Michigan Syndromic Surveillance System (MSSS) Emergent/Urgent Data Submission Guide

Guidelines for Electronic Syndromic Submission to the Michigan Department of Health and Human Services

May 19, 2017

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Background and Overview

What is the Michigan Syndromic Surveillance System (MSSS)?

The Michigan Syndromic Surveillance System (MSSS) is a real-time surveillance system that tracks the chief presenting complaints from healthcare providers allowing public health officials and providers to monitor trends and investigate unusual increases in symptom presentations.

Why has the MSSS been developed?

The Syndromic Surveillance System provides real-time situational awareness of potential public health threats and emergencies. The system sends alerts to Michigan public health officials when unusual increases in symptom presentations are detected, and Michigan Department of Health and Human Services (MDHHS) epidemiologists can analyze findings, investigate further, and contact local public health agencies and providers.

De-identified data is also transmitted from MSSS to the Centers for Disease Control and Prevention (CDC) National Syndromic Surveillance Program (NSSP). Emergency departments participating in syndromic surveillance in Michigan have contributed data for national surveillance since as far back as 2008. Additional information about NSSP is available at: https://www.cdc.gov/nssp/index.html.

The MSSS has been a joint project with the Michigan Bureau of Disease Control, Prevention and Epidemiology (BDCPE), Michigan Office of Public Health Preparedness (OPHP), Michigan Department of Technology, Management & Budget (DTMB) and Altarum Institute.

Meaningful Use and MSSS

Emergent and urgent care centers are to use the *PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings* available here: https://www.cdc.gov/nssp/documents/guides/SyndrSurvMessagGuide2_MessagingGuide_PHN.pdf. The HL7 data elements requirements listed in Appendix B used this guide as its basis.

Michigan receives syndromic data from hospital emergency departments and urgent care centers (emergent care). Michigan currently does not accept data from non-urgent care settings and has no plans to accept messages for inpatient data. The table below details the healthcare provider settings from which Michigan will accept syndromic data.

Health System Setting	Patient Population	Patient Population Explanation
Hospitals	All patients from **Emergent** settings	**Emergency Department registrations only**. No data accepted from hospital inpatient visits. There is no other department within a health system's hospitals that MSSS wants data from.
Urgent Care	All patients from **Urgent Care (emergent)** settings	**Urgent Care registrations onl**y. While patients in urgent care may be considered "outpatients," urgent care feeds are grouped with Hospitals as "emergent" sites for syndromic surveillance. No data accepted from inpatient visits.
Non-Urgent Care (Clinics, MD/DO Physicians, other ambulatory providers)	**No data** accepted	No data accepted

For more information on definitions of these categories, please visit the Centers for Medicare and Medicaid Services (CMS) EHR Incentive Program page at https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/.

Eligible Hospitals and Providers that wish to fulfill the Meaningful Use public health objective of capability to submit electronic syndromic surveillance data to public health agencies must comply with the following regulations:

1. Michigan's Capacity to Accept Syndromic Surveillance Data
2. CMS Final Rules for the EHR Incentive Program
3. ONC Final Rules for Health Information Technology Standards, Implementation Specifications, and Certification Criteria for EHR Technology

Visit www.michiganhealthit.org/public-health/ for more information on the meaningful use interactions with public health and the MSSS in Michigan. Eligible Providers who need guidance or have questions regarding the Medicare and Medicaid Incentive Program and Meaningful Use in general should visit the M-CEITA website (www.mceita.org) for valuable information.

1. Michigan's Capacity to Accept Syndromic Surveillance Data

MDHHS has determined MSSS has the capacity to receive syndromic data in accordance with the established meaningful use vocabulary and content exchange standards for eligible hospital emergency departments (not inpatient hospital departments) and urgent care centers.

In August 2013, MDHHS announced an invitation for certain ambulatory care providers (Eligible Professionals or EPs) to submit data to MSSS and onboarding efforts continued in 2014 and 2015. In late 2015, CMS announced rule changes to the EHR Incentive Program, including provisions that Syndromic Surveillance will only be available for Urgent Care settings when Stage 3 takes effect. Since this means that Michigan EPs will no longer be able to select MSSS in Stage 3, MDHHS is taking steps now to reduce

the burden for Michigan EPs. As of January 1, 2016, MDHHS is no longer accepting Syndromic data from eligible professionals in non-urgent care settings.

According to the final rule, eligible professionals can claim an exclusion if the eligible professional is not in a category of providers from which ambulatory syndromic surveillance data is collected by their jurisdiction's syndromic surveillance system. This will be the case for EPs in Michigan as of 1/1/2016.

For more information please see the Public Health Meaningful Use FAQ at:
https://www.michiganhealthit.org/public-health/faq/

2. CMS Final Rules for the EHR Incentive Program

See https://www.cms.gov/Regulations-and-Guidance/Legislation/EHRIncentivePrograms/index.html

3. ONC Final Rules for Health Information Technology Standards, Implementation Specifications, and Certification Criteria for EHR Technology

See https://www.healthit.gov/policy-researchers-implementers/standards-and-certification-regulations

How to Send Data Electronically

To participate in the MSSS, a submitter must:

1. Be able to create an outbound HL7 message.
2. Transport the message.
3. Test the message.
4. Move new data feed into production.

1. Outbound HL7 Message Format

The MSSS can accept an HL7 2.3.1 or HL7 2.5.1 message, however starting in January 2013, the MSSS will only accept new connections using the HL7 2.5.1 format specified in Appendix B. The data elements for these guides are based on the latest national guides available at the time. The specific guides and version, along the message specifications, are listed in Appendix B.

Facilities that are currently sending data using the HL7 message format outlined in previous version of the MSSS Data Submission Guides (also known as the Legacy MSSS format) can continue to use that format. Facilities that are sending the Legacy MSSS message format can qualify for Stage 1 Meaningful Use; however, Stage 2 Meaningful Use requires the use of the new MSSS message format that is listed in Appendix B.

2. Transport the Message

Facilities wishing to send data should contact their respective Sub-State Health Information Exchange or Qualified Organization (Sub-State HIE or QO) regarding the status of their capacity for processing syndromic messages. MDHHS currently plans to only accept new connections to the MSSS via sub-state HIEs. If other transportation options are needed, please contact the Technical Information contact listed below.

Facilities that are sending data to the MSSS as of December 31, 2012 will be able to continue to send with the current transport methodology until such time that the facility wishes to transition away from the Legacy MSSS message format. At that time, the facility will have to transition to a message transport method that goes through a sub-state HIE.

3. Test the Message

Structure and Contents

Like message transport, your local HIE may be able to help with testing the message structure and contents. **A web-based message validator is available for the MDHHS Syndromic Message listed in this guide and prospective senders are expected to evaluate their syndromic message with this utility.** Submitting a test message to the validator will satisfy the One Test requirement for Stage 1 Year 1 of Meaningful Use for Syndromic Surveillance.

To obtain access to the MDHHS Syndromic Message Validator (MDHHS-V), please email the MSSS Help Desk at MSSS.Help@altarum.org.

Transport

Message testing includes the ability to send the message to MDHHS securely as well as testing of the message contents. This will include the reception of the message by the MSSS as well as the

acknowledgement message going back to the sending facility. Transport of the message will likely happen through the sender's sub-state HIE and a potential sender should contact them in regards to their capacity and any setup that is needed. If the sender does not currently subscribe to a sub-state HIE, they should contact Michigan Health Information Network (MiHIN) Shared Services (www.mihin.org) for information on what sub-state HIEs are available. Any HIE wishing to test may contact the MSSS technical contact below to arrange testing.

Sending Test Messages

Potential submitters should visit the Meaningful Use website (www.michiganhealthit.org/public-health/steps-for-meaningful-use/) and register in the Online Health Systems Testing Repository (HSTR). This will serve as notification to the MSSS Staff and begin the testing and onboarding process. The MSSS Staff will then contact the submitter with information on what they will need to do in order to submit a test message to the MSSS testing application. This will include agreeing upon unique identifiers for each facility that will submit data so it can be processed and stored correctly.

After sending the initial test messages to the MSSS, the MSSS onboarding team will provide feedback on message quality and any other items that will need to be changed or fixed.

4. Move to Production

To move to production, MSSS staff must verify that the message is without any errors and is ready to for entry into the production system. At that point, MSSS Staff, the sending facility, and all parties involved will agree on a date to begin sending and receiving messages. Moving submitters into production will typically happen in batch once or twice a month. This will likely cause some delay between the time that a submitter is approved to move to production and when the actual move happens. The MSSS Technical Staff will make any needed changes to the system to move the feed to production and the sender will change any testing flags in the message header (namely, MSH-11) to production.

When a site moves into production, ALL parties that interact with the syndromic message must log that interaction and hold those logs for one year. This includes the sender, any HIEs, the MSSS and any other application or vendor that interacts with the message, even if it only passes through their system.

Contact Information

Question Subject Area	Contact Person
Technical Information Submitter Onboarding Access to Syndromic Validator (MDHHS-V) Troubleshooting/Technical Problems OID Creation and Registration	MSSS Help Desk – Altarum Institute MSSS.Help@altarum.org John Christensen – Altarum Institute John.Christensen@altarum.org
Meaningful Use Verification Meaningful Use Questions	MDHHS Meaningful Use Team MDHHSPublicHealthMU@michigan.gov
User Training/Support (Emergency Departments already in Production)	Katie Arends – MDHHS ArendsK@michigan.gov

Appendix A

MDHHS has defined several categories to help indicate where a prospective submitter is in the testing process. This is intended to help bring prospective submitters going through Michigan's onboarding process in line with terminology that is commonly used in reference to Meaningful Use.

Onboarding Phase	Definition
One Test	A provider who has submitted one message that can be identified as a qualifying Syndromic HL7 message, regardless of whether it is of a quality that would move into production submission. Submitting a test message to the web-based message validator (MDHHS-V) will satisfy the One Test requirement. This would pass Stage 1.
Follow-up Submission	A provider who: • Is not in production • Has submitted at least one message and entered the One Test Phase Providers are assumed to be working on message quality independently given the available tools, the MSSS Data Submission Guide and/or the feedback given from their initial test. Entering this phase is a requirement of Stage 1 Meaningful Use to prove intent to move towards production status. Failure to adequately engage in Follow-up Submission will jeopardize the provider's ability to meet Stage 1 Meaningful Use in the second year. **As part of Follow-up Submission, providers are expected to send at least one test message to the MDHHS-V or MSSS Test during each calendar quarter.**
On-Going Submission	A provider who: • Is currently in production **OR** • Has been approved for production, but is waiting for the transition date **OR** • Has registered in the Online HSTR and notified MSSS Staff of the intent to move to production within their reporting period, but is still engaged in testing and validation at the end of their reporting period **OR** • Has registered in the Online HSTR and notified MSSS Staff of the intent to move to production within their reporting period, but is awaiting invitation to test by MDHHS Providers are assumed to be working on message quality independently given the available tools, the MSSS Data Submission Guide, and the feedback given from their initial test. Subsequent test messages should demonstrate improvement. Those not registered by the reporting period deadline or who fail to participate in the onboarding process by failing to respond to requests from MDHHS for action within 30 days on two occasions will not qualify. This phase is a requirement of Stage 2 Meaningful Use. If this phase is met prior to officially beginning Stage 2 Meaningful Use (i.e., before or during the Stage 1, Year 2 EHR Reporting period), this will also pass Stage 1 MU for the second year. **As part of testing and validation, providers are expected to send at least one test message to the MDHHS-V or MSSS Test during each calendar quarter (or the EHR reporting period quarter in 2014).**

Appendix B

The HL7 message in this guide is derived from the *PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings* and modified for Michigan's specific requirements.

The MSSS requires the use of Object Identifiers (OIDs) in the syndromic message: a Facility OID and an Organizational OID.

- The Facility OID used in EVN-7 corresponds to the Event Facility, which is the location where the patient was treated. Note that senders will need distinct Facility OIDs for emergency and ambulatory data if a location (e.g., hospital + co-located clinics) sees both types of patients. Senders will also need to register unique OIDs for each facility location that treats patients.

- The Organizational OID used in MSH-4 should represent the organization (e.g., health system, parent company) or sender of the message.

- For submitters that are single facilities with no "parent" or "sister" provider locations, the Facility OID and Organizational OID can be the same.

- Information on obtaining an OID can be found in the OID Creation and Registration Guide at https://www.michiganhealthit.org/public-health/msss/

Data elements are marked as follows:

- **R** – Required, Must always be populated
- **RE** – Required, but may be empty.* If the Sender has data, it must be sent. The Receiver must be capable of processing data if sent, and must not raise an error or warning if the data is not sent.
- **C** – Conditionally Required
- **CE** – Conditionally Required but may be empty. The Receiver must be capable of processing data if sent, and must not raise an error or warning if the data is not sent.
- **X** – Not supported
- **O** – Optional

*Usage Note for RE: "The element may be missing from the message, but must be sent by sending application if there is relevant data. A conforming sending application must be capable of providing all 'RE' elements. If conforming sending application knows required values for the element, it must send that element. If conforming sending application does not know the required values, then that element will be omitted." From PHIN Guide p. 95: https://www.cdc.gov/nssp/documents/guides/syndrsurvmessagguide2_messagingguide_phn.pdf

Please refer to the tables in this appendix for information on each segment and field for MSSS submission. Heavily shaded rows in the HL7 specification table below indicate items that are part of the HL7 2.5.1 standard, but not included in any syndromic surveillance specification for the MSSS. For ease of use, elements with a green background color indicate HL7 requirements that are different than those

listed in the *PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings* dated April 21, 2015.

The Segment, Sequence, Length, Data Type, Cardinality, Value Set, HL7 Field Name, and Values/Notes columns below were obtained directly from the PHIN Messaging Guide listed above. The Data Element Name column is MDHHS's interpretation of the data elements listed in both the Emergency Department guide and the Ambulatory guide published by the ISDS. The Requirements and Additional MDHHS Requirements columns were constructed by MDHHS based on the data needs of the MSSS. These final two columns describe requirements needed by MDHHS specifically for our MSSS program and should supersede the national guidance if there is a conflict.

For additional information about data elements, see TABLE 2-5: DATA ELEMENTS OF INTEREST in the *PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings* here:
https://www.cdc.gov/nssp/documents/guides/SyndrSurvMessagGuide2_MessagingGuide_PHN.pdf.

Links to Value Sets for Coded Data Elements (e.g., Discharge Disposition, Race, Patient Class) can also be found in the PHIN Messaging Guide referenced above.

Business Rules

These business rules are adapted from the PHIN Messaging Guide for use by MSSS data submitters:

- Data must be timely for syndromic surveillance. Therefore, 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.***

- All messages that are produced as a result of a single patient encounter for the purpose of syndromic surveillance SHALL have the same value for PV1-19.1 (Visit ID). Messages that are produced as a result of different patient encounters for the purpose of syndromic surveillance, SHALL NOT have the same value for PV1-19.1 (Visit ID).

- When data elements are updated in the sender's system, the entire record (i.e., all specified elements) shall be resent. MSSS will use unique identifiers to match and reconcile records. Sequentially numbered Message Control IDs in MSH 10 make this process easier and are requested.

- Provide syndromic surveillance data for all face-to-face clinical encounters.

- Provide with each syndromic surveillance record, de-identified data that can be securely used to lookup additional information about a patient visit of public health concern.

- If new visit data is available, send updates for **up to six months**. MSSS does not need encounter updates after six months and subsequent update messages should be filtered from submission.

Message Segments

MSSS expects message segments in the following order for ADT A04, A08, and A01 messages.

Segment	Name	Required	Cardinality
MSH	Message Header	R	[1..1]
EVN	Event Type	R	[1..1]
PID	Patient Identification	R	[1..1]
PV1	Patient Visit	R	[1..1]
[PV2]	Patient Visit - Additional Information	RE	[0..1]
{OBX}	Observation / Result	R	[1..*]
[{DG1}]	Diagnosis Information	RE	[0..*]

For ADT A03 messages, the DG1 segments are expected before the OBX segments, per the PHIN Messaging Guide.

General Acknowledgment Message

MSSS is unable to send ACK messages to confirm receipt of Syndromic messages.

Submitters may receive ACK messages as verification that messages were successfully or unsuccessfully received, but the ACKs will not be from the MSSS. These ACKs will be sent from the State's Data Hub.

Message Observations

The following message observations (OBX segments) are required or optional in the message.

For Syndromic Surveillance, the most critical OBX segment is Chief Complaint. The MSSS algorithms look at field OBX 5.9 for free text chief complaint. The Chief Complaint is based on the patient's perspective, so it may be available before the doctor sees the patient. Though the Chief Complaint OBX segment is listed as "RE" (Required but may be empty) in the table below, we are requesting that submitters treat it as "R" (Required).

We will collect facility street addresses at onboarding and therefore request that the Facility Street Address OBX segment **not** be sent.

The Encounter Reason OBX segment has been removed from the table below. Please send Admit or Encounter Reason in PV2 3. See page 38 for more details.

Observation	OBX-3 Coding	Type	Required
Date of Onset	11368-8^^LN	TS	O
Clinical Impression	44833-2^^LN	TX	O
Triage Notes	54094-8^^LN	TX	O
Facility Street Address	SS002^^PHINQUESTION	XAD	X
Age	21612-7^^LN	NM	RE
Initial Temperature	11289-6^^LN	NM	O
Initial Pulse Oximetry	59408-5^^LN	NM	O
Height	8302-2^^LN	NM	O
Weight	3141-9^^LN	NM	O
Blood Pressure Diastolic	8462-4^^LN	NM	O
Blood Pressure Systolic	8480-6^^LN	NM	O
Smoking Status	72166-2^^LN	CWE	O
Chief Complaint	8661-1^^LN	TX (or CWE)*	RE
Facility/Visit Type	SS003^^PHINQUESTION	CWE	R
Initial Acuity	11283-9^^LN	CWE	O

*MSSS will accept Chief Complaint OBX segments as either type TX (new requirement in PHIN Submission Guide) or CWE (previous requirement in PHIN and MSSS Submission Guides). Specifications for both are provided in Appendix B. Note that:

- For type **TX**, chief complaint text must appear in OBX **5.1**.
- For type **CWE**, chief complaint text must appear in OBX **5.9**.

More details are available in the OBX section on starting on page 44 of this guide.

MSH – Message Header Segment

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
MSH	1	1	ST	[1..1]		Field Separator		Default Value "|" (ASCII 124).	MSH-1 (Field Separator). SHALL have the Literal Value of '|'	R	
MSH	2	4	ST	[1..1]		Encoding Characters		Default Values "^~\&" (ASCII 94,126, 92, and 38).	MSH-2 (Encoding Characters) SHALL have the Literal Value of "^~\&"	R	
MSH	3	227	HD	[0..1]	0361	Sending Applications				O	
MSH	4	227	HD	[1..1]	0362	Sending Facility		Field that uniquely identifies the facility associated with the application that sends the message If Acknowledgements are in use, this facility will receive any related Acknowledgement message.		R	MDHHS will **not** be using the NPI as a Facility ID. MDHHS expects the sender to use a registered OID for this field. The OID used in this field should represent the sender of the message. (e.g. if a patient is seen at Lansing Central Hospital and it is part of the Lansing Hospital System which has a unified EHR, the Lansing Hospital System OID would go here) This field may be the same as EVN-7.
MSH	4.1	20	IS	[0..1]	0362	Namespace ID		0362		R	This is the Organization name. Hospitals converting from a Legacy syndromic message should coordinate with MSSS staff to ensure that this field is properly populated to avoid any loss of data from the Legacy message feed.

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
											Must not be the same as the value in EVN 7.1.
MSH	4.2	199	ST	[1..1]		Universal ID		Organizational OID expected		R	Sending Organization OID
MSH	4.3	6	ID	[1..1]	0301	Universal ID Type		0301		R	Value of 'ISO' is expected
MSH	5	227	HD	[0..1]	0361	Receiving Application		0361		R	MSH 5.1 must be "MSSS". MSH 5.2 may be blank or "2.16.840.1.114222.4.3.2.2.3.161.1.6777". MSH 5.3 may be blank or "ISO".
MSH	6	227	HD	[0..1]	0362	Receiving Facility		0362		R	MSH 6.1 must be "MDCH". MSH 6.2 may be blank or "2.16.840.1.114222.4.3.2.2.3.161.1". MSH 6.3 may be blank or "ISO".
MSH	7	26	TS	[1..1]		Date/Time of Message		Note: Date/Time the sending system created the message in the following format:YYYYMMDDHHMM[SS[.S[S[S[S]]]]][+/-ZZZZ] The minimum acceptable precision is to the nearest minute; seconds are desirable. If Coordinated Universal Time (UTC) offset is not sent, it is assumed to be offset of the receiver.	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]'.	R	
MSH	8	40	ST	[0..1]		Security				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
MSH	9	15	MSG	[1..1]		Message Type		Note: All messages will be Admit-Discharge-Transfer (ADT) message types. The triggering event is a real-world circumstance causing the message to be sent. Supported trigger events are A01 (Inpatient Admission), A03 (Discharge), A04 (Emergency Department Registration), and A08 (Update).	MSH-9 (Message Type) SHALL be constrained to be a value in the set ('ADT^A01^ADT_A01', 'ADT^A03^ADT_A03'', 'ADT^A04^ADT_A01'', 'ADT^A08^ADT_A01'').	R	ADT A01, A03, A04 and A08 Messages Only
MSH	9.1	3	ID	[1..1]		Message Code		Literal Value "ADT" or "ACK"		R	"ADT"
MSH	9.2	3	ID	[1..1]		Trigger Event		One of the following literal values: "A01", "A03", "A04", or "A08"		R	"A01", "A03", "A04", or "A08"
MSH	9.3	7	ID	[1..1]		Message Structure		Trigger events A01, A04, and A08 share the same "ADT_A01" Message Structure. One of the following literal values: "ADT_A01" or "ADT_A03", or "ACK"		R	"ADT_A01" or "ADT_A03"
MSH	10	199	ST	[1..1]		Message Control ID		Note: This field is a number or other identifier that uniquely identifies the message.		R	Unique Message Identifier. Sequentially numbered Message Control IDs in MSH 10 make it easier for MSSS to process messages in the proper order and are requested.
MSH	11	3	PT	[1..1]		Processing ID		Note: Indicates how to process the message as defined in HL7 processing rules Literal values: "P" for Production, "D" for Debug or "T" for Training.	MSH-11 (Processing ID) SHALL have a value in the set of literal values ('P, 'D, 'T').	R	Must be 'T' if a Test message or if a sender is in the onboarding process. Must be 'P' if a Production message and the sender has completed the onboarding process. (see #4 on page 7)

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
MSH	12	5	VID	[1..1]		Version ID		Note: HL7 version number used to interpret format and content of the message. Literal value: “2.3.1” or “2.5.1”	MSH-12 (Version ID) SHALL have the Literal Value of ‘2.5.1’.	R	Must be '2.5.1'
MSH	13	15	NM	[0..1]		Sequence Number				X	
MSH	14	180	ST	[0..1]		Continuation Pointer				X	
MSH	15	2	ID	[0..1]	0155	Accept Acknowledgement Type		HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions Usage is C(R/X) with the 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		R	Must be “AL” Note that ACKs will come from the State’s Data Hub not the MSSS
MSH	16	2	ID	[0..1]	0155	Application Acknowledgment Type		HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions Usage is C(R/X) with the 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		C	Note that ACKs will come from the State’s Data Hub not the MSSS
MSH	17	3	ID	[0..1]	0399	Country Code				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
MSH	18	16	ID	[0..1]	0211	Character Set				X	
MSH	19	478	CE	[0..1]		Principal Language Of Message				X	
MSH	20	20	ID	[0..1]	0356	Alternate Character Set Handling Scheme				X	
MSH	21	427	EI	[1..1]		Message Profile Identifier		PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SSReceiver^2.16.840.1.114222.4.10.3^ISO PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-NoAck^SSReceiver^2.16.840.1.114222.4.10.3^ISO PH_SS-Batch^SSR Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Batch^SSReceiver^2.16.840.1.114222.4.10.3^ISO	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-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO”	R	Send as “PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO”

EVN – Event Type Segment

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
EVN	1	3	ID	[0..1]	0003	Event Type Code		This field had been retained for backward compatibility only. Use the second component (trigger event) of MSH-9 - Message Type to transmit event type code information.		O	
EVN	2	26	TS	[1..1]		Recorded Date/Time	Message or Report Date/Time	If data flows through an intermediary or third party, the intermediary must keep the original date/time of transmission. HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]][+/-ZZZZ]	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]'..	R	
EVN	3	26	TS	[0..1]		Date/Time Planned Event				X	
EVN	4	3	IS	[0..1]	0062	Event Reason Code				X	
EVN	5	309	XCN	[0..1]	0188	Operator ID				X	
EVN	6	26	TS	[0..1]		Event Occurred				X	
EVN	7	241	HD	[1..1]		Event Facility		**Definition**: This field identifies the location where the patient was actually treated.		R	
EVN	7.1	20	IS	[0..1]		Namespace ID	Facility Name	Name of originating facility		R	Hospitals converting from a Legacy syndromic message

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
											should coordinate with MSSS staff to ensure that this field is properly populated to avoid any loss of data from the Legacy message feed. Must not be the same as the value in MSH 4.1.
EVN	7.2	199	ST	[1..1]		Universal ID	Facility Identifier	Facility OID expected		R	MDHHS will **not** be using the NPI as a Facility ID. MDHHS expects the sender to use a registered **OID** for this field. The OID used in this field must be specific to the facility/branch location where the patient was treated. (e.g. if a patient is seen at Lansing Central Hospital and it is part of the Lansing Hospital System which has a unified EHR, the Lansing Central Hospital OID would go here) This field may be the same as MSH-4.
EVN	7.3	6	ID	[1..1]		Universal ID Type		https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6050		R	"ISO"

PID – Patient Identification Segment

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PID	1	4	SI	[1..1]		Set ID - PID		Note: This Set ID numbers the repetitions of the segments. Only one patient per message is supported. Literal value: "1"	PID-1 (Set ID) SHALL have the Literal Value of '1'	R	"1"
PID	2	20	CX	[0..0]		Patient ID				X	
PID	3	478	CX	[1..*]		Patient Identifier List	Unique Patient Identifier (Emergent), Medical Record Number (Emergent), Unique Patient/Visit Identifier (Ambulatory)	Value set uses a subset of HL7 2.x Identifier Type table (excluding organization identifier) 2.16.840.1.114222.4.11.3597 PHVS_IdentifierType_SyndromicSurveillance Notes: Data providers and PHAs should determine which unique identifier(s) will be sent in accordance with applicable local and state laws for the purpose of conducting reach-back if necessary. If the sender and receiver agree to support record linkage (of patient records across multiple encounters), a Unique Patient Identifier should be used that will allow the matching and linking of a patient's records across multiple encounters.		R	MDHHS recommends that a masked identifier be used in this field in order to keep this information as de-identified as possible. In reference to the data elements, the Unique Patient Identifier is Required, the use of a Medical Record Number is acceptable though MDHHS would prefer that an anonymized ID be used if possible. PID.3 is a repeating field that can accommodate multiple patient identifiers. However, MDHHS does not need to receive more than one

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
											unique identifier per patient. Please choose one that is present for every patient and suppress the rest of them. Do not send Social Security Number.
PID	3.1	15	ST	[1..1]		ID Number		Note: A Unique Patient Identifier is required (such as Patient Account number or MPI Number). In addition, it is strongly recommended to submit the patient medical record number to facilitate identification of the patient in the event of a required follow-up investigation. Without it, the work required to follow up on the data provider is greatly increased.		R	MDHHS does not need to receive more than one unique identifier per patient. Please choose one that is present for every patient and suppress the rest of them. Do not send Social Security Number.
PID	3.2	1	ST	[0..1]		Check Digit				X	
PID	3.3	3	ID	[0..1]	0061	Check Digit Scheme		0061		X	
PID	3.4	227	HD	[0..1]	0363	Assigning Authority		0363		R	Value should be sent as a 3-part ID that includes the authority's OID. For example "altarum&2.16.840.1.113883.3.3380&ISO"
PID	3.5	5	ID	[1..1]		Identifier Type Code		Identifier Type (Syndromic Surveillance)		R	MDHHS will accept relevant patient ID types

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								Note: Use the Identifier Type Code that corresponds to the type of ID Number specified in PID-3.1. For Medical Record Number, use literal value “MR”. Value Set: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3597			from the PHIN VADS value set, but do not send Visit Number (“VN”) or Social Security Number (“SS”). Medical Record (“MR”) Number is acceptable but MDHHS would prefer that an anonymized ID (“ANON”) be used if submitters are able to produce and send them.
PID	3.6	227	HD	[0..1]		Assigning Facility				O	
PID	3.7	8	DT	[0..1]		Effective Date				X	
PID	3.8	8	DT	[0..1]		Expiration Date				X	
PID	3.9	705	CWE	[0..1]		Assigning Jurisdiction				X	
PID	3.10	705	CWE	[0..1]		Assigning Facility				X	
PID	4	20	CX	[0..0]		Alternate Patient ID - PID				X	
PID	5	294	XPN	[1..*]		Patient Name		**Note**: Syndromic surveillance does not allow the patient name. A Visit or Patient ID, as specified within this guide, shall be used by PHAs to join related visit data and for working with hospitals to find additional visit information for syndromic surveillance signal confirmation or investigation.	**Conformance Statement SS-023**: PID-5 (Patient Name) SHALL be valued with only the constant value "S" or “U” in PID-5.7 Name Type (i.e., PID-5 shall be	R	Required by HL7 Standard, but Syndromic data is to be de-identified. Submitters should only send this field as: |~^^^^^^S|

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								Since, however, HL7 requires the patient name, the field must be populated even when data patient name shall not be sent. In such an instance (i.e., patient name is not sent), patient name shall be presented in a pseudonymized manner.	valued as |~^^^^^^S| or |~^^^^^^U|).		
PID	5.1	194	FN	[0..1]		Family Name				RE	Must be NULL
PID	5.2	30	ST	[0..1]		Given Name				RE	Must be NULL
PID	5.3	30	ST	[0..1]		Second Given Name or Initials				RE	Must be NULL
PID	5.4	20	ST	[0..1]		Suffix				RE	Should be blank per PID-5 notes
PID	5.5	20	ST	[0..1]		Prefix				RE	Should be blank per PID-5 notes
PID	5.6	6	IS	[0..0]	0360	Degree				X	
PID	5.7	1	ID	[1..1]	0200	Name Type Code		0200 Expected Values: “L” (Legal) – used for patient legal name “S” (Pseudonym) – used for de-identification of patient name “U” (Unspecified) – used when patient name is not known		R	Should be "S" per PID-5 notes
PID	5.8	1	ID	[0..1]		Name Representation Code				X	
PID	5.9	483	CE	[0..1]		Name Context				X	
PID	5.10	53	DR	[0..1]		Name Validity Range				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PID	5.11	1	ID	[0..1]	0444	Name Assembly Order				X	
PID	5.12	26	TS	[0..1]		Effective Date				X	
PID	5.13	26	TS	[0..1]		Expiration Date				X	
PID	5.14	199	ST	[0..1]		Professional Suffix				X	
PID	6	294	XPN	[0..*]		Mother's Maiden Name				X	
PID	7	26	TS	[0..1]		Date/Time of Birth				RE	Format of YYYYMMDD
PID	8	1	IS	[0..1]	0001	Administrative Sex	Gender	Use HL7 administrative sex codes as the following: 2.16.840.1.114222.4.11.3403 PHVS_Gender_SyndromicSurveillance		RE	Values of 'M', 'F', 'O' or 'U'
PID	9	294	XPN	[0..0]		Patient Alias				X	
PID	10	478	CE	[0..*]	0005	Race	Race	Race Category (CDC) Note: Patient could have more than one race defined. Value Set: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.836		RE	Should be NULL (blank) if unknown or patient refuses to answer
PID	10.1	20	ST	[0..1]		Identifier		Note: Standardized code for patient race category		RE	"Concept Code" at https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.836
PID	10.2	199	ST	[0..1]		Text		Note: Standardized description associated with code in PID-10.1		RE	"Preferred Concept Name" at https://phinvads.cdc.gov

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
											/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.836
PID	10.3	20	ID	[0..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component PID 10.1.		CE	"CDCREC"
PID	10.4	20	ST	[0..1]		Alternate Identifier				X	
PID	10.5	199	ST	[0..1]		Alternate Text				X	
PID	10.6	20	ID	[0..1]		Name of Alternate Coding System				X	
PID	11	513	XAD	[0..1]		Patient Address		Note: Expecting only the patient primary (current) address information in the supported components		RE	Home City, State, ZIP Code, Country, and County only.
PID	11.1	184	SAD	[0..1]		Street Address				X	Must be NULL
PID	11.2	120	ST	[0..1]		Other Designation				X	Must be NULL
PID	11.3	50	ST	[0..1]		City	Patient City/Town	Helps characterize spatio-temporal patterns for analysis based on patient's residence.		RE	
PID	11.4	50	ST	[0..1]	FIPS 5-2	State or Province	Patient State	It is recommended that the 2-digit (numeric) abbreviation be used for State of the patient domestic home address. Use FIPS state codes as the following: 2.16.840.1.114222.4.11.830 https://phinvads.cdc.gov/vads/ViewVal		RE	"Concept Code" from https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.830. Alpha codes acceptable as "alternate codes"

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								ueSet.action?oid=2.16.840.1.114222.4.11.830			
PID	11.5	12	ST	[0..1]	USPS	ZIP or Postal Code	Patient ZIP Code	Provide a minimum of 5 digits for domestic ZIP codes.		RE	HOME ZIP Only
PID	11.6	3	ID	[0..1]	ISO 3166-1	Country	Patient Country	It is recommended that the 3-character country codes be used for Country of the patient home address. Use ISO country codes as following: 2.16.840.1.114222.4.11.828 ISO 3166-1 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.828		RE	3-character country codes. "USA" for United States "CAN" for Canada "MEX" for Mexico For full list, see https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.828
PID	11.7	3	ID	[0..1]	0190	Address Type		190 ; Expecting value: 'C'		O	"C"
PID	11.8	50	ST	[0..1]		Other Geographic Designation				O	
PID	11.9	20	IS	[0..1]		County/Parish Code	Patient County	Patient's residence County Use 5 digit FIPS County codes as follows: 2.16.840.1.114222.4.11.828 https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.829		RE	5 digit FIPS County codes from https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.829
PID	11.10	20	IS	[0..1]		Census Tract				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PID	11.11	1	ID	[0..1]		Address Representation Code				X	
PID	11.12	53	DR	[0..0]		Address Validity Range				X	
PID	11.13	26	TS	[0..1]		Effective Date				X	
PID	11.14	26	TS	[0..1]		Expiration Date				X	
PID	12	4	IS	[0..0]	0289	County Code				X	
PID	13	250	XTN	[0..*]		Phone Number - Home				X	
PID	14	250	XTN	[0..*]		Phone Number - Business				X	
PID	15	478	CE	[0..1]	0296	Primary Language				X	
PID	16	478	CE	[0..1]	0002	Marital Status				X	
PID	17	478	CE	[0..1]	0006	Religion				X	
PID	18	250	CX	[0..1]		Patient Account Number				X	Expect NULL
PID	19	16	ST	[0..0]		SSN Number - Patient				X	Must be NULL
PID	20	64	DLN	[0..0]		Driver's License Number - Patient				X	Expect NULL
PID	21	250	CX	[0..*]		Mother's Identifier				X	
PID	22	478	CE	[0..1]	0189	Ethnic Group	Ethnicity	**Definition**: This field further defines the patient's ancestry. PHVS_EthnicityGroup_CDC Value set that indicates whether the patient is hispanic or not.		RE	"2135-2^Hispanic or Latino^CDCREC" Or "2186-5^Not Hispanic or Latino^CDCREC"

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								While the standard allows this field to repeat, only expecting one of the mutually exclusive ethnicity codes to be in the message.			Send as "UNK^Unknown^NULLFL" when Ethnicity is unknown or patient refuses to answer
PID	22.1	20	ST	[0..1]		Identifier		Note: Standardized code for patient ethnic group. https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.837		RE	"2135-2" or "2186-5" "UNK" if unknown or patient refuses to answer
PID	22.2	199	ST	[0..1]		Text		Note: Standardized description associated with code in PID-22.1. https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.837		RE	"Hispanic or Latino" or "Not Hispanic or Latino" "Unknown" if unknown or patient refuses to answer
PID	22.3	20	ID	[0..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component PID-22.1.		CE	"CDCREC" "NULLFL" if unknown or patient refuses to answer
PID	22.4	20	ST	[0..1]		Alternate Identifier				X	
PID	22.5	199	ST	[0..1]		Alternate Text				X	
PID	22.6	20	ID	[0..1]		Name of Alternate Coding System				X	
PID	23	250	ST	[0..1]		Birth Place				X	
PID	24	1	ID	[0..1]	0136	Multiple Birth Indicator				X	
PID	25	2	NM	[0..1]		Birth Order				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PID	26	478	CE	[0..*]	0171	Citizenship				X	
PID	27	478	CE	[0..1]	0172	Veterans Military Status				X	
PID	28	478	CE	[0..0]	0212	Nationality				X	
PID	29	26	TS	[0..1] [0..1] [0..1] [0..0]		Patient Death Date and Time		Condition Rule: If the patient expired, this field should contain the patient death date and time. (PV1-36 denotes patient expiration) The minimum acceptable precision is to the nearest minute; seconds are desirable. (meaning if you have/know it send it) If Coordinated Universal Time (UTC) offset is not sent, it is assumed to be offset of the receiver. **Condition Predicate:** If valued, PID-30 (Patient Death Indicator) **SHALL** be valued to the Literal Value 'Y'. **Condition Predicate:** If PV1-36 is valued with any of the following: '20', '40', '41', '42' then PID-29 (Patient Death and Time) **SHALL** be populated.	If valued, PID-29 (Patient Death and Time), SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]][+/-ZZZZ]'	C(R/RE) (A03) C(R/RE) (A08) C(R/RE) (A04) X (A01)	
PID	30	1	ID	[0..1] [0..1] [0..1] [0..0]		Patient Death Indicator		**Definition**: This field indicates whether the patient is deceased. • Y the patient is deceased • N the patient is not deceased This field shall not be populated on an admission message.	If valued, PID-30 (Patient Death Indicator), SHALL be valued to the Literal Value 'Y'.	C(R/RE) (A03) C(R/RE) (A08) C(R/RE) (A04)	"Y" if patient is deceased "N" if not deceased

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								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.		X (A01)	
PID	31	1	ID	[0..1]	0136	Identity Unknown Indicator				X	
PID	32	20	IS	[0..*]	0445	Identity Reliability Code				X	
PID	33	26	TS	[0..1]		Last Update Date/Time				O	
PID	34	241	HD	[0..1]		Last Update Facility				O	
PID	35	478	CE	[0..1]	0446	Species Code				X	
PID	36	478	CE	[0..1]	0447	Breed Code				X	
PID	37	80	ST	[0..1]		Strain				X	
PID	38	478	CE	[0..1]	0429	Production Class Code				X	
PID	39	697	CWE	[0..*]	0171	Tribal Citizenship				X	

PV1 – Patient Visit Segment

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV1	1	4	SI	[1..1]		Set ID – PV1		Note: Set ID numbers the repetitions of the segments Only one patient per message is supported. Literal value: "1"	PV1-1 (Set ID) SHALL have the Literal Value of '1'	R	"1"
PV1	2	1	IS	[1..1]	0004	Patient Class	Patient Class	Used to identify which data stream (setting) the record is coming from. Patient Class (Syndromic Surveillance) Value set: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3404		R	"E" or "O" only MSSS does not want Inpatient data ("I") from submitters
PV1	3	1220	PL	[0..1]		Assigned Patient Location				O	
PV1	4	2	IS	[0..1]	0007	Admission Type		HL7 table 0007: User defined: Admission type This field indicates the circumstances under which the patient was or will be admitted.		O	
PV1	5	250	CX	[0..1]		Pre-Admit Number				X	
PV1	6	1220	PL	[0..1]		Prior Patient Location		INPATIENT DATA ELEMENT OF INTEREST ONLY		X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV1	7	309	XCN	[0..*]	0110	Attending Doctor	Unique Physician Identifier			O	Can be used to identify Physician's Individual (Type 1) NPI. This is only required to identify the physician for Meaningful Use verification and generally does not apply to Emergent/Urgent Care submitters.
PV1	8	309	XCN	[0..*]	0110	Referring Doctor				X	
PV1	9	309	XCN	[0..0]	0110	Consulting Doctor				X	
PV1	10	3	IS	[0..1]	0069	Hospital Service				O	
PV1	11	1220	PL	[0..1]		Temporary Location				X	
PV1	12	2	IS	[0..1]	0087	Preadmit Test Indicator				X	
PV1	13	2	IS	[0..1]	0092	Re-Admission Indicator				X	
PV1	14	6	IS	[0..1]	0023	Admit Source				O	
PV1	15	2	IS	[0..*]	0009	Ambulatory Status				O	
PV1	16	2	IS	[0..1]	0099	VIP Indicator				X	
PV1	17	309	XCN	[0..*]	0010	Admitting Doctor				X	
PV1	18	2	IS	[0..1]	0018	Patient Type				X	
PV1	19	478	CX	[1..1]		Visit Number		A visit is defined as a discrete or unique clinical encounter within a service department or location. **Note**: Every visit will generate a record.		R	All should be unique unless multiple messages are describing the same encounter

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV1	19.1	15	ST	[1..1]		ID Number	Unique Visiting ID (Emergent) Unique Patient/Visit ID (Ambulatory)	Note: Unique identifier for a patient visit		R	
PV1	19.2	1	ST	[0..1]		Check Digit				X	
PV1	19.3	3	ID	[0..1]	0061	Check Digit Scheme				X	
PV1	19.4	227	HD	[0..1]	0363	Assigning Authority				R	Value should be sent as a 3-part ID that includes the authority's OID. For example "altarum&2.16.840.1.113883.3.3380&ISO"
PV1	19.5	5	ID	[1..1]		Identifier Type Code		Identifier Type Note: Use the Identifier Type Code that corresponds to the type of ID Number specified in PV1-19.1.	PV1-19.5 (Identifier Type Code) SHALL be valued to the Literal Value 'VN'.	R	"VN"
PV1	19.6	227	HD	[0..1]		Assigning Facility				O	
PV1	19.7	8	DT	[0..1]		Effective Date				X	
PV1	19.8	8	DT	[0..1]		Expiration Date				X	
PV1	19.9	705	CWE	[0..1]		Assigning Jurisdiction				X	
PV1	19.10	705	CWE	[0..1]		Assigning Facility				X	
PV1	20	50	FC	[0..*]	0064	Financial Class				X	
PV1	21	2	IS	[0..1]	0032	Charge Price Indicator				X	
PV1	22	2	IS	[0..1]	0045	Courtesy Code				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV1	23	2	IS	[0..1]	0046	Credit Rating				X	
PV1	24	2	IS	[0..*]	0044	Contract Code				X	
PV1	25	8	DT	[0..*]		Contract Effective Date				X	
PV1	26	12	NM	[0..*]		Contract Amount				X	
PV1	27	3	NM	[0..*]		Contract Period				X	
PV1	28	2	IS	[0..1]	0073	Interest Code				X	
PV1	29	4	IS	[0..1]	0110	Transfer to Bad Debt Code				X	
PV1	30	8	DT	[0..1]		Transfer to Bad Debt Date				X	
PV1	31	10	IS	[0..1]	0021	Bad Debt Agency Code				X	
PV1	32	12	NM	[0..1]		Bad Debt Transfer Amount				X	
PV1	33	12	NM	[0..1]		Bad Debt Recovery Amount				X	
PV1	34	1	IS	[0..1]	0111	Delete Account Indicator				X	
PV1	35	8	DT	[0..1]		Delete Account Date				X	
PV1	36	3	IS	[1..1] [0..1] [0..1] [0..0]	0112	Discharge Disposition	Discharge Disposition	Discharge Disposition (HL7) This field contains the disposition of the patient at time of discharge (i.e., discharged to home, expired, etc.) and shall be populated in a Discharge message.		R (A03) RE (A08) RE (A04) X (A01)	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								Notes: This field shall not be populated in an Admission message (A01). A03 Usage=R, Cardinality = [1..1] A08 Usage=RE, Cardinality = [0..1] A04 Usage=RE, Cardinality = [0..1] A01 Usage= X, Cardinality [0..0] Value set https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.915			
PV1	37	47	DLD	[0..1]	0113	Discharged to Location				X	
PV1	38	478	CE	[0..1]	0114	Diet Type				X	
PV1	39	2	IS	[0..1]	0115	Servicing Facility				X	
PV1	40	1	IS	[0..0]	0116	Bed Status				X	
PV1	41	2	IS	[0..1]	0117	Account Status				X	
PV1	42	1220	PL	[0..1]		Pending Location				X	
PV1	43	1220	PL	[0..1]		Prior Temporary Location				X	
PV1	44	26	TS	[1..1]		Admit Date/Time	Encounter or Visit Date/Time	This field contains the admit date/time. This field is also used to reflect the date/time	**Conformance Statement SS-010:** PV1-44 (Admit	R	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								of an outpatient/emergency patient registration. **Note**: Date and time of the patient presentation.	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]'		
PV1	45	26	TS	[0..1] [0..0] [0..0] [1..1]		Discharge Date/Time	Disposition Date/Time	This field contains the discharge date/time and shall be populated in a Discharge message. This field is also used to reflect the date/time of an outpatient/emergency patient discharge.	**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]' **Conformance Statement SS-045:** PV1-45 (Discharge Date/Time) **SHALL** be expressed with a minimum precision	RE (A08) X (A01) X (A04) R (A03)	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
									of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]][+/-ZZZZ]'		
PV1	46	12	NM	[0..1]		Current Patient Balance				X	
PV1	47	12	NM	[0..1]		Total Charges				X	
PV1	48	12	NM	[0..1]		Total Adjustments				X	
PV1	49	12	NM	[0..1]		Total Payments				X	
PV1	50	250	CX	[0..1]	0203	Alternate Visit ID				X	
PV1	51	1	IS	[0..1]	0326	Visit Indicator				X	L
PV1	52	309	XCN	[0..0]	0010	Other Healthcare Provider				X	

PV2 – Patient Visit – Additional Information Segment

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV2	1	1220	PL	[0..1]		Prior Pending Location				X	
PV2	2	478	CE	[0..1]	0129	Accommodation Code				X	
PV2	3	478	CE	[0..1]		Admit Reason	Admit/ Encounter Reason	This field contains the short description of the providers' reason for patient admission. **NOTE**: Admit Reason may be coded (CE.1 – CE.3) or Free text (CE.2.) PHVS_AdministrativeDiagnosis_CDC_ICD-9CM ICD-9 CM Administrative Diagnosis Codes used for billing purposes, Reason for Study, DG1 Diagnosis segments Keyword: ICD-9 Vol 1 & 2. **Or** https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7356 The list provides ICD-10 codes and associated cause-of-death titles for the most detailed listing of causes of death. This list is maintained by CDC NCHS.	The implementation **SHALL** support all 3 value sets for PV2-3 (Admit Reason): ICD-9 CM Administrative Diagnosis Codes; ICD-10 codes; SNOMED Disease or Disorder - 64572001 Domain Codes. If only Free Text is used, it is communicated in component 3.2. If there is not a code in one of the 3 value sets specified that captures the concept trying to be conveyed, then free text is allowed to be used and it is communicated in component PV2-3.2.	RE	INPATIENT, ED AND AC DATA ELEMENT OF INTEREST This field is the **provider's reason** for the encounter or (for inpatient) admitting the patient. It is distinct from the Chief Complaint / Reason for Visit field which is the patient's **self-reported** chief complaint or reason for visit. If free or drop-down text is sent, it should appear in PV2 3.2.

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								Or PHVS_Disease_CDC Disease or Disorder - 64572001 SNOMED Domain	PV2-3.3 (Admit Reason Code System Name) SHALL be valued to one of the Literal Values in the set 'I10C', 'I9CDX', 'SCT'.		
PV2	3.1	20	ST	[0..1]		Identifier				RE	ICD-9 Clinical Modification diagnosis code (including E-codes and V-codes) https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.856 Or ICD-10 Clinical Modification diagnosis code https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7356 Or SNOMED Disorder/ Disease domain https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.909

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV2	3.2	199	ST	[0..1]		Text		It is strongly recommended that text be sent to accompany any identifier.		RE	If free or drop-down text is sent, it should appear in PV2 3.2. Text here can also accompany any identifier sent in PV2 3.1.
PV2	3.3	20	ID	[0..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component PV2 3.1.	PV2-3.3 SHALL be valued to one of the Literal Values in the set ('I10C', 'I9CDX', 'SCT') if an identifier is provided.	C	'I10C', 'I9CDX', 'SCT'
PV2	3.4	20	ST	[0..1]		Alternate Identifier				X	
PV2	3.5	199	ST	[0..1]		Alternate Text				X	
PV2	3.6	20	ID	[0..1]		Name of Alternate Coding System				X	
PV2	4	478	CE	[0..1]		Transfer Reason				X	
PV2	5	25	ST	[0..*]		Patient Valuables				X	
PV2	6	25	ST	[0..1]		Patient Valuables Location				X	
PV2	7	2	IS	[0..*]	0130	Visit User Code				X	
PV2	8	26	TS	[0..1]		Expected Admit Date/Time				X	
PV2	9	26	TS	[0..1]		Expected Discharge Date/Time				X	
PV2	10	3	NM	[0..1]		Estimated Length of Inpatient Stay				X	
PV2	11	3	NM	[0..1]		Actual Length of Inpatient Stay				X	
PV2	12	50	ST	[0..1]		Visit Description				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV2	13	309	XCN	[0..*]		Referral Source Code				X	
PV2	14	8	DT	[0..1]		Previous Service Date				X	
PV2	15	1	ID	[0..1]	0136	Employment Illness Related Indicator				X	
PV2	16	1	IS	[0..1]	0213	Purge Status Code				X	
PV2	17	8	DT	[0..1]		Purge Status Date				X	
PV2	18	2	IS	[0..1]	0214	Special Program Code				X	
PV2	19	1	ID	[0..1]	0136	Retention Indicator				X	
PV2	20	1	NM	[0..1]		Expected Number of Insurance Plans				X	
PV2	21	1	IS	[0..1]	0215	Visit Publicity Code				X	
PV2	22	1	ID	[0..1]	0136	Visit Protection Indicator				X	
PV2	23	250	XON	[0..*]		Clinic Organization Name				X	
PV2	24	2	IS	[0..1]	0216	Patient Status Code				X	
PV2	25	1	IS	[0..1]	0217	Visit Priority Code				X	
PV2	26	8	DT	[0..1]		Previous Treatment Date				X	
PV2	27	2	IS	[0..1]	0112	Expected Discharge Disposition				X	
PV2	28	8	DT	[0..1]		Signature on File Date				X	
PV2	29	8	DT	[0..1]		First Similar Illness Date				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV2	30	478	CE	[0..1]	0218	Patient Charge Adjustment Code				X	
PV2	31	2	IS	[0..1]	0219	Recurring Service Code				X	
PV2	32	1	ID	[0..1]	0136	Billing Media Code				X	
PV2	33	26	TS	[0..1]		Expected Surgery Date and Time				X	
PV2	34	1	ID	[0..1]	0136	Military Partnership Code				X	
PV2	35	1	ID	[0..1]	0136	Military Non-Availability Code				X	
PV2	36	1	ID	[0..1]	0136	Newborn Baby Indicator				X	
PV2	37	1	ID	[0..1]	0136	Baby Detained Indicator				X	
PV2	38	478	CE	[0..1]	0430	Mode of Arrival Code				X	
PV2	39	478	CE	[0..*]	0431	Recreational Drug Use Code				X	
PV2	40	478	CE	[0..1]	0432	Admission Level of Care Code				X	
PV2	41	478	CE	[0..*]	0433	Precaution Code				X	
PV2	42	478	CE	[0..1]	0434	Patient Condition Code				X	
PV2	43	2	IS	[0..1]	0315	Living Will Code				X	
PV2	44	2	IS	[0..1]	0316	Organ Donor Code				X	
PV2	45	478	CE	[0..*]	0435	Advance Directive Code				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
PV2	46	8	DT	[0..1]		Patient Status Effective Date				X	
PV2	47	26	TS	[0..1]		Expected LOA Return Date/Time				X	
PV2	48	26	TS	[0..1]		Expected Pre-admission Testing Date/Time				X	
PV2	49	20	IS	[0..*]	0534	Notify Clergy Code				X	

OBX – Observation/Results Segment

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
OBX	1	4	SI	[1..1]		Set ID – OBX		Note: Set ID numbers the repetitions of the segments For the first repeat of the OBX segment, the sequence number shall be one (1), for the second repeat, the sequence number shall be two (2), etc. Example: OBX|1|…. OBX|2|….	OBX-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	Any message with zero OBX segments will be rejected by MSSS. At least one (1) OBX segment must be present in all submitted messages (and across all message types).
OBX	2	3	ID	[1..1]	0125	Value Type		0125 Note: Identifies the structure of data in observation value (OBX.5).	OBX-2 SHALL be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD').	R	'TS', 'TX', 'NM', 'CWE', 'XAD'
OBX	3	478	CE	[1..1]		Observation ID		Observation Identifier (Syndromic Surveillance) Note: Identifies data to be received in observation value (OBX-5) Value set for Observation IDs https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3589		R	MSSS currently only accepts: 11368-8^^LN 44833-2^^LN 54094-8^^LN **21612-7^^LN (R)** 11289-6^^LN 59408-5^^LN 8302-2^^LN 3141-9^^LN 8462-4^^LN 8480-6^^LN 72166-2^^LN **8661-1^^LN (RE but ~R)**

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								Value set for Vital Signs https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.80.62			**SS003^^PHINQUESTION (R)** 11283-9^^LN Bolded are Required segments.
OBX	3.1	20	ST	[1..1]		Identifier		Value set for Observation IDs https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3589 Value set for Vital Signs https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.80.62		R	Use Concept Code from https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3589 or https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.80.62
OBX	3.2	199	ST	[0..1]		Text		Value set for Observation IDs https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3589 Value set for Vital Signs https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.80.62		O	Match Preferred Concept Name from https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3589 or https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.113883.3.88.12.80.62
OBX	3.3	20	ID	[0..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component OBX-3.1. Usage for this element is essentially R (Required) since OBX 3.1 is Required.		R	"LN" or "PHINQUESTION"

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
OBX	3.4	20	ST	[0..1]		Alternate Identifier				X	
OBX	3.5	199	ST	[0..1]		Alternate Text				X	
OBX	3.6	20	ID	[0..1]		Name of Alternate Coding System				X	
OBX	4	20	ST	[0..1]		Observation Sub-Id				X	
OBX	5	99999	Varies	[0..*]		Observation Value		Note: Values received in observation value are defined by value type (OBX.2) and observation identifier (OBX.3). Listed below are the supported fields for each of the supported value types.		RE	
The OBX segment will be used for several different pieces of data in the syndromic message. The Data Element being sent in each respective OBX segment will dictate the data type and identifiers (set in OBX-2 and OBX-3) and subsequently determine the format of the OBX-5 segment. Some of these data are required and several of them are optional. All of the different possible configurations of the OBX-5 segments are listed below.											
Date of Onset (TS) (O)											
OBX	5.1	24	DTM	[0..1]		Time	Date of Onset	OBX Segment (TS Data Type, 1st Component, 5th field) with LOINC Code (11368-8) Observation Identifier		R	
OBX	5.2	1	ST	[0..0]		Degree of Precision				X	
Clinical Impression (TX) (O)											
OBX	5.1	65536	TX	[0..1]		Text Data	Clinical Impression	Note: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters). OBX Segment (TX Data Type, 5th field) with LOINC		R	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								Code (44833-2) Observation Identifier			
Triage Notes (TX) (O)											
OBX	5.1	65536	TX	[0..1]		Text Data	Triage Notes	Note: The TX data type is used to carry string data intended for display purposes. It can contain leading blanks (space characters). OBX Segment (TX Data Type, 5th field) with LOINC Code (54094-8) Observation Identifier		R	
Facility Street Address (XAD) (X)											
OBX	5.1	184	SAD	[0..1]		Street Address	Facility Street Address	If this data element is captured and maintained as part of the facility registration process, it may not be sent with every message. See ISDS recommendations, section 4.2, on Facility Registration ISDS. OBX Segment (XAD Data Type) with PHINQUESTION Code (SS002) Observation Identifier		X	We will collect facility street addresses during MSSS onboarding and therefore request that the Facility Street Address OBX segment **not** be sent.
OBX	5.1.1	120	ST	[0..1]		Street or Mailing Address		Note: This is the first subcomponent of the SAD data type. This has the same effect as being the first component of the field, while limiting the length based on other subcomponents that are not supported.		X	
OBX	5.1.2	50	ST	[0..1]		Street Name				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
OBX	5.1.3	12	ST	[0..1]		Dwelling Number				X	
OBX	5.2	120	ST	[0..1]		Other Designation				X	
OBX	5.3	50	ST	[0..1]		City	Facility City			X	
OBX	5.4	50	ST	[0..1]	FIPS 5-2	State or Province	Facility State	FIPS 5-2		X	
OBX	5.5	12	ST	[0..1]	USPS	ZIP or Postal Code	Facility ZIP Code	USPS		X	
OBX	5.6	3	ID	[0..1]	ISO 3166 -1	Country		ISO 3166-1		X	
OBX	5.7	3	ID	[0..1]	0190	Address Type		0190		X	
OBX	5.8	50	ST	[0..1]		Other Geographic Designation				X	
OBX	5.9	20	IS	[0..1]		County/Parish Code	Facility County			X	
OBX	5.10	20	IS	[0..1]		Census Tract				X	
OBX	5.11	1	ID	[0..1]		Address Representation Code				X	
OBX	5.12	53	DR	[0..0]		Address Validity Range				X	
OBX	5.13	26	TS	[0..1]		Effective Date				X	
OBX	5.14	26	TS	[0..1]		Expiration Date				X	
Age (NM) (RE)											
OBX	5.1	16	ST	[0..1]		Numeric Value	Age	Note: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an		RE	Omit the AGE OBX segment if age is unknown or unavailable if possible. However, MSSS will accept blank/NULL age in OBX-5

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer. OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (21612-7) Observation Identifier			with any one of the accepted PHIN VADS age units sent in OBX-6. Age in years, though MSSS would prefer age in months for patients less than 2 years old if possible. For patients less than (<) 2 years old: • Report the age in integer months. Do not report days or weeks. • Truncate month to integer. For example, 5 months and 20 days = 5 months old. • Unit value should be "Months" ("mo^month"UCUM") for patients less than (<) 2 years old
Initial Temperature (NM) (O)											
OBX	5.1	16	ST	[0..1]		Numeric Value	Initial Temperature	Note: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is		R	MSSS is only interested in the first (initial) value for temperature and not subsequent values collected during a patient's care.

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								assumed to be positive. If there is no decimal point the number is assumed to be an integer. OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (11289-6) Observation Identifier			Do not send subsequent Temperature readings after the initial.
Initial Pulse Oximetry (NM) (O)											
OBX	5.1	16	ST	[0..1]		Numeric Value	Initial Pulse Oximetry	Note: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer. OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (59408-5) Observation Identifier		R	MSSS is only interested in the first (initial) value for pulse oximetry and not subsequent values collected during a patient's care. Do not send subsequent pulse oximetry readings after the initial.
Height (NM) (O)											
OBX	5.1	16	ST	[0..1]		Numeric Value	Height	Note: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is		R	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (8302-2) Observation Identifier

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								assumed to be positive. If there is no decimal point the number is assumed to be an integer.			Can send value as feet (e.g., "6.5" for 6 and a half feet) or inches ("78" for 6 and a half feet).
Weight (NM) (O)											
OBX	5.1	16	ST	[0..1]		Numeric Value	Weight	Note: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer.		R	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (3141-9) Observation Identifier
BP Diastolic (NM) (O)											
OBX	5.1	16	ST	[0..1]		Numeric Value	BP Diastolic (SBP/DBP - Most Recent)	Note: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer.		R	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (8462-4) Observation Identifier "Most recent systolic and diastolic blood pressure of the patient. Most recent is the blood pressure taken most closely to the time that message is constructed/ assembled." PHIN Guide p. 117

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
											Only one value should be sent for each BP type. Do not send subsequent blood pressure readings.
BP Systolic (NM) (O)											
OBX	5.1	16	ST	[0..1]		Numeric Value	BP Systolic (SBP/DBP - Most Recent)	Note: A numeric data type is a number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer.		R	OBX Segment (NM Data Type, 1st Component, 5th field) with LOINC Code (8480-6) Observation Identifier "Most recent systolic and diastolic blood pressure of the patient. Most recent is the blood pressure taken most closely to the time that message is constructed/ assembled." PHIN Guide p. 117 Only one value should be sent for each BP type. Do not send subsequent blood pressure readings.
Smoking Status (CWE) (O)											
OBX	5.1	20	ST	[1..1]		Identifier	Smoking Status	Value set: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6027		R	OBX Segment (CWE Data Type, 5th field) with LOINC Code (72166-2) Observation Identifier

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
											Concept Code from https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6027
OBX	5.2	199	ST	[0..1]		Text		It is strongly recommended that text be sent to accompany any identifier Value set: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6027		RE	Match Preferred Concept Name from https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.6027
OBX	5.3	20	ID	[1..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component 1.	If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued	R	"SCT" (SNOMED-CT)
OBX	5.4	20	ST	[0..1]		Alternate Identifier		It is strongly recommended that text be sent to accompany any identifier.		RE	
OBX	5.5	199	ST	[0..1]		Alternate Text		Condition Rule: Required if an identifier is provided in component 4.		RE	
OBX	5.6	20	ID	[0..1]		Name of Alternate Coding System				C	
OBX	5.7	10	ST	[0..1]		Coding System Version ID				O	
OBX	5.8	10	ST	[0..1]		Alternate Coding System Version ID				O	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
OBX	5.9	199	ST	[0..1]		Original Text		Provide the richest text available in this field.		RE	
Chief Complaint (CWE*) (RE) **See the next section if sending as TX*											
OBX	5.1	20	ST	[1..1]		Identifier	Chief Complaint	Note: Implementers should check with their local jurisdiction for version of adopted coding system. OBX Segment (CWE Data Type, 5th field) with LOINC Code (8661-1) Observation Identifier	Expect to be NULL	R	No coding system has been designated locally. Expect to be NULL. Chief Complaint text must be in OBX 5.9 (not in OBX 5.1) to be recognized by MSSS
OBX	5.2	199	ST	[0..1]		Text		It is strongly recommended that text be sent to accompany any identifier	Expect to be NULL	RE	
OBX	5.3	20	ID	[1..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component 1.	Expect to be NULL	R	
OBX	5.4	20	ST	[0..1]		Alternate Identifier		It is strongly recommended that text be sent to accompany any identifier.	Expect to be NULL	RE	
OBX	5.5	199	ST	[0..1]		Alternate Text		Condition Rule: Required if an identifier is provided in component 4.	Expect to be NULL	RE	
OBX	5.6	20	ID	[0..1]		Name of Alternate Coding System			Expect to be NULL	C	
OBX	5.7	10	ST	[0..1]		Coding System Version ID			Expect to be NULL	O	
OBX	5.8	10	ST	[0..1]		Alternate Coding System Version ID			Expect to be NULL	O	
OBX	5.9	199	ST	[0..1]		Original Text		Provide the richest text available in this field.		RE	Chief Complaint Free Text. Differs from Encounter

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
											Reason as it is based on patient's perspective. Chief Complaint text must be in OBX 5.9 to be recognized by MSSS
Chief Complaint (TX*) (RE) **See the previous section if sending as* CWE											
OBX	5.1	65536	TX	[0..1]		Text Data	Chief Complaint			R	Chief Complaint Free Text. Differs from Encounter Reason as it is based on patient's perspective. Chief Complaint text must be in OBX 5.1 to be recognized by MSSS
Facility/Visit Type (CWE) (R)											
OBX	5.1	20	ST	[1..1]		Identifier	Facility/ Visit Type	OBX Segment (CWE Data Type) with PHINQUESTION Code (SS003) Observation Identifier Value set: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3401		R	OBX 5 should be one of four values: 261QM2500X^Medical Specialty^HCPTNUCC; 261QP2300X^Primary Care^HCPTNUCC; 261QE0002X^Emergency Care^HCPTNUCC; 261QU0200X^Urgent Care^HCPTNUCC OBX 5.1 values: "261QM2500X" (Medical Specialty) "261QP2300X" (Primary Care

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
											"261QE0002X" (Emergency Care) "261QU0200X" (Urgent Care) Do not send Inpatient Care type (1021-5)
OBX	5.2	199	ST	[0..1]		Text		It is strongly recommended that text be sent to accompany any identifier		RE	Match Preferred Concept Name in https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3401
OBX	5.3	20	ID	[1..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component 1.		R	"HCPTNUCC"
OBX	5.4	20	ST	[0..1]		Alternate Identifier		It is strongly recommended that text be sent to accompany any identifier.		RE	
OBX	5.5	199	ST	[0..1]		Alternate Text		Condition Rule: Required if an identifier is provided in component 4.		RE	
OBX	5.6	20	ID	[0..1]		Name of Alternate Coding System				C	
OBX	5.7	10	ST	[0..1]		Coding System Version ID				O	
OBX	5.8	10	ST	[0..1]		Alternate Coding System Version ID				O	
OBX	5.9	199	ST	[0..1]		Original Text				RE	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
Initial Acuity (CWE) (O)											
OBX	5.1	20	ST	[1..1]		Identifier		OBX-5 is a value from Admission Level of Care (HL7). Value Set: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.912		R	Concept Codes from: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.912
OBX	5.2	199	ST	[0..1]		Text		It is strongly recommended that text be sent to accompany any identifier		RE	Match Preferred Concept Name in https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.912
OBX	5.3	20	ID	[1..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component 1.	If OBX-5.1 (the identifier) is provided then OBX-5.3 is valued	R	"HL70432"
OBX	5.4	20	ST	[0..1]		Alternate Identifier		It is strongly recommended that text be sent to accompany any identifier.		RE	
OBX	5.5	199	ST	[0..1]		Alternate Text		Condition Rule: Required if an identifier is provided in component 4.		RE	
OBX	5.6	20	ID	[0..1]		Name of Alternate Coding System				C	
OBX	5.7	10	ST	[0..1]		Coding System Version ID				O	
OBX	5.8	10	ST	[0..1]		Alternate Coding System Version ID				O	
OBX	5.9	199	ST	[0..1]		Original Text				RE	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
Remainder of OBX Segment (Units, etc)											
OBX	6	62	CE	[0..1]		Units		**Definition**: The identifier that is used in Syndromic Surveillance for Units of measurement either for age, or temperature or pulse oximetry **Background**: When an observation's value is measured on a continuous scale (OBX-5), one must report the measurement units within the units field of the OBX segment (OBX-6). Usage = C(R/X) Condition Predicate: If OBX.2 (Value Type) is valued "NM" Units (OBX-6) shall be provided.	If OBX 3.1 (Observation Identifier) is valued with 21612-7 AGE-REPORTED (LOINC), then OBX-6.1 (Unit Identifier) SHALL be valued to a member of the set: PHVS_AgeUnit_SyndromicSurveillance If OBX 3.1 (Observation Identifier) is valued with 11289-6 BODY TEMPERATURE, INITIAL (LOINC) then OBX-6.1 (Identifier) SHALL be valued to a member of the set: PHVS_TemperatureUnit_UCUM If OBX 3.1 (Observation Identifier) is valued with 59408-5 OXYGEN SATURATION IN	C	Age (units sent only as a^year^UCUM, mo^month^UCUM, or UNK^unknown^NULLFL): https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.3402 Pulse OX: https://phinvads.cdc.gov/vads/ViewValueSet.action?id=A7453ADB-5505-E011-9273-00188B39829B Height: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.891 Weight: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.879 Temperature: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.919

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
									ARTERIAL BLOOD BY PULSE OXIMETRY (LOINC), then OBX-6.1 (Identifier) SHALL be valued to a member of the set: PHVS_PulseOximetryUnit_UCUM OBX-6.3 will contain the code system code 'UCUM' for any unit values given.		Blood Pressure: https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.920
OBX	6.1		ST	[1..1]		Identifier	Age Units			R	
OBX	6.2		ST	[0..1]		Text		Standardized description associated with code in OBX-6.1.		O	
OBX	6.3		ID	[0..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component OBX-6.1. Usage for this element is essentially R (Required) since the component (OBX 6.1) is Required.		R	
OBX	6.4	20	ST	[0..1]		Alternate Identifier				X	
OBX	6.5	199	ST	[0..1]		Alternate Text				X	
OBX	6.6	20	ID	[0..1]		Name of Alternate Coding System				X	
OBX	7	60	ST	[0..1]		Reference Range				X	
OBX	8	5	IS	[0..*]	0078	Abnormal Flags				X	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
OBX	9	5	NM	[0..1]		Probability				X	
OBX	10	2	ID	[0..*]	0080	Nature of Abnormal Test				X	
OBX	11	1	ID	[1..1]	0085	Observation Result Status		0085 Expected value: 'F'		R	"F"
OBX	12	26	TS	[0..1]		Date Last Observed Normal Values				X	
OBX	13	20	ST	[0..1]		User Defined Access Checks				X	
OBX	14	26	TS	[0..1]		Date/Time of the Observation				O	
OBX	15	478	CE	[0..1]		Producer's ID				X	
OBX	16	309	XCN	[0..*]		Responsible Observer				X	
OBX	17	478	CE	[0..*]		Observation Method				X	
OBX	18	424	EI	[0..*]		Equipment Instance Identifier				X	
OBX	19	26	TS	[0..1]		Date/Time of the Analysis				X	

DG1 – Diagnosis Segment

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
DG1	1	4	SI	[1..1]		Set ID – DG1		Note: Numbers the repetitions of the segments	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	
DG1	2	2	ID	[0..1]	0053	Diagnosis Coding Method				X	
DG1	3	478	CE	[1..1]		Diagnosis Code, Identifier, Text, Coding System	Diagnosis/External Cause of Injury Code (Emergent), Primary Diagnosis (Ambulatory), Additional Diagnosis (Ambulatory)	**Definition**: This contains the diagnosis code assigned to this diagnosis. ICD-9 Clinical Modification diagnosis code (including E-codes and V-codes) https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.856 Or ICD-10 Clinical Modification diagnosis code https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7356 Or		R	Data should be sent on a regular schedule and should not be delayed for diagnosis or verification procedures. Regular updating of data should be used to correct any errors or send data available later. Include V-codes and E-codes. The DG1 3 field should contain only one diagnosis per DG1 segment, but multiple DG1 segments may be sent per encounter. When sending multiple diagnoses, the first diagnosis segment should be the primary diagnosis.

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
								SNOMED Disorder/ Disease domain https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.909			
DG1	3.1	20	ST	[1..1]		Identifier		This component contains a code value (concept ID) from one of the following code systems: PHVS_AdministrativeDiagnosis_CDC_ICD-9CM **Or** PHVS_AdministrativeDiagnosis_ICD-10CM **Or** PHVS_Disease_CDC	The implementation **SHALL** support all 3 value sets.	R	ICD-9 Clinical Modification diagnosis code (including E-codes and V-codes) https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.856 Or ICD-10 Clinical Modification diagnosis code https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.7356 Or SNOMED Disorder/ Disease domain https://phinvads.cdc.gov/vads/ViewValueSet.action?oid=2.16.840.1.114222.4.11.909
DG1	3.2	199	ST	[0..1]		Text		Note: Standardized description associated with code in DG1-3.1.		RE	

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
DG1	3.3	20	ID	[1..1]		Name of Coding System		Condition Rule: Required if an identifier is provided in component DG1-3.1. Usage for this element is essentially R (Required) since the component DG1 3.1 is Required.	DG1-3.3 SHALL be valued to one of the Literal Values in the set ('I10C', 'I9CDX', 'SCT').	R	'I10C', 'I9CDX', 'SCT'
DG1	3.4	20	ST	[0..1]		Alternate Identifier				X	
DG1	3.5	199	ST	[0..1]		Alternate Text				X	
DG1	3.6	20	ID	[0..1]		Name of Alternate Coding System				X	
DG1	4	40	ST	[1..1]		Diagnosis Description				X	
DG1	5	26	TS	[0..1]		Diagnosis Date/Time				O	
DG1	6	2	IS	[1..1]		Diagnosis Type	Diagnosis Type	Diagnosis Type (HL7) Note: Identifies the type of diagnosis being sent. Literal values: "A" for Admitting diagnosis, "W" for Working diagnosis or "F" for Final diagnosis. Value set: https://phinvads.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).	R	"A", "W", "F"

Segment	Sequence	Length	Data Type	Cardinality	Value Set	HL7 Field Name	Data Element Name	Values/Notes	Conformance Statements	Requirement	Additional MDHHS Requirements
DG1	7	478	CE	[0..0]	0118	Major Diagnostic Category				X	
DG1	8	478	CE	[0..0]	0055	Diagnostic Related Group				X	
DG1	9	1	ID	[0..0]	0136	DRG Approval Indicator				X	
DG1	10	2	IS	[0..0]	0056	DRG Grouper Review Code				X	
DG1	11	478	CE	[0..0]	0083	Outlier Type				X	
DG1	12	3	NM	[0..0]		Outlier Days				X	
DG1	13	538	CP	[0..0]		Outlier Cost				X	
DG1	14	4	ST	[0..0]		Grouper Version And Type				X	
DG1	15	2	ID	[0..1]	0359	Diagnosis Priority				X	
DG1	16	309	XCN	[0..*]		Diagnosing Clinician				X	
DG1	17	3	IS	[0..1]	0228	Diagnosis Classification				X	
DG1	18	1	ID	[0..1]	0136	Confidential Indicator				X	
DG1	19	26	TS	[0..1]		Attestation Date/Time				X	
DG1	20	427	EI	[0..1]		Diagnosis Identifier				X	
DG1	21	1	ID	[0..1]	0206	Diagnosis Action Code				X	

Appendix C – Change Log

December 2013 Revision

- Added Appendix C to show revision changes.
- Changed table heading (pg 4).
- Updated references to accepting syndromic feeds from eligible providers to indicate Michigan's ability to receive those messages as of specific dates (pgs 4 and 5).
- Changed guidance for sub-state HIE selection to MiHIN and moved references to M-CEITA to page 4 (page 6).
- Updated links to MichiganHealthIT.org to reflect website restructuring. (pgs 4, 5, and 7).
- Updated link to MiHIN website (pg 6).
- Updated local code for Encounter Reason from `ENCRSN^^MDCH` to `ENCRSN^^L` (page 11).
- Changes to Structure and Content section; added references to MDHHS Syndromic Validator (MDHHS-V), including use of MDHHS-V for One Test (pgs 6-8).
- Added details about test message submission during follow-up submission/testing and validation (pg 9 and 10, Appendix A).
    - Changed "emailed" to "notified."
    - Added bolded sections at the bottom of Follow-up Submission and On-Going Submission.
- Clarified OID usage in MSH-4 and EVN-7 (pgs 12 and 19, Appendix B).
- Added link to OID Creation and Registration Guide (pg 9, Appendix B).
- Corrected mistake in full name for PHTR (pg 7, 8).
- Added clarification that MSH-4.1 is the Organization Name field (pg 12).
- Corrected MSH-12 to state that it can only be a value of "2.5.1" in the MDHHS Requirements (pg 15).
- Updated Bureau of Epidemiology to Bureau of Disease Control, Prevention & Epidemiology (pg 3).

August 2014 Revision

- Added language about data submission to CDC BioSense (pg 3).
- Added Ophthalmologists to table of healthcare providers (pg 4).
- Reversed the order of "Transport" and "Structure" sections on page 6 to better reflect the process chronology.
- Changed the name of the "Public Health Testing Repository" (PHTR) to "Health Systems Testing Repository" (HSTR).
- Added text about agreeing on senders ID data before sending test messages (pg 7).
- Updated the On-Going Submission definition (bulleted list only) in Appendix A (pg 8).
- Added clarifying text about the need for distinct Facility OIDs (pg 9).
- Added link to where submitters can find additional details on data elements (pg 10).
- Added note about PHIN code value sets (pg 10)

- Corrected the “Date of Onset” OBX-3 code from 11368^^LN to 11368-8^^LN (pg 12).
- Corrected the “Weight” OBX-3 code from 29463-7^^LN to 3141-9^^LN (pg 12) and in Appendix B (pg 43).
- Corrected the “Smoking Status” OBX-3 code from 54845-3^^LN to 72166-2^^LN (pg 12) and in Appendix B (Pg 44).
- Added additional text in “Message Observations” on the importance of the “Chief Complaint” segment and field 5.9 to MSSS goals (pg 12).
- Specified OID numbers as options for MSH-5 and MSH-6 (pg 14).

February 2015 Revision

- Updated the directions on which PHIN Guides that Emergent and Ambulatory Care Centers should use and added link (pg3).
- Added Desiree McLain (Altarum onboarding support) to the POC list (pg 7) and updated Question Subject Area for Katie Arends.
- Updated On-Going Submission definition (pg8).
- Updated name (pg9) and link (pg10) to current PHIN Guide (9/14/2014).
- Reversed the order that {OBX} and [{DG1}] appear in the message segment table to match the required sequence (pg11).
- Added a column for Cardinality in the message segment table (pg11).
- Edited the description of how ACK messages are generated (pg11 and pg16).
- Changed PID 1 to "R" (pg19).
- Removed Encounter Reason (ENCRSN^^L) from the table of Observations (OBX) (pg 12) and Appendix B (pgs 44-45).
- Changed Facility Street Address OBX segment requirement status to “X” for “will be ignored/do not send” in the table of observations (pg12) and Appendix B (pgs 39-40).
- Changed Pulse Oximetry OBX segment requirement status from “RE” to “O” (pg12).
- Changed Date of Onset OBX segment requirement status from “RE” to “O” (pg12).
- Changed Facility/Visit Type OBX segment requirements status from “RE” to “R” (pg12).
- Marked OBX Segments that differ in requirement between MSSS and PHIN guidance (pg12).
- Added “A03 (Discharge)” to the list of accepted trigger events for MSH 9 (pgs 14-15).
- Added “Do not send Social Security Number” to Additional MDHHS Requirements for PID 3 Patient Identifier (pg19).
- Changed description for PID 11.9 County/Parish Code to include desired value and link to FIPS 6-4 code (pgs 23-24).
- Changed PV1 19.4 (Assigning Authority) and PV1 19.6 (Assigning Facility) to “O” (pg28).
- Changed PV1 36 Discharge Disposition to "R" for A03, "RE" for A08, "X" for A04 (pgs 29-30).
- Changed PV1 45 Discharge Date/Time to "R" for A03, "RE" for A08, "X" for A04 (pg30).
- Added “Admit/Encounter Reason” to Data Element Name for PV2 3 (pg32).
- Changed OBX 1 to "R" (pg37).
- Added notes from PHIN Guide on usage of PV2 3 Admit or Encounter Reason (pgs 32-33).

- Added note to clarify that MSSS is only interested in the first (initial) value for both temperature and pulse oximetry and not subsequent values collected during a patient's care (pg41).
- Changed OBX 5.1 (TX for Clinical Impression, Triage Notes) to "RE" (pgs 38-39).
- Changed OBX 5.1 (NM for Age, Height, Weight, BP Diastolic/Systolic, Initial Pulse Ox) to "RE" (pgs 41-43).
- Changed OBX 5.1 (CWE for Smoking Status) to "R" (pg44).
- Changed Smoking Status (CWE) OBX 5.3 Name of Coding System to "R" and added condition predicate note (pg 44).
- Changed Chief Complaint (CWE) OBX 5.1 Identifier to "R" (pgs 44-45)
- Changed Chief Complaint (CWE) OBX 5.3 Name of Coding System to "R" and added condition predicate note (pg45).
- Changed the DG1 3 Diagnosis Code, Identifier, Text Coding System requirement status from "RE" to "R" to match the PHIN Guide dated 9/16/2014 (pg50).
- Added condition predicate note to DG1 3.1 (pg50).
- Marked several fields (PID 18 Patient Account Number, PV1 6 Prior Patient Location, Clinical Impression (TX) OBX 5.1, Height (NM) OBX 5.1, BP Diastolic (NM) OBX 5.1, Smoking Status (CWE) OBX 5.1 Identifier, Weight (NM) OBX 5.1 Identifier) as green to denote difference from MSSS specs and latest PHIN Guide of 9/16/14.

January 2016 Revision

- Updated entire Guide to reflect acceptance of urgent care setting data only as of 1/1/2016. The new information is primarily in the "Michigan's Capacity to Accept Syndromic Surveillance Data" section (pgs 4-5).
- Changed the name of the Michigan Department of Community Health (MDCH) to the Michigan Department of Health and Human Services (MDHHS) throughout.
- Updated links to revised PHIN Messaging Guide of April 21, 2015 (pgs 3, 9, 10).
- Updated table of accepted data settings (pg4).
- Updated CMS Final Rules guidance with a link to the most current information (pg5).
- Updated ONC Final Rules guidance with a link to the most current information (pg5).
- Added new contact information for the MSSS Help Desk (pgs 6-7).
- Updated definitions for R, RE, O, C, CE, and X to match PHIN Messaging Guide (pg9).
- Added usage note for RE from the PHIN Messaging Guide (pg9).
- Added a "Business Rules" section to further clarify MSSS message and data expectation for submitters (pg10).
- Added clarification of segment order in messages (pg 11).
- Updated the Observation segment table to change the Initial Temperature OBX to Optional, add Initial Acuity OBX as an accepted Optional segment, and note that Chief Complaint OBX segments can be sent as either TX or CWE types (pg12).
- Added clarification on how to submit Chief Complaint as either CWE or TX segment types (pg12).
- MSH 4.1: Updated with clarification about uniqueness (pg14).

- MSH 5: Updated MDHHS Requirements (pg14).
- MSH 6: Updated MDHHS Requirements (pg14).
- MSH 9.1: Added expected value MDHHS Requirements (pg15).
- MSH 9.2: Added expected value MDHHS Requirements (pg15).
- MSH 9.3: Added expected value MDHHS Requirements (pg15).
- MSH 10: Added clarification that sequentially numbered control IDs are requested (pg15).
- MSH 12: Changed field length (pg16).
- MSH 15: Updated Values/Notes and Requirement (pg16).
- MSH 16: Updated Values/Notes and Requirement (pg16).
- MSH 21: Changed Cardinality and HL7 Field Name to match PHIN Guide and added expected values in MDHHS Requirements (pg17).
- EVN 1: Changed Cardinality, HL7 Field Name, and Requirement and added Values/Notes to match PHIN Guide (pgs 17-18).
- EVN 2: Changed HL7 Field Name and added Values/Notes to match PHIN Guide (pg18).
- EVN 7: Updated Values/Notes (pg18).
- EVN 7.1: Updated with clarification about uniqueness in MDHHS Requirements (pgs 18-19).
- EVN 7.2: Updated Values/Notes (pg19).
- EVN 7.3: Updated Values/Notes and expected value in MDHHS Requirements (pg19).
- PID 1: Updated Cardinality and expected value in MDHHS Requirements (pg20).
- PID 3: Updated Values/Notes and MDHHS Requirements (pgs 20-21).
- PID 3.1: Updated MDHHS Requirements (pg21).
- PID 3.5: Updated MDHHS Requirements and added link to Value Set (pgs 21-22).
- PID 5: Updated Values/Notes and Conformance Statements (pgs 22-23).
- PID 5.1 through 5.3: Clarified that field must be NULL (blank) (pg23).
- PID 7: Updated HL7 Field Name (pg24).
- PID 8: Added Values/Notes (pg24).
- PID 10: Added Value Set link and MDHHS Requirements (pg24).
- PID 10.1: Added MDHHS Requirements (pg24).
- PID 10.2: Added MDHHS Requirements (pg24).
- PID 10.3: Added MDHHS Requirements (pg25).
- PID 11: Updated the MDHHS Requirements to add Country (pg25).
- PID 11.1 and 11.2: Changed MDHHS Requirements from “Expected to be empty” to “Must be NULL” (pg25).
- PID 11.3: Added Values/Notes (pg25).
- PID 11.4: Added Values/Notes and MDHHS Requirements (pg25).
- PID 11.5: Added Values/Notes (pg26).
- PID 11.6: Added Values/Notes and MDHHS Requirements (pg26).
- PID 11.7: Added MDHHS Requirements (pg26).
- PID 11.9: Added Values/Notes and MDHHS Requirements (pg26).
- PID 18: Added “Expect NULL” to MDHHS Requirements (pg27).

- PID 19: Added “Must be NULL” to MDHHS Requirements (pg27).
- PID 20: Added “Expect NULL” to MDHHS Requirements (pg27).
- PID 22: Updated Values/Notes and MDHHS Requirements (pg27).
- PID 22.1: Updated Values/Notes and MDHHS Requirements (pg28).
- PID 22.2: Updated Values/Notes and MDHHS Requirements (pg28).
- PID 22.3: Updated MDHHS Requirements (pg28).
- PID 29: Updated Cardinality, HL7 Field Name, Values/Notes, and Requirement (pgs 28-29).
- PID 30: Updated Cardinality, Values/Notes, Requirement, and MDHHS Requirements (pg29).
- PV1 1: Updated Cardinality, HL7 Field Name, Requirement, and MDHHS Requirements (pg31).
- PV1 2: Updated Values/Notes and MDHHS Requirements (pg31).
- PV1 4: Updated Values/Notes (pg31).
- PV1 6: Updated Values/Notes and Requirement (pg31).
- PV1 7: Updated Requirement and MDHHS Requirements (pgs 31-32).
- PV1 19: Updated Values/Notes (pg32).
- PV1 19.5: Updated MDHHS Requirements (pg33).
- PV1 44: Updated Values/Notes and Conformance Statement (pgs 35-36).
- PV1 45: Updated Cardinality, Values/Notes, Conformance Statement, and Requirement (pgs 36-37).
- PV2 3: Updated Values/Notes, Conformance Statement, and MDHHS Requirements (pgs 38-39).
- PV2 3.1: Added MDHHS Requirements (pg39).
- PV2 3.2: Added MDHHS Requirements (pgs 39-40).
- PV2 3.3: Added Conformance Statement and MDHHS Requirements (pg40).
- OBX 1: Added Conformance Statement and MDHHS Requirements (pg44).
- OBX 2: Added MDHHS Requirements (pg44).
- OBX 3: Added links to Value Sets in Values/Notes and MDHHS Requirements (pgs 44-45).
- OBX 3.1: Added links to Value Sets in Values/Notes and MDHHS Requirements (pg45).
- OBX 3.2: Added links to Value Sets in Values/Notes and MDHHS Requirements (pg45).
- OBX 3.3: Added MDHHS Requirements (pg45).
- Date of Onset OBX 5.1: Changed field to be Required when (optional) segment is sent (pg46).
- Clinical Impression OBX 5.1: Changed field to be Required when (optional) segment is sent (pgs 46-47).
- Triage Notes OBX 5.1: Changed field to be Required when (optional) segment is sent (pg47).
- Age OBX 5.1: Changed field to be Required when (required) segment is sent and added MDHHS Requirements (pgs 48-49).
- Initial Temperature OBX Segment: Changed to Optional to match PHIN Messaging Guide (pg49).
- Initial Temperature OBX 5.1: Changed field to be Required when (optional) segment is sent and added MDHHS Requirements (pg49).
- Height OBX 5.1: Changed field to be Required when (optional) segment is sent and added MDHHS Requirements (pg50).
- Weight OBX 5.1: Changed field to be Required when (optional) segment is sent (pgs 50-51).

- BP Diastolic OBX 5.1: Changed field to be Required when (optional) segment is sent and added MDHHS Requirements (pg51).
- BP Systolic OBX 5.1: Changed field to be Required when (optional) segment is sent and added MDHHS Requirements (pgs 51-52).
- Smoking Status OBX 5.1: Changed Cardinality, Values/Notes, and added MDHHS Requirements (pg52).
- Smoking Status OBX 5.2: Changed Values/Notes and added MDHHS Requirements (pgs 52-53).
- Smoking Status OBX 5.3: Changed Cardinality and added MDHHS Requirements (pg53).
- Chief Complaint OBX: Added requirements for sending segments either as Type CWE or TX. MSSS will now accept both types (pgs 53-55).
- Chief Complaint (CWE) OBX 5.1: Updated Cardinality and added Conformance Statement and MDHHS Requirements (pg53).
- Chief Complaint (CWE) OBX 5.2: Added Conformance Statement (pgs 53-54).
- Chief Complaint (CWE) OBX 5.3: Updated Cardinality and Conformance Statement (pg54).
- Chief Complaint (CWE) OBX 5.4: Added Conformance Statement (pg54).
- Chief Complaint (CWE) OBX 5.5: Added Conformance Statement (pg54).
- Chief Complaint (CWE) OBX 5.6: Added Conformance Statement (pg54).
- Chief Complaint (CWE) OBX 5.7: Added Conformance Statement (pg54).
- Chief Complaint (CWE) OBX 5.8: Added Conformance Statement (pg54).
- Chief Complaint (CWE) OBX 5.9: Changed MDHHS Requirements (pg54).
- Chief Complaint (TX) OBX 5.1: Created new row in table based on PHN Messaging Guide (pgs 54-55).
- Facility/Visit Type OBX 5.1: Changed Cardinality, Values/Notes, and Requirement and added MDHHS Requirements (pg55).
- Facility/Visit Type OBX 5.2: Added MDHHS Requirements (pgs 55-56).
- Facility/Visit Type OBX 5.3: Changed Cardinality and Requirement and added MDHHS Requirements (pg56).
- Initial Acuity OBX: Created rows in table for Initial Acuity as an Optional OBX segment based on PHIN Messaging Guide (pgs 56-57).
- OBX-6: Changed Values/Notes, Conformance Statements, and MDHHS Requirements (pgs 57-59).
- OBX-11: Added MDHHS Requirements (pg60).
- DG1 3: Changed Values/Notes and MDHHS Requirements (pgs 61-62).
- DG1 3.1: Changed Values/Notes, Conformance Statements, and MDHHS Requirements (pgs 62-63).
- DG1 3.3: Added MDHHS Requirements (pg63).
- DG1 6: Updated Values/Notes, Conformance Statements, and MDHHS Requirements (pgs 63-64).

February 2017 Revision

- Updated the contact email for the MDHHS Meaningful Use Team (pg7).
- Removed reference to more details for "**C** – Conditionally Required" (pg9).
- Added new bullet to "Business Rules" requesting that submitters stop sending updates for encounters that occurred more than 6 months in the past (pg10).
- Changed Age OBX segment requirement status from "R" to "RE" (pg12).
- MSH-15: Changed field to be Required and contain the value of "AL" (pg16).
- MSH-21: Changed MDHHS requirement to be the value "PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO" only (pg17).
- PID-3.4: Changed field to be Required and added format and example (pg21).
- PID-3.5: Added clarifying text about what ID types are and aren't accepted (pgs 21-22).
- PID-3.6: Changed field requirement to Optional (pg22).
- PID-5: Updated Values/Notes and Conformance Statements to match latest PHIN Guide/errata (pgs 22-23).
- PID-8: Updated with current values in the PHIN VADS value set (pg24).
- PID-11.6: Provided 3-character code examples for Canada and Mexico and added link to full PHIN VADS list (pg26).
- PID-22.2: Changed field requirement to RE (pg28).
- PID-29: Changed field requirements by message type to match PHIN Guide errata (pg29).
- PID-30: Changed field requirements by message type to match PHIN Guide errata (pg29).
- PV1-2: Changed Cardinality to match PHIN Guide (pg31).
- PV1-19.4: Changed field to be Required and added format and example (pg33).
- PV2-3.3: Changed ICD-10 value to match current PHIN VADS value set (pg40).
- OBX-1: Changed Cardinality to match PHIN Guide (pg44).
- OBX-5: Changed Age OBX segment and OBX-5 field requirement from R to RE and added clarifying text (pgs 48-49).
- OBX-6: Added clarifying text on units accepted for Age (pg58).
- OBX-6.1: Removed field length specific to this component (pg59).
- OBX-6.2: Removed field length specific to this component (pg59).
- OBX-6.3: Removed field length specific to this component (pg59).
- DG1-3: Removed Condition Predicate per PHIN Guide errata (pg61).
- DG1-3.1: Changed Cardinality to match PHIN Guide (pg62).
- DG1-3.3: Changed Cardinality to match PHIN Guide and ICD-10 value to match current PHIN VADS value set (pg63).
- DG1-6: Changed Cardinality to match PHIN Guide (pg63).

May 2017 Revision

- Corrected BioSense/NSSP link (pg3).
- Corrected Date/Time format throughout the guide by removing space the between milliseconds and UTC offset (YYYYMMDDHHMM[SS[.S[S[S[S]]]]][+/-ZZZZ]).

- Corrected broken links throughout the guide.