NEW YORK
state department of
HEALTH

SUBMISSION OF SYNDROMIC SURVEILLANCE DATA BY HOSPITALS
Requirements Document
v1.0

Syndromic Surveillance Data from Hospitals
Version 1.0
August 27, 2013

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1 Introduction

1.1 Background

<u>Syndromic Surveillance Program</u>

Syndromic Surveillance monitors near real-time health-related data that are available before confirmed diagnoses or laboratory confirmation to indicate possible outbreaks or health events. The data along with statistical tools are used to detect and characterize unusual activity for further public health investigation. The core goals include:

- Monitor general community health trends
- Recognize an outbreak or cluster of illness
- Provide objective evidence that an outbreak may **not** be occurring
- Characterize the geographic and temporal spread of an outbreak after initial detection

All emergency departments (EDs) in New York State, excluding New York City, are encouraged to participate in the New York State Department of Health (NYSDOH) syndromic surveillance system. Emergency Department chief complaint data is submitted daily for over 140 hospitals outside New York City to the Department's Electronic Clinical Laboratory Reporting System (ECLRS), covering more than 98% of the non-NYC hospitals. Messages are transmitted to public health directly (via UPHN Lite) using either ASCII or HL7 messaging. The data is then parsed into a database and ultimately analyzed and reported through the Emergency Department Syndromic Surveillance System (SyndSurv). The Statistical Unit in the Division of Epidemiology searches for indications of selected syndromes (based on chief complaint data) and routinely monitors trends in non-specific symptoms of illness at the community level for detection of situational awareness of ten (10) clinical syndromes:

- Asthma
- Carbon Monoxide Poisoning
- Fever
- Gastrointestinal Illness (GI)
- Heat Related Illness (Heat wave)
- Hypothermia
- Neurological
- Rash
- Respiratory
- Synthetic Drugs

<u>Meaningful Use</u>

Meaningful Use regulations allow eligible health care providers to qualify for Centers for Medicare and Medicaid incentive payments when they adopt certified EHR technology and use it to achieve specified objectives designed to improve health care quality, safety, and efficiency. One of the

objectives is to report electronic syndromic surveillance data to public health agencies. At this time, the NYSDOH will only accept syndromic surveillance data from eligible hospitals.

The Stage 1[1] final rule designates Syndromic Surveillance as a menu objective and requires an eligible hospital to perform at least one test of ONC certified EHR technology's capacity to provide electronic syndromic surveillance data to public health agencies.

The Stage 2[2] final rule designates Syndromic Surveillance as a core objective and requires that an eligible hospital achieve successful ongoing submission of electronic syndromic surveillance data from ONC certified EHR technology to a public health agency for the entire EHR reporting period of 90 days.

1.2 Document Scope

The document will describe the requirements pertaining to data exchange with eligible hospitals to New York State Health Department for syndromic surveillance. It is specifically designed to meet the business requirements put forth in the CDC PHIN Messaging Guide for Syndromic Surveillance (Release 1.1). In addition to specifications for Admit, Discharge, Transfer (ADT) messages, the guide also specifies a minimum data set of 33 data elements commonly used by public health authorities to conduct Syndromic Surveillance. New York State specifies Patient Date of Birth, Patient Class, Patient Medical Record Number, and Chief Complaint, which are included in the CDC minimum data set, as required data elements.

1.3 Document Conventions

BR refers to Business Requirement, FR refers to Functional Requirement, NFR refers to Nonfunctional Requirement, and D1 – D…n refer to Data Requirements. "Epi" will refer to the Division of Epidemiology.

1.4 Assumptions and Dependencies

1.4.1 Hospitals must utilize certified EHR technology (CEHRT) in order to meet Meaningful Use requirements[3].

1.4.2 Hospitals will transmit messages in HL7 version 2.5.1 to meet Meaningful Use requirements.

1.4.3 Messages will conform to the message construct and vocabulary standards as determined by the SyndSurv which is aligned with the CDC PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data, Release 1.1 (August 2012).

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[1]   http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/Meaningful_Use.html
[2] http://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/downloads/Stage2_HospitalCore_15_SyndromicSurveillanceDataSubmission.pdf
[3] Meaningful Use Stage 2 Public Health Agency Readiness Guidance and Recommendations
http://www.naccho.org/topics/infrastructure/informatics/loader.cfm?csModule=security/getfile&pageID=247454

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1.4.4 The current SyndSurv data flow with individual hospitals (point to point) will be maintained until validation of HL7 2.5.1 data is completed by the program.

2 Glossary

Table 1 Glossary of Terms

Term	Definition
Eligible Hospitals	Eligible hospitals have the capability to submit electronic syndromic surveillance data to public health agencies and actual submission is in accordance with applicable law and practice.
UPHN Lite	Universal Public Health Node - Lite A technical architecture and collection of services with supporting data standards, messaging specifications and operational policies. Designed to integrate health information exchange for public health for healthcare facilities and providers with the Statewide Health Information Network for New York (SHIN-NY).

Table 2 Glossary of Abbreviations

Term	Definition
ADT	Admission, Discharge, and Transfer An HL7 message type that has been identified for Syndromic Surveillance reporting. ADT messages convey data related to patient demographics and/or to healthcare encounters (visits). Also used to refer to hospital data processing system for patient tracking.
ONC -ATCBs	ONC Authorized Testing and Certification Bodies Organizations authorized by the ONC to perform complete EHR and/or EHR Module testing and certification.
CMS	Centers for Medicare & Medicaid Services
ECLRS	Electronic Clinical Laboratory Reporting System
ED	Emergency Department
SyndSurv	Emergency Department Syndromic Surveillance System
EHR	Electronic Health Record
EVN	Event Type Segment
FIPS 5-2	Numeric and two-letter alphabetic state codes defined in the U.S. Federal Information Processing Standard Publication 5-2

Term	Definition
HL7	Health Level 7
ICD-CM	International Classification of Diseases – Clinical Modification V-codes identify conditions other than a disease or injury E-codes identify external causes of injury or poisoning
LHD	Local Health Department
MSH	Message Header Segment of an HL7 message
NPI	National Provider Identifier A unique ID used for practitioners, hospitals, hospital departments, and other health providers.
ONC	Office of the National Coordinator for Health Information Technology
PHA	Public Health Authority
PHVS	PHIN Vocabulary Access and Distribution System The CDC PHINMS library of value set codes for use in HL7. The link to the website is: http://phinvads.cdc.gov/vads/ViewView.action?id=643D8286-B864-DE11-9B52-0015173D1785
PID	Patient Identification Segment of an HL7 message
PFI	Permanent Facility Identifier Used by New York State Department of Health to identify healthcare facilities (hospitals, nursing homes, etc.).
PV1, PV2	Patient Visit Segment of an HL7 message Segments of an HL7 message that contain information about a patient's visit to a healthcare facility or encounter with a healthcare provider.
RE	An HL7 Usage Message Structure Attribute The data element is 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.
UCUM	Unified Code for Units of Measure

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3   Referenced Documents

Table 3 References

Ref	Title	Version / Date
1	PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data, HL7 version 2.5.1	Release 1.1 August 2012
2	PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data, Addendum	Release 1.1 August 2012
3	PHIN Vocabulary Access and Distribution System	Application Version: 3.3.7 Content Version: 2011.06.17

4 As-Is State

Hospitals Transmitting Data Directly to SyndSurv

Messages from the participating EDs are submitted daily via UPHN Lite from either the nurse triage database or the ED registration system. The following messaging options are available:

- ASCII file (non-HL7)

    OR

- HL7, which can be either:

    o HL7 version 2.3 ORU^R01 (lab file format)

        OR

    o HL7 version 2.3.1 ADT^A04 (admission/discharge/transfer files)

NOTE: HL7 version 2.3 includes user-defined segments, for example, ZLR, which is used for reporting age. When HL7 version 2.3.1 is in use there are no user-defined "Z" segments.

In addition to Sending Facility Name and ID, Receiving Facility, Receiving Application, and other data elements that provide message structure and context, the following data elements are required:

- Medical Record Number
- Patient Date of Birth[4]
- Patient Gender
- Zip Code of Patient Residence
- Chief Complaint (reported by patient, text field)
- Discharge Disposition
- Patient Visit Date and Time

Summary statistics are generated from the ED Chief Complaint data. Data for patient visits from the previous day are submitted via ECLRS (the Department's Electronic Clinical Laboratory Reporting System) by 9:00 am the next day. The ED Chief Complaint data are categorized into ten (10) syndromes (see list in Section 1.1 above) . Summary and case-level counts, signals (CuSum analysis results), short-term and long-term trend graphs, as well as patient listings are available by syndrome, hospital, county, and region.

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[4] With HL7 version 2.3.1, only DOB is received in both the ORU^R01 and ADT^A04 messages. With HL7 version 2.3.z, both DOB and Age are received with Age sent in the ZLR message segment.

Hospital users may view data for their hospital and aggregated for their surveillance region. LHD users may view data for all hospitals in their county, as well as aggregated data for their county and region.

5 To-Be State

The transmission of syndromic surveillance data from eligible hospitals, on a daily schedule by 9:00 am at the latest, will occur with the required data elements in HL7 version 2.5.1 format. The data will be routed through the UPHN lite – ECLRS connection, and sent to a Staging Database. The messages will be parsed by the NYSDOH HL7 Parser without de-duplication and be inserted into the SyndSurv Database. Records will be de-duplicated and Chief Complaint data are categorized into ten (10) syndromes (see list in Section 1.1 above) . Summary and case-level counts, signals (CuSum analysis results), short-term and long-term trend graphs, as well as patient listings are available by syndrome, hospital, county, and region.

6 Business and Functional Requirements

6.1 BR-1 Data Exchange with Hospitals

6.1.1 BR-1.FR-1 Data elements that are designated as usage "Required" must be transmitted to NYSDOH as specified in Section 8, Table 4Table 4.

6.1.2 BR-1.FR-2 Data elements designated as usage "RE" must be sent if the data is available in the hospital database; NYSDOH must accept the data if sent.

6.1.3 BR-1.FR-3 For data elements designated as usage "Optional", NYSDOH and the hospitals will agree upon transmission during the test file creation process.

6.1.4 BR-1.FR-4 NYSDOH will not reject the message if data is not sent for "Required", "RE", or "Optional" data elements.

6.1.5 BR-1.FR-5 Messages that are lacking expected data fields will still be parsed by the NYSDOH parser for evaluation and follow-up by SyndSurv staff.

6.1.6 BR-1.FR-6 Hospitals will construct and implement translation tables as necessary in order to satisfy the data values/code sets specified in Section 8, Table 4.

6.1.7 BR-1.FR-7 Hospitals will provide NYSDOH with the lookup tables used for code translation and will update them as necessary.

6.1.8 BR-1.FR-8 Messages will be transmitted to NYSDOH using HL7 version 2.5.1. Only ADT messages as defined below in Section 6.1.11 will be sent.

6.1.9   BR-1.FR-9 Hospitals must select patient visit data about events as defined below in Section 6.1.11. The data returned must be data that has been newly reported or updated by submitting hospitals during the calendar day (midnight to midnight).

6.1.10   BR-1.FR-10 If hospitals miss submission for any reason, the hospitals must be able to recreate and send new/updated data for that missed day on a later date. It is recommended that the hospitals maintain a data buffer to ensure that a given submission file can be recreated. A reasonable data buffer would be 7 days.

6.1.11   BR-1.FR-11 Hospitals will construct and send messages of the following type, on a daily schedule, to UPHN lite – ECLRS for processing. See D23 in Section 8, Table 4 for information on the Patient Class data element:

- A01 = A patient visits the ED or an ED patient is admitted to the hospital

  The hospital may send A01 messages to report the ED Visit of the patient with a Patient Class of "E".

  The hospital may send an A01 message to report the admission of any ED patient to inpatient care at the same hospital. The Patient Class of this A01 message should be "I".

- A03 = Provider discharges/ends an ED patient's visit.

  The hospital may send an A03 message to report the ED discharge of a patient.

  The Patient Class data element for A03 messages for patients discharged from the ED must be set to "E".

- A04 = Patient registers at Emergency Department

  The hospital may send an A04 (or an A01) message to report the registration of a patient to the ED at the treating facility. There must be one message per patient that visits the ED.

  The Patient Class data element for A04 messages must be set to "E".

- A08 = ED visit record is updated

  The hospital may send an A08 message about any ED patient. Messages should NOT be sent if the admission or visit date is over 120 days old prior to the update date.

  The Patient Class data element for A08 messages must be set to "E".

  The hospital should not be sending A08 (update) messages for patients once they have been admitted to inpatient care.

6.1.12   BR-1.FR-12 If Chief Complaint (OBX-5) is changed or updated over the duration of a single ED visit for a patient, then all versions of the chief complaint must be retained by

the Hospitals and sent in subsequent OBX segments (as indicated by field OBX-1, the OBX set ID).

6.1.13   BR-1.FR-13 Hospitals will populate the Sending Facility field (MSH-4) with the hospital name, as the hospital is the sender of the message. See D1 in Section 8, Table 4.

6.1.14   BR-1.FR-14 Hospitals will populate the Treating Facility Identifier field (EVN-7.2) with the hospital NPI. The Hospital Name can be added in EVN-7.1, as this would correspond to the NPI that was reporting in EVN-7.2.

6.1.15   BR-1.FR-15 Hospitals will supply the NPI for the hospital ED, if available. If the NPI is not available then the hospital will supply the NPI for the hospital or for its general clinical care setting.

6.1.16   BR-1.FR-16 The same NPI for a facility must be used for all data transmissions for that facility.

6.1.17   BR-1.FR-17 ECLRS helpdesk will supply a translation table to crosswalk PFIs to NPIs. See D10 in Section 8, Table 4.

6.1.18   BR-1.FR-18 The patient Date of Birth (PID-7) is a required field for NYSDOH. See D14 in Section 8, Table 4.

6.1.19   BR-1.FR-19 Hospitals will send the original patient Medical Record Number (PID-3.1) to NYSDOH without any alteration. See D12 in Section 8, Table 4. The Medical Record Number from some hospitals may exceed the HL7 standard for field length. Since the Medical Record Number is used for processing, PID-3.1 may exceed the HL7 standard length and should not be truncated by the hospital.

6.1.20   BR-1.FR-20 Hospitals will adhere to the code set PHVS_DischargeDisposition_HL7_2x for reporting Discharge Disposition (PV1-36) as specified in the PHIN Messaging Guide for Syndromic Surveillance (Reference # 4). See D25 in Section 8, Table 4.

6.2   BR-2 Data Submission Detail

6.2.1   BR-2.FR-3 Hospitals will send data for patient visit encounters between 12:00 am and 11:59 pm the prior day and patient visit data updated by the hospital to NYSDOH by 9:00 am the next day. If a technical issue results in hospital data missing the 9:00 am deadline, the hospital will send the missed data as soon as possible and not wait to include it in the next day's submission.

6.2.2   BR-2.FR-4 One A01, A03, or A04 message will be sent per patient visit. Multiple A08 messages may be sent for Updating data.

6.2.3   BR-2.FR-5 Records that were previously sent will not be re-sent.

6.2.4   BR-2.FR-8 An email notification from the Epi Statistical Unit staff will be sent to the appropriate personnel regarding missing hospital submissions no later than 3:00PM EST.

6.3   BR-3 Data Processing

6.3.1   BR-3.FR-3 The HL7 messages received from the hospitals will be processed and parsed by the NYS DOH HL7 Parser.

6.3.2   BR-3.FR-4 One file will be parsed at a time and the raw data will be placed in individual fields in one or more processing tables; one row per message will be created.

6.3.3   BR-3.FR-6 Messages causing a fatal error will be logged by ECLRS. Fatal errors are defined as errors related to HL7 message architecture and structure; general HL7 message parsing (valid field and/or format). Note: A file with fatal errors will be rejected.

6.3.4   BR-3.FR-7 When one or more fatal errors occur, Epi statistical unit staff will receive email in real time. The email will also advise Epi statistical unit staff to review the error log to view the malformed messages. Certain pre-defined users at the facility will also receive a similar email informing them that the file failed and to call the ECLRS Help Desk for specifics on why the file failed.

6.3.5   BR-3.FR-9 Epi statistical unit staff will investigate problems regarding the received files/data or missing files/data with the hospital.

6.3.6   BR-3.FR-10 Epi statistical unit will implement data verification process for each hospital production data.

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7 Message Segments (Adapted From PHIN MESSAGING GUIDE FORSYNDROMIC SURVEILLANCE, Release 1.1)

These tables supersede Table 3-6A through Table 3-6G in the PHIN Messaging Guide for Syndromic Surveillance, and specifically reference NYS requirements. For more details please reference the PHIN Messaging Guide for Syndromic Surveillance.

Non-supported sequence numbers that fall after the last supported sequence number in a message segment have been removed from the Tables as they do not need to be populated or included.

7.1 Constrained Message Types

The following HL7 ADT Messages have been identified for Syndromic Surveillance reporting:

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

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

The HL7 message formats sent to public health agencies will be constrained versions of the 2.5.1 abstract message (with backward compatibility to 2.3.1) formats. Only the segments necessary for carrying the Syndromic data, and certain structural message segments, are included. Because the message structure for the message types is similar, one table (Table 3-5A) was used to define the message structure for the ADT A01, A04, and A08 messages. Another table (Table 3-5B) was used for the A03 message structure, as per the HL7 Standard.

CONSTRAINED MESSAGE STRUCTURE ADT_A01

Table 3-5A Simple Message Structure: A01, A04, and A08

TABLE 3-5A: SIMPLE MESSAGE STRUCTURE: A01, A04, AND A08				
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..*]
{IN1}]	Insurance	Information about insurance policy coverage information	O	[0..*]

CONSTRAINED MESSAGE STRUCTURE ADT_A03

Table 3-5B Simple Message Structure: A03

TABLE 3-5B: SIMPLE MESSAGE STRUCTURE: A03				
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]
[{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..*]

7.2   Segment Profile Attributes

** In the "Field Name" column indicates a specific requirement for submission of Syndromic Surveillance data to New York State

ABBREVIATION	DEFINITION
Field Name	Descriptive Name of the data element
Sequence (Seq)	Sequence of the elements as they are numbered in the HL7 segment
Datatype (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[5] - 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

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[5] 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.

	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 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. Contains the name and/or the PHIN Value Set (accessible through PHIN VADS) when relevant as well as notes, condition rules and recommendations.

7.3   Message Header Segment (MSH)

Table 3-6A: Message Header Segment (MSH)

TABLE 3-6A: 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]	**SS-1:** MSH-1 (Field Separator). **SHALL** have the Literal Value of '|'
Encoding Characters	2	ST	4	R	R	[1..1]	**SS-2:** MSH-2 (Encoding Characters) **SHALL** have the Literal Value of "^~\&"
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. *NYS requires this to be the Hospital Name.*

TABLE 3-6A: MESSAGE HEADER SEGMENT (MSH)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Receiving Application **	5	HD	227	*R for New York State*	*R For New York State*	*[1..1]*	*UPHN*
Receiving Facility **	6	HD	227	*R for New York State*	*R For New York State*	*[1..1]*	*NYSDOH*
Date/Time Of Message	7	TS	26	R	R	[1..1]	SS-3: 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]'.
Security	8	ST	40	X	X	[0..1]	

Message Type**	9	MSG	15	R	R	[1..1]	**SS-4:** 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'). **Supported trigger events are A01 (Inpatient Admission), A03 (Discharge/end visit), A04 (Emergency Department Registration), and A08 (Update).**
Message Code **	9.1	ID	3	R	R	[1..1]	Literal Value "ADT"
Trigger Event	9.2	ID	3	R	R	[1..1]	One of the following literal values: "A01", "A03", "A04", or "A08"
Message Structure **	9.3	ID	7	R	R	[1..1]	Trigger events A01, A04, and A08 share the same "ADT_A01" Message Structure **Trigger event A03 follows the "ADT_A03" Message Structure**
Message Control ID	10	ST	199	R	R	[1..1]	**Note:** This field is a number or other identifier that uniquely identifies the message.

							TABLE 3-6A: MESSAGE HEADER SEGMENT (MSH)

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Processing ID **	11	PT	3	R	R	[1..1]	**SS-5:** MSH-11 (Processing ID) **SHALL** have a value in the set of literal values ('P, 'T'). Literal values: "P" for Production, or "T" for Testing.
Version ID **	12	VID	5	R	R	[1..1]	**SS-6**: MSH-12 (Version ID) **SHALL** have the Literal Value of '2.5.1'.
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]	
Application Acknowledgement Type	16	ID	2	X	X	[0..1]	
Country Code	17	ID	3	X	X	[0..1]	

Character Set	18	ID	16	X	X	[0..*]	
Principal Language Of Message	19	CE	478	X	X	[0..1]	
Alternate Character Set Handling Scheme	20	ID	20	X	X	[0..1]	
Message Profile Identifier	21	EI	427	O	O	[1..*]	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

7.4 Event Type Segment (EVN)

Table 3-6B: Event Type Segment (EVN)

TABLE 3-6B: EVENT TYPE SEGMENT (EVN)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Event Type Code	1	ID	3	X	X	[0..0]	
Recorded Date/Time	2	TS	26	R	R	[1..1]	**S-8:** 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]'..
Date/Time Planned Event	3	TS	26	X	X	[0..1]	
Event Reason Code	4	IS	3	X	X	[0..1]	
Operator ID	5	XCN	309	X	X	[0..*]	
Event Occurred	6	TS	26	X	X	[0..1]	

TABLE 3-6B: EVENT TYPE SEGMENT (EVN)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Event Facility	7	HD	241	R	R	[1..1]	**Note:** This is the location where the patient was actually treated.
Namespace ID	7.1	IS	20	RE	RE	[0..1]	Name of originating facility
Universal ID**	7.2	ST	199	R	R	[1..1]	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 - *NPI – Division of Epidemiology will provide a crosswalk table of NPIs/PFIs and note the NPI expected for a facility.*
Universal ID Type	7.3	ID	6	R	R	[1..1]	Expecting Value "NPI"

7.5   Patient Identification (PID) Segment

Table 3-6C: Patient Identification Segment (PID)

TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Set ID - PID	1	SI	4	O	RE	[0..1]	**SS-9**: PID-1 (Set ID) **SHALL** have the Literal Value of '1'
Patient ID	2	CX	20	X	X	[0..0]	
Patient Identifier List	3	CX	478	R	R	[1..*]	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.

TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
ID Number**	3.1	ST	15	R	R	*[1..*]*	**Note:** A Unique Patient Identifier is required. In addition, it is strongly recommended to submit the patient medical record number to facilitate identification of the patient in the event of a required follow-up investigation. Without it, the work required to follow up on the data provider is greatly increased. *MR = Medical Record Number (required)* *PI = Internal Identifier* *PT = External Identifier* *PI and/or PT may be sent in addition to the MR in repeating segments.* *This field should not be truncated by the hospital .*
Check Digit	3.2	ST	1	X	X	[0..1]	
Check Digit Scheme	3.3	ID	3	X	X	[0..1]	
Assigning Authority	3.4	HD	227	O	RE	[0..1]	

TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Identifier Type Code	3.5	ID	5	R	R	[1..1]	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".
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]	

				TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Patient Name**	5	XPN	294	*O for New York State*	*O for New York State*		**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.
Family Name	5.1	FN	194	O	RE	[0..1]	

				TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
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]	
Name Type Code**	5.7	ID	1	*O For New York State*	*O For New York State*	[1..1]	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
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]	

				TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Name Assembly Order	5.11	ID	1	X	X	[0..1]	
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..*]	
Date/Time of Birth**	7	TS	26	*R For New York State*	*R For New York State*	*[1..1]*	
Administrative Sex	8	IS	1	RE	RE	[0..1]	PHVS_AdministrativeSex_HL7_2x
Patient Alias	9	XPN	294	X	X	[0..0]	
Race	10	CE	478	RE	RE	[0..*]	Race Category (CDC)
Identifier	10.1	ST	20	RE	RE	[0..1]	**Note**: Standardized code for patient race category

TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Text	10.2	ST	199	O	RE	[0..1]	**Note:** Standardized description associated with code in PID-10.1
Name of Coding System	10.3	ID	20	CE	C	[0..1]	**Condition Predicate:** If CE.1 (Identifier) 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]	
Patient Address	11	XAD	513	RE	RE	[0..1]	**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]	
State or Province	11.4	ST	50	O	O	[0..1]	FIPS 5-2

TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
ZIP or Postal Code	11.5	ST	12	RE	RE	[0..1]	USPS
Country	11.6	ID	3	O	O	[0..1]	ISO 3166-1
Address Type	11.7	ID	3	O	O	[0..1]	Expecting value: 'C'
Other Geographic Designation	11.8	ST	50	O	O	[0..1]	
County/Parish Code	11.9	IS	20	RE	RE	[0..1]	
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]	
Phone Number - Home	13	XTN	250	X	X	[0..*]	

				TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Phone Number - Business	14	XTN	250	X	X	[0..*]	
Primary Language	15	CE	478	X	X	[0..1]	
Marital Status	16	CE	478	X	X	[0..1]	
Religion	17	CE	478	X	X	[0..1]	
Patient Account Number	18	CX	250	O	O	[0..1]	
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..*]	

TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Ethnic Group	22	CE	478	RE	RE	[0..1]	Ethnicity Group (CDC)
Identifier	22.1	ST	20	RE	RE	[0..1]	**Note:** Standardized code for patient ethnic group.
Text	22.2	ST	199	O	O	[0..1]	**Note:** Standardized description associated with code in PID-22.1.
Name of Coding System	22.3	ID	20	CE	C	[0..1]	**Condition Predicate:** If CE.1 (Identifier) 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]	
Birth Order	25	NM	2	X	X	[0..1]	
Citizenship	26	CE	478	X	X	[0..*]	

				TABLE 3-6C: PATIENT IDENTIFICATION SEGMENT (PID)			
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Veterans Military Status	27	CE	478	X	X	[0..1]	
Nationality	28	CE	478	X	X	[0..0]	
Patient Death Date and Time	29	TS	26	CE	CE	[0..1]	**Condition Predicate**: If PV1.36 is valued '20'
Patient Death Indicator	30	ID	1	CE	CE	[0..1]	**Condition Predicate**: If PV1.36 is valued '20'
Identity Unknown Indicator	31	ID	1	X	X	[0..1]	
Identity Reliability Code	32	IS	20	X	X	[0..*]	
Last Update Date/Time	33	TS	26	O	O	[0..1]	
Last Update Facility	34	HD	241	O	O	[0..1]	

7.6 Patient Visit (PV1) Segment

Table 3-6D: Patient Visit Segment (PV1)

TABLE 3-6D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Set ID - PV1	1	SI	4	RE	RE	[0..1]	**SS-12**: PV1-1 (Set ID) **SHAL**L have the Literal Value of '1'
<u>Patient Class**</u>	2	IS	1	R for New York State	R for New York State	*[1..1]*	Patient Class (Syndromic Surveillance) *E = Emergency Dept.* *I = Inpatient*
Assigned Patient Location	3	PL	1220	O	O	[0..1]	
Admission Type	4	IS	2	O	O	[0..1]	
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	X	X	[0..*]	
Referring Doctor	8	XCN	309	X	X	[0..*]	

	TABLE 3-6D: PATIENT VISIT SEGMENT (PV1)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Consulting Doctor	9	XCN	309	X	X	[0..0]	
Hospital Service	10	IS	3	O	O	[0..1]	
Temporary Location	11	PL	1220	X	X	[0..1]	
Preadmit Test Indicator	12	IS	2	X	X	[0..1]	
Re-admission Indicator	13	IS	2	X	X	[0..1]	
Admit Source	14	IS	6	O	O	[0..1]	
Ambulatory Status	15	IS	2	O	O	[0..*]	
VIP Indicator	16	IS	2	X	X	[0..1]	
Admitting Doctor	17	XCN	309	X	X	[0..*]	
Patient Type	18	IS	2	X	X	[0..1]	
Visit Number**	19	CX	478	*O For New York State*	*O For New York State*	*[0..1]*	

				TABLE 3-6D: PATIENT VISIT SEGMENT (PV1)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
ID Number**	19.1	ST	15	*O For New York State*	*O For New York State*	*[0..1]*	**Note:** Unique identifier for a patient visit
Check Digit	19.2	ST	1	X	X	[0..1]	
Check Digit Scheme	19.3	ID	3	X	X	[0..1]	
Assigning Authority	19.4	HD	227	O	RE	[0..1]	
Identifier Type Code**	19.5	ID	5	*O For New York State*	*O For New York State*	*[0..1]*	**SS-13:** PV1-19.5 (Identifier Type Code) **SHALL** be valued to the Literal Value 'VN'.
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]	

TABLE 3-6D: PATIENT VISIT SEGMENT (PV1)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Assigning Facility	19.10	CWE	705	X	X	[0..1]	
Financial Class	20	FC	50	X	X	[0..*]	
Charge Price Indicator	21	IS	2	X	X	[0..1]	
Courtesy Code	22	IS	2	X	X	[0..1]	
Credit Rating	23	IS	2	X	X	[0..1]	
Contract Code	24	IS	2	X	X	[0..*]	
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]	
Transfer to Bad Debt Code	29	IS	4	X	X	[0..1]	
Transfer to Bad Debt Date	30	DT	8	X	X	[0..1]	

TABLE 3-6D: PATIENT VISIT SEGMENT (PV1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Bad Debt Agency Code	31	IS	10	X	X	[0..1]	
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]	
Delete Account Date	35	DT	8	X	X	[0..1]	
Discharge Disposition	36	IS	3	RE	RE	[0..1]	Discharge Disposition (HL7)
Discharged to Location	37	DLD	47	X	X	[0..1]	
Diet Type	38	CE	478	X	X	[0..1]	
Servicing Facility	39	IS	2	X	X	[0..1]	
Bed Status	40	IS	1	X	X	[0..0]	
Account Status	41	IS	2	X	X	[0..1]	
Pending Location	42	PL	1220	X	X	[0..1]	

						TABLE 3-6D: PATIENT VISIT SEGMENT (PV1)	

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Prior Temporary Location	43	PL	1220	X	X	[0..1]	
Admit Date/Time**	44	TS	26	*RE For New York State*	*RE For New York State*	*[0..1]*	**SS-14:** 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]'..
Discharge Date/Time	45	TS	26	O	O	[0..1]	**Note:** Date and time of the patient discharge. YYYYMMDDHHMM[SS[.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.

7.7   Patient Visit – Additional Information (PV2) Segment

Table 3-6E: Patient Visit – Additional Information Segment (PV2)

TABLE 3-6E: PATIENT VISIT – ADDITIONAL INFORMATION SEGMENT (PV2)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Prior Pending Location	1	PL	1220	X	X	[0..1]	
Accommodation Code	2	CE	478	X	X	[0..1]	
Admit Reason	3	CE	478	RE	RE	[0..1]	ICD-9 Clinical Modification diagnosis code (including E-codes and V-codes) **Or** ICD-10 Clinical Modification diagnosis code **Or** SNOMED Disorder/ Disease domain
Identifier	3.1	ST	20	RE	RE	[0..1]	
Text	3.2	ST	199	RE	RE	[0..1]	It is strongly recommended that text be sent to accompany any identifier.
Name of Coding System	3.3	ID	20	C	C	[0..1]	**Condition Predicate:** If CE.1 (Identifier) is valued.

7.8   Observation/Result (OBX) Segment

Table 3-6F: Observation/Result Segment (OBX)

TABLE 3-6F: OBSERVATION / RESULT SEGMENT (OBX)							

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
Set ID - OBX	1	SI	4	O	RE	[0..1]	**Note:** Set ID numbers the repetitions of the segments 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|….
Value Type	2	ID	3	R	R	[1..1]	**SS-16** OBX-2 **SHALL** be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD').
Observation Identifier	3	CE	478	R	R	[1..1]	Observation Identifier (Syndromic Surveillance) **Note:** Identifies data to be received in observation value (OBX.5)

	TABLE 3-6F: OBSERVATION / RESULT SEGMENT (OBX)						
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
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	[0..1]	Usage for this element is essentially R (Required) since OBX 3.1 is Required. See the errata section that changes the usage to R for OBX.3.3.
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..*]	**Note:** Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3). Listed below are the supported fields for each of the supported value types.

Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
TABLE 3-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Beginning of OBX-5 Observation Value Usage Based on Data Type in OBX-2							
HD Data Type							
Namespace ID	5.1	IS	20	RE	RE	[0..1]	Name of originating facility.
Universal ID	5.2	ST	199	R	R	[1..1]	National Provider Identifier. (10 digit identifier)
Universal ID	5.3	ID	6	R	R	[1..1]	Expecting Value "NPI".
TS Data Type							
Time	5.1	DTM	24	RE	RE	[0..1]	Unconstrained. Some values might be to the day, others to the year/ decade, etc.
Degree of Precision	5.2	ST	1	X	X	[0..0]	
TX Data Type							
Text Data	5.1	TX	65536	RE	RE	[0..1]	**Note:** The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters).

TABLE 3-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
NM Data Type							
Numeric Value	5.1	ST	16	RE	RE	[0..1]	**Note:** 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							
Identifier	5.1	ST	20	RE	RE	[0..1]	**Note:** Implementers should check with their local jurisdiction for version of adopted coding system.
Text	5.2	ST	199	RE	RE	[0..1]	It is strongly recommended that text be sent to accompany any identifier.
Name of Coding System	5.3	ID	20	C	C	[0..1]	**Condition Predicate:** If CWE.1 (Identifier) is valued.
Alternate Identifier	5.4	ST	20	RE	RE	[0..1]	
Alternate Text	5.5	ST	199	RE	RE	[0..1]	It is strongly recommended that text be sent to accompany any identifier.

TABLE 3-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Name of Alternate Coding System	5.6	ID	20	C	C	[0..1]	**Condition Predicate:** If CWE.4 (Alternate Identifier) 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]	Provide the richest text available in this field.
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]	**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.
Street Name	5.1.2	ST	50	O	O	[0..1]	

TABLE 3-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
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]	
State or Province	5.4	ST	50	O	O	[0..1]	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]	ISO 3166-1
Address Type	5.7	ID	3	O	O	[0..1]	
Other Geographic Designation	5.8	ST	50	O	O	[0..1]	
County/Parish Code	5.9	IS	20	O	O	[0..1]	
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]	

TABLE 3-6F: OBSERVATION / RESULT SEGMENT (OBX)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
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							
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]	**SS-17:** 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, (Value Set OID 2.16.840.1.114222.4.11.3402). **SS-18** 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 (Value Set OID 2.16.840.1.114222.4.11.919). **SS-19** 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, (Value Set OID 2.16.840.1.114222.4.11.3590)

Text	6.2	ST	20	O	O	[0..1]	Standardized description associated with code in OBX-6.1.
Name of Coding System	6.3	ID	20	R	R	[1..1]	Usage for this element is essentially R (Required) since the component OBX 6.1) is Required. See the errata section that changes the usage to R for OBX.6.3.
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..*]	
Observation Result Status	11	ID	1	R	R	[1..1]	Expected value: 'F'
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]	

7.9 Diagnosis (DG1) Segment

Table 3-6G: Diagnosis Segment (DG1)

TABLE 3-6G: DIAGNOSIS SEGMENT (DG1)							
Field Name	**Seq**	**DT**	**Length**	**Sender Usage**	**Receiver Usage**	**Cardinality**	**Values / Value Set**
Set ID - DG1	1	SI	4	R	R	[1..1]	**SS-20:** 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.
Diagnosis Coding Method	2	ID	2	X	X	[0..1]	
Diagnosis Code - DG1	3	CE	478	R	R	[1..1]	ICD-9 Clinical Modification diagnosis code (including E-codes and V-codes) **Or** ICD-10 Clinical Modification diagnosis code **Or** SNOMED Disorder/ Disease domain
Identifier	3.1	ST	20	R	RE	[0..1]	**Note:** Standardized code for diagnosis.
Text	3.2	ST	199	RE	RE	[0..1]	**Note:** Standardized description associated with code in DG1-3.1.
Name of Coding System	3.3	ID	20	R	R	[1..1]	Usage for this element is essentially R (Required) since the component DG1 3.1 is Required. See the errata section that changes the usage to R for DG1.3.3.

				TABLE 3-6G: DIAGNOSIS SEGMENT (DG1)			
Field Name	Seq	DT	Length	Sender Usage	Receiver Usage	Cardinality	Values / Value Set
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]	
Diagnosis Type**	6	IS	2	*RE for New York State*	*RE For New York State*	*[0..1]*	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.

8 Data Requirements

Table 4 Data Elements

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
D1	Sending Facility	Field that uniquely identifies the facility associated with the application that sends the message	Hospital name	Required for New York State	MSH-4
D2	Receiving Application		UPHN	Optional	MSH-5
D3	Receiving Facility		NYSDOH	Optional	MSH-6
D4	Message Code		Literal value "ADT"	Required	MSH-9.1
D5	Trigger Event	A real-world circumstance causing the message to be sent	"A01", "A03", "A04", or "A08"	Required	MSH-9.2
D6	Message Structure		"ADT_A01" or "ADT_A03"	Required	MSH-9.3
D7	Processing ID	Indicates how to process the message	P = Production T = Testing	Required	MSH-11

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
D8	Version ID	HL7 version number used to interpret format and content of the message	2.5.1	Required	MSH-12
D9	Report Date/Time	Date and time of report transmission from original source (from treating facility)	HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ] If data flows through an intermediary or third party, the intermediary must keep the original date/time of transmission	Required	EVN-2
D10	Facility Identifier (Treating)	Unique facility identifier of the facility where the patient originally presented (original provider of the data)	NPI Division of Epi will provide a crosswalk table of NPIs/PFIs and note the NPI expected for a facility	Required	EVN-7.2
D11	Facility Name (Treating)	Name of facility where the patient originally presented (original provider of the data)		RE	EVN-7.1

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
D12	Unique Patient Identifier	Unique identifier for the patient	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.

MR = Medical Record Number (required)
PI = Internal Identifier
PT = External Identifier

PI and/or PT may be sent in addition to the MR in repeating segments. | Required

NYS requires the original Medical Record Number used for the patient at the Treating Facility. This field should not be truncated by the hospital. | PID-3.1 |
| D13 | Medical Record Number | Patient medical record number | Refer to D12 for Medical Record Number usage required by NYS. | | |
| D14 | DOB | Patient Date of Birth | YYYYMMDD | Required for New York State | PID-7 |
| D15 | Gender | Gender of patient | F = Female
M = Male
O = Other
U = Unknown | RE | PID-8 |
| D16 | Race | Race of patient | PHVS_RaceCategory_CDC | RE | PID-10 |

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
D17	City/Town	City/Town of patient residence	Free text City/Town designations	Optional	PID-11.3
D18	ZIP Code	ZIP code of patient residence	Minimum of 5-digits for domestic Zip codes Will accept with or without +4 Foreign postal codes will be supported (may contain alpha characters)	RE	PID-11.5
D19	State	State of patient residence	Recommended that the 2-digit (numeric) abbreviation PHVS State FIPS 5-2	Optional	PID-11.4
D20	Country	Country of patient	Recommended that the 3-character country codes be used for Country of the patient home address	Optional	PID-11.6
D21	County	County/Parish Code of patient	PHVS_County_FIPS_6-4	RE	PID-11.9
D22	Ethnicity	Ethnicity of patient	PHVS_Ethnicity_Group_CDC	RE	PID-22

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
D23	Patient Class	Patient classification within facility	E = Emergency Dept. I = Inpatient (provider ends an ED patient's visit or discharges from inpatient care a patient who was originally seen in the ED) See Section **6.1.11** for additional details.	Required for New York State	PV1-2
D24	Unique Visiting ID	Unique identifier for a Patient visit A visit is defined as a discrete or unique clinical encounter within a service department or location.	PHVS_IndentifierType_SyndromicSurveillance	Required	PV1-19
D25	Discharge Disposition	Patient's anticipated location or status following ED/UC visit	PHVS_DischargeDisposition_HL7_2x	RE	PV1-36
D26	Visit Date/Time	Date/Time of patient presentation	HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]][+/-ZZZZ]	Required	PV1-44
D27	Disposition Date/Time	Date and time of disposition	HL7 Date/Time Format:	Optional	PV1-45

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
			YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ] Send this field as empty if the patient has not been discharged. Do not wait to send data until patient is discharged.		
D28	Admit Reason	Reason for patient admission	Admit Reason Code: ICD-9CM or ICD-10 CDC or SNOMED Include V-codes and E-codes Admit Reason Text: Free text	RE New York State specific	PV2-3
D29	Facility Location (Treating) – Street Address	Street address of treating facility location		Optional	
D30	Facility Location (Treating) – City	City of treating facility location	Free text City/Town designations	Optional	OBX (XAD Data Type)
D31	Facility Location (Treating) – County	County of treating facility location	Free text County designations	Optional	
D32	Facility Location (Treating) – State	State of treating facility location	PHVS State FIPS 5-2	Optional	

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
D33	Facility / Visit Type	Type of facility that the patient visited for treatment	PHVS_FacilityVisitType_Syndromic Surveillance	Required	OBX (CWE Data Type)
D34	Date of Onset	Date that patient began having symptoms of condition being reported	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.	Optional	OBX TS Data Type, 1st component, 5th field with LOINC Code (11368-8) Observation Identifier
D35	Chief Complaint/Reason for Visit	Short description of the chief complaint or reason of patient's visit, recorded when seeking care.	Free text If data flows through an intermediary or third party, the intermediary must keep the original text (CWE-9) of the transmission.	Required for New York State	OBX-5 CWE Data Type, 5th field with LOINC Code (8661-1) Observation Identifier
D36	Triage Notes	Triage notes for the patient visit	Free text	Optional	OBX-5 TX Data Type, 5th field with LOINC Code (54094-8) Observation Identifier

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
D37	Clinical Impression	Clinical impression (free text) of the diagnosis	Free text	Optional	OBX-5 TX Data Type 5th field with LOINC Code (44833-2) Observation Identifier
D38	Initial Temperature	1st recorded temperature including units	OBX-3; Numeric OBX-6; degF, Fahrenheit, UCUM	Optional	OBX-5 NM Data Type, 1st component, 5th field with LOINC Code (11289-6) Observation Identifier Units of measure (OBX-6, CE Data Type) must be included defining the numeric value.
D39	Initial Pulse Oximetry	1st recorded pulse oximetry value	OBX-3; Numeric OBX-6; %, Percent, UCUM	Optional	OBX-5 NM Data Type, 1st component, 5th field with LOINC Code (59408-5) Observation Identifier. Units of measure (OBX-6, CE Data Type) must be included defining the numeric value.
D40	Age	Numerical Value of patient's age	Numeric data type	Optional	OBX-5.1

Data Require ment #	Data Element Name	Description of Field	Implementation Notes/Value	Usage	HL7 version 2.5.1 Location
D41	Age units	Unit corresponding to numeric value of patient age	Year	Optional	OBX -6
D42	Diagnosis/Injury Code	Diagnosis or injury code of patient condition	ICD-9CM or ICD-10 CDC or SNOMED. Include V-codes and E-codes. This field is a repeatable field; multiple codes may be sent.	RE	DG1-3.1
D43	Diagnosis Type	Qualifier for Diagnosis/Injury Code specifying type of diagnosis	PHVS_DiagnosisType_HL7_2x	RE for New York State	DG1-6