

Wisconsin Messaging Guide for Syndromic Surveillance

HL7 2.5.1 Messaging Guide for Emergency, Inpatient, Non-urgent
Ambulatory, and Urgent Care Settings



WISCONSIN DEPARTMENT
of **HEALTH SERVICES**

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I. Introduction

The Wisconsin Department of Health Services (DHS) Division of Public Health (DPH) has created this guide for health care providers who wish to submit syndromic data to DPH. This document is a consolidated guide for the content and transmission specifications of syndromic messages to DPH. For more information, refer to the “Useful Resources” section on page 5.

Wisconsin Guidance in Relation to National Guidance Documents

This guidance document primarily reflects national guidance for syndromic messaging developed by the International Society for Disease Surveillance and released in the following document: ***Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings*** (Release 2.2, May 2017).

There are Wisconsin-specific departures from national Release 2.2 Minimum Data Element specifications. Some elements specified as “O” (Optional) or “RE” (Required but may be empty) usage status in the national Release 2.2 guidance are “RE” or “R” (Required) in Wisconsin because the element is necessary for our routing or other administrative purposes. For discrepancies between this guide and the national standard, please use the specifications in this guide.

Wisconsin Hosting in Relation to National Hosting

Wisconsin stores all syndromic data collected from transmissions at DHS including protected health information (PHI) and personally identifiable information (PII). Some of these data elements collected will not be received by the CDC’s National Syndromic Surveillance Program (NSSP). DPH will scrub Patient Name and Patient Address before transmission of data to NSSP.

Acknowledgements

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II. Data Submission

Scope of Messaging

Participating facilities and providers located in Wisconsin should submit syndromic messages from all visits with no filtering done prior to submission to DPH. Multistate networks should discuss implementation details with each state in which they operate.

Emergency departments, urgent care centers, and non-urgent ambulatory care centers will send syndromic messages from all visits for all patients, regardless of the nature of the visit. Hospitals providing inpatient care shall send syndromic messages from all inpatient stays, regardless of the source of admission. Inpatient records should include patients classified as observation or obstetric (for example, labor and delivery). Hospitals may exclude records pertaining to patients classified as outpatient, pre-admit, or recurring.

Facility Identification

Wisconsin's facility registration within DPH's **Public Health Registration for Electronic Data Submission System (PHREDS)** will not replace the need to include facility identification details in the HL7 messages submitted for syndromic surveillance. Information about the treating facility (for example, facility name [EVN-7.1], facility identifier [EVN-7.2], and facility type [OBX]) shall be included in each message.

Patient and Visit Identification

The facility-provided **Patient ID** and **Visit ID** are the key link for circumstances that require follow up by DPH. The combination of Patient ID and Visit ID provided in a syndromic message must allow the sending facility to identify the patient and visit that triggered the message of interest. **Patient ID** is intended to provide a single unique identifier *per patient* within a facility or network. **Visit ID** must provide a single unique identifier for a *distinct patient encounter*. This unique **Visit ID** must be used for *all* messages triggered by any activity associated with that patient encounter, including changes in patient class, such as emergency department to inpatient admission. (From the April 2015 PHIN Guide, "ALL messages constrained by this guide that are produced as a result of a single patient encounter for the purpose of Syndromic Surveillance, SHALL have the same value for PV1-19.1 [Visit ID]. Messages constrained by this guide that are produced as a result of different patient encounters for the purpose of Syndromic Surveillance, SHALL NOT have the same value for PV1-19.1 [Visit ID].")

DPH also requires **Patient Name** and **Patient Address** for the purposes of linking with other datasets internally. These elements will be scrubbed before transmission to the CDC's National Syndromic Surveillance Program.

Message Frequency

DPH requests that syndromic data be submitted in hourly batches. The timing of files may be adjusted in frequency as is convenient for data submitters. Files must, at a minimum, be sent as early as possible after midnight and contain all visits from the previous 24 hours. Data submission should occur 24 hours a day, seven days a week. HL7 batch protocol, as specified in **Appendix C**, must be used to submit messages in batches.

Message File Size

Files should, on average, not exceed 10MB in size.

Message File Names

DPH requests that message file names indicate the sending or treating facility, syndromic surveillance, and the time of file transmission. *Each file transmitted must have a unique filename.* This could take the form “HOSPA_SS_YYYYMMDDhhmm.hl7” where HOSPA is a generic placeholder for the sending or treating facility name. Do not begin file names with “WI” or “DPH,” and do not include spaces. If your organization needs to include WIDPH in the file name, please use the form “HOSPA_SS_WIDPH_YYMMDDHHMM.hl7.” *The file extension must be “.hl7” to ensure proper routing and processing.*

Message Updates

DPH supports patient updates. When any of the requested data elements *described in the messaging guides* are updated in the data provider’s system, whether before *or after* discharge, an update message (ADT^A08) should be triggered. The information contained shall be cumulative, including all previously sent information that remains correct and adding the new or changed information. (From the April 2015 PHIN Guide, “*When data elements are updated in the sender’s system, the entire record [i.e., all specified elements sent in previous messages] SHALL be resent.*”) Please review your protocol for triggering syndromic message updates to ensure that unrelated changes to the patient record do not trigger syndromic message updates, as this produces a high volume of duplicate messages.

Sender Usage Requirements

Data fields of interest for syndromic surveillance have sender usage requirements designated as “R” (Required), “RE” (Required but may be empty), or “O” (Optional).

Sender Usage	Sender Usage Description
R: Required	Data fields marked “R” must be present in all messages transmitted.
RE: Required but may be empty	Data fields marked “RE” are required when the data is present in the patient record (expected in the majority of situations.) “RE” <i>does not mean optional.</i> A certified EHR is expected to support collection and transmission of all RE data elements. “RE”-designated information may legitimately be missing in some circumstances, for example, information on patient demographics when the patient arrives unconscious or if specific data is not collected routinely as part of the standard clinical workflow.
O: Optional	DPH is supporting and requesting all “Optional” data fields. These fields are of interest for improving the performance of syndromic surveillance. However, each sender may make their own determination if some “Optional” fields will be excessively burdensome to provide.

Requirements by Patient Care Setting

In general, information in this guide applies to all care settings participating in submission of syndromic data (emergency, urgent, non-urgent ambulatory, and inpatient care settings). Any required distinctions among these care settings are noted explicitly in the implementation notes for specific data fields in **Appendices A, B, and C.**

III. Supported HL7 Messages

In alignment with the 2015 Edition of the ONC Certification Criteria for EHR Technology, DPH requires all syndromic messages submitted to be HL7 version 2.5.1. Facilities sending earlier version HL7 messages will be asked to update to version 2.5.1 as soon as possible.

Syndromic surveillance in Wisconsin will use information from HL7 2.5.1 messages of type ADT (Admit, Discharge, Transfer). ADT messages form the basis of syndromic surveillance; all required data elements are transmitted by ADT messages.

Usage of ADT message types is expected as follows:

ADT^A01: Admission—Patient is undergoing the admission process that assigns the patient to a bed for inpatient care. It signals the beginning of a patient’s stay in a health care facility.

ADT^A03: Discharge—Patient’s stay in a health care facility has ended and their status is changed to discharged.

ADT^A04: Registration—Patient has arrived or checked in; includes one-time and recurring patients.

ADT^A08: Patient Information Update—Patient information has changed or new information has become available, but no other trigger event has occurred. These A08 update messages shall be sent at the time the new or changed information becomes available, whether before *or after* discharge. The information they contain shall be cumulative, presenting all previously sent information that remains correct and adding the new or changed information.

HL7 Message Type Requirements by Care Setting

Patient Care Setting	Message Trigger Types	ADT			
		A04	A08	A03	A01
Hospitals providing inpatient care		R	R	R	R
Hospitals providing emergency care ONLY		R	R	R	C
Professionals (urgent and non-urgent ambulatory care)		R	R	C	C

R = Required

C = Required only if used during normal flow of business

IV. Useful Resources

Wisconsin Meaningful Use resources

Wisconsin Department of Health Services Meaningful Use website

<https://www.dhs.wisconsin.gov/phmu/index.htm>

Wisconsin Department of Health Services Syndromic Surveillance website

<https://www.dhs.wisconsin.gov/phmu/syndromic.htm>

Current national syndromic surveillance messaging guidance document

Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient, and Ambulatory Care Settings (Release 2.2, May 2017)

<https://healthsurveillance.site-ym.com/resource/resmgr/MESSAGING-GUIDE-FOR-SYNDROM.html>

Syndromic surveillance messaging standards referenced by the 2015 edition of the ONC Certification Criteria for EHR Technology

PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings, Release 2.0 (April, 2015)

https://www.cdc.gov/nssp/documents/guides/syndrsurvmessagguide2_messagingguide_phn.pdf

Messaging and terminology standards and validation

National Institute of Standards and Technology (NIST) Syndromic Surveillance 2015 edition validation tool:

<https://hl7v2-ss-r2-testing.nist.gov/ss-r2/#/home>

Health Level Seven International (HL7) standards development organization: <http://www.hl7.org/>

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

National Syndromic Surveillance Program Data Dictionary: <https://www.cdc.gov/nssp/biosense/docs/NSSP-Data-Dictionary.xlsx>

International Classification of Diseases, Ninth Revision (ICD9): <http://icd9.chrisendres.com/>

International Classification of Diseases, Tenth Revision (ICD10): <http://www.icd10data.com/>

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

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

American Medical Association Current Procedural Terminology (CPT):

<http://www.ama-assn.org/ama/pub/physician-resources/solutions-managing-your-practice/coding-billing-insurance/cpt.page>

Questions?

For questions about this guide or about syndromic submission to the Wisconsin Department of Health Services, please email [Wisconsin Syndromic Surveillance](mailto:Wisconsin_Syndromic_Surveillance).

APPENDIX A: ADT MESSAGE DATA ELEMENTS, WISCONSIN-SPECIFIC GUIDANCE

Name	Field	Usage	Wisconsin Syndromic Surveillance Implementation Notes
MESSAGE HEADER	MSH	R	INFORMATION FOR PARSING AND PROCESSING MESSAGE MSH segments per message: one (1)
Field Separator	MSH-1	R	Use the literal value “ ”
Encoding Characters	MSH-2	R	Use the literal value “^~\&”
Sending Application	MSH-3	O	Uniquely identifies the sending application among all applications in network enterprise
Sending Facility	MSH-4	R	The name of the sending facility may differ from the name of the treating facility.
Namespace ID	MSH-4.1	R	A business name descriptive enough to clearly identify the sending facility (1-20 characters)
Universal ID	MSH-4.2	R	NPI is preferred; OID may be used
Universal ID Type	MSH-4.3	R	Use literal value “NPI” for NPI, “ISO” for OID
Receiving Application	MSH-5	R	Use literal value “BioSense^2.16.840.1.113883.3.1673^ISO”
Namespace ID	MSH-5.1	O	Use literal value “BioSense”
Universal ID	MSH-5.2	O	The OID for BioSense is “2.16.840.1.113883.3.1673”
Universal ID Type	MSH-5.3	O	Universal ID Type for an OID is “ISO”
Receiving Facility	MSH-6	R	Use literal value “BioSense^2.16.840.1.113883.3.1673^ISO”
Date/Time of Message	MSH-7	R	Date/time that the sending system created the message; minimum precision is to the nearest minute: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]
Message Type	MSH-9	R	“ADT^A01^ADT_A01”, “ADT^A03^ADT_A03”, “ADT^A04^ADT_A01” or “ADT^A08^ADT_A01”
Message Control ID	MSH-10	R	Each unique message should have a message control ID that is unique at least within the sending application
Processing ID	MSH-11	R	Use literal value “T” during testing and validation; use literal value “P” once the messages have been fully validated and are in production
Version ID	MSH-12	R	Use the literal value “2.5.1”
Message Profile Identifier	MSH-21	R	DPH nor BioSense will not be sending acknowledgement messages. Use one of the following literal values: “PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO” “PH_SS-Batch^SS Sender^2.16.840.1.114222.4.10.3^ISO”

Name	Field	Usage	Wisconsin Syndromic Surveillance Implementation Notes
EVENT TYPE	EVN	R	TRIGGER EVENT INFORMATION EVN segments per message: one (1)
Recorded Date/Time	EVN-2	R	Expected to be the system date/time that the transaction WIs entered (NOTE, EVN-2 does not have to equal MSH-7); minimum precision is to the nearest minute: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]
Event Facility	EVN-7	R	This field shall identify the individual facility where the patient was treated
NamespaceID	EVN-7.1	RE	Use an abbreviation descriptive enough to clearly identify the treating facility
Universal ID	EVN-7.2	R	NPI is preferred and must identify <i>the individual facility providing service</i> ; If no existing NPI uniquely identifies the facility providing service, use OID. If no NPI or OID identifies the facility see https://www.hl7.org/oid/index.cfm for information on registering an OID for the facility
Universal ID Type	EVN-7.3	R	Use literal value "ISO" for OID, "NPI" for NPI
PATIENT IDENTIFICATION	PID	R	PATIENT IDENTIFYING AND DEMOGRAPHIC INFORMATION PID segments per message: one (1)
Set ID – PID	PID-1	R	Use the literal value "1"
Patient Identifier List	PID-3	R	Patient's unique identifier(s) from the submitting facility/organization; identifiers should be strong enough to remain unique across submitting organizations PID-3 is a repeating field that can accommodate multiple patient identifiers
ID Number	PID-3.1	R	Patient's medical record number The identifier provided should allow the treating facility to retrieve information on the patient from their electronic health record if requested by Public Health.
Assigning Authority	PID-3.4	O	This field shall identify the organizational entity responsible for assigning the unique Patient ID Number specified in PID-3.1 for all ADT messages associated with the patient visit
Identifier Type Code	PID-3.5	R	Use "MR" for medical record number

Name	Field	Usage	Wisconsin Syndromic Surveillance Implementation Notes
Assigning Facility	PID-3.6	O	This field shall identify the individual facility where the patient was assigned an ID
Patient Name	PID-5	R	If name is unknown, PID-5 shall be valued as "^^^^^^~^^^^^^U"
Family Name	PID-5.1	R	Patient's last name
Given Name	PID-5.2	R	Patient's first name
Middle Name	PID-5.3	R	Patient's middle name
Name type	PID-5.7	R	If patient legal name is provided, use literal value "L"; if patient name is unknown, use "U"
Date/Time of Birth	PID-7	O	Expressed with minimum precision to the month: YYYYMM[DD]. Leave blank if unknown.
Administrative Sex	PID-8	RE	Use value set <i>PHVS_Gender_SyndromicSurveillance</i>
Race	PID-10	RE	Patient may have more than one race defined. Leave blank if race is unknown.
Identifier	PID-10.1	RE	Use value set <i>PHVS_RaceCategory_CDC</i>
Text	PID-10.2	O	Concept name associated with code in PID-10.1
Name of Coding System	PID-10.3	CE	Condition Predicate: If PID-10.1 (Identifier) is valued, then 10.3 shall be valued "CDCREC"
Patient Address	PID-11	RE	Transmit patient's primary/current address
Street Address	PID-11.1	R	Patient's street address
City or Town	PID-11.3	RE	Free text
State or Province	PID-11.4	RE	For US residents, use value set <i>PHVS_State_FIPS_5-2</i> ; otherwise, use local code
Zip or Postal Code	PID-11.5	RE	USPS 5 digit code for US residents; otherwise, use local postal code
Country	PID-11.6	RE	Use value set <i>PHVS_Country_ISO_3166-1</i>
County/Parish Code	PID-11.9	R	For US residents, use value set <i>PHVS_County_FIPS_6-4</i>
Patient Account Number	PID-18	O	The account number assigned by accounting to which all charges and payments are recorded.
Ethnic Group	PID-22	RE	Leave blank if unknown.
Identifier	PID-22.1	RE	Use value set <i>PHVS_EthnicityGroup_CDC</i>
Text	PID-22.2	O	Concept name associated with code in PID-22.1
Name of Coding System	PID-22.3	CE	Condition Predicate: If PID-22.1 (Identifier) is valued, then 22.3 shall be valued "CDCREC"
Patient Death Date and	PID-29	CE	Date/time at which patient death occurred, expressed with minimum precision to the nearest
Patient Death Date and Time	PID-29	CE	Condition Predicate: If PV1-36 (Discharge Disposition) is valued "20", "40", "41", or "42", then PID-29 shall be populated
Patient Death Indicator	PID-30	CE	Condition Predicate: If PV1-36 (Discharge Disposition) is valued "20", "40", "41", or "42", then PID-30 shall be valued "Y"
Last Update Date/Time	PID-33	O	Last update date/time for the data contained in the PID segment
Last Update Facility	PID-34	O	Identifies the facility which last updated the data contained in the PID segment

Name	Field	Usage	Wisconsin Syndromic Surveillance Implementation Notes
PATIENT VISIT	PV1	R	VISIT-SPECIFIC INFORMATION
Set ID – PV1	PV1-1	R	Use literal value “1”
Patient Class	PV1-2	R	Use value set <i>PHVS_PatientClass_SyndromicSurveillance</i> ; Data providers should include ALL
Assigned Patient Location	PV1-3	O	Indicates patient’s initial assigned location or the location to which the patient is being moved
Admission Type	PV1-4	O	This field indicates the circumstances under which the patient was or will be admitted (e.g. routine, emergency, elective, etc.); use value set <i>PHVS_Admission_Type_HL7_2x</i>
Previous Hospital Unit	PV1-6	O	Unit where patient was prior to the current transaction
Physician Identifier	PV1-7	O	Attending doctor; recommend use of physician’s NPI
Hospital Service	PV1-10	O	Treatment or type of surgery the patient is scheduled to receive; Use HL7 Table 0069
Admit Source	PV1-14	O	Indicates setting from which the patient was admitted; Use value set
Ambulatory Status	PV1-15	O	Indicates any permanent or transient handicapped condition
Visit Number	PV1-19	R	Uniquely identifies the patient visit among all visits at the facility/organization
ID Number	PV1-19.1	R	All syndromic messages produced as a result of a single patient encounter must have the same
Assigning Authority	PV1-19.4	O	This field shall identify the organizational entity responsible for assigning the unique patient Visit ID Number specified in PV1-19.1 for all syndromic messages associated with the patient visit
Identifier Type Code	PV1-19.5	R	Use the literal value “VN”
Assigning Facility	PV1-19.6	O	This field shall identify the individual facility where the patient was assigned an ID
Discharge Disposition	PV1-36 PV1-44	RE (A08)	Use the value set <i>PHVS_DischargeDisposition_HL7_2x</i> This field shall not be populated in an A01 or A04 message; data shall be sent in an A03 at the
Discharge Disposition		RE (A08) R(A03)	Date/time of patient presentation, expressed with minimum precision to the nearest minute: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]. Hold this value constant across all messages for a specific visit.
Admit Date/Time		R	

Name	Field	Usage	Wisconsin Syndromic Surveillance Implementation Notes
Disposition or Discharge Date/Time	PV1-45	RE(A08) R(A03)	Date/time of patient disposition or discharge, expressed with minimum precision to the nearest minute: YYYYMMDDHHMM[SS.S[S[S[S]]]] [+/-ZZZZ] This field shall not be populated in A01 or A04 messages; field shall be populated in A03 discharge messages when available, and subsequent A08 updates. This field is not required in ambulatory settings.
PATIENT VISIT, ADD'L INFO	PV2	RE	ADMIT REASON INFORMATION PV2 segments per message: none or one (0-1)
Admit Reason	PV2-3	RE	<i>Provider's</i> description of reason for patient encounter or admission
Identifier	PV2-3.1	RE	Use ICD-9CM, ICD-10CM, or SNOMED CT codes
Text	PV2-3.2	RE	It is strongly recommended that text be sent to accompany any identifier; if only free text is used to capture admit reason, it is communicated in this component. If structured text is captured, concatenate all values and include in this field.
Name of Coding System	PV2-3.3	C	Condition Predicate: If PV2-3.1 (Identifier) is valued, PV2-3.3 shall be valued to one of the literal values in the set ("I9C", "I10C", "I10", "SCT")
OBSERVATION/RESULT	OBX	R/RE/O	OBSERVATION INFORMATION (of variable structure) OBX segments per message: expect at least 5 (absolute minimum of 2 in rare circumstances; maximum is unlimited) See Appendix B for full description of all OBX segment data of interest
DIAGNOSIS	DG1	RE	DIAGNOSIS INFORMATION DG1 segments per message: none to many (0 - max unlimited)
Set ID - DG1	DG1-1	R	The first occurrence of a DG1 Segment SHALL have the literal value of "1"; each following occurrence shall be numbered consecutively; maintain the ranking of diagnosis
Diagnosis Code - DG1	DG1-3	R	Include all diagnoses including E-, V-, W-, X-, Y-, and T- codes; the first code should be the primary diagnosis. Provider diagnoses are preferred to billing codes. Updates to diagnoses may be sent after discharge.
Identifier	DG1-3.1	R	Use ICD-9CM, ICD-10CM, or SNOMED CT codes
Text	DG1-3.2	RE	It is strongly recommended that text be sent to accompany any identifier
Name of Coding System	DG1-3.3	R	DG1-3.3 shall be valued to one of the literal values in the set ("I9C", "I10C", "SCT")

Name	Field	Usage	Wisconsin Syndromic Surveillance Implementation Notes
Diagnosis Date/Time	DG1-5	O	Date/time that diagnosis was determined
Diagnosis Type	DG1-6	R	Use value set <i>PHVS_DiagnosisType_HL7_2x</i> ; submit all Admitting (A), Working (W), and Final (F) diagnosis types. Does not apply in ambulatory settings.

PROCEDURES	PR1	RE	INFORMATION ABOUT PROCEDURES PERFORMED PR1 segments per message: none to many (0 - max unlimited)
Set ID – PR1	PR1-1	R	Numbers the repetitions of the segment, beginning with 1
Procedure Code Identifier	PR1-3.1	RE	Procedure codes may be sent as CPT-4, CPT-5, ICD-9-CM-PCS, ICD-10-PCS, or SNOMED CT
Text	PR1-3.2	RE	It is strongly recommended that text be sent to accompany any identifier
Name of Coding System	PR1-3.3	CE	Condition Predicate: If PR1-3.1 (Identifier) is valued, then PR1-3.3 shall be valued to one of the literal values in the set (“C4”, “C5”, “I9C”, “I10P”, “SCT”)
Procedure Date/Time	PR1-5	R	Date/time the procedure was performed

INSURANCE	IN1	O	INFORMATION ABOUT INSURANCE POLICY COVERAGE IN1 segments per message: none to many (0 - max unlimited)
Set ID – IN1	IN1-1	R	Numbers the repetitions of the segment, beginning with 1
Insurance Plan ID	IN1-2	R	Unique identifier for the insurance plan; If an insurance plan ID is unavailable, use UNK^UNKNOWN^NULLFL to meet the requirement to populate the field
Insurance Company ID	IN1-3	R	Use National Health Plan Identifier (HPID) in field IN1-3.1
Plan Type	IN1-15	O	Plan type, e.g. Medicare, Medicaid, Blue Cross, HMO, etc.; may use value set: <i>PHVS_SourceOfPaymentTypology_PHDSC</i>

APPENDIX B: ADT OBX SEGMENT SUMMARY AND SPECIFICATIONS

Segment Usage column abbreviations: **ED** = emergency department, **IN** = inpatient, **AC** = non-urgent ambulatory care, **UC** = urgent care

OBX Segment Data	Segment Usage	Segment-specific implementation			
		Field	Field Name	Literal values (in quotes) and implementation notes	
Treating Facility Location If multiple locations exist within an organization, provide the address that specifies where the service was provided	ED: RE	OBX-1	Set ID	Use the literal value "1"	
		OBX-2	Value Type	"XAD"	
		OBX-3.1	Obs Identifier	"SS002"	
	IN: RE	OBX-3.3	Name of Coding System	"PHINQUESTION"	
		OBX-5.1	Facility Street Address	Street address of facility where patient received care	
	AC: RE	OBX-5.2	Other Designation (<i>Opt</i>)	Additional address information may be placed here (<i>Optional</i>)	
	UC: RE	OBX-5.3	Facility City	Free text	
		OBX-5.4	Facility State	From value set: <i>PHVS_State_FIPS_5-2</i>	
		OBX-5.5	Facility ZIP Code	USPS zip code	
		OBX-5.6	Facility Country	From value set: <i>PHVS_Country_ISO_3166-1</i>	
		OBX-5.9	Facility County	From value set: <i>PHVS_County_FIPS_6-4</i>	
		OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>	
Facility/Visit Type	ED: R	OBX-1	Set ID	Use the literal value "1"	
		OBX-2	Value Type	"CWE"	
		OBX-3.1	Obs Identifier	"SS003"	
		OBX-3.3	Name of Coding System	"PHINQUESTION"	
	IN: R	OBX-5.1 OBX-5.2	Coded Identifier Text	For emergency department: "261QE0002X^Emergency Care"	
				For urgent ambulatory care: "261QU0200X^Urgent Care"	
	AC: R			For non-urgent ambulatory care: "261QP2300X^Primary Care"	
				OR "261QM2500X^Medical Specialty"	
	UC: R			For inpatient care: "1021-5^Inpatient Practice Setting"	
				For observation: "1021-5^Inpatient Practice Setting"	
				From value set: <i>PHVS_FacilityVisitType_SyndromicSurveillance</i>	
OBX-5.3				Name of Coding System	"HCPTNUCC"
OBX-5.4				Alternate Identifier	If the sender records visit type using a coding system other than NUCC provider codes, provide values from the implemented coding system in OBX-5.4, 5.5, and 5.6
OBX-5.5	Alternate Text				
OBX-5.6	Name of Alt Coding Sys				
		OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>	

OBX Segment Data	Segment Usage	Segment-specific implementation			
		Field	Field Name	Literal values (in quotes) and implementation notes	
Age	ED: RE	OBX-1	Set ID	Use the literal value "1"	
		OBX-2	Value Type	"NM"	
		OBX-3.1	Obs Identifier	"21612-7"	
		OBX-3.3	Name of Coding System	"LN"	
	IN: RE	OBX-5.1	Numeric Value	Enter the numeric value of the patient's age in years at the time of the visit ; for patients less than 2 years of age, report age in months. Round values to the nearest integer.	
	AC: RE	UC: RE	OBX-6.1	Units Identifier	Use literal value "a" or "mo"
	UC: RE				From value set: PHVS_AgeUnit_SyndromicSurveillance
					OBX-6.3
UC: RE	OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x		
Hospital Unit (Inpatient) / Service Location (Outpatient) *Although optional, this data is STRONGLY requested	ED: O	OBX-1	Set ID	Use the literal value "1"	
		OBX-2	Value Type	"CWE"	
		OBX-3.1	Obs Identifier	"56816-2"	
		OBX-3.3	Name of Coding System	"LN"	
	IN: O	OBX-5.1	Coded Identifier	From value set: NHSNHealthcareServiceLocationCode	
		OBX-5.2	Text	Text associated with code from the value set specified	
	AC: O	OBX-5.3	Name of Coding System	"HSLOC"	
		UC: O	OBX-5.4	Alternate Identifier	If the sender records service location using a different coding system than that provided in the value set NHSNHealthcareServiceLocationCode , values from the alternate system must be provided in fields OBX 5.4, 5.5, and 5.6 of this segment
			OBX-5.5	Alternate Text	
	OBX-5.6	Name of Alt Coding Sys			
	UC: O	OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x	
UC: O	OBX-14.1	Date/Time of Obs (Optional)	YYYYMMDDHHMM[SS[.S...]] [+/-ZZZZ] (Datetime that information was recorded in system)		

OBX Segment Data	Segment Usage	Segment-specific implementation		
		Field	Field Name	Literal values (in quotes) and implementation notes
Chief Complaint / Reason for Visit (patient-reported)	ED: RE IN: RE UC: RE AC: RE	Free text (strongly requested)		
		OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"TX"
		OBX-3.1	Obs Identifier	"8661-1"
		OBX-3.3	Name of Coding System	"LN"
		OBX-5.1	Original Text	Enter original free text recorded from patient's reported reason for visit; If structured text is also captured (e.g., drop-down pick list), include those values as well. Include ALL values captured in a pick-list. Maintain original value in all messages.
		OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x
Height and Weight: Both must be sent (two separate OBX segments) to enable BMI calculation				
Height	ED: O IN: RE AC: RE UC: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"NM"
		OBX-3.1	Obs Identifier	"8302-2"
		OBX-3.3	Name of Coding System	"LN"
		OBX-5.1	Numeric Value	Enter the numeric value of the patient's height at this visit
		OBX-6.1	Units Identifier	From value set: PHVS_HeightUnit_UCUM Transmit height in original units in which it was recorded
		OBX-6.2	Units Description	Include Preferred Concept Name from value set: PHVS_HeightUnit_UCUM
		OBX-6.3	Units Coding System	"UCUM"
OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x		

OBX Segment Data	Segment Usage	Segment-specific implementation		
		Field	Field Name	Literal values (in quotes) and implementation notes
Weight	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"NM"
		OBX-3.1	Obs Identifier	"3141-9"
		OBX-3.3	Name of Coding System	"LN"
	IN: RE	OBX-5.1	Numeric Value	Enter the numeric value of the patient's weight at this visit
	AC: RE	OBX-6.1	Units Identifier	From value set: <i>PHVS_WeightUnit_UCUM</i> Transmit weight in original units in which it was recorded
		OBX-6.2	Units Description	Include Preferred Concept Name from value set: <i>PHVS_WeightUnit_UCUM</i>
	UC: O	OBX-6.3	Units Coding System	"UCUM"
		OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>
Body Mass Index	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"NM"
	IN: O	OBX-3.1	Obs Identifier	"59574-4"
		OBX-3.3	Name of Coding System	"LN"
	AC: O	OBX-5.1	Numeric Value	Enter the numeric value of the patient's BMI at this visit
	UC: O	OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>
Provider Type	ED: O	OBX-1	Set ID	Use the literal value of "1"
		OBX-2	Value Type	"CWE"
	IN: O	OBX-3.1	Obs Identifier	"54582-2"
		OBX-3.3	Name of Coding System	"LN"
	AC: O	OBX-5.1	Coded Identifier	From value set: <i>PHVS_ProviderCodes_NUCC</i>
	UC: O	OBX-5.2	Text	Text associated with code from the value set specified
		OBX-5.3	Name of Coding System	"NUCC"

OBX Segment Data	Segment Usage	Segment-specific implementation			
		Field	Field Name	Literal values (in quotes) and implementation notes	
Smoking Status	ED: O	OBX-1	Set ID	Use the literal value "1"	
		OBX-2	Value Type	"CWE"	
		OBX-3.1	Obs Identifier	"72166-2"	
		OBX-3.3	Name of Coding System	"LN"	
	IN: RE	OBX-5.1	Coded Identifier	From value set: PHVS_SmokingStatus_MU	
		OBX-5.2	Text	Text associated with code from the value set specified	
	AC: RE	OBX-5.3	Name of Coding System	"SCT"	
		OBX-5.4	Alternate Identifier	If the sender records smoking status using a different coding system than that provided in the value set ' PHVS_SmokingStatus_MU ', values from the alternate system must be provided in fields OBX 5.4, 5.5, and 5.6 of this segment	
	UC: O	OBX-5.5	Alternate Text		
			OBX-5.6	Name of Alt Coding Sys	
		OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x	
Initial Temperature	ED: O	OBX-1	Set ID	Use the literal value "1"	
		OBX-2	Value Type	"NM"	
		OBX-3.1	Obs Identifier	"11289-6"	
		OBX-3.3	Name of Coding System	"LN"	
	IN: O	OBX-5.1	Numeric Value	Enter the numeric value of the patient's first temperature reading during this visit	
		OBX-6.1	Units Identifier	From value set: PHVS_TemperatureUnit_UCUM	
	AC: O	OBX-6.2	Units Description	Include Preferred Concept Name from value set: PHVS_TemperatureUnit_UCUM	
		UC: O	OBX-6.3	Units Coding System	"UCUM"
			OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x
			OBX-14.1	Date/Time of Obs (Optional)	YYYYMMDDHHMM[SS[.S...]] [+/-ZZZZ] (Datetime of patient measurement)
Triage Notes	ED: O	OBX-1	Set ID	Use the literal value "1"	
		OBX-2	Value Type	"TX"	
	IN: X	OBX-3.1	Obs Identifier	"54094-8"	
		AC: X	OBX-3.3	Name of Coding System	"LN"
	UC: O	OBX-5.1	Text data	Enter original free text of triage notes for the patient visit	
		OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x	

OBX Segment Data	Segment Usage	Segment-specific implementation		
		Field	Field Name	Literal values (in quotes) and implementation notes
Clinical Impression	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"TX"
	IN: X	OBX-3.1	Obs Identifier	"44833-2"
		OBX-3.3	Name of Coding System	"LN"
	AC: O	OBX-5.1	Text data	Provide the clinician's preliminary diagnosis as free text
	UC: O	OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x
Date of Onset	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"TS"
	IN: X	OBX-3.1	Obs Identifier	"11368-8"
		OBX-3.3	Name of Coding System	"LN"
	AC: O	OBX-5.1	Time	YYYYMMDD[HHMM] (Date of onset of symptoms associated with reason for visit)
	UC: O	OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x
Initial Pulse Oximetry	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"NM"
		OBX-3.1	Obs Identifier	"59408-5"
		OBX-3.3	Name of Coding System	"LN"
	IN: O	OBX-5.1	Numeric Value	Use the numeric value of the patient's first pulse oximetry reading
	AC: O	OBX-6.1	Units Identifier	"%" (from value set: PHVS_PulseOximetryUnit_UCUM)
		OBX-6.2	Units Description	Include Preferred Concept Name from value set: PHVS_PulseOximetryUnit_UCUM
	UC: O	OBX-6.3	Units Coding System	"UCUM"
		OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x
	OBX-14.1	Date/Time of Obs (Optional)	YYYYMMDDHHMM[SS[.S...]] [+/-ZZZZ] (Date/time of patient measurement)	

OBX Segment Data	Segment Usage	Segment-specific implementation		
		Field	Field Name	Literal values (in quotes) and implementation notes
Blood Pressure: If sending, systolic and diastolic blood pressure must both be sent (two separate OBX segments)				
Systolic Blood Pressure (BP)	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"NM"
		OBX-3.1	Obs Identifier	"8480-6"
		OBX-3.3	Name of Coding	"LN"
	IN: O	OBX-5.1	Numeric Value	Enter the numeric value of the patient's most recent systolic BP
		OBX-6.1	Units Identifier	"mm[Hg]"
	AC: O	OBX-6.2	Units Description	Include Preferred Concept Name from value set: PHVS_BloodPressureUnit_UCUM
	UC: O	OBX-6.3	Units Coding System	"UCUM"
		OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x
		OBX-14.1	Date/Time of Obs (Optional)	YYYYMMDDHHMM[SS[.S...]] [+/-ZZZZ] (Datetime of patient measurement)
OBX-14.1		Date/Time of Obs (Optional)	YYYYMMDDHHMM[SS[.S...]] [+/-ZZZZ] (Datetime of patient measurement)	
Diastolic Blood Pressure (BP)	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"NM"
		OBX-3.1	Obs Identifier	"8462-4"
		OBX-3.3	Name of Coding	"LN"
	IN: O	OBX-5.1	Numeric Value	Enter the numeric value of the patient's most recent diastolic BP
		OBX-6.1	Units Identifier	"mm[Hg]"
	AC: O	OBX-6.2	Units Description	Include Preferred Concept Name from value set: PHVS_BloodPressureUnit_UCUM
	UC: O	OBX-6.3	Units Coding System	"UCUM"
		OBX-11	Obs Result Status	From value set: PHVS_ObservationResultStatus_HL7_2x
		OBX-14.1	Date/Time of Obs (Optional)	YYYYMMDDHHMM[SS[.S...]] [+/-ZZZZ] (Datetime of patient measurement)
OBX-14.1		Date/Time of Obs (Optional)	YYYYMMDDHHMM[SS[.S...]] [+/-ZZZZ] (Datetime of patient measurement)	

OBX Segment Data	Segment Usage	Segment-specific implementation		
		Field	Field Name	Literal values (in quotes) and implementation notes
Initial Acuity	ED: O IN: O AC: O UC: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"CWE"
		OBX-3.1	Obs Identifier	"11283-9"
		OBX-3.3	Name of Coding System	"LN"
		OBX-5.1	Coded Identifier	May use values 1-5 with 1 indicating most severe. May also use value set: <i>PHVS_AdmissionLevelOfCareCode_HL7_2x</i>
		OBX-5.2	Text	Text associated with code from the value set specified
		OBX-5.3	Name of Coding System	"HL70432"
		OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>
		OBX-14.1	Date/Time of Obs (Opt)	YYYYMMDDHHMM[SS[.S...]] [+/-ZZZZ] (Datetime of assessment)
Problem List	ED: O IN: O AC: O UC: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"CWE"
		OBX-3.1	Obs Identifier	"11450-4"
		OBX-3.3	Name of Coding System	"LN"
		OBX-5.1	Text data	Narrative description of conditions currently being monitored
		OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>
Medication List	ED: O IN: O AC: O UC: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"TX"
		OBX-3.1	Obs Identifier	"10160-0"
		OBX-3.3	Name of Coding System	"LN"
		OBX-5.1	Text data	Narrative description of current medications
		OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>

OBX Segment Data	Segment Usage	Segment-specific implementation		
		Field	Field Name	Literal values (in quotes) and implementation notes
Medications Prescribed or Dispensed	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"CWE"
		OBX-3.1	Obs Identifier	"8677-7"
	IN: O	OBX-3.3	Name of Coding System	"LN"
		OBX-5.1	Coded Identifier	Medication code from RxNorm
	AC: O	OBX-5.2	Text	Description of medication code
		OBX-5.3	Name of Coding System	Free text
	UC: O	OBX-5.4	Alternate Identifier	Medication code from alternate coding system
		OBX-5.5	Alternate Text	Description of medication code
		OBX-5.6	Name of Alt Coding System	Free text
		OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>
Travel History	ED: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"TX"
	IN: O	OBX-3.1	Obs Identifier	"10182-4"
		OBX-3.3	Name of Coding System	"LN"
	UC: O	OBX-5.1	Text data	Provide any information about travel history collected
		OBX-11	Obs Result Status	From value set: <i>PHVS_ObservationResultStatus_HL7_2x</i>

OBX Segment Data	Segment Usage	Segment-specific implementation		
		Field	Field Name	Literal values (in quotes) and implementation notes
Occupation	ED: O IN: O UC: O AC: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"TX"
		OBX-3.1	Obs Identifier	"85658-3"
		OBX-3.3	Name of Coding System	"LN"
		OBX-5.1	Text data	Send patient occupation. If none available, do not send segment.
		OBX-11	Obs Result Status	"F"
Employer	ED: O IN: O UC: O AC: O	OBX-1	Set ID	Use the literal value "1"
		OBX-2	Value Type	"TX"
		OBX-3.1	Obs Identifier	"80427-8"
		OBX-3.3	Name of Coding System	"LN"
		OBX-5.1	Text data	Send name of patient's employer. If none available, do not send segment.
		OBX-11	Obs Result Status	"F"

APPENDIX C: HL7 BATCH PROTOCOL

Name	Field	Usage	Wisconsin Syndromic Surveillance Implementation Notes
FILE HEADER	FHS	R	FHS segments per file: One (1)
File Field Separator	FHS-1	R	Use the literal value “ ”
File Encoding Characters	FHS-2	R	Use the literal value “^~\&”
File Sending Application	FHS-3	R	Uniquely identifies the sending application among all applications in network enterprise
File Sending Facility	FHS-4	R	The name of the sending facility may differ from the name of the treating facility. If the message is sent by a vendor on behalf of a health care facility, use the name of the vendor.
NamespaceID	FHS-4.1	R	Use a business name abbreviation descriptive enough to clearly identify the sending facility
Universal ID	FHS-4.2	R	NPI is preferred; OID may be used
Universal ID Type	FHS-4.3	R	Use literal value “NPI” for NPI, “ISO” for OID
File Receiving Application	FHS-5	R	Use literal value “BioSense^2.16.840.1.113883.3.1673^ISO”
File Receiving Facility	FHS-6	R	Use literal value “BioSense^2.16.840.1.113883.3.1673^ISO”
File Creation Date/Time	FHS-7	R	YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]

Name	Field	Usage	Wisconsin Syndromic Surveillance Implementation Notes
BATCH HEADER	BHS	R	BHS segments per file: One (1)
Batch Field Separator	BHS-1	R	Use the literal value “ ”
Batch Encoding Characters	BHS-2	R	Use the literal value “^~\&”
Batch Sending Application	BHS-3	R	Uniquely identifies the sending application among all applications in network enterprise
Batch Sending Facility	BHS-4	R	The name of the sending facility may differ from the name of the treating facility. If the message is sent by a vendor on behalf of a health care facility, use the name of the vendor.
NamespaceID	BHS-4.1	R	Use a business name abbreviation descriptive enough to clearly identify the sending facility
Universal ID	BHS-4.2	R	OID or NPI is preferred
Universal ID Type	BHS-4.3	R	Use literal value “ISO” for OID, “NPI” for NPI
Batch Receiving Application	BHS-5	R	Use literal value “BioSense^2.16.840.1.113883.3.1673^ISO”
Batch Receiving Facility	BHS-6	R	Use literal value “BioSense^2.16.840.1.113883.3.1673^ISO”
Batch Creation Date/Time	BHS-7	R	Date/time that the sending system created the batched file; minimum precision is to the nearest minute: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]
BATCH TRAILER	BTS	R	BTS segments per file: one (1)
Batch Message Count	BTS-1	R	The number of messages contained in the preceding batch
Batch Comment	BTS-2	O	Limit of 80 characters if populated
FILE TRAILER	FTS	R	FTS segments per file: one (1)
File Batch Count	FTS-1	R	Must be “1” (only one batch per file)
File Trailer Comment	FTS-2	O	Limit of 80 characters if populated

APPENDIX D: SAMPLE ADT HL7 MESSAGES

A01 – Admit

MSH|^~\&|EPIC|Hospital^6868012945^NPI|BioSense^2.16.840.1.113883.3.1673^ISO|BioSense^2.16.840.1.113883.3.1673^ISO
|20180110101830||ADT^A01^ADT_A01|12345678|P|2.5.1|||NE|||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO||
EVN||20120110101830|||Hospital^6868012945^NPI
PID|1||12345678^^^ORGENTITY&NPI&ISO^MR||Dinosaur^Happy^^^^^^^|19680922|M||2106-3^White^CDCREC|317 Curbside
Boulevard^^Chatham^55^53206^USA^^^55079|||||12345678|||2186-5^NOT HISPANIC OR LATINO^CDCREC|||||||
PV1|1|E|G.ER|E|||||||7|||||G0000471^^^MPI&2.16.840.1.114222.4.1.3657&ISO^VN^DGH&2.16.840.1.114222.4.1.3657&ISO|||||||
|||||||20140620113859|||||
PV2||J1100^Influenza due to unidentified influenza virus with unspecified type of pneumonia^I10C
OBX|1|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION||261QE0002X^Emergency Care ^HCPTNUCC|||||F|||201612272000-0500
OBX|2|NM|21612-7^Age-Reported^LN||10|a^^UCUM|||||F|||201612272000-0500
OBX|3|TX|8661-1^CHIEF COMPLAINT^LN||fever, cough, difficulty breathing|||||F|||201612272000-0500
OBX|4|TS|11368-8^ILLNESSORINJURYONSETDATEANDTIME^LN||201612262200-0500|||||F|||201612272000-0500
OBX|5|CWE|56816-2^HOSPITALUNIT^LN||1047-0^PediatricRespiratoryCriticalCare^HSLOC|||||F|||201612272000-0500
DG1|1||J1100^INFLUENZA DUE TO UNIDENTIFIED INFLUENZA VIRUS WITH UNSPECIFIED TYPE OF PNEUMONIA^I10C||201612272000-0500|A
IN1|1|1234567|12345678|InsuranceGroup|||||||92^Other(Non-government)^PHDSC

A03 – Discharge

MSH|^~\&|EPIC|Hospital^6868012945^NPI|BioSense^2.16.840.1.113883.3.1673^ISO|BioSense^2.16.840.1.113883.3.1673^ISO
|20180110101830||ADT^A03^ADT_A03|12345678|P|2.5.1|||NE|||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO||
EVN||20120110101830|||Hospital^6868012945^NPI
PID|1||12345678^^^ORGENTITY&NPI&ISO^MR||Dinosaur^Fakename^^^^^^^|19680922|F||2028-9^Asian^CDCREC|1 Solitude
Way^^Chatham^55^53703^USA^^^55025|||||12345678|||2186-5^NOT HISPANIC OR LATINO^CDCREC|||||||
PV1|1|E|G.ER|E||unit|1234567898||MED||||7|||||12345678^^^12345678&NPI&ISO^^|01|||||20180109171536|2018
0109201000|||||||
PV2||S82.3^FRACTURE OF LOWER END OF TIBIA^I10C
OBX|1|NM|21612-7^AGE-REPORTED^LN||50|a^^UCUM|||||F|||||||
OBX|2|NM|11289-6^BODY TEMPERATURE^LN||97.5|[degF]^FAHRENHEIT^UCUM|||||F|||20180115112500|||||||
OBX|3|NM|59408-5^OXYGEN SATURATION:PULSE OXIMETRY^LN||95|^PERCENT^UCUM|||||F|||20180115112500|||||||
OBX|4|TX|8661-1^CHIEF COMPLAINT^LN||broken ankle|||||F|||||||
OBX|5|CWE|SS003^FACILITY / VISIT TYPE^PHINQUESTION||261QE0002X^Emergency Care^HCPTNUCC|||||F|||||||
OBX|6|TX|11450-4^ANKLE PAIN^LN||ankle pain|||||F|||||||

A04 – Registration

MSH|^~\&|EPIC|Hospital^6868012945^NPI|BioSense^2.16.840.1.113883.3.1673^ISO|BioSense^2.16.840.1.113883.3.1673^ISO|20180110101830|ADT^A04^ADT_A01|12345678|P|2.5.1||NE||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO|EVN||20120110101830||||Hospital^6868012945^NPI
PID|1||12345678^^^ORGENCY&NPI&ISO^MR||Dinosaur^Fakename^^^^~^^^^||19680922|M||2054-5^BLACK OR AFRICAN AMERICAN^CDCREC|456 Butts Avenue^^Chatham^55^53206^USA^^^55079||||12345678|||2186-5^NOT HISPANIC OR LATINO^CDCREC|||||||
PV1|1|E|G.ER|E|||||||7||||G0000471^^^MPI&2.16.840.1.114222.4.1.3657&ISO^VN^DGH&2.16.840.1.114222.4.1.3657&ISO|||||||
|||||||20140620113859|||||
PV2||J1100^Influenza due to unidentified influenza virus with unspecified type of pneumonia^I10C
OBX|1|CWE|SS003^FACILITY / VISIT TYPE^PHINQUESTION||261QE0002X^EMERGENCY CARE^HCPTNUCC||||F||20140620|||||
OBX|2|NM|21612-7^AGE-REPORTED^LN||29|a^^UCUM||||F|||||||
OBX|3|NM|8302-2^BODYHEIGHT^LN||45|[in_us]^inch^UCUM||||F||201612272000-0500
OBX|4|NM|3141-9^BODYWEIGHTMEASURED^LN||768|[oz_av]^ounce^UCUM||||F|||||||
OBX|5|TX|8661-1^CHIEF COMPLAINT^LN||fever, cough, difficulty breathing||||F||201612272000-0500

A08 –Patient Update

MSH|^~\&|EPIC|HospitalName^6868012945^NPI|BioSense^2.16.840.1.113883.3.1673^ISO|BioSense^2.16.840.1.113883.3.1673^ISO|20180110101830|ADT^A08^ADT_A01|12345678|P|2.5.1||NE||||PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO|EVN||20120110101830||||HospitalName^6868012945^NPI
PID|1||23456^^^ORGENCY&NPI&ISO^MR||Dinosaur^Wisconsinname^^^^~^^^^||19680922|F||2106-3^White^CDCREC|312 Alley Way^^Chatham^55^53206^USA^^^55079||||12345678|||2135-2^HISPANIC OR LATINO^CDCREC|||||||
PV1|1|E|G.ER|E||unit|1234567898||MED||||7||||12345678^^^12345678&NPI&ISO^^|||||||01|||||20180109171536|20180109201000|||||
PV2||B34.9^INFECTION^I10C
OBX|1|NM|21612-7^AGE-REPORTED^LN||50|a^^UCUM||||F|||||||
OBX|2|TX|8661-1^CHIEF COMPLAINT^LN||abdominal pain||||F|||||||
OBX|3|CWE|SS003^FACILITY/VISITTYPE^PHINQUESTION||261QE0002X^Emergency Care^HCPTNUCC||||F|||||||