Kansas Department of Health and Environment Technical Specifications for Participation in Syndromic Surveillance

Syndromic Surveillance gives public health authorities, like the Kansas Department of Health and Environment (KDHE) and local health departments, timely access to emergency department (ED) and urgent care (UC) data. This de-identified information is used to monitor trends in emergency departments for early event detection and enhanced awareness of patterns that can be used to improve community health. The Kansas Syndromic Surveillance Program (KSSP) partners with National Syndromic Surveillance Program (NSSP) to conduct syndromic surveillance by using NSSP's BioSense platform to collect and house data.

Certification Standards

If you are interested in participating in the Promoting Interoperability (PI) program, contact the PI Coordinator and submit the completed Registration of Intent to Submit Data form at kdhe.MeaningfulUse@ks.gov. While registering intent for PI is not necessarily a pre-requisite for participating in Syndromic Surveillance with the State of Kansas, participating facilities must adhere to PI guidelines to be approved for production.

Kansas requires that an EHR product used by the facility be considered Certified Electronic Health Record Technology (2015 CEHRT).

KDHE also requires that facilities use the PHIN Messaging Guide for Syndromic Surveillance - Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings (v.2.5.1) (henceforth referred to as "PHIN Guide") as a guide for implementation of their syndromic surveillance system. Information in this KSSP Technical Specifications document closely aligns with the PHIN Guide with some additions specific to Kansas.

Accepted Message Types

- **CDC and KSSP accept Health Level 7 (HL7) ADT message Event Types A01, A04, A03, and A08** (corresponding to patient admission, registration, discharge, and updates) for ED and UC facility types in the reporting of syndromic surveillance data.
- Only messages related to **CURRENT** visits should be sent.
- It is required that all initial patient information, including chief complaint, be submitted **within 24 hours** and preferred that all information regarding a patient encounter be submitted **within 14 days** of the visit date.
- **Each message should include all priority data, NOT just the updated fields.** For example, after the chief complaint field is recorded, it should be sent in all subsequent messages for that visit.

Accepted Transport Types

KDHE and the CDC only accept Health Level 7 (HL7) message types reported via secure File Transfer Protocol (sFTP). If the facility is involved in a Kansas HIE, like KONZA, please view their connection information.

Suggested sFTP for transferring files to the BioSense Platform servers:

WinSCP – http://winscp.net FileZilla – https://filezilla-project.org/

Batch or Continuous Transmission and Timeliness

Facilities reporting directly to BioSense must submit data in batches. Hourly batches of records are preferred by KSSP. Each batch must have a valid sFTP file name to be processed correctly.

- SFTP Filename Convention: {State}_{Provider}_{Date}_{Hour}_{FileNumber}.{Suffix}
  - Example: KS_ExampleClinic_20210824_15_001.hl7

Note: No white-space characters are permitted in the filename.

Messages must be transmitted at the time of patient encounter or within 24 hours.

Facilities reporting to BioSense via KONZA can submit data continuously (real-time) or in batches. A batch header will be generated by KONZA for transmission to BioSense.

Testing and Validating HL7 Messages

BioSense contains a testing server (called Staging) for new facilities and facilities switching EHR products. In Staging, facilities will work to improve Syndromic data before being approved by the KSSP Onboarding Coordinator to submit data to the BioSense Production server. Contact kdhe.syndromic@ks.gov for help with testing, validation, and endpoint connection information for the staging server. For more on the testing process please see the KDHE Syndromic Surveillance Onboarding Process document.

Personal Identifiable Data

IMPORTANT NOTE: The PHIN Guide and KDHE stipulate **patient identifiable data (PII) should NOT be submitted to BioSense**. This includes, but is not limited to patient name, patient social security number, patient street address, next-of-kin information, patient phone number, and more.

The following HL7 fields frequently contain identifiable data and are **NOT** supported in BioSense:

- PID-2.1 (Patient ID)
- PID-3.2.4
- PID-5.1.6 (Legal Name of Patient)
- PID-5.8.12 (Patient Name)
- PID-6 (Mother's Maiden Name)
- PID-9 (Patient Alias)
- PID-11.1.2 (Patient Street Address)
- PID-11.8: (Other Geographic Designation)
- PID-13.17 (Patient Phone)
- PID-19.21 (Patient SSN)
- PID-23.28 (Birthplace)
- PID-30.2 (Patient Surname)
- NK Segments
- MRG-7
- IN1-16 (Name of Insured)
- IN1-19 (Insured Address)
- GT1-3.6
- GT1-12
- GT1-19

While patient street address must be null, **patient state, zip code, county code and country code are required for submission.**

Minimum Fields Needed for BioSense Record Creation		
MSH-4.2	Sending_Facility	Facility NPI number that has been registered with NSSP.
	Any change in this field without proper care will result in all sent messages being rejected.	
MSH-7	Message_Date_Time	Date and time that the message is sent, including time zone.
MSH-9.1	Message_Type	'ADT'
PID-3.1	Medical_Record_Number	Unique identifier for patient across all visits to facility.
	Note: BioSense only utilizes the first unique identifier # listed in PID-3.1, **SO MRN MUST BE LISTED FIRST**	
PV1-44.1	Admit_Date_Time	Date and time of encounter for admission.
	All records with any date/time set more than 12 hours in the future will be rejected.	

Diagnosis Codes

KSSP expects ICD-10 diagnosis codes in the DG1 diagnosis segment. Admitting, Working, and Final diagnosis codes should be sent for each visit. SNOMED codes are acceptable for additional information such as historical codes and comorbidities. These additional SNOMED codes should not be used as a replacement for ICD-10 codes and should be sent in a Problem List OBX segment.

Optional Data

KDHE will gladly accept any optional data a facility is willing to share. Refer to the PHIN Guide for Syndromic Surveillance for details as to how these fields should be populated.

KSSP Data Field Requirements

The following is a list of important data field requirements for KSSP. All Fields with KDHE Usage listed as 'R' must be submitted to meet syndromic surveillance guidelines. Other fields are listed as Optional 'O' or Conditional 'C'. When referring to the Public Health Information Network Vocabulary Access and Distribution System (PHIN VADS) value sets, the 'Preferred Concept Name' is what should be used to describe the field. This list of fields is not complete and has modifications specific to Kansas needs. Please refer to the PHIN Guide for other data field requirements.

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Field Separator	Separator between the segment ID and the first real field, MSH-2-encoding characters.	Default value is |, (ASCII 124).	**R**	MSH-1.1
Encoding Characters	Four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator.	Default values are ^~\& (ASCII 94, 126, 92, and 38, respectively).	**R**	MSH-2.1
Sending Application	Name of the EHR vendor and product used by the facility.		**O**	MSH-3.1
Sending Facility	Unique facility identifier of facility where the patient originally presented (original provider of data). **Use NPI (National Provider Identifier): ie, 1234567890**	This ID must be approved by and submitted to the BioSense technical team prior to submission of any test or production messages. ID must appear in the header of every message or batch.	**R**	MSH-4.2
Receiving Application	Identification of the receiving application.	This will be valued with either "KONZA" if sending to the KONZA HIE, or "SYS-P" otherwise.	**O**	MSH-5.1
Receiving Facility	Identification of the receiving application among multiple instances.	This will be valued with "KDHE" for all Kansas facilities.	**O**	MSH-6.1
Date/Time of Message	Date and time that the message is sent, including time zone.	Date/Time should be in the following format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]	**R**	MSH-7.1
Message Code	Literal Value 'ADT' or 'ACK'	PHVS_MessageType_SyndromicSurveillance	**R**	MSH-9.1

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Trigger Event	One of the following literal values: 'A01', 'A03', 'A04', or 'A08'	PHVS_EventType_SyndromicSurveillance	**R**	MSH-9.2
Message Structure	Trigger events A01, A04, and A08 share the same 'ADT_A01' Message Structure. Valid values are: 'ADT_A01' or 'ADT_A03' or 'ACK'	PHVS_MessageStructure_SyndromicSurveillance	**R**	MSH-9.3
Message Control ID	Contains a number or other identifier that uniquely identifies the message.		**R**	MSH-10.1
Processing ID	Used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. Note: Indicates how to process the message as defined in HL7 processing rules	Conformance Statement SS-015: MSH-11 (Processing ID) SHALL have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training.	**R**	MSH-11.1
Version ID	HL7 version number used to interpret format and content of the message.	**Conformance Statement SS-016**: MSH-12 (Version ID) SHALL have a value '2.5.1'	**R**	MSH-12.1
Accept Acknowledgement Type	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions	Must be left empty for the Accept Acknowledgment.	**C**	MSH-15.1
Application Acknowledgement Type	HL7 table 0155: HL7 defined: Accept/application acknowledgment conditions	Must be left empty for the Accept Acknowledgment.	**C**	MSH-16.1
Message Profile Identifier	Assert adherence to, or reference, a message profile. Message profiles contain detailed explanations of grammar, syntax, and usage for a particular message or set of messages	**Conformance Statement SS-017:** **See p. 57 of the PHIN Guide for Syndromic Surveillance** For most KS facilities this value should be: |PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO|	**R**	MSH-21
Event Type Code	Event type that triggers a message submission	Should match Trigger Event in MSH-9.2 PVHS_EventType_SyndromicSurveillance	**R**	EVN-1.1

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Recorded Date/Time	Date and time that record is generated from original source (from treating facility)	Date/Time should be in the following format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]	**R**	EVN-2.1
Event Facility	This field identifies the location where the patient was actually treated, and is required to identify facilities in BioSense **Use facility NPI: ie, 1234567890**		**R**	EVN-7.2
Patient Identifier List[1]	This field may contain multiple unique patient identifiers. **MRN should be listed first** and is taken from the first non-null value where PID-3.5 = 'MR'	Example MRN in PID-3: |MR101100001^^^^MR| Here are the different Identifier Types accepted in PID-3: https://phinvads.cdc.gov/vads/ViewValueSet.action?o	**R**	PID-3
Date/Time of Birth	Date of birth for patient	Date/Time should be in the following format: YYYYMMDD	**R**	PID-7
Gender	Gender of patient	Use HL7 administrative sex codes as the following: PHVS_Gender_SyndromicSurveillance	**R**	PID-8
Race	Race of patient	Use CDC Race & Ethnicity codes as the following: 2.16.840.1.114222.4.11.836/PHVS_RaceCategory_CDC	**R**	PID-10
City/Town	City/Town of patient residence		**R**	PID-11.3
Zip Code[4]	Zip Code of patient home address	See below[4]	**R**	PID-11.5
State	State of patient home address	Field must be formatted as a 2-digit FIPS code and valid state codes for ALL state in the US must be included. Use the following code value set for state FIPS codes: 2.16.840.1.114222.4.11.830 PHVS_State_FIPS_5-2	**R**	PID-11.4

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
County[6]	County of residence for patient	Field must be formatted as a 5-digit FIPS code and valid county codes for ALL counties in the US must be included. Use the following county FIPS code value set: 2.16.840.1.114222.4.11.829 PHVS_County_FIPS_6-4	**R**	PID-11.9
Country	Country of patient home address	Valid codes for ALL countries must be included. Use the following code value set: 2.16.840.1.114222.4.11.828 PHVS_Country_ISO_3166-	**R**	PID-11.6
Ethnicity	Ethnicity of patient	Use CDC Race & Ethnicity codes as the following: 2.16.840.1.114222.4.11.837	**R**	PID-22
Patient Death Date/Time	The date and time at which the patient death occurred. This field shall not be populated on an admission message	**Conformance Statement SS-036:** If valued, PID-29 (Patient Death and Time), SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Condition Predicate:** If valued, PID-30 (Patient Death Indicator) SHALL be valued to the Literal Value 'Y'. Condition Predicate: If PV1-36 is valued with any of the following: '20', '40', '41', '42' then PID-29 (Patient Death and Time) SHALL be populated.	**C**	PID-29
Patient Death Indicator	This field indicates whether the patient is deceased.	Conformance Statement SS-037: If valued, PID-30 (Patient Death Indicator) SHALL be valued to the Literal Value 'Y'. Condition Predicate: If PV1-36 (Discharge Disposition) is valued with any of the following: '20', '40', '41', '42' and PID-29 (Patient Death and Time) SHALL be populated.	**C**	PID-30

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Patient Class	Patient classification within facility. Patient class is expected to match facility type.	Data should be limited to emergency room/department patients only; limit to E=Emergency. Use HL7 Patients Class codes as the following: 2.16.840.1.114222.4.11.3404 PHVS_PatientClass_SyndromicSurveillance	**R**	PV1-2.1
Admit Source	Indicates where the patient was admitted	This field is checked only for invalid entries	**O**	PV1-14.1
Unique Visiting ID	Unique identifier for a patient visit	A visit is defined as a discrete or unique clinical encounter within a service department or location. **Notes:** Every visit will generate a record.	**R**	PV1-19
Discharge Disposition	Patient's anticipated location or status following ED visit (i.e., discharged to home, inpatient, expired, etc.)	Uses National Uniform Billing Committee (NUBC) – Patient Status (UB04 -Field 17 Codes): 2.16.840.1.114222.4.11.915 PHVS_DischargeDisposition_HL7_2x **Required on all A03 messages and any messages received thereafter.**	**R**	PV1-36.1
Admit or Encounter Date/Time	Date and time of patient presentation	**Conformance Statement SS-010:** PV1-44 (Admit Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/- ZZZZ]'	**R**	PV1-44.1
Discharge Date/Time	This field contains the discharge date/time and shall be populated in a Discharge message	**Conformance Statement SS-045**: PV1-45 (Discharge Date/Time) **SHALL** be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ]' **Required on all A03 messages and any messages received thereafter.**	**R**	PV1-45

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Admit or Encounter Reason	Short description of the provider's reason for admitting the patient – Code and Description	This field is the provider's reason for admitting the patient. It is distinct from the Chief Complaint / Reason for Visit field which is the patient's selfreported chief complaint or reason for visit. Senders should send the richest and most complete description of the patient's reason for admission or encounter.	**R**	PV2-3
Diagnosis/External Cause of Injury	Diagnosis code or external cause of injury code (for injury-related-visits) of patient condition	If the DG1 Segment is provided, DG1-3 (Diagnosis Code) is required to be valued. **ICD10 diagnosis codes from the provider (EHR) are preferred** over the diagnosis provided through billing. Include V-codes and E-codes. When the primary diagnosis code is an injury, also provide one or more supplemental external-cause-of-injury codes or E-codes. Data should be sent on a regular schedule and should not be delayed for diagnosis or verification procedures. Regular updating of data should be used to correct any errors or send data available later. This field is a repeatable field; multiple codes may be sent. The first diagnosis code should be the primary diagnosis.	**R**	DG1-3
Diagnosis Type	This field contains a code that identifies the type of diagnosis being sent.	If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued. Values are: A = Admitting, F = Final, W = Working Use the following HL7 Diagnosis Type codes: 2.16.840.1.114222.4.11.827 PHVS_DiagnosisType_HL7_2x	**R**	DG1-6

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Procedure Code	Procedures administered to the patient.		**O**	PR1-3
Procedure Date/Time	This field contains the date/time that the procedure was performed.		**R**	PR1-5.1
Age	Numeric value of patient age at time of visit	OBX-3 uses a LOINC observation identifier (specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance) 21612-7, Age – Reported (LOINC)	**R**	OBX-2, OBX-3, OBX-5
Age Units	Unit corresponding to numeric value of patient age (e.g., Days, Month or Years)	OBX-6 Units uses UCUM or Null Flavor as the following: 2.16.840.1.114222.4.11.3402 PHVS_AgeUnit_SyndromicSurveillance	**R**	OBX-6
Chief Complaint/ Reason for visit[5]	Short description of the chief complaint or reason for patient's visit, recorded when seeking care	Field Identified using code value 8661-1, CHIEF COMPLAINT – REPORTED. A free text field that should be captured at the beginning of every visit and sent with every subsequent message	**R**	OBX-2, OBX-3, OBX-5
Facility/Visit Type	Type of facility that the patient visited for treatment. Facility type is expected to match patient class.	For OBX-3 Use the following the National Claim Committee, NUCC, codes 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance SS003 Facility/Visit Type (PHIN Questions) For OBX-5 use: 2.16.840.1.114222.4.11.34 01 PHVS_FacilityVisitType_S yndromicSurveillance	**R**	OBX-2, OBX-3, OBX-5

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Triage Notes	Triage notes for the patient visit	**This field often contains more nuanced information regarding the patient's visit; travel history is often also included in this field).** OBX-3 uses a LOINC observation identifier (specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance) 54094-8, Emergency Department Triage Note (LOINC) For OBX-5 use: Free text. For further guidance refer to column 'Recommended HL7 Location' in the PHIN Messaging Guide.	**R**	OBX-2, OBX-3, OBX-5
Clinical Impression	Clinical Impression (free text) of diagnosis		**O**	OBX-5
Date of onset	Date that patient began having symptoms of condition being reported		**O**	OBX-2, OBX-3, OBX-5
Pregnancy Status	Whether the patient is pregnant during the encounter	OBX-3 uses a LOINC observation identifier 11449-6 Pregnancy Status (LOINC) OBX-5 is Yes, No or Unknown PHVS_YesNoUnknown_CDC	O	OBX-2, OBX-3, OBX-5
Initial Temperature	1st recorded temperature	OBX-3 uses a LOINC observation identifier (specified in the value set: 2.16.840.1.113883.3.88.12.80.62 PHVS_VitalSignResult_HITSP) 11289-6 Initial Temp (LOINC)	**O**	OBX-5
Initial Temperature Units	Units corresponding to 1st recorded temperature (e.g., Fahrenheit, Celsius)	OBX-6 uses the following UCUM - Unified Codes for Units of Measure: PHVS_TemperatureUnit_UCUM	**O**	OBX-6

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Initial Pulse Oximetry	1st recorded pulse oximetry value	OBX-3 uses a LOINC observation identifier (specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance) 59408-5 Oxygen saturation in Arterial blood by Pulse Oximetry (LOINC)	**O**	OBX-5
Initial Pulse Oximetry Units	Units for 1st recorded pulse oximetry value	OBX-6 uses a single Unit of Measure value from UCUM: 2.16.840.1.114222.4.11.3590 PHVS_PulseOximetryUnit_UCUM	**C**	OBX-6
Systolic and Diastolic Blood Pressure	Most recent Systolic and Diastolic Blood Pressure of the patient.	OBX-3 uses a LOINC observation identifier (specified in the value set: 2.16.840.1.113883.3.88.12.80.62 PHVS_VitalSignResult_HITSP) 8480-6 Systolic blood pressure (LOINC) 8462-4 Diastolic blood pressure (LOINC)	**O**	OBX-3
Initial Blood Pressure Units	Units for 1st recorded blood pressure	OBX-6 uses the following UCUM - Unified Codes for Units of Measure: 2.16.840.1.114222.4.11.920 PHVS_BloodPressureUnit_UCUM	**C**	OBX-6.2
Insurance Plan ID	Insurance plan associated with the patient		**R**	IN1-2.1
Insurance Company ID	Insurance Company ID		**R**	IN1-3.1
Insurance Coverage	High-level description of insurance, such as Medicare, Medicaid, Private Insurance and Self-pay	For IN1-15 Insurance Plan ID, use Source of Payment Typology (PHDSC) 2.16.840.1.114222.4.11.3591	**O**	INI-15

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Height	Height of the patient	OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.113883.3.88.12.80 .62 PHVS_VitalSignResult_HITS 8302-2 Body height (LOINC) **NOTE:** Units of measure must be included defining the numeric value. For OBX-6 use the following UCUM - Unified Codes for Units of Measure: 2.16.840.1.114222.4.11.891 PHVS_HeightUnit_UCUM	**R**	OBX-3 OBX-2 OBX-6
Weight	Weight of the patient	OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.113883.3.88.12.80 .62 PHVS_VitalSignResult_HITS 3141-9 Body weight Measured (LOINC) **NOTE:** Units of measure (OBX-6) must be included defining the numeric value. For OBX-6 use the following UCUM - Unified Codes for Units of Measure: 2.16.840.1.114222.4.11.879 PHVS_WeightUnit_UCUM	**R**	OBX-3 OBX-2 OBX-6
Smoking Status	Smoking Status of Patient	OBX-6 uses a Concept Code specified in the value set: PHVS_SmokingStatus_MU 72166-2 Tobacco smoking status (LOINC) This data element is a Promoting Interoperability requirement. Allows monitoring of chronic conditions.	**R**	OBX-3 OBX-2 OBX-5

Data Element Name	Description of Field	Additional Implementation Notes/ Value Set	KSSP Usage	HL7 Location
Problem List	Problem list of the patient conditions. Can be used for historical and comorbidity codes.	OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 11450-4 Problem List - Reported (LOINC)	**O**	OBX-3 OBX-2 OBX-5
Medication List	Current medications entered as narrative.	OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 10160-0 Medication Use Reported (LOINC) OBX-5 allows formatted text/narrative only	**O**	OBX-3 OBX-2 OBX-5
Medications Prescribed or Dispensed	Current medications	OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 8677-7 History of Medication Use - Reported (LOINC) OBX-5 (1) Standard and OBX-2 Value Type of CWE. Collection of this data may be relevant to more in-depth analyses, individual patient follow-up or other surveillance process.	**O**	OBX-3 OBX-2 OBX-5
Travel History	Travel History as Narrative	OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 10182-4 History of Travel Narrative (LOINC)Oximetry (LOINC) and OBX-2 Value Type of TX.	**O**	OBX-3 OBX-2

Usage defined
R = Required & field must contain a value; A value must be present for the message to be accepted
O = Optional field.
C = Conditional field. If field evaluates to 'TRUE', then considered the same at 'R'; otherwise, Senders must not populate the field.

Example HL7 Messages

Example A04 Registration Message For ED Visit

```
MSH|^~\&||ExampleED^999999999^NPI|||202111171430||ADT^A04^ADT_A01|NIST-SS-001.12|P|2.5.1|||||||
        |PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||202111171400|||||ExampleED^999999999^NPI
PID|1||2222^^^^MR||~^^^^^^S||19790505|F||2106-3^White^CDCREC|^^Topeka^20^66612^USA^20710||||||||||2135-2^Hispanic or Latino^CDCREC
PV1|1|E|||||||||||||||2222_001^^^^VN|||||||||||||||||||||||202111171200
OBX|1|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION||261QE0002X^Emergency Care^HCPTNUCC||||||F
OBX|2|NM|21612-7^Age - Reported^LN||35|a^year^UCUM|||||F
OBX|2|TX|8661-1^CHIEF COMPLAINT ^LN||STOMACH ACHE||||||F|||202111171200
```

Example A08 Update Message For ED Visit

```
MSH|^~\&||ExampleED^999999999^NPI|||202111171430||ADT^A08^ADT_A01|NIST-SS-001.12|P|2.5.1|||||||
        |PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||202111171400|||||ExampleED^999999999^NPI
PID|1||4444^^^^MR||~^^^^^^S|||M||2076-8^Native Hawaiian or Other Pacific Islander^CDCREC~2028-9^Asian^CDCREC
        |^^Topeka^20^66612^^^^20710||||||||||2135-2^Hispanic or Latino^CDCREC
PV1|1|E|||||||||||||||4444_001^^^^VN|||||||||||||||||||||||202111171330
OBX|1|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION||261QE0002X^Emergency Care^HCPTNUCC|||||F
OBX|2|NM|21612-7^Age-Reported^LN||10|a^year^UCUM|||||F
OBX|3|TX|8661-1^Chief Complaint^LN||fever, cough, difficulty breathing|||||F
DG1|1||78605^Shortness of breath^I10||2021111500|W
DG1|2||7862^Cough^I10||2021111500|W
```

Example A03 Discharge Message For ED Visit

```
MSH|^~\&||ExampleED^999999999^NPI|||202111171430||ADT^A03^A DT_A03|NIST-SS-001.22|P|2.5.1|||||||
        |PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||202111171400|||||ExampleED^999999999^NPI
PID|1||2222^^^^MR||~^^^^^^S|||F||2106-3^White^CDCREC|^^Topeka^20^66612^USA^20710||||||||||2135-2^Hispanic or Latino ^CDCREC
PV1|1|||||||||||||||||2222_001^^^^VN|||||||||||||||||01|||||||202111171200|202111171245
PV2|||78907^ABDOMINAL PAIN, GENERALIZED^I10
DG1|1||78900^ABDMNAL PAIN UNSPCF SITE^I10|||A
DG1|2||5409^ACUTE APPENDICITIS NOS^I10|||W
DG1|3||5400^AC APPEND W PERITONITIS^I10|||F
OBX|1|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION||261QE0002X^Emergency Care^HCPTNUCC|||||F
OBX|2|NM|21612-7^Age - Reported^LN||35|a^^UCUM|||||F
OBX|3|TX|8661-1^CHIEF COMPLAINT ^LN||STOMACH ACHE||||||F|||202111171220
OBX|4|NM|11289-6^BODY TEMPERATURE^LN||99.1|[degF]^FARENHEIT^UCUM||A|||F|||202111171220
OBX|5|CWE|72166-2^TOBACCO SMOKING STATUS^LN||428071000124103^Current Heavy tobacco smoker^SCT||||||F|||202111171220
OBX|3|NM|8302-2^BODY HEIGHT^LN||69|[in_us]^inch[length]^UCUM|||||F|||202111171225
OBX|3|NM|3141-9^BODY WEIGHT^LN||120|[lb_av]^pound [mass]^UCUM|||||F|||202111171225
```

Example A01 Inpatient Admission Message For an ED Patient

```
MSH|^~\&||ExampleHospital^999999999^NPI|||202111171430||ADT^A01^ADT_A01|NIST-SS-001.12|P|2.5.1|||||||
        |PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO
EVN||202111171400|||||ExampleHospital^999999999^NPI
PID|1||4444^^^^MR||~^^^^^^S|||M||2076-8^Native Hawaiian or Other Pacific Islander^CDCREC~2028-9^Asian^CDCREC
        |^^Topeka^20^66612^USA^20710| ||||||||||2135-2^Hispanic or Latino^CDCREC
PV1|1|I|Pediatric ICU Unit||||||||||emd|||||4444_001^^^^VN|||||||||||||||||09|||||||||202111171230
PV2|||4870^influenza with pneumonia^I10
OBX|1|CWE|SS003^FACILITY/VISIT TYPE^PHINQUESTION||1021-5^Inpatient Care Setting^HSLOC|||||F
OBX|2|NM|21612-7^Age-Reported^LN||10|a^year^UCUM|||||F
OBX|3|TX|8661-1^Chief Complaint^LN||fever, cough, difficulty breathing|||||F
DG1|1||4870^influenza with pneumonia^I10||202111171200|||A
```

[1] **Patient Identifier List**: It is recommended that data providers submit the patient medical record number to facilitate identification of the patient, in the event of a required follow-up investigation. Unique Patient Identifier should be used that will allow the matching and linking of a patient's records across multiple encounters; it **must NOT be the patient's social security number**, but may be the same as the Medical Record Number. Patient ID is generated from the first non-null PID-3 segment, regardless of the Type (PID-3.5). PATIENT ID MUST BE IN THE SAME ORDER IN EVERY RECORD; BioSense will only utilize the first PID to tag the record.

[3]**Medical Record Number**: This field this must NOT be a patient's social security number and may be the same as the Unique Patient ID. This is taken from the first non-null PID-3.1 value WHERE PID-3.5 = "MR".

[4]**Zip Code**: Valid zip codes for ALL zip codes in the US must be included. Provide a minimum of 5 digits for domestic ZIP codes. Foreign postal codes should be supported.

[5]**Chief Complaint/Reason for Visit**: This field is the patient's self-reported chief complaint or reason for visit. It should be distinct from the diagnosis code which based on provider's assessment for the visit. Free text is the preferred value set. If the chief complaint is only available from drop down list fields, then concatenate all drop-down list chief complaints. The chief complaint text should NOT be replaced either manually or by the system. Keep the chief complaint the same as how it was captured at admission. **Chief complaint fields are text only and should not contain ICD-9 or ICD-10 codes.**

For Chief Complaint OBX-3 Use: 8661-1 Chief Complaint – Reported (LOINC)
For Chief Complaint OBX-5 Use: Free text

[6]**County:** Valid county codes for ALL counties/parishes in the US must be included. The 5-digit FIPS county code is required.

Refer to the PHIN Messaging Guide for Syndromic Surveillance for additional details as to how all fields should be populated.