



**Syndromic Surveillance Technical Specifications for
Facility Data Transmissions**

Version 2.0

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Introduction

The U.S. Department of Health and Human Services administers federal incentive programs for eligible hospitals (EHs), critical access hospitals (CAHs), eligible providers (EPs), and eligible clinicians (ECs) that have adopted and use certified electronic health record technology (CEHRT). The transmission of syndromic surveillance messages from health care providers to a public health agency using CEHRT is one of the measures available to incentive program participants. Due to changes in national standards that are part of these incentive programs, the Ohio Department of Health (ODH) has expanded the fields of data collected since establishing a Syndromic Surveillance program in 2003. These changes have improved the data that public health agencies in Ohio use for detecting, tracking and characterizing health events.

The technical specifications included in this document have been informed by the following federal Final Rules:

- [Medicare Program; Merit-Based Incentive Payment System \(MIPS\) and Alternative Payment Model \(APM\) Incentive Under the Physician Fee Schedule, and Criteria for Physician-Focused Payment Models](#)
- [Medicare and Medicaid Programs; Electronic Health Record Incentive Program-Stage 3 and Modifications to Meaningful Use in 2015 Through 2017](#)
- [2015 Edition Health Information Technology \(Health IT\) Certification Criteria, 2015 Edition Base Electronic Health Record \(EHR\) Definition, and ONC Health IT Certification Program Modifications](#)

Ohio's technical specifications are also consistent with the following Public Health Information Network (PHIN) messaging guides for syndromic surveillance:

- [PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings, Release 2.0 \(April, 2015\)](#)
- [Erratum to the PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings ADT Messages A01, A03, A04 and A08 Optional ORU^R01 Message Notation for Laboratory Data HL7 Version 2.5.1 \(Version 2.3.1 Compatible\) Release 2.0 April 21, 2015](#)

or outlined in the [Health Level Seven \(HL7\) messaging standards 2.5.1](#) (creation of an account is necessary to download).

Information about state-specific eligibility requirements can be found on the ODH's Syndromic Surveillance policy webpage: <https://www.odh.ohio.gov/healthstats/HIT/Sys.aspx>.

A major change for Stage 3 occurred in the October 2015 Final Rule: Only EHs, CAHs, and EPs/ECs at urgent care centers are eligible to take the syndromic surveillance measure.

Enrollment and registration to submit data for public health measures managed by ODH can be completed by going to the Ohio Public Health Reporting (OPHR) web application: <http://ohiopublichealthreporting.info>. Encounters that occur at a facility within the state of Ohio are eligible per federal Final Rules. Contacts for facilities or healthcare systems should be kept current on the OPHR website by the Meaningful Use (MU) primary contact for syndromic surveillance.

Security and Data Transmission of Syndromic Surveillance Messages

Syndromic surveillance messages are derived from data stored in CEHRT systems. CEHRT systems, syndromic surveillance messages, and syndromic surveillance systems contain protected health information (PHI). System owners, users of these systems, and transmitters of PHI containing messages must secure the collected information to adhere to federal, state, and local (as applicable) rules regarding PHI.

ODH requests only the minimum PHI necessary to accomplish the purposes of Syndromic Surveillance for public health (see appendices B through F for standards and fields or components to transmit). The CEHRT systems and ODH's vendor strive to keep the information secure with security and privacy requirements. Submitting facilities are responsible for ensuring only the requested information is being sent to ODH's vendor. The vendor or ODH will contact you should they find messages that include identifying protected health information that is not formally requested in this document. Named individuals or address information (with the exception of state, zip code, country, address type, and county/parish code) will not be transmitted. A list of excluded PHI fields can be found in appendix F (suppressed fields).

ODH's vendor has implemented a number of secure data transmission formats. These secure methods include MLLP, SFTP, FTPS, and FTP over a VPN. A secure method of transmission is a requirement for the submission of data.

Encryption is necessary for the patient identifier and the visit number fields submitted. Should there be a public health event or inquiry from local health departments, the submitting facility may need to decode the encrypted patient identifier and visit numbers. In practice, the individuals involved with responding to public health inquiries (someone other than the CEHRT interface technician) should be able to complete this task quickly (a single patient or a list of encounters covering multiple days). If encrypting these two fields is not possible, please contact ODH's vendor to discuss their ability to encrypt these fields.

Data Standards

The federal Final Rules require syndromic surveillance messages to be sent using the HL7 messaging standards 2.5.1. ODH's vendor can accept a number of HL7 message formats (2.1, 2.2, 2.3, 2.3.1, 2.4, 2.5, 2.5.1, and 2.6), but the current standard for incentive payments is version 2.5.1.

Typical syndromic surveillance HL7 message types include the message code and trigger event components of ADT^A01, ADT^A03, ADT^A04, and ADT^A08. The encrypted patient identifier and visit number should remain unchanged when submitting these messages. Internal processes may terminate the patient from the CEHRT system (e.g., ADT^A13 "Cancel Discharge / End Visit", ADT^A23 "Delete a Patient Record", ADT^29 "Delete Person Information"). If these or other message types are being used by your facility, please communicate this information with ODH's vendor and await instructions. The information provided assists with properly classifying encounters into syndrome, symptom, or custom categories. The completeness of these fields (e.g., free-text chief complaint, discharge diagnoses, residential zip code, patient age, patient race) provides ODH with classification information that will

improve anomaly detection or descriptive information that will summarize characteristics of an identified cluster.

Process of Onboarding and Subsequent Testing

ODH will invite new facilities to onboard with its vendor. At the time of notification for onboarding, the facility will be provided a unique identifier for only the prescribed facility's encounters. This code should not be used for other facilities within its healthcare network. The testing phase will take anywhere from a week to months, depending on the timeliness, identification and correction of errors, volume of test messages from the submitters, and to account for available staffing (*e.g.*, ODH's vendor, facility interface staff, CEHRT product staff), especially during the summer months and holidays. After moving into production with ODH's vendor, public health will be able to see data for their first time from the submitting facility/facilities. Production data and test data rarely match examples, so some additional post-production changes may be requested either by public health or by ODH's vendor.

Established facilities that have new facilities to onboard shall not add to their established data feed to ODH's vendor to submit additional encounters. Each facility will be provided their own identifier so that when there is a health event, public health will be able to quickly distinguish where the issue is located.

Testing in advance of CEHRT system upgrades should occur with ODH's vendor, regardless of whether or not the CEHRT upgrade is expected to impact the creation or data within the fields for syndromic surveillance messages. Please provide as much advance notice to ODH's vendor as possible to assure adequate time and staffing availability. Testing for upgrades can occur in parallel with ongoing production data submission.

ODH's vendor may request additional testing at any time. This may be due to changes of the data being submitted to the vendor, an oversight, or a shift to the data standards in place. As previously mentioned above, submission of unwanted PHI may warrant additional testing. The ODH encourages the resolution of these data issues as quickly as possible.

ODH provides surveillance on data available every hour. Therefore, we encourage the use of near real-time reporting of encounters. For those submitting for Modified Stage 2, the submission standard is at least once every 24 hours. Those submitting for Stage 3, the PHIN Messaging Guide for Syndromic Surveillance: ED/UC, Inpatient and Ambulatory Care Settings state (page 23, Table 2-1):

“...data must be submitted at least within 24 hours of the date and time of the patient's initial encounter. Any subsequent updates to a patient's record must also be submitted within 24 hours of the information (transaction) being added to the patient record. Real time data transmission, or very frequent batch data transmission, is preferred. If batch transmission mode is utilized, batches must be transmitted at least once every 6 hours.”

Public health events and situation monitoring could occur at any time. The goal is to keep data up to date so decisions can be made quickly by public health and its stakeholders. Ideally, downtime events should be kept to a minimum. Any messages during downtime events should be sent as soon as possible after the downtime, with the exception of very large volume of downtime messages. If the volume of messages is high, please coordinate the batch transmission of messages with ODH's vendor. Detection

of unusual events are more easily captured when all locations are reporting timely encounters. Therefore, ODH understands unexpected downtimes will occur, but encourages quick responses and complete reporting. For planned, special monitoring events (*e.g.*, the Republican National Convention, 2016), it would not be unusual for the ODH to request a delay in routine updates to the CEHRT system or the hardware where it resides during or immediately before the special monitoring event.

Data Fields, Components, and Concept Codes to Submit

There are fields that the ODH requires for submission (denoted “R” or “RE”) and those that are optional (“O”). See [appendix A](#) for Foundational References of Usage, Data Types, and Segment Usage that cover these and other specified values. [Appendix B](#) is a complete table of fields and components, [appendix C](#) includes additional syndromic surveillance OBX segments concept codes, [appendices D](#) and [E](#) for field and component locations (respectively), and [appendix F](#) for suppressed fields.

While required fields, components, and concept codes are important to submit, there are two frequently requested free-text concepts codes that allows for ODH’s syndromic surveillance system to perform at a high level. These two fields are the chief complaint and the triage note. A self-reported, free-text chief complaint with all stated symptoms is required. This is different than the provider’s reason (*e.g.*, triage nurse, physician, registered nurse), which has its own field. Should a major health event occur, public health will look to this completed concept code first. If both the free text chief complaint text and drop down selection chief complaint text are available, send both. The chief complaint text should not be replaced with other information either manually or by the data provider’s system. The chief complaint should remain unchanged as it was captured at time of admission. A corollary field to the chief complaint is the triage note. The information in the triage note may identify possible common sources and/or date(s) of exposure, provides history of medical care up to that assessment (*e.g.*, “Narcan administered”), supports or refutes the patient’s chief complaint information faster than final diagnoses are provided (*e.g.*, “patient not in room when envelope with white powder was opened”), assists with identifying clusters with keywords provided (*e.g.*, mass casualties), and may decrease the need of public health contacting the facility for timely, additional information for determining an appropriate response. If you have any questions about these two concept codes, please do not hesitate to contact the Syndromic Surveillance program.

Errata

When identified, errors will be corrected within the document and published with version and last modified date updates.

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Appendix A: Foundational References of Usage, Data Types, and Segment Usage

Usage Table of Assigned Values for Ohio

Value	Definition
R	Required. Must always be populated.
RE	Required, but may be empty. If the sender has the data, it must be sent. The Ohio Department of Health (ODH) or ODH's vendor must be capable of processing data if sent (quality data sent).
C	Conditionally required
CE	Conditionally required, but may be empty. ODH or ODH's vendor must be capable of processing data if sent (quality data sent).
X	Not supported
O	Optional

Notations on optional or repetitions

Segments, fields, or components included in brackets ('[]') are considered optional. For example, if provided with the following date time field:

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

you will be required to submit at least 'YYYYMMDDHHMM'. The remaining seconds and fractions of a second are optional. Time-zone ('[+/- ZZZZ]') is also optional, however, if the treating facility, submitting facility, submitting entity (*e.g.*, certified electronic health record technology vendor), or the Ohio Department of Health are located in time-zones, please submit time zones on all date/time fields for clarity.

Segments, fields, or components included in 'curly' braces ('{ }') are permitted to have repetitions. Examples include OBX segments, PID-10 (patient's race), and admit reason.

Segment Usage Requirements for A01, A03, A04, and A08 Message Types

Segment and Order	Usage for A01, A04, and A08 Message Types	Usage for A03
MSH	R	R
EVN	R	R
PID	R	R
PV1	R	R
PV2	RE	RE
OBX	R	
DG1	RE	RE
PR1	O	O
OBX (order changed for A03 messages)		RE
IN1	O	O

There are multiple “Data Types” per [Health Level Seven \(HL7\) messaging standards 2.5.1](#). Please use the HL7 source as the reference for definitions unless otherwise stated in the following appendices.

Appendix B: Syndromic Surveillance Health Level Seven (HL7) 2.5.1 Segments, Fields, and Components[†]

[†] Tables derived from a combination of [PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings, Release 2.0](#), [Erratum to the PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings ADT Messages A01, A03, A04 and A08 Optional ORU^R01 Message Notation for Laboratory Data HL7 Version 2.5.1 \(Version 2.3.1 Compatible\) Release 2.0](#), and [Health Level Seven \(HL7\) messaging standards 2.5.1](#)

MSH Segment fields

MSH Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Field Separator	ST	1	The field separator is the bar (“ ”). Conformance Statement SS-043: MSH-1 (Field Separator) SHALL be the literal value: ‘ ’, (ASCII 124)	R	R
2	Encoding Characters	ST	4	The component separator (“^”), repetition separator (“~”), escape character (“\”), and subcomponent separator (“&”), respectively, are listed in this field. Conformance Statement SS-044: MSH-2 (Encoding Characters) SHALL be the literal value: ‘^~\&’, (ASCII 94, 126, 92, and 38, respectively).	R	R
3	Sending application	HD	227	User defined sending application among all of the certified electronic health record technology components.	O	O
4	Sending facility	HD	227	ODH has been utilizing MSH-4 as the unique field to identify event/encounter location facilities. There may be a transition during CEHRT version upgrades to duplicate or move this value to EVN-7 to re-align to HL7 2.5.1 standards. For other jurisdictions, this field may contain a National Provider Identifier (NPI; NPI search: https://npiregistry.cms.hhs.gov/).	R	R
5	Receiving application	HD	227		O	O
6	Receiving facility	HD	227		O	O

MSH Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
7	Date/Time Of Message	TS	26	<p>Date/time that the sending system created the message. Time zone (+/-ZZZZ) shall remain consistent throughout the message. Please be aware that MSH-7 (Date/Time of Message) is not necessarily synonymous as EVN-2 (Message Date/Time)</p> <p>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]'</p>	R	R
9	Message Type	MSG	15	<p>This field contains the components of message type, trigger event, and the message structure ID, respectively.</p> <p>Conformance Statement SS-014: MSH-9 (Message Type) SHALL be the literal value: 'ADT^A01^ADT_A01' for Admission Messages</p> <p>Conformance Statement SS-004: MSH-9 (Message Type) SHALL be the literal value: 'ADT^A04^ADT_A01' for Registration Messages</p> <p>Conformance Statement SS-035: MSH-9 (Message Type) SHALL be the literal value: 'ADT^A08^ADT_A01' for Update Messages'</p> <p>Conformance Statement SS-038: MSH-9 (Message Type) SHALL be the literal value: 'ADT^A03^ADT_A03' for Discharge Messages'</p>	R	R
9.1	Message Code	ID	3	<p>PHVS_MessageType_SyndromicSurveillance</p> <p>https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6049</p>	R	R
9.2	Trigger Event	ID	3	<p>PHVS_EventType_SyndromicSurveillance</p> <p>https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6048</p>	R	R
9.3	Message Structure	ID	7	<p>PHVS_MessageStructure_SyndromicSurveillance</p> <p>https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6047</p>	R	R
10	Message Control ID	ST	199	<p>This is the unique identifier for the message generated by the sending application. As this value is never duplicated, ODH's</p>	R	R

MSH Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				vendor can send acknowledgment receipts (in the message acknowledgment segment (MSA)). This field is a number or other identifier that globally unique identifies the message.		
11	Processing ID	PT	3	While this field typically tells how to process the messages, Ohio's vendor and some Ohio Health Information Exchanges (HIEs) have a separate internet protocol addresses for their testing and production environments. Please assure you are sending messages to the correct environment. Prior to any system upgrades, it is strongly recommended to test with Ohio's syndromic surveillance vendor. 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.	R	R
12	Version ID	VID	5	HL7 version number used for the submitted message. For messages meeting Meaningful Use standards, the value SHALL be 2.5.1 Conformance Statement SS-016: MSH-12 (Version ID) SHALL have a value '2.5.1'	R	R
15	Accept Acknowledgment Type	ID	2	Value sets for senders include "AL" (always), "NE" (never), "ER" (error/reject conditions only), and "SU" (successful completion only). Ohio's vendor always sends ACK files on all messages, regardless of what is transmitted. There may be changes in syndromic surveillance requirements for MSH-15, MSH-16, and MSH-21 in future releases.	C(R/X)	C(R/X)

MSH Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				Condition Rule: For MSH-21 Message Profile ID 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, the ADT and ORU message must be valued with the literal value "AL" (Always). Must be left empty for the Accept Acknowledgment (receiver message back to sender).		
16	Application Acknowledgment Type	ID	2	Value sets for senders include "AL" (always), "NE" (never), "ER" (error/reject conditions only), and "SU" (successful completion only). Ohio's vender always sends ACK files on all messages, regardless of what is transmitted. Ohio's vender always sends ACK files on all messages, regardless of what is transmitted. There may be changes in syndromic surveillance requirements for MSH-15, MSH-16, and MSH-21 in future releases. Condition Rule: For MSH-21 Message Profile ID 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. Must be left empty for the Accept Acknowledgment (receiver message back to sender).	C(R/X)	C(R/X)
21	Message Profile Identifier	EI	427	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 or 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 or 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	O	R

EVN Segment fields

EVN Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Event Type Code	ID	3	<p>This field had been retained for backward compatibility only. This field is a copy of the trigger event code (MSH-9.2) of the Message Type field.</p> <p>PHVS_EventType_SyndromicSurveillance https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.6048</p>	O	O
2	Recorded Date/Time	TS	26	<p>This field captures the date/time when the transaction was entered (system based). This is not necessarily the same as the field Date/Time of the Message (MSH-7), as the message could be delayed in being sent from the system.</p> <p>Timeliness of syndromic information is important to consumers of syndromic surveillance data.</p> <p>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]'</p>	R	R
7	Event Facility	HD	227	<p>Definition: This field identifies the location where the patient was actually treated.</p> <p>This field is used to capture the coded value of where the patient was treated (as compared to the "Sending facility" code in MSH-4).</p> <p>ODH has been utilizing MSH-4 as the unique field to identify event/encounter location facilities. There may be a transition during CEHRT version upgrades to duplicate or move this value to EVN-7 to re-align to HL7 2.5.1 standards.</p> <p>By definition, this field can have repetitious event facility codes. Ohio's vendor is currently accepting just one code in MSH-4 or</p>	O (R for single CEHRT healthcare systems that submit ambulatory encounters.)	R

EVN Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>EVN-7 (specified at testing). The use of a facility's assigned code should have a local coded value in EVN-7.3 of "L". Other jurisdictions are utilizing National Provider Identifier (NPI; NPI search: https://npiregistry.cms.hhs.gov/).</p> <p>Repetitions (with repetition separators, '~') should be considered here (e.g., National Provider Identifier in 7.1-.3 and ODH vendor specific values. Example code for multiple identifiers: TripleAAmbulatoryGrp^OH_AAAAG^L~TripleAAmbulatoryGrp^5555555555^NPI</p> <p>The maximum length for an HD data type is 227. This differs from the field standards. The total length would also include all repetitions.</p> <p>The NPI could also be sent in the OBX concept code SS001 (see Appendix C).</p>		
7.1	Namespace ID	IS	20	<p>The use of Organization Legal Name is recommended.</p> <p>Legal Business Name (LBN) associated with the National Provider Identifier (NPI) Standard provided by Centers for Medicare and Medicaid Services. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.</p>	O	RE
7.2	Universal ID	ST	199	<p>Value is provided by ODH's syndromic surveillance vendor.</p> <p>The National Provider Identifier (NPI) Standard provided by Centers for Medicare and Medicaid Services is recommended. If NPI is not available, use a different unique identifier, such as OID or a State-designated identifier.</p>	O (R for single CEHRT healthcare systems that	R

EVN Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
					submit ambulatory encounters.)	
7.3	Universal ID Type	ID	6	<p>As ODH is requiring submission of a local code, “L” can be provided for that value. If the NPI value is also provided, “NPI” should be used.</p> <p>PHVS_UniversalIDType_SyndromicSurveillance https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.6050</p> <p>Conditional: If submitting something other than the local code in EVN-7.2, then EVN-7.3 needs to be populated.</p>	C	R

PID Segment fields

PID Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Set ID - PID	SI	4	<p>This field contains the number that identifies this transaction. The sequence number SHALL be one.</p> <p>Conformance Statement SS-019: PID-1 (Set ID) SHALL have the Literal Value of ‘1’.</p>	R	R
3	Patient Identifier List	CX	1913	<p>ODH requires an encrypted patient identifier by the submitting facility</p> <p>This field can accept multiple (repetitive) patient identifiers. ODH does not want medical record numbers, social security numbers,</p>	R	R

PID Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>or other identifying information. Numbers should be globally unique at the patient level.</p> <p>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. While national standards for Stage 3 suggest a maximum length of 478, a CX data type length has a maximum length of 1913.</p>		
3.1	[Patient Identifier] ID Number	ST	199	Encrypted patient identifier by the submitting facility	R	R
3.2	[Patient Identifier] Check Digit	ST	1		X	X
3.3	[Patient Identifier] Check Digit Scheme	ID	3		X	X
3.4	[Patient Identifier] Assigning Authority	HD	227		O	O
3.5	[Patient Identifier] Identifier Type Code	ID	5	<p>For ODH, use “PI” for patient internal identifier, as the value in PID-3.1 should be encrypted.</p> <p>PHVS_IdentifierType_SyndromicSurveillance https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3597</p> <p>Previous ODH technical requirements provided an example value of “MR” for medical record number; however this is incorrect as</p>	R	R

PID Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				this value should never match the patient's medical record number.		
5	Patient Name	XPN	294	<p>ODH limits the amount of private health information it collects. While we acknowledge that the patient name field is required to be populated for Stage 3 reporting, ODH will only collect information in the "Name Type" component (PID-5.7) as specified by PHIN messaging guides.</p> <p>Conformance Statement SS-023: PID-5 (Patient Name) SHALL be valued as ^^^^^^S or ^^^^^^U.</p>	X	R
5.7	Name Type			Submit "S" or "U", as described for Patient Name (immediately above)	X	R
7	Date/Time of Birth	TS	26	<p>This field contains the patient's date and time of birth. The date of birth is the minimum precision for ODH. Data will be represented in the following format: 'YYYYMMDD[HH[MM[SS[.S[S[S]]]]]]' [+/- ZZZZ]</p> <p>For ODH, if Date/Time of Birth is not provided, the patient's reported age (concept code) will be required.</p>	O	O
8	Administrative Sex	IS	1	<p>This field is sometimes referenced simply as the gender or sex of the patient.</p> <p>PHVS_Gender_SyndromicSurveillance https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3403</p>	RE	RE
10	Race	CE	483	<p>Race category or categories reported by the patient.</p> <p>PHVS_RaceCategory_CDC https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.836</p>	RE	RE

PID Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				An example of multiple races: 2054-5^Black or African American^CDCREC~2028-9^Asian^CDCREC While field standards suggest a length of 478, the CE data type length has a maximum length of 483.		
10.1	[Race] Identifier	ST	20	PHVS_RaceCategory_CDC https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.836	RE	RE
10.2	[Race] Text	ST	199	If using PHVS_RaceCategory_CDC, the text provided should be used.	RE	RE
10.3	[Race] Name of Coding System	ID	20	If using PHVS_RaceCategory_CDC, the coding system is “CDCREC” If one or more race identifiers are provided (PID-10.1), then the appropriate race name of the coding system should also be provided (PID-10.2 and PID-10.3, respectively). The code set will always found in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338	CE	RE
11	Patient Address	XAD	631	This field contains the current mailing address of the patient at the time of service. ODH historically has only collected state and zip code information. Country and address type can be submitted as well. Please note that the street address and city are not fields ODH wishes to collect at this time. While field standards suggest a length of 513, the XAD data type length has a maximum length of 631.	R	R
11.1	Street Address	SAD	184	Not collected by ODH.	X	X
11.2	Other Designation	ST	120	Not collected by ODH.	X	X
11.3	City	ST	50	Not collected by ODH.	RE	RE

PID Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
11.4	State or Province	ST	50	Two digit FIPS code. PHVS_State_FIPS_5-2 https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.830	RE	RE
11.5	Zip or Postal Code	ST	12	5 digit values only.	R	R
11.6	Country	ID	3	Three character code. PHVS_Country_ISO_3166-1 https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.828	RE	RE
11.7	Address Type	ID	3	Mailing (literal value of “M”) or Home (Residential; literal value of “H”) address types are provided. PHVS_AddressType_HL7_2x https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.801	RE	RE
11.8	Other Geographic Designation	ST	50		X	X
11.9	County/Parish Code	IS	20	Coded 5 digit FIPS code (state and county codes combined). PHVS_County_FIPS_6-4 https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.829	RE	RE
18	Patient Account Number	CX	1913	ODH does not collect this field as part of public health surveillance. ODH relies on the encrypted patient identifier (PID-3) and visit number (PV1-19) and/or other submitted fields as unique values to determine if a patient is unique to the healthcare system.	X	X

PID Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				While field standards suggest a length of 250, the CX data type length has a maximum length of 1913.		
22	Ethnic Group	CE	483	<p>The field standard allows this field to repeat, only one of the mutually exclusive ethnicity codes (“Hispanic or Latino” or “Not Hispanic or Latino”) is expected in the message.</p> <p>PHVS_EthnicityGroup_CDC https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.837 While field standards suggest a length of 478, the CE data type length has a maximum length of 483.</p>	RE	RE
22.1	[Ethnic Group] Identifier	ST	20	<p>PHVS_EthnicityGroup_CDC https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.837</p>	RE	RE
22.2	[Ethnic Group] Text	ST	199	If using PHVS_EthnicityGroup_CDC, the text provided should be used.	O	RE
22.3	[Ethnic Group] Name of Coding System	ID	20	<p>If using PHVS_EthnicityGroup_CDC, the coding system is the literal value of “CDCREC”.</p> <p>If one (or more) ethnic group identifiers are provided (PID-22.1), then the appropriate ethnic group name of the coding system should also be provided (PID-22.3).</p> <p>The code set will always found in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3338</p>	CE	CE
29	Patient Death Date and Time	TS	26	<p>This field SHALL NOT be populated on an admission message.</p> <p>Conformance Statement SS-036 (for A03, A04, A08 trigger events (MSH-9.2)): If valued, PID-29 (Patient Death and Time), SHALL be expressed with a minimum precision of the nearest minute and</p>	C (R/RE) (A03, A08, A04) X (A01)	C (R/RE) (A03, A08,

PID Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/- ZZZZ]'</p> <p>Condition Predicate Condition Predicate (for A03, A04, A08 trigger events (MSH-9.2)): If PV1-36 (Discharge Disposition) is valued with any of the following: '20', '40', '41', '42'.</p>		A04); X (A01)
30	Patient Death Indicator	ID	1	<p>This field SHALL NOT be populated on an admission message. Two literal values for this field exist: "Y" if the patient is deceased; "N" if the patient is alive.</p> <p>Conformance Statement Conformance Statement SS-037 (for A03, A04, A08 trigger events (MSH-9.2)): If PV1-36 (Discharge Disposition) is valued with any of the following: '20', '40', '41', '42' then PID-30 (Patient Death Indicator) SHALL be valued to the literal value "Y".</p> <p>Condition Predicate Condition Predicate (for A03, A04, A08 trigger events (MSH-9.2)): If PV1-36 (Discharge Disposition) is valued with any of the following: '20', '40', '41', '42' then PID-29 (Patient Death and Time) SHALL be populated.</p>	C (R/RE) (A03, A08, A04) X (A01)	C (R/RE) (A03, A08, A04); X (A01)
33	Last Update Date/Time	TS	26	Last time the data in the PID segment was updated, represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/- ZZZZ]'.	O	O
34	Last Update Facility	HD	227	<p>Last facility that updated the data in the PID segment.</p> <p>The format and values should follow formats provided in MSH-4 or EVN-7.</p> <p>The use of a facility's assigned code should have a local coded value in PID-34.3 of "L". Other jurisdictions may use the National</p>	O	O

PID Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>Provider Identifier (NPI; NPI search: https://npiregistry.cms.hhs.gov/).</p> <p>Repetitions (with repetition separators, '~') should be considered here (e.g., National Provider Identifier in 34.1-.3 and ODH vendor specific values.</p> <p>Example code for multiple identifiers: TripleAAmbulatoryGrp^OH_AAAAG^L~TripleAAmbulatoryGrp^5555555555^NPI</p>		

PV1 Segment fields

PV1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Set ID - PV1	SI	4	Conformance Statement SS-024: PV1-1 (Set ID) SHALL have the Literal Value of '1'	RE	R
2	Patient Class	IS	1	<p>Patient classification within the facility.</p> <p>PHVS_PatientClass_SyndromicSurveillance https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3404</p>	R	R
3	Assigned Patient Location	PL	1230	<p>This component is vague in what data should be provided. While syndromic surveillance does not capture most trigger events, this field is where CEHRTs would populate the new location of the patient and PV1-6 would hold the prior patient location. For A03 trigger events, this field should be populated with where the patient was located just prior to discharge.</p> <p>Clarifying information is provided (Usage: RE) in the patient location concept code submissions of the OBX segment in Appendix C.</p>	X	O

PV1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
4	Admission Type	IS	20	<p>This field includes a coded value as to why the patient was admitted.</p> <p>PHVS_AdmissionType_HL7_2x https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.913</p>	X	O
6	Prior Patient Location	PL	1230	<p>This component is vague in what data should be provided. While syndromic surveillance does not capture most trigger events, this field is where CEHRTs would populate the prior location of the patient and PV1-3 would hold the new patient location.</p> <p>Clarifying information is provided (Usage: RE) in the patient location concept code submissions of the OBX segment in Appendix C and in PV1-3 (assigned patient location).</p>	X	O
7	Attending Doctor	XCN	3002	<p>There is a prescribed formatting to this field, with many of the fields being optionally submitted. Please contact the syndromic surveillance program if you are interested in sending this information.</p> <p>The National Provider Identifier (NPI) is a commonly used identifier set. NPI search: https://npiregistry.cms.hhs.gov/</p> <p>While field standards suggest a length of 309, the XCN data type length has a maximum length of 3002.</p>	X	O
7.1	[Attending Doctor] ID Number	ST	15	The National Provider Identifier (NPI) is a commonly used identifier set. NPI search: https://npiregistry.cms.hhs.gov/	X	O
7.9	[Attending Doctor] Assigning Authority	HD	227	<p>This is a triplet coded component set, hence the '&' values between subcomponent values: <Namespace ID>&<Universal ID>&<Universal ID Type></p> <p>Example for an NPI value in PV1-7.9:</p>	X	O

PV1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>'NPI& 2.16.840.1.113883.4.6&ISO'</p> <p>The Universal ID Type would need to be found in HL7 Table 0301. PHVS_UniversalIDType_SyndromicSurveillance https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6050</p>		
10	Hospital Service	IS	20	<p>Trigger events typically are with messages that are not sent for syndromic surveillance messages, with the exception of A01s. Other trigger events include A02, A14, and A15.</p> <p>While field standards suggest a length of 3, the IS data type length has a maximum length of 20.</p>	X	O
14	Admit Source	IS	20	<p>PHVS_AdmitSource_HL7_2x https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.918</p> <p>While field standards suggest a length of 6, the IS data type length has a maximum length of 20.</p>	X	O
15	Ambulatory Status	IS	20	While field standards suggest a length of 2, the CE data type length has a maximum length of 20.	X	O
19	Visit Number	CX	1913	<p>ODH requires an encrypted visit number by the submitting facility</p> <p>PHVS_IdentifierType_SyndromicSurveillance https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3597</p> <p>Conformance Statement SS-025: PV1-19.5 (Identifier Type Code) SHALL be valued to the Literal Value 'VN'.</p>	R	R

PV1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				While field standards suggest a length of 478, the CX data type length has a maximum length of 1913.		
19.1	[Visit Number] ID Number	ST	15	Encrypted Visit Number by the submitting facility. This value may be provided back to the submitting or treating facility for potential re-identification if a public health concern is identified from syndromic surveillance data.	R	R
19.2	[Visit Number] Check Digit	ST	1		X	X
19.3	[Visit Number] Check Digit Scheme	ID	3		X	X
19.4	[Visit Number] Assigning Authority	HD	227		X	O
19.5	[Visit Number] Identifier Type Code	ID	5	For ODH, use "VN" PHVS_IdentifierType_SyndromicSurveillance https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3597	R	R
36	Discharge Disposition	IS	3	This field contains the coded discharge disposition of the patient. PHVS_DischargeDisposition_HL7_2x https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.915 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. In addition, population of PID-29 (Patient Death Date and Time) and PID-30 (Patient Death Indicator) should be provided.	R (A03), RE (A08, A04), X (A01)	R (A03), RE (A08, A04), X (A01)
44	Admit Date/Time	TS	26	Populate this field with the date and time the patient was registered.	R	R

PV1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				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]'		
45	Discharge Date/Time	TS	26	<p>Populate this field with the date and time the patient was discharged.</p> <p>Conformance Statement SS-012: If present in the A08, 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]'</p> <p>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[S]]]]] [+/- ZZZZ]'</p>	RE (A08), R (A03), X (A01, A04)	RE (A08), R (A03), X (A01, A04)

PV2 Segment fields

PV2 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
3	Admit Reason (clinical assessment)	CE	483	<p>This field contains a coded reason for the patient's admission. The syndromic surveillance program prefers all reasons and symptoms for admission, not just a single value. This field allows for repetitive code sets. Please submit all admit reasons clinically provided, not the highest ranking by the electronic health record system or content from a drop-down list. ODH will take the</p>	RE	RE

PV2 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>clinical information and categorize the data into syndrome and symptom categories.</p> <p>This field SHOULD NOT be updated with additional clinical or discharge diagnosis information. Corrections are permitted.</p> <p>Please note that this is a clinical assessment, not what the patient stated in their chief complaint. These fields should be kept separate. The Clinical Impression/Preliminary Diagnosis concept code (Appendix C) is also available to provide a free-text clinical impression or preliminary diagnosis rather than PV2-3.2 without a coded value in PV2-3.1 and PV2-3.3.</p> <p>The coded values should be provided as (1.) International Classification of Diseases, Tenth Revision, Clinical Modification (ICD-10-CM), (2.) SNOMED-CT® codes, or (3.) International Classification of Diseases, Ninth Revision, Clinical Modification (ICD-9-CM). From previous submissions, values of “Other”, “General reasons”, “Illness/Injury”, or other non-descript values are not considered acceptable content as they are too vague. Submitted coded values should match a properly defined value (e.g., “IMO0001” is not acceptable in PV2-3.1 or as part of PV2-3.2).</p> <p>If only free text data is available, this should be entered into PV2-3.2.</p> <p>See links to the value sets below: ICD-10-CM: PHVS_AdministrativeDiagnosis_CDC_ICD-10CM https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.7356,</p>		

PV2 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>SNOMED-CT®: PHVS_Disease_CDC https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.909,</p> <p>or</p> <p>ICD-9-CM: PHVS_AdministrativeDiagnosis_CDC_ICD-9CM https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.856.</p> <p>While still permitted in syndromic surveillance reporting, the Ohio Department of Health (ODH) would prefer receipt of ICD-10-CM and SNOMED-CT® codes, whenever available. These codes are used for billing and statistical purposes for clinical documentation.</p> <p>Conformance Statement SS-009: The implementation SHALL support all 3 value sets for PV2-3 (Admit Reason): ICD-9-CM, ICD-10-CM, and SNOMED-CT®.</p> <p>Condition Predicate: If PV2-3.1 (the identifier) is provided then PV2-3.3 is valued.</p> <p>Conformance Statement SS-026: PV2-3.3 (Admit Reason Code System Name) SHALL be valued to one of the Literal Values in the set 'I10', 'I9CDX', 'SCT'.</p> <p>While field standards suggest a length of 478, the CE data type length has a maximum length of 483.</p>		
3.1	[Admit Reason] Identifier	ST	20	Coded value from ICD-9-CM, ICD-10-CM or SNOMED-CT® PHIN VADS set above	RE	RE

PV2 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
3.2	[Admit Reason] Text	ST	199	Text value from the ICD-9-CM, ICD-10-CM or SNOMED-CT® PHIN VADS set above. Free-text is permitted, if no code is submitted in PV2-3.1 The Clinical Impression/Preliminary Diagnosis concept code (Appendix C) is also available to provide a free-text clinical impression or preliminary diagnosis if an admit reason is not provided.	RE	RE
3.3	[Admit Reason] Name of Coding System	ID	20	Coded value. Values are literally 'I9CDX', 'I10', or 'SCT'. The code set(s) will always be found in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338	RE	RE

DG1 Segment fields

DG1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Set ID - DG1	SI	4	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	R	R
3	Diagnosis Code	CE	483	Multiple DG1 segments can be submitted for each diagnosis. Each diagnosis should come from a designated code set (see PV2-3; ICD-9-CM, ICD-10-CM, or SNOMED-CT®) permitted. Ohio prefers receiving ICD-10-CM and SNOMED-CT® diagnoses over ICD-9-CM as there is more information available in the expanded code sets. If submitting ICD-9-CM codes, include V-codes and E-codes.	R	R

DG1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>If submitting ICD-10-CM codes, please include V, W, X, Y, Z, and select T codes. Please send all codes, including injury related codes that are available in the EHR. Each diagnosis code provided should have a text value (which may provide an enhanced diagnosis over a general category; DG1-3.2), the diagnosis code set it is derived from (DG1-3.3), and a diagnosis type (DG1-6). If the EHR diagnosis is only matched on names, additional work should be conducted to assure the correct coding (<i>e.g.</i>, influenza A diagnoses should not be matched with only pandemic strain final diagnoses). Diagnoses could be provided in repeats in DG1-3, but more often are provided with repeat DG1 segments. Diagnoses should be sent on a regular basis. Final discharge diagnosis sets should be provided as soon as possible.</p> <p>This field can accept repetitious values from a code set; multiple codes may be sent. The first diagnosis code should be the primary diagnosis, whenever possible. Alternatively, please use the order or significance in DG1-15 (primary=1, secondary=2, etc.) with separate DG1 segments with each diagnosis code.</p> <p>Condition Predicate: If the DG1 Segment is provided, DG1-3 (Diagnosis) is required to be valued.</p> <p>While field standards suggest a length of 478, the CE data type length has a maximum length of 483.</p>		
3.1	[Diagnosis code] Identifier	ST	20	<p>Valid codes come from one of the following sets:</p> <p><u>ICD-10-CM: PHVS_AdministrativeDiagnosis_CDC_ICD-10CM</u> https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7356,</p>	R	R

DG1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>SNOMED-CT®: PHVS_Disease_CDC https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.909,</p> <p>or</p> <p>ICD-9-CM: PHVS_AdministrativeDiagnosis_CDC_ICD-9CM https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.856.</p> <p>Conformance Statement SS-011: The implementation SHALL support all 3 value sets.</p>		
3.2	[Diagnosis code] Text	ST	199	A text description is provided for the diagnosis code identifier provided. It may be a specific text diagnosis, especially if the provided code is a general or “unspecified” from all of the preceding subheadings.	RE	RE
3.3	[Diagnosis code] Name of Coding System	ID	20	<p>This field will be populated with the correct value (literally, ‘I10’, ‘I9CDX’, or ‘SCT’) for the value provided in DG1-3.1.</p> <p>Conformance Statement SS-033: DG1-3.3 SHALL be valued to one of the Literal Values in the set (‘I10’, ‘I9CDX’, ‘SCT’).</p> <p>The code set(s) will always found in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3338</p>	R	R
5	Diagnosis Date/Time	TS	26	When the diagnosis was provided. This is different than the discharge date (PV1-45). This value should have the following format: ‘YYYYMMDDHHMM[SS.S[S[S[S]]]] [+/-ZZZZ]’	O	O
6	Diagnosis Type	IS	2	Diagnosis type, in combination of the diagnosis date/time field, informs when the patient diagnoses were made (literally, ‘A’ (Admitting), ‘F’ (Final), or ‘W’ (Working)). Whenever a DG1	R	R

DG1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				segment is provided or DG1-3 field is populated, this field is provided too. Diagnosis Type: https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.827 Conformance Statement SS-040: DG1-6 (Diagnosis Type) SHALL be either A (Admitting), F (Final), or W (Working).		
15	Diagnosis Priority	ID	2	This field identifies the order or significance of the diagnosis code (DG1-3). A value of '1' is primary, '2' is secondary,... A value of '0' is not included in diagnosis ranking.	O	O

PR1 Segment fields

(Sending the procedure segment is optional. If the facility opts to send the procedure codes, the following usage applies.)

PR1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Set ID – PR1	SI	4	Conformance Statement SS-034: PR1-1 (Set ID) for the first occurrence of a PR1 Segment SHALL have the Literal Value of '1'. Each following occurrence SHALL be numbered consecutively.	X	R
3	Procedure Code	CE	483	This field contains procedure values and descriptions that the patient had during the visit. For ICD-10-PCS, use https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7371	X	R

PR1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>For Current Procedural Terminology, Fourth Edition (CPT-4), use an appropriate Centers for Medicare and Medicaid Services or American Medical Association reference.</p> <p>For ICD-9-CM Procedural Codes (Volume 3), if appropriate, use https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.962</p> <p>While field standards suggest a length of 478, the CE data type length has a maximum length of 483.</p>		
3.1	[Procedure Code] Identifier	ST	20	Condition Predicate: If PR1-3.1 (the identifier) is provided then PR1-3.3 is valued.	X	C(R/X)
3.2	[Procedure Code] Text	ST	199	Text value form the ICD-9-CM or ICD-10-PCS PHIN VADS set above.	X	O
3.3	[Procedure Code] Name of Coding System	ID	20	<p>If using ICD-10-PCS, the code is 'I10P'. If using ICD-9-CM, use 'I9CP'. If using CPT-4, the code is 'C4'.</p> <p>PHVS_CodingSystem_HL7_2x_Table0396: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338</p> <p>Condition Predicate: If PR1-3.1 (the identifier) is provided then PR1-3.3 is valued.</p> <p>The code set(s) will always found in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338</p>	X	C(R/X)
5	Procedure Date/Time	TS	26	This value should have the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]] [+/-ZZZZ]'	X	R

PR1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				This field is required if submitting a PR1 segment.		

OBX Segment fields

OBX Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Set ID - OBX	SI	4	Conformance Statement SS-027: OBX-1 (Set ID) for the first occurrence of an OBX Segment SHALL have the Literal Value of '1'. Each following occurrence SHALL be numbered consecutively.	R	R
2	Value Type	ID	VARIES	<p>Please use the following template for common value (data) types:</p> <p>"When the value type is [], then OBX-5 has a max. length of []" 'CWE', 705. Note: all components of CWE type follow as component fields (OBX-5.1=Identifier, OBX-5.2=Text, OBX-5.3=Name of coding system (typically listed on a set in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338, etc.).</p> <p>'NM', 199 'ST', 199 'TX', 65536 'XAD', 631. Note: Condition Predicate: OBX-3 = 'SS002^TREATING FACILITY LOCATION^PHINQUESTION' OBX-5.1 = Facility street address OBX-5.2 = Other Designation OBX-5.3 = City</p>	R	R

OBX Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				OBX-5.4 = State or Province https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.830 OBX-5.5 = Zip or postal code OBX-5.6 = Country https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.828 OBX-5.7 = Address type https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.801 OBX-5.8 = Other geographic designation OBX-5.9 = County/Parish code (FIPS, 5 digit) https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.829		
3	Observation Identifier	CE	483	Multiple OBX concept codes are available for syndromic surveillance, with some required. Please see Appendix C (Additional OBX Concept Codes for Submission) for a list of usual syndromic surveillance data observations. The current version of the set can be found in the hyperlink in OBX-3.1 (PHVS_ObservationIdentifier_SyndromicSurveillance)	R	R
3.1	[Observation Identifier] Identifier	ST	20	The values for these observations will be from: PHVS_ObservationIdentifier_SyndromicSurveillance https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3589	R	R
3.2	[Observation Identifier] Text	ST	199		R	R
3.3	[Observation Identifier] Name of Coding System	ID	20	At the time of publication of this technical specification, the value will literally be 'LN' (LOINC) or 'PHINQUESTION'. The code set will always found in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396	R	R

OBX Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338		
4	Observation Sub-ID	ST	20		X	0
5	Observation Value	VARIES	99999	<p>The value provided will always match the data type provided in OBX-2.</p> <p>If the OBX-2 value is CWE, the value in OBX-5.3 will always be listed in HL7 Table 0396.</p> <p>If the OBX-2 value is NM (numeric), the value will be a number and a value will be provided for the next field (units, OBX-6).</p> <p>See OBX-2 and Appendix C (Additional OBX Concept Codes for Submission) for more references.</p>	RE	RE
6	Units	CE	483	<p>See Appendix C (Additional OBX Concept Codes for Submission), for additional examples of OBX segments and units to report.</p> <p>Conformance Statement SS-029: If OBX 3.1 (Observation Identifier) is valued with 21612-7, then OBX-6.1 (Unit Identifier) SHALL be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3402.</p> <p>In OBX-5, for ODH, limit the age reported to months if less than 2 years of age. If equal to or greater than 2 years of age, report age in integer years (rounded down to the integer).</p> <p>For ages reported in years, the literal value of 'a^YEAR^UCUM' should be provided. For ages reported in months (less than 2 years aged), the literal value of 'mo^MONTH^UCUM' should be</p>	C	C(R/X)

OBX Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>provided. No smaller age unit will be provided than month. See ‘patient age – reported’ for an example OBX segment.</p> <p>Conformance Statement SS-030: If OBX 3.1 (Observation Identifier) is valued with 11289-6 then OBX-6.1 (Identifier) SHALL be valued to a member of the set: PHVS_TemperatureUnit_UCUM https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.919. See ‘body temperature’ for an example OBX segment.</p> <p>Conformance Statement SS-031: If OBX 3.1 (Observation Identifier) is valued with 59408-5 then OBX-6.1 (Identifier) SHALL be valued to a member of the set: PHVS_PulseOximetryUnit_UCUM https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3590. See ‘oxygen saturation’ for an example OBX segment.</p> <p>For most unit values provided in OBX-6[.1], the OBX-6.3 value will typically have the literal value of ‘UCUM’. However, if the unit value is not provided in the UCUM subset, the data set must be on HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3338</p>		
6.1	[Units] Identifier	ST	20		C	C(R/X)
6.2	[Units] Text	ST	199		C	C(R/X)
6.3	[Units] Name of Coding System	ID	20	Typically, this will be the literal value, ‘UCUM’. If not, the code set will always found in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396	C	C(R/X)

OBX Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338		
11	Observation Result Status	ID	1	PHVS_ObservationResultStatus_HL7_2x: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.811	R	R
14	Date/Time of the Observation	TS	26	This value should have the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]]' [+/-ZZZZ]	O	O

IN1 Segment fields

(Sending the insurance segment is optional. If the facility opts to send the insurance segment, the following usage applies.)

IN1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Set ID – IN1	SI	4	Conformance Statement SS-TBD: IN1-1 (Set ID) for the first occurrence of an OBX Segment SHALL have the literal value of '1'. Each following occurrence SHALL be numbered consecutively.	X	R
2	Insurance Plan ID	CE	483	This is a user defined field. At this time, Ohio does not have a specific table of values for insurance plans. This set, based on the CE data type, should be available on the HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338 Should one be developed, it will be provided as part of onboard testing with Ohio's vendor or will be distributed once created.	X	X

IN1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
				<p>Please note that multiple (repetitious) values can be submitted for this field.</p> <p>Please list in the order of payer submission (primary payer first, secondary payer second, <i>etc.</i>). This can be accomplished by the order of IN1 segments (<i>e.g.</i>, 'IN1 1 ...', 'IN1 2 ...', 'IN1 3 ...'). See IN1-1 for more information.</p>		
2.1	[Insurance Plan ID] Identifier	ST	20		X	X
2.2	[Insurance Plan ID] Text	ST	199		X	X
2.3	[Insurance Plan ID] Name of coding system	ID	20	<p>See IN1-2 for additional information.</p> <p>The code set will always found in HL7 Table 0396: PHVS_CodingSystem_HL7_2x_Table0396 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.84.0.1.114222.4.11.3338</p>	X	R
3	Insurance Company ID	CX	1913	<p>This is a user defined field. At this time, Ohio does not have a specific table of values for insurance plans. Should one be developed, it will be provided as part of onboard testing with Ohio's vendor or will be distributed once created.</p> <p>Please note that multiple (repetitious) values can be submitted for this field, however, because of a single ID presented in IN1-15, please list only one value set in this field.</p> <p>Please list in the order of payer submission (primary payer first, secondary payer second, <i>etc.</i>). This can be accomplished by the order of IN1 segments (<i>e.g.</i>, 'IN1 1 ...', 'IN1 2 ...', 'IN1 3 ...'). See IN1-1 for more information.</p>	X	R

IN1 Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
3.1	[Insurance Company ID] ID number	ST	15		X	R
3.4	[Insurance Company ID] Assigning Authority	HD	227		X	R
3.5	[Insurance Company ID] Identifier Type Code	ID	5	Based on other standards, the value for this component should be from the following table: PHVS_IdentifierType_SyndromicSurveillance https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3597	X	R
15	Plan Type	IS	20	PHVS_SourceOfPaymentTypology_PHDSC https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3591	X	O

MSA Segment fields

Please note: Ohio's vendor sends confirmation messages for each message received.

MSA Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
1	Acknowledgment Code	ID	2	PHVS_AcknowledgmentCode_HL7_2x https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.958	C	C
2	Message Control ID	ST	20	The message control ID (MSH-10) from the submitted message must be provided back to the sending system. The message control ID value	C	C
3	Text Message	ST	80		X	X

MSA Field / component order	Field name	Data type	Length	Comment	ODH Modified S2 Usage	ODH S3 Usage
4	Expected Sequence Number	NM	15		X	X
5	Delayed Acknowledgment Type				X	X
6	Error Condition	CE	483	<p>PH_MessageErrorConditionCodes_HL7_2x https://phinivads.cdc.gov/vads/ViewCodeSystem.action?id=2.16.84.0.1.113883.12.357</p> <p>This field was used in earlier HL7 standards. Please see HL7 reference material for the ERR segment content when using HL7 2.5.1 messages.</p>	C	C

Appendix C: Additional OBX Concept Codes for Submission[†]

[†] Tables derived from a combination of [PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings, Release 2.0](#) and [Erratum to the PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings ADT Messages A01, A03, A04 and A08 Optional ORU^R01 Message Notation for Laboratory Data HL7 Version 2.5.1 \(Version 2.3.1 Compatible\) Release 2.0](#) and direct values from the most recent version (6) of the Syndromic Surveillance Observation Identifier (<https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3589>) at the time publication.

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
11283-9	Acuity assessment [Function] at First encounter	Initial Acuity	<p><u>Literal values:</u> OBX-2: 'CWE' OBX-3: '11283- 9^INITIAL ACUITY^LN' OBX-5.3: 'HL70432'</p> <p>OBX-5.1-5.2: uses values from: PHVS_AdmissionLevelOfCareCode_HL7_2x: https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.912</p> <p><u>Example shell:</u> OBX 1 CWE 11283- 9^INITIAL ACUITY^LN <OBX-5.1 Acuity identifier value>^<OBX-5.2 Acuity text value>^HL70432 <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O
21612-7	Age:Time:Pt :Patient:Qn: Reported	Patient Age - Reported	<p>For ODH, if Date/Time of Birth (PID-7) is not provided, this concept code is required. Please note that this field is a 'required, but may be empty if not available at the facility'.</p> <p><u>Literal values:</u> OBX-2: 'NM' OBX-3: '21612-7^AGE - REPORTED^LN'</p>	RE	RE

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			<p>OBX-5: Whole number values In OBX-5, for ODH, limit the age reported to months if less than 2 years of age. If equal to or greater than 2 years of age, report age in integer years (rounded down to the integer).</p> <p>OBX-6: Uses values from: PHVS_AgeUnit_SyndromicSurveillance: https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3402</p> <p>For ages reported in years, the literal value of 'a^YEAR^UCUM' should be provided. For ages reported in months (less than 2 years aged), the literal value of 'mo^MONTH^UCUM' should be provided. No smaller age unit will be provided than month.</p> <p>Conformance Statement SS-029: If OBX 3.1 (Observation Identifier) is valued with 21612-7, then OBX-6.1 (Unit Identifier) SHALL be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance: https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3402.</p> <p><u>Example shell:</u> OBX 1 NM 21612-7^AGE - REPORTED^LN <OBX-5 whole number value> <OBX-6.1 identifier value>^<OBX-6.2 text value>^UCUM <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
39156-5	BMI	Body mass index (BMI) [Ratio]	<p>If BMI can be calculated within the EHR, then it is preferable to just receive BMI instead of height and weight. The standard way of calculating BMI is kilograms per meter squared. If BMI is not calculated with these units, please correct OBX-6 (shown below) accordingly or calculate the conversion to kilogram per meter squared.</p>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			<p><u>Literal values:</u> OBX-2: 'NM' OBX-3: '59574-4^BODY MASS INDEX^LN' OBX-6: 'kg/m2^kilogram / (meter squared)^UCUM'</p> <p>OBX-5: BMI value</p> <p><u>Example shell:</u> OBX 1 NM 59574-4^BODY MASS INDEX^LN <OBX-5 BMI value> kg/m2^kilogram / (meter squared)^UCUM <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
11289-6	Body temperature:Temp:Encounter^first:Patient:Qn:	Body temperature	<p>For ODH, this concept code is requested if it is available in the facility's certified electronic health record technology system.</p> <p><u>Literal values:</u> OBX-2: 'NM' OBX-3: '11289-6^BODY TEMPERATURE^LN' OBX-6: 'Cel^degrees Celsius^UCUM' or '[degF]^degrees Fahrenheit^UCUM'</p> <p>OBX-5: Body temperature value OBX-6 Use: PHVS_TemperatureUnit_UCUM https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.919.</p> <p><u>Example shell:</u> OBX 1 NM 11289-6^BODY TEMPERATURE^LN <OBX-5 Body temperature value> <OBX-6.1 identifier value>^<OBX-6.2 text</p>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			value>^UCUM <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value>		
8661-1	Chief complaint:Find:Pt:Patient:Nom:Reported	Chief complaint	<p>For ODH, a self-reported, free-text field with <u>all</u> stated symptoms is required. ODH's syndromic surveillance system performs best with free-text data and multiple symptoms provided. Should a major health event occur, public health will look to this completed concept code first.</p> <p>This field is the patient's self-reported chief complaint or reason for visit. It is distinct from the Admit Reason (PV2-3) field which is the provider's reason for admitting the patient. 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. Some systems may automatically overwrite chief complaint with final diagnosis when the final diagnosis code is assigned. <u>The chief complaint text should NOT be replaced with other information either manually or by the data provider's system.</u> Keep the chief complaint the same as how it was captured at time of admission.</p> <p>Please be aware there was a conflict of data types provided in the PHIN messaging guide version 1.9 for syndromic surveillance. It lists both Conformance Statements SS-005 and SS-006, which lists two different data types. ODH is requesting the use of TX for the chief complaint (OBX-3), which is carried forward and allows for a longer stated chief complaint.</p> <p><u>Literal values:</u> OBX-2: 'TX' OBX-3: '8661-1^CHIEF COMPLAINT – REPORTED^LN' OBX-5: Stated chief complaint</p>	RE	RE

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			<p>Conformance Statement SS-005: The patient's chief complaint SHALL be captured only as an unstructured, free-text note, valued in OBX- 5 [data type], TX [in OBX-3][4]. This method includes chief complaint captured from a coding system or captured as a structured field in the source system.</p> <p><u>Example shell:</u> OBX 1 TX 8661-1^CHIEF COMPLAINT – REPORTED^LN <OBX-5 Stated chief complaint value> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
44833-2	Diagnosis.preliminary:Im p:Pt:Patient: Nom:	Clinical Impression/ Preliminary Diagnosis	<p>A stated clinical impression may provide similar value to the (clinical) admit reason (PV2-3.2). A free-text value may have a greater value over a single coded value (ICD-10-CM, SNOMED-CT® codes) if it is well defined.</p> <p>The LOINC code is listed as “preliminary diagnosis”.</p> <p><u>Literal values:</u> OBX-2: ‘TX’ OBX-3: ‘44833- 2^PRELIMINARY DIAGNOSIS^LN’</p> <p>OBX-5: Stated clinical impression or preliminary diagnosis (free text)</p> <p><u>Example shell:</u> OBX 1 TX 44833- 2^PRELIMINARY DIAGNOSIS^LN <OBX-5 Stated clinical impression (free text) value> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O
8462-4	Diastolic Blood Pressure	Diastolic Blood Pressure	Blood pressures are usually verbally (and on paper) reported with both the systolic and diastolic pressures. For syndromic surveillance, they are reported separately. Diastolic pressures are typically the lower values than	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
	(DBP) – most recent	(DBP) – most recent	<p>the systolic pressures. Exceptions to this are in hypotensive events where the diastolic value cannot be distinguished/determined. When providing a diastolic blood pressure, please also provide the systolic blood pressure for completeness.</p> <p><u>Literal values:</u> OBX-2: 'NM' OBX-3: '8462- 4^DIASTOLIC BLOOD PRESSURE^LN' OBX-6: 'mm[Hg]^MilliMeters of Mercury [Blood Pressure Unit]^UCUM'</p> <p>OBX-5: Diastolic pressure value</p> <p>OBX-6 uses PHVS_BloodPressureUnit_UCUM: https://phinvals.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.920</p> <p><u>Example shell:</u> OBX 1 NM 8462- 4^DIASTOLIC BLOOD PRESSURE^LN <OBX-5 Diastolic pressure value> mm[Hg]^MilliMeters of Mercury [Blood Pressure Unit]^UCUM <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
SS003	Facility / Visit Type	Facility / Visit Type	<p><u>Literal values:</u> OBX-2: 'CWE' OBX-3: 'SS003^FACILITY / VISIT TYPE^PHINQUESTION' OBX-5: For an urgent care: '261QU0200X^Urgent Care^ HCPTNUCC' For an emergency department: '261QE0002X^Emergency Care^HCPTNUCC' For primary care: '261QP2300X^Primary Care^HCPTNUCC' For an Inpatient: '1021-5^Inpatient practice setting^HSLOC'</p>	R	R

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			<p>OBX-5: uses PHVS_FacilityVisitType_SyndromicSurveillance: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.3401</p> <p>Example shell: OBX 1 CWE SS003^FACILITY / VISIT TYPE^PHINQUESTION <OBX-5.1 Facility identifier value>^<OBX-5.2 Facility text value>^< OBX-5.3 Name of coding system value> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
8302-2	Height	Body height	<p><u>Literal values:</u> OBX-2: 'NM' OBX-3: '8302-2^BODY HEIGHT^LN' OBX-6.3: 'UCUM'</p> <p>OBX-5: Patient height value</p> <p>OBX-6 uses PHVS_HeightUnit_UCUM: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.891</p> <p>If BMI can be calculated within the EHR, then it is preferable to just receive BMI instead of height and weight. If BMI is not provided, please provide both height and weight.</p> <p>Example shell: OBX 1 NM 8302-2^BODY HEIGHT^LN <OBX-5 Patient height value> <OBX-6.1 identifier value>^<OBX-6.2 text value>^UCUM <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
11368-8	Illness or injury onset date and time: TmStp: Pt: ^Patient: Qn:	Illness or injury onset date	<p><u>Literal values:</u> OBX-2: 'TS' OBX-3: '11368-8^ILLNESS OR INJURY ONSET DATE^LN'</p> <p>For Ohio data, the minimum data that would be needed is year for OBX-5. A full date is encouraged, if available. The format for OBX-5.1 is: YYYY[MM[DD[HH[MM[SS[.S[S[S(S)]]]]]]]]][+/-ZZZZ]</p> <p><u>Example shell:</u> OBX 1 TS 11368-8^ILLNESS OR INJURY ONSET DATE^LN <OBX-5 Illness or injury onset value> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O
8677-7	Medications Prescribed or Dispensed	History of medication use	<p><u>Literal values:</u> OBX-2: 'CWE' OBX-3: '8677-7^HISTORY OF MEDICATION USE REPORTED^LN' OBX-5.3: 'RXNORM'</p> <p>OBX-5: Coded value sets. Repetition ['~'] of sets is allowed; individual OBX segments are also permitted. Use RxNorm https://phinvads.cdc.gov/vads/ViewCodeSystem.action?id=2.16.840.1.113883.6.88</p> <p><u>Example shell:</u> OBX 1 CWE 8677-7^HISTORY OF MEDICATION USE REPORTED^LN <OBX-5.1 Medication identifier value>^<OBX-5.2 Medication name text value>^RXNORM <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O
10160-0	Medical List / Medical	History of medication use narrative	<p><u>Literal values:</u> OBX-2: 'TX' OBX-3: '10160-0^HISTORY OF MEDICATION USE NARRATIVE^LN'</p>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
	Use Reported		<p>OBX-5: Free text of medications used reported. Please include brand or generic name, route of administration, dosage, and frequency of use. Medical terminology abbreviations are accepted.</p> <p><u>Example shell:</u> OBX 1 TX 10160-0^HISTORY OF MEDICATION USE NARRATIVE^LN <OBX-5 Free text of History of medication use value> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
59408-5	Oxygen saturation: MFr:Pt:BldA :Qn:Pulse oximetry	Oxygen saturation in arterial blood by pulse oximetry	<p><u>Literal values:</u> OBX-2: 'NM' OBX-3: '59408-5^OXYGEN SATURATION IN ARTERIAL BLOOD BY PULSE OXIMETRY^LN' OBX-6: '%^percent [fraction]^UCUM'</p> <p>OBX-5: Pulse oximetry percentage (whole number) value</p> <p>OBX-6 uses PHVS_PulseOximetryUnit_UCUM: https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.3590</p> <p><u>Example shell:</u> OBX 1 NM 59408-5^OXYGEN SATURATION IN ARTERIAL BLOOD BY PULSE OXIMETRY^LN <OBX-5 Pulse oximetry percentage (whole number) value> ^percent [fraction]^UCUM <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O
56816-2	Patient location /	Patient location	<p><u>Literal values:</u> OBX-2: 'CWE' OBX-3: '56816-2^PATIENT LOCATION^LN'</p>	RE	RE

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
	Hospital Unit		<p>OBX-5.3: 'HSLOC'</p> <p>At the time of publication, this code set was not available on PHIN VADS, but was listed in the PHIN messaging guide for Syndromic Surveillance (version 2.0). If you need a copy, please contact the Syndromic Surveillance Program.</p> <p>OBX-5 uses NHSNHealthcareServiceLocationCode: https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.13.19</p> <p>This field vastly expands on the assigned patient location of PV1-3 (Usage: O).</p> <p><u>Example shell:</u> OBX 1 CWE 56816-2^PATIENT LOCATION^LN <OBX-5.1 Location identifier value>^<OBX-5.2 Location text value>^HSLOC <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
11449-6	Pregnancy status - reported	Pregnancy status - reported	<p><u>Literal values:</u> OBX-2: 'CWE' OBX-3: '11449-6^PREGNANCY STATUS - REPORTED^LN' OBX-5.3: 'HL70136' or 'NULLFL', depending on the set used</p> <p>OBX-5.1-5.2 uses PHVS_YesNoUnknown_CDC: https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.888</p> <p>While this field is only optionally reported, additional answer options are available in PH_ExpandedYesNo_HL7_2x:</p>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.820 <u>Example shell:</u> OBX 1 CWE 11449-6^PREGNANCY STATUS - REPORTED^LN <OBX-5.1 Pregnancy status identifier value>^<OBX-5.2 Pregnancy status text value>^<OBX-5.3 Pregnancy status code set> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value>		
11450-4	Problem list Reported	Problem list - Reported	<u>Literal values:</u> OBX-2: 'CWE' OBX-3: '11450-4^PROBLEM LIST - REPORTED^LN' OBX-5.3: 'I9CDX', 'I10', or 'SCT' Repetition ['~'] of sets is allowed in OBX-5; individual OBX segments are also permitted. OBX-5 uses: <u>ICD-10-CM:</u> PHVS_AdministrativeDiagnosis_CDC_ICD-10CM https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.7356 , <u>SNOMED-CT®:</u> PHVS_Disease_CDC https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.909 , or <u>ICD-9-CM:</u> PHVS_AdministrativeDiagnosis_CDC_ICD-9CM https://phinivads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.856 . <u>Example shell:</u>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			OBX 1 CWE 11450-4^PROBLEM LIST - REPORTED^LN <OBX-5.1 Problem list identifier value>^<OBX-5.2 Problem list text value>^<OBX-5.3 Problem list code set> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value>		
54582-2	Provider type [MDSv3]	Provider type [MDSv3]	<p>Literal values: OBX-2: 'CWE' OBX-3: '54582-2^PROVIDER TYPE [MDSv3]^LN' OBX-5.3: 'HCPTNUCC'</p> <p>OBX-5 uses: PHVS_ProviderCodes_NUCC https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.11.19465</p> <p>Example shell: OBX 1 CWE 54582-2^PROVIDER TYPE [MDSv3]^LN <OBX-5.1 Provider Type identifier value>^<OBX-5.2 Provider type text value>^HCPTNUCC <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O
8480-6	Systolic Blood Pressure (SBP) – most recent	Systolic Blood Pressure (SBP) – most recent	<p>Blood pressures are usually verbally (and on paper) reported with both the systolic and diastolic pressures. For syndromic surveillance, they are reported separately. Systolic pressures are typically the higher values than the diastolic pressures. When providing a systolic blood pressure, please also provide the diastolic blood pressure for completeness.</p> <p>Literal values: OBX-2: 'NM' OBX-3: '8480-6^SYSTOLIC BLOOD PRESSURE^LN' OBX-6: mm[Hg]^MilliMeters of Mercury [Blood Pressure Unit]^UCUM</p> <p>OBX-5: Systolic pressure value</p>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			<p>OBX-6 uses PHVS_BloodPressureUnit_UCUM: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.920</p> <p><u>Example shell:</u> OBX 1 NM 8480-6^SYSTOLIC BLOOD PRESSURE^LN <OBX-5 Systolic pressure value> mm[Hg]^MilliMeters of Mercury [Blood Pressure Unit]^UCUM <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
72166-2	Tobacco smoking status	Tobacco smoking status	<p><u>Literal values:</u> OBX-2: 'CWE' OBX-3: '72166-2^TOBACCO SMOKING STATUS^LN' OBX-5.3: 'SCT'</p> <p>OBX-5 uses SNOMED-CT® codes: PHVS_SmokingStatus_MU https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.6027</p> <p><u>Example shell:</u> OBX 1 CWE 72166-2^TOBACCO SMOKING STATUS^LN <OBX-5.1 Tobacco smoking status identifier value>^<OBX-5.2 Tobacco smoking status text value>^SCT <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O
10182-4	Travel History Reported	History of travel narrative	<p>Currently, this field is an open text field for a narrative. Public health groups across the nation are reviewing the data collected for disease reporting to assure all components and methods will satisfy the surveillance needs across many programs.</p> <p><u>Literal values:</u></p>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			<p>OBX-2: 'TX'</p> <p>OBX-3: '10182-4^HISTORY OF TRAVEL NARRATIVE^LN'</p> <p>OBX-5: For Ohio, please consider including the following content:</p> <ul style="list-style-type: none"> Dates of start and end of travel to destinations Destination locations, including other sub-unit locations within the destination (<i>e.g.</i>, country → state or province → county → city → building (<i>e.g.</i>, hotel, restaurant, sightseeing location)) Means of travel to reach destinations (include details, such as flight carrier and number, cruise ship name, <i>etc.</i>) If other travelers were with the patients (family members, group) When the patient started feeling symptomatic Why was the patient traveling (<i>e.g.</i>, work, leisure) <p>Depending on the suspected (or known) clinical information, the duration of the travel history may be a few hours to years.</p> <p><u>Example shell:</u> OBX 1 TX 10182-4^HISTORY OF TRAVEL NARRATIVE^LN' <OBX-5 Free text of History of medication use value> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
SS001	Treating Facility Identifier	Treating Facility Identifier	<p>This may be redundant information from what was provided in EVN-7 (event [treating] facility).</p> <p><u>Literal values:</u> OBX-2: 'HD' OBX-3: 'SS001^TREATING FACILITY IDENTIFIER^PHINQUESTION' OBX-5.3: 'NPI'</p>	R	R

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			<p>OBX-5 uses the National Provider Identifier (NPI; NPI search: https://npiregistry.cms.hhs.gov/) from the Centers for Medicare and Medicaid Services (CMS).</p> <p>Example shell: OBX 1 HD SS002^ TREATING FACILITY IDENTIFIER^PHINQUESTION <OBX-5.1 Treating facility NPI text value>^<OBX-5.2 Treating facility NPI identifier value>^NPI <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
SS002	Treating Facility Location	Treating Facility Location	<p><u>Literal values:</u> OBX-2: 'XAD' OBX-3 = 'SS002^TREATING FACILITY LOCATION^PHINQUESTION'</p> <p>OBX-5.1 = Facility street address OBX-5.2 = Other designation OBX-5.3 = City OBX-5.4 = State or Province https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.830 OBX-5.5 = Zip or postal code OBX-5.6 = Country https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.828 OBX-5.7 = Address type https://phinvas.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.801 OBX-5.8 = Other geographic designation OBX-5.9 = County/Parish code (FIPS, 5 digit). PHVS_County_FIPS_6-4</p>	RE	RE

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.829 Example OBX segment: OBX 1 XAD SS002^TREATING FACILITY LOCATION^PHINQUESTION <OBX-5.1 Facility street address value>^<OBX-5.2 Other designation value>^<OBX-5.3 City value>^<OBX-5.4 State or Province value>^<OBX-5.5 Zip or postal code value>^<OBX-5.6 Country value>^<OBX-5.7 Address type value>^<OBX-5.8 Other geographic designation value>^<OBX-5.9 County or Parish FIPS code (5 digit) value> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value>		
54094-8	Triage note:Find:Pt :Emergency department: Doc:	Emergency Department Triage Notes	<p>For ODH, this concept code is strongly recommended. This concept code identifies possible common sources and/or date(s) of exposure, provides history of medical care (e.g., Narcan administered), supports or refutes the patient's chief complaint information faster than final diagnoses are provided (e.g., "patient not in room when envelope with white powder was opened"), assists with identifying clusters with keywords provided (e.g., mass casualties), and may decrease the need of public health contacting the facility for timely, additional information for determining an appropriate response.</p> <p><u>Literal values:</u> OBX-2: 'TX' OBX-3: '54094-8^EMERGENCY DEPARTMENT TRIAGE NOTES^LN'</p> <p>If the treating facility is not an emergency department, please consider using the urgent care center triage note, 85210-3 (OBX-3: '85210-3^URGENT CARE TRIAGE NOTE^LN'), or the nonspecific triage note, 75500-9 (OBX-3: '75500-9^TRIAGE NOTE^LN').</p>	O	O

Concept Code (OBX-3.1)	Concept Name	Preferred Concept Name	Notes	ODH Modified S2 Usage	ODH S3 Usage
			<p>Please note that triage notes differ from nursing notes (34746-8, OBX-3: '34746-8^NURSE NOTE^LN'). If you are willing to transmit both triage and nurse notes, please inform Ohio's vendor.</p> <p><u>Example shell:</u> OBX 1 TX 54094-8^EMERGENCY DEPARTMENT TRIAGE NOTES^LN' <OBX-5 Free text of emergency department triage notes value> <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>		
3141-9	Weight of the patient	Body weight measured	<p><u>Literal values:</u> OBX-2: 'NM' OBX-3: '3141-9^BODY WEIGHT MEASURED^LN' OBX-6.3: 'UCUM'</p> <p>OBX-5: Patient weight value</p> <p>OBX-6 uses PHVS_WeightUnit_UCUM: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.11422.2.4.11.879</p> <p>If BMI can be calculated within the EHR, then it is preferable to just receive BMI instead of height and weight. If BMI is not provided, please provide both height and weight.</p> <p><u>Example shell:</u> OBX 1 NM 3141-9^BODY WEIGHT MEASURED^LN' <OBX-5 Patient weight value> <OBX-6.1 Weight identifier value>^<OBX-6.2 Weight text value>^UCUM' <OBX-11 Observation result status value> <OBX-14 Date/time of the observation value></p>	O	O

Appendix D: Example of HL7 Message with Required Field Names for Submission to the Ohio Department of Health for Stage 3

MSH|^~\&||<Sending Facility>||<Date/Time of Message>||<Message Type>|<Message Control ID>|<Processing ID>|<Version ID>|||||||<Message Profile Identifier>

EVN|<Event Type Code>|<Recorded Date/Time>||||<Event Facility>

PID|<Set ID – PID>||<Patient Identifier List>||<Patient Name>||<Administrative Sex>||<Race>|<Patient Address>|||||||<Ethnic Group>

PV1|<Set ID – PV1>|<Patient Class>|||||||<Visit Number>|||||||<Discharge Disposition>|||||<Admit Date/Time>|<Discharge Date/Time>

PV2|||<Admit Reason>

DG1|<Set ID – DG1>||<Diagnosis Code – DG1>||<Diagnosis Type>

OBX|<Set ID – OBX>|<Value Type>|<Observation Identifier>||<Observation Value>||||<Observation Result Status>

IN1|<Set ID>|<Insurance Plan ID>|<Insurance Company ID>

Appendix E: Example of HL7 Message with Required Field Names or Components (bolded) for Submission to the Ohio Department of Health for Stage 3

MSH|^~\&||<Sending Facility>||<Date/Time of Message>||<Message Code>^<Trigger Event>^<Message Structure>|<Message Control ID>|<Processing ID>|<Version ID>|||||||<Message Profile Identifier>

EVN|<Event Type Code>|<Recorded Date/Time>||||<Namespace ID>^<Universal ID>^<Universal ID Type>

PID|<Set ID – PID>||<[Patient Identifier List] ID Number>^<[Patient Identifier] Check Digit>^<[Patient Identifier] Check Digit Scheme>^<[Patient Identifier] Assigning Authority>^<[Patient Identifier] Identifier Type Code>||^<Name Type>||<Administrative Sex>||<[Race] Identifier>^<[Race] Text>^<[Race] Name of Coding System>|<Street Address>^<Other Designation>^<City>^<State>^<Zip or Postal Code>^<Country>^<Address Type>^<Other Geographic Designation>^<County/Parish Code (FIPS 5 digit)>|||||||<[Ethnic] Identifier>^<[Ethnic] Text>^<[Ethnic] Name of Coding System>

PV1|<Set ID – PV1>|<Patient Class>|||||||<[Visit Number] ID Number>^<[Visit Number] Check Digit>^<[Visit Number] Check Digit Scheme>^<[Visit Number] Assigning Authority>^<[Visit Number] Identifier Type Code>|||||||<Discharge Disposition>||||||<Admit Date/Time>|<Discharge Date/Time>

PV2||<[Admit Reason] Identifier>^<[Admit Reason] Text>^<[Admit Reason] Name of Coding System>

DG1|<Set ID – DG1>||<[Diagnosis Code] Identifier>^<[Diagnosis Code] Text>^<[Diagnosis Code] Name of Coding System>||<Diagnosis Type>

OBX|<Set ID – OBX>|<Value Type>|<Observation Identifier>||<[Number of Subcomponents Varies Based on OBX-2 (Value Type)]>||||<Observation Result Status>

IN1|<Set ID>|<[Insurance Plan ID] Identifier>^<[Insurance Plan ID] Text>^<[Insurance Plan ID] Name of coding system>|<[Insurance Company ID] ID number>^<[Insurance Company ID] Check Digit>^<[Insurance Company ID] Check Digit Scheme>^<[Insurance Company ID] Assigning Authority>^<[Insurance Company ID] Identifier Type Code>

Appendix F: Suppressed Fields

Fields or Components Specifically to Exclude / Suppress for Syndromic Surveillance
Messages to the Ohio Department of Health

HL7 Segment/Field/Subcomponent	HL7 Description
PID-5.1 through PID-5.6, PID-5.8 through PID-5.14	Patient name, with the exception of Name Type (to ensure anonymity)
PID-6	Mother's Maiden Name
PID-9	Patient Alias
PID-11.1, PID-11.2, and PID-11.8	Patient Street Address, Other Designation subcomponents, Other Geographic Designation
PID-13 through PID-17	Home and Business Phone Numbers, Primary Language, Marital Status, Religion
PID-19 through PID-21	SSN, Driver's License Number, Mother's Identifier
PID-23 through PID-28	Birth Place, Multiple Birth Indicator, Birth Order, Citizenship, Veterans Military Status, Nationality
NK Segment	Next of Kin Segments
MRG-7	Prior Patient Name
IN1-16	Name of Insured
IN1-19	Address of Insured
GT1 Segment	Guarantor segment

Fields that are not supported (marked only as data type = 'X' and conditionally not supported (C(R/X))) may also be suppressed.

Data References Frequently Used by Syndromic Surveillance

ODH's Syndromic Surveillance policy webpage: <https://www.odh.ohio.gov/healthstats/HIT/Sys.aspx>

Ohio Public Health Reporting (OPHR) web application: <http://ohiopublichealthreporting.info>

Office of the National Coordinator of Health Information Technology's Certified Health IT Product List: <https://chpl.healthit.gov/>

Medicare Program; Merit-Based Incentive Payment System (MIPS) and Alternative Payment Model (APM) Incentive Under the Physician Fee Schedule, and Criteria for Physician-Focused Payment Models: <https://www.federalregister.gov/documents/2016/11/04/2016-25240/medicare-program-merit-based-incentive-payment-system-mips-and-alternative-payment-model-apm>

Medicare and Medicaid Programs; Electronic Health Record Incentive Program-Stage 3 and Modifications to Meaningful Use in 2015 Through 2017: <https://www.federalregister.gov/documents/2015/10/16/2015-25595/medicare-and-medicaid-programs-electronic-health-record-incentive-program-stage-3-and-modifications>

2015 Edition Health Information Technology (Health IT) Certification Criteria, 2015 Edition Base Electronic Health Record (EHR) Definition, and ONC Health IT Certification Program Modifications: <https://www.federalregister.gov/documents/2015/10/16/2015-25597/2015-edition-health-information-technology-health-it-certification-criteria-2015-edition-base>

PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings, Release 2.0 (April, 2015): https://www.cdc.gov/nssp/documents/guides/syndrsurvmsgagguid2_messagingguide_phn.pdf

Erratum to the PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings ADT Messages A01, A03, A04 and A08 Optional ORU^R01 Message Notation for Laboratory Data HL7 Version 2.5.1 (Version 2.3.1 Compatible) Release 2.0 April 21, 2015: <https://www.cdc.gov/nssp/documents/guides/erratum-to-the-cdc-phin-2.0-implementation-guide-august-2015.pdf>

Health Level Seven (HL7) messaging standards 2.5.1 (creation of an account is necessary to download): http://www.hl7.org/implement/standards/product_brief.cfm?product_id=144

PHIN Vocabulary Access and Distribution System (VADS): <http://phinvads.cdc.gov/>

Logical Observation Identifiers Names and Codes (LOINC) resource: <http://loinc.org/>

Systematized Nomenclature of Medicine-Clinical Terms (SNOMED-CT®): <http://www.ihtsdo.org/snomed-ct/>

International Classification of Diseases, Ninth Revision, Clinical Modification: <https://www.cdc.gov/nchs/icd/icd9cm.htm>

International Classification of Diseases, Tenth Revision, Clinical Modification: <https://www.cdc.gov/nchs/icd/icd10cm.htm>

National Provider Identifier (NPI): To search for, or to apply for a NPI: <https://npiregistry.cms.hhs.gov/>