0125 **Note:** Identifies the structure of data in observation value (OBX.5).	**Conformance Statement SS-028:** OBX-2 **SHALL** be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD') PHVS_ValueType_SyndromicSurveillance **Definition**: This field contains the format of the observation value in OBX. Note: Identifies the structure of data in observation value (OBX.5)

Location	Field Name	Change	Existing	Corrected
OBX-3	Observation Identifier	Changed from the Value Set Name to Value Set Code Added a hyperlink	Observation Identifier (Syndromic Surveillance) **Note:** Identifies data to be received in observation value (OBX.5)	PHVS_ObservationIdentifier_SyndromicSurveillance **Definition**: This field contains a unique identifier for **the** observation. **Note**: Identifies data to be received in observation value (OBX.5) **Data Elements of Interest** communicated in OBX Segment may include: Facility Street address (Treating), Data Type: XAD:1, SAD:1 Facility City (Treating), Data Type: XAD:3 Facility State (Treating), Data Type: XAD:4 Facility ZIP Code (Treating), Data Type: XAD:5 Facility County (Treating), Data Type: XAD:9 Age, Data Type: NM Facility / Visit Type, Data Type: CWE (only for ED/UC) Chief Complaint/Reason for Visit, Data Type: CWE, (Free Text is preferred) Clinical Impression, Data Type: TX Initial Temperature, Data Type: NM Height, Data Type: NM Weight, Data Type: NM Smoking Status, PHVS_SmokingStatus_MU Triage Notes, Data Type: TX

Location	Field Name	Change	Existing	Corrected
OBX-3.3	Observation Identifier.Name of Coding System	Changed verbiage in 'Value Column' Condition Predicate added Changed Usage (Sender/Receiver) Changed Cardinality	**Condition Rule:** Required if an identifier is provided in component 1. C [0..1]	**Condition Predicate:** If OBX-3.1 (the identifier) is provided then OBX-3.3 is valued.
OBX-5	Observation Value HD Data Type 3rd component (2.3.1 Messaging Only) HD-5.3 Universal ID Type Data Element: Facility Name (Treating)	Changed 'Field Name' column Added Value Set Code Added a hyperlink	Universal ID Expecting Value "NPI".	Listed below are the supported fields for each of the supported value types. **Definition**: This field contains the value observed by the observation producer. OBX-2-value type contains the data type for this field according to which observation value is formatted. **Note**: Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3). **Notes on Data Types:** TS Data Type: Unconstrained. Some values might be to the day, others to the year/ decade, etc. TX Data Type: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters). NM Data Type: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive.

Location	Field Name	Change	Existing	Corrected
				If there is no decimal point the number is assumed to be an integer.
				CWE Data Type: Data Element: Facility / Visit Type (only for ED/UC)
				CWE-5:2 Text: It is strongly recommended that text be sent to accompany any identifier.
				CWE Data Type: Data Element: Chief Complaint / Reason for visit
				It is the short description of the patient's self-reported chief complaint or reason for visit.
				It is preferred that Free text is used.
				Free Text should appear in CWE:9
				XAD Data Type: Data Elements:
				Facility Street address (Treating), Data Type: XAD:1, SAD:1:
				Note: This is the first subcomponent of the SAD data type. This has the same effect as being the first component of the field, while limiting the length based on other subcomponents that are not supported.
				Facility City (Treating), Data Type: XAD:3
				Facility State (Treating), Data Type: XAD:4
				Facility ZIP Code (Treating), Data Type: XAD:5

Location	Field Name	Change	Existing	Corrected
				Facility County (Treating), Data Type: XAD:9
OBX-5	Observation Value Timestamp TS-5.1 Data Type	Changed Precision	**Note:** The minimum acceptable precision is to the nearest day.	**Note:** Unconstrained. Some values might be to the day, others to the year/ decade, etc.
OBX-5	Observation Value CWE Data Type	Added 2 CWE data types for Data Elements : #7 Facility / Visit Type (Required) #25 Chief Complaint / Reason for visit RE and allows free text	A Single CWE data type	Developed 2 CWE data types with components to reflect the specific Usage for: #7 Facility / Visit Type CWE-5.1 and 5.3 Required #25 Chief Complaint / Reason for visit RE and allows free text
OBX-5	Observation Value CWE Data Type (CWE-5.1) Identifier Data Element: #Facility Type	Added Value Set Code	**Note:** Implementers should check with their local jurisdiction for version of adopted coding system.	**Note:** Implementers should check with their local jurisdiction for version of adopted coding system. PHVS_FacilityVisitType_SyndromicSurveillance
OBX-5	Observation Value CWE Data Type (CWE:2) Structured Field (e.g., drop-down menu	Added Conformance Statement		**Conformance Statement SS-005:** If patient's chief complaint is captured as an unstructured, free-text note, then chief complaint **SHALL** be valued in OBX- 5, CWE:9. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation Identifier

Location	Field Name	Change	Existing	Corrected
	Data Element of Interest: Chief Complaint/Reason for visit			Example OBX Segment (free text): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||^^^^^^^STOMACH ACHE||||||F|||201102171531 **Conformance Statement SS-006:** If patient's chief complaint is captured from a Coding System, then chief complaint **SHALL** be valued in OBX- 5, CWE:1, CWE:2, CWE:3. PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **or** PHVS_CauseOfDeath_ICD-10_CDC **or** PHVS_Disease_CDC **Conformance Statement SS-004**: The implementation **SHALL** support all 3 value sets. Example OBX Segment (coded): OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REPORTED^LN||7804^Dizziness and giddiness [780.4]^I9CDX||||||F|||20110217 **Conformance Statement SS-007:** If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX- 5, CWE:2. OBX|3|CWE|8661-1^CHIEF COMPLAINT:FIND:PT:PATIENT:NOM:REP

Location	Field Name	Change	Existing	Corrected
				ORTED^LN||^Dizziness and giddiness||||||F|||20110217 **Conformance Statement SS-008:** The implementation **SHALL** support a minimum of 70 characters for unstructured, free-text patient's chief complaint.
OBX-5	Observation Value CWE Data Type (CWE-5.3) Name of Coding System	Condition Predicate added	**Condition Rule:** Required if an identifier is provided in component 1	**Condition Predicate:** If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued.
OBX-5	Observation Value CWE Data Type (CWE-5.6) Alternate Name of Coding System	Condition Predicate added	**Condition Rule:** Required if an identifier is provided in component 1	**Condition Predicate:** If OBX-5.4 (the identifier) is provided then OBX-5.6 is valued.
OBX-5	Observation Value CWE Data Type (CWE-5.9) Original Text	Changed verbiage in 'Value Column'	Provide the richest text available in this field.	Free text (Preferred) goes here

Location	Field Name	Change	Existing	Corrected
OBX-5	Observation Value XAD Data Type (XAD-5.4) State or Province	Changed Value Set Code Added a hyperlink	FIPS 5-2	PHVS_State_FIPS_5-2
OBX-5	Observation Value XAD Data Type (XAD-5.6) Country	Changed to Value Set Code Added a hyperlink	ISO 3166-1	PHVS_Country_ISO_3166-1
OBX-5	Observation Value XAD Data Type (XAD-5.7) Address Type	Changed to Value Set Code Added a hyperlink	0190	PHVS_AddressType_HL7_2x

OBX-6	Units	Condition Predicate added	Pulse Oximetry Unit
			
			Temperature Unit
			
			Age unit (Syndromic Surveillance)
			
			Note: Units are a conditional field. If numeric data is sent, the units field must define the units of the value used in observation value (OBX.5)
				Condition Predicate: If OBX.2 (Value Type) is valued "NM"
				Background: When an observation's value is measured on a continuous scale, one must report the measurement units within the unit's field of the OBX segment.
				Data Elements of Interest:
				    Age units
				    Initial Temperature units
				    Height units
				    Weight Units
				PHVS_AgeUnit_SyndromicSurveillance

Location	Field Name	Change	Existing	Corrected
OBX-6.1	Units.Identifier	Moved from Field Name OBX-6 Units Changed from the Value Set Name to Value Set Code Added Conformance Statements		**Conformance Statement SS-029:** If OBX 3.1 is valued with 21612-7, then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance **Conformance Statement SS-030:** If OBX 3.1 = is valued with 11289-6 then OBX-6.1 (Identifier) **SHALL** be valued to a member of the set: PHVS_TemperatureUnit_UCUM **Conformance Statement SS-031:** If OBX 3.1 is valued with 59408-5 then OBX6.1 (Identifier) **SHALL** be valued to a member of the set PHVS_PulseOximetryUnit_UCUM
OBX-6.3	Units.Name of Coding System	Condition Predicate added Changed Usage (Sender/Receiver Changed Cardinality	**Condition Rule:** Required if an identifier is provided in component 1 C [0..1]	**Condition Predicate:** If OBX-6.1 (the identifier) is provided then OBX-6.3 is valued.
DG1-1	Set-ID	Changed verbiage in 'Value Column'	**Note:** Numbers the repetitions of the segments	**Conformance Statement SS-032:** DG1-1 (Set ID) for the first occurrence of a DG1 Segment **SHALL** have the Literal Value of '1'. Each following occurrence **SHALL** be numbered consecutively **Definition**: This field contains the number that identifies this transaction. For the first occurrence of the segment the sequence number shall be 1, for the second occurrence it shall be 2, etc.

Location	Field Name	Change	Existing	Corrected
DG1-3	Diagnosis Code – DG1	Changed from the Value Set Name to Value Set Code Added a hyperlink Added conformance statement	ICD-9 Clinical Modification diagnosis code (including E-codes and V-codes) **Or** ICD-10 Clinical Modification diagnosis code **Or** SNOMED Disorder/ Disease domain	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** PHVS_AdministrativeDiagnosis_ICD-10CM **Or** PHVS_Disease_CDC **Conformance Statement SS-011**: The implementation **SHALL** support all 3 value sets.
DG1-3.3	Name of Coding System	Added Condition Predicates Added conformance statement Changed Usage (Sender/Receiver) Changed Cardinality	**C** [0..1]	**Condition Predicate:** If DG1-3.1 (the identifier) is provided then DG1-3.3 is valued. **Conformance Statement SS-033:** DG1-3.3 **SHALL** be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT'). R [1..1]
DG1-6	Diagnosis Type	Changed from the Value Set Name to Value Set Code Added a hyperlink Added condition predicate	Diagnosis Type (HL7) **Note:** Identifies the type of diagnosis being sent. Literal values: "A" for Admitting diagnosis, "W" for Working diagnosis or "F" for Final diagnosis.	PHVS_DiagnosisType_HL7_2x **Definition**: This field contains a code that identifies the type of diagnosis being sent **Note**: Identifies the type of diagnosis being sent. **Data Element of Interest:** Diagnosis type **Condition Predicate:** If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued.