West Virginia Syndromic Surveillance

Data Elements

Version: September 2015

	Key Terms and Definitions									
Column Name	Definition									
Data Element Name	Name of the minimum data set element									
Description of field	Description of the data element									
	Refers to whether an element is a required or optional field. The Usage codes are:									
	R – Required: Indicates that the field is a required field and must be supported by the EHR system. A value must be present in the field in order for the message to be accepted.									
Usage	RE – Required, but can be empty: Indicates that the field is a required field and must be supported by the EHR system. The reporting of data is setting-specific. If data are present, then they must be reported. However, if there are no data captured in the field due to the setting (e.g. no chief complaint data for a trauma patient) and the field is blank, the message may be sent with the field containing no data.									
	O – Optional: Indicates that this field must be supported by the EHR system, but the transmission of the values captured in these fields is optional. Specific usage of these data elements shall be determined at the state or local-level jurisdiction.									
Cardinality	Minimum and maximum number of times the element may appear.									
Notes	Additional notes describing rules pertaining to the data element, processing of the data element field, or identifying relevant values for the data element.									

4.2 SYNDROMIC SURVEILLANCE DATA ELEMENTS OF INTEREST

Table 4-2 contains the data elements of interest commonly used for public health syndromic surveillance. These data elements are captured from the exchange of patient clinical encounter records between different systems. The Data Element Name may be slightly different if translated to an HL7 Field Name in the segment descriptions. Changes/updates to any of these data elements trigger a new ADT^A08 message to be sent.

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST									
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING				
Basic Message	Information									
Identifier (Treating)	Unique facility identifier where the patient was treated (original provider of the data)	R		Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a Statedesignated identifier.	This number should be specific for each facility location (not a number representing an umbrella business) It is recommended that National Provider Identifier (NPI) be used for the Facility Identifier. NPI is a 10-digit identifier. Note: The use of 'NPI' should be discussed during the implementation process as local jurisdictions may differ on their use of identifiers for this field.	EVN-7.2 Event Facility - Facility Identifier Example EVN-7: OTH_REG_MEDCTR^1234567 890^NPI Note: For implementation of Treating Facility Identifier in HL7 v.2.3.1 see details in Appendix E,				

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST									
DATA ELEMENT NAME	DESCRIPTION OF FIELD	Us	AGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING			
(1100	Name of the treating facility where the patient is treated	F			Name Business Name (LBN) associated with the National Provider Identifier Standard	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. ⁷	EVN-7.1 Event Facility - Facility Name Example EVN-7: OTH_REG_MEDCTR^1234567 890^NPI Note: For implementation of Treating Facility Name in HL7 v.2.3.1 see details in Appendix E, Section 9.2.			

⁷ International Society for Disease Surveillance. (2011, January). Final Recommendation: Core Processes and EHR Requirements for Public Health Syndromic Surveillance. Available online: www.syndromic.org/projects/meaningful-use, pp. 42-47

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST								
DATA ELEMENT NAME	DESCRIPTION OF FIELD	Usagi	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING			
State, ZIP, and County)	treating facility location:	R		State: Use FIPS state codes as follows: 2.16.840.1.114222.4.11.830 PHVS State FIPS 5-2 County: Use 5 digit FIPS County codes as follows: 2.16.840.1.114222.4.11.828 PHVS County FIPS 6-4 Country: Use 3 character ISO Country Codes as follows: 2.16.840.1.114222.4.11.828 PHVS Country ISO 3166-1	in the Facility Registration process as defined by ISDS.	OBX Segment with OBX-3 Observation Identifier of SS002 Treating Facility Location (PHINQUESTION) and OBX-2 Value Type of XAD. The XAD Data Type has specific fields to accommodate the street address, city, county and state, so only a single OBX is required to pass the data. Example OBX segment: OBX 1 XAD SS002^TREATING FACILITY LOCATION^PHINQUESTION 1 234 Anywhere Street^^Doraville^13^303 41^USA^C^^13089			

⁸ International Society for Disease Surveillance. (2011, January). Final Recommendation: Core Processes and EHR Requirements for Public Health Syndromic Surveillance. Available online: www.syndromic.org/projects/meaningful-use, pp. 42-47.

			TABLE	4-2 SYNDROMIC DATA EI	LEMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
Facility/Visit type	Type of facility that the patient visited for treatment	R	[11]	For OBX-3 Use the following the National Claim Committee , NUCC, codes 2.16.840.1.114222.4.11.35 89 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	ED/UC/AC DATA ELEMENT OF INTEREST ONLY Relevant facility/visit type values are defined in value set. This data can also be accommodated in the Facility Registration process as defined by ISDS for facilities where a single facility/visit type is expected. Inpatient example using Healthcare Service Location code: OBX 2 CWE SS003^FACILIT Y/VISIT TYPE^PHINQUESTION 1021-5^Inpatient Care Setting^HSLOC F 201102091114 Urgent Care example using NUCC code: OBX 2 CWE SS003^FACILIT Y/VISIT TYPE^PHINQUESTION 201102091114	OBX Segment with OBX-3 Observation Identifier SS003^FACILITY/VISIT TYPE (PHINQUESTION) and OBX-2 Value Type of CWE to allow for coded input of facility types in OBX-5 Observation Value. Example OBX segments: OBX 2 CWE SS003^FACILI TY/VISIT TYPE^PHINQUESTION 261QE0002X^Emergency Care^HCPTNUCC F 201102091114 OBX 2 CWE SS003^FACILI TY/VISIT TYPE^PHINQUESTION 261QM2500X^Medical Specialty^HCPTNUCC F 201102091114 OBX 2 CWE SS003^FACILI TY/VISIT TYPE^PHINQUESTION 261QP2300X^Primary Care^HCPTNUCC F 201102091114

		1	ABLE	4-2 SYNDROMIC DATA EL	EMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
Message (Event) Date/Time	Date and time that the report is created / generated from original source (from treating facility)	R	[11]		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 Event Date/Time Example Report Date/Time: 1:01:59 AM EST on July 4, 2011 20110704010159-0500
Unique Physician Identifier	Unique identifier for the physician providing care	0	[01]	Recommend the use of the National Provider Identifier Standard provided by Centers for Medicare and Medicaid Services. For more information about NPI, search for, or to apply for a NPI, click here. If NPI is not available, use a different unique identifier, such as OID or a Statedesignated identifier		PV1-7 Attending Doctor Attending Doctor is the XCN datatype where the ID number is in the first component and the assigning authority is in the 9th component as a HD (hierarchical designator) type. Example using the NPI: 1234567890^^^^^NPI& 2.16.840.1.113883.4.6& ISO
Provider Type		0	[0*]	OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.35 89 PHVS_ObservationIdentifier_SyndromicSurveillance 54582-2 Provider type (LOINC) OBX-5 uses a value from Provider Type from NUCC Healthcare Provider Taxonomy Code System: 2.16.840.1.113883.1.6.101 ProviderType		

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST									
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING				
Unique Patient Identifier / Medical Record Number	Unique identifier for the patient or visit	R		Value set uses a subset of HL7 2.x Identifier Type table (excluding organization identifier) 2.16.840.1.114222.4.11.35 97 PHVS_IdentifierType_Synd romicSurveillance 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.	Unique Patient Identifiers related to individual identifiers found in the Value set/Value Set Domain column. The contents of this field can be used to crosswalk patient visits with multiple visit numbers. 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. Without the medical record number, the work required to follow-up on the records of interest greatly increases on the data provider and may cause unacceptable delays in public health response. In addition, the medical record number may aid in record de-duplication efforts and may often aid in the resolution of apparent transcription errors.	PID-3 Patient Identifier List The Unique Patient Identifier occurs in the 1st component of the CX data type. The 5th component, the Identifier Type Code, defines the type of identifier used in the 1st component. This field allows multiple patient identifiers to be passed in the message. The Medical Record # is a specific instance of a unique patient identifier. It occurs in the 1st component of the CX data type. The fifth component, the Identifier Type Code, defines the identifier as the Medical Record # (MR). Example PID-3 Field: MR101100001^^^MR Other examples of identifiers: Internal Identifier (PI) 95101100001^^^PI External Identifier (PT) E95101100001^^^PT Example PID-3 that shows all of these identifiers in the same message: MR101100001^^^MR~951 01100001^^^PT				

		Т	ABLE	4-2 SYNDROMIC DATA EL	EMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
	Unique identifier for the visit/encounter	R	[1*]		individual identifiers found in the Value set/Value Set Domain column. A visit is defined as a discrete or	PV1-19 Visit ID The Unique Visit ID occurs in the 1st component of the CX data type. The 5th component, the Identifier Type Code, defines the identifier as the Visit Number (VN). Example PV1-19 Field: VN101100001^^^VN
	Stated gender of patient	R	[01]	Use HL7 administrative sex codes as the following: 2.16.840.1.114222.4.11.3403 PHVS_Gender_SyndromicSurveillance	Relevant Gender values are defined in value set. Notes: Helps to characterize the outbreak / condition of interest by person/place/time that may be affected by this social determinant	PID-8 Administrative Sex Example PID-8 Fields: F or M or U or O
Race	Race of patient	R	[0*]	Use CDC Race & Ethnicity codes as the following: 2.16.840.1.114222.4.11.836 PHVS_RaceCategory_CDC	Relevant Race Category values are defined in value set. Notes: Helps to characterize the outbreak / condition of interest by person/place/time that may be affected by this social determinant	PID-10 Race A singe race code example: 1002-5^American Indian or Alaska Native^CDCREC A multiple race codes example: 2028-9^Asian^CDCREC~2106- 3^White^CDCREC~2054-5^Black or African American^CDCREC
	Ethnicity of patient	R	[0*]	Use CDC Race & Ethnicity codes 2.16.840.1.114222.4.11.837 PHVS_EthnicityGroup_CDC	in value set. Notes: Helps to characterize the outbreak / condition of interest by person/place/time that may be affected by this social determinant	PID-22 Ethnicity Examples: 2135-2^Hispanic or Latino^CDCREC 2186-5^Not Hispanic or Latino^CDCREC UNK^Unknown^NULLFL

		1	TABLE	4-2 SYNDROMIC DATA EL	EMENTS OF INTEREST					
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING				
Demographics										
Age/Age Units	Numeric value of patient age at time of visit	R		<u>rveillance</u>	to (>=) 2 years old, report in whole years. Unit value should be "Year" • Truncate age to integer. For example, 16.75 years = 16 years old 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" for patients less than (<) 2 years old	OBX Segment with OBX-3 Observation Identifier of 21612-7 AGE – REPORTED (LOINC) and OBX-2 Value Type of NM Age number is reported in OBX-5 Observation Value Example OBX Segment for a patient greater than 2 years: OBX 4 NM 21612-7^AGE - REPORTED^LN 43 a^YEAR^U CUM F 20110217 Example OBX Segment for a patient less than 2 years: OBX 4 NM 21612-7^AGE - REPORTED^LN 5 mo^month^ UCUM F 20110217				
Patient City/Town	City or town of patient residence	R	[01]	The ISDS recommendations allow free text City/Town designations.	Helps characterize spatio-temporal patterns for analysis based on patient's residence. Potential proxy to identify socio-economic disparities. Can identify out of state patients for treatments/conditions. This data element is RE to allow for differences in geographical characterization between jurisdictions (i.e., some states operate public health activities on a county level, others on a city/town level, etc.) By making City/Town, ZIP and County all Core (RE) PHAs will have access to the necessary geographic information.	PID-11.3 Patient Address City Examples: ^^City/Town Name				

		Ţ	ABLE	4-2 SYNDROMIC DATA EL	LEMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
Patient ZIP Code	ZIP Code of patient residence	R	[01]		Provide a minimum of 5 digits for domestic ZIP codes. Foreign postal codes should be supported. Supports the Federal use case. County helps to further target spatiotemporal patterns since ZIP Code can cross multiple counties. This data element is Core to allow for differences in geographical characterization between jurisdictions (i.e., some states operate public health activities on a county level, others on a city/town level, etc.)	PID-11.5 Patient Address Postal Code Example Address with just ZIP/Postal code component populated: ^^^30303
Patient County	County of patient residence	R		Use 5-digit FIPS county codes as the following: 2.16.840.1.114222.4.11.829 PHVS_County_FIPS_6-4	Patient's residence County Supports the Federal use case. County helps to further target spatiotemporal patterns since ZIP Code can cross multiple counties. This data element is Core to allow for differences in geographical characterization between jurisdictions (i.e., some states operate public health activities on a county level, others on a city/town level, etc.)	PID-11.9 Patient Address County Example Address with just County component populated as FIPS numeric: ^^^^^^^13089
Patient State	State of patient residence	R		Use FIPS state codes as the following: 2.16.840.1.114222.4.11.830 PHVS_State_FIPS_5-2	It is recommended that the 2-digit (numeric) abbreviation be used for State of the patient domestic home address. Helps characterize spatial-temporal patterns for analysis based on patient's residence. It is also a readily available data element that is useful if other patient location data elements are not available.	PID-11.4 Patient Address State Example Address with just State component populated as FIPS numeric used GA as the example): ^^13

		T	ABLE	4-2 SYNDROMIC DATA EI	LEMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
Patient Country	Country of patient residence	R		Use ISO country codes as following: 2.16.840.1.114222.4.11.828 PHVS Country ISO 3166-1	It is recommended that the 3-character country codes be used for Country of the patient home address. There are some foreign countries that use 5 digit zip codes, so country is needed to help identify if patient is international.	PID-11.6 Patient Address Country Example Address with just Country component populated as FIPS numeric used GA as the example): ^^^^CAN
Visit Informat	ion					
Visit	Patient's self- reported chief complaint or reason for visit	R		For OBX-3 Use: 8661-1 Chief complaint — Reported (LOINC) For OBX-5 Use: Free text	This field is the patient's self- reported chief complaint or reason for visit. It is distinct from the Admit Reason field which is the provider's reason for admitting the patient Senders should send the most complete description of the patient's chief complaint. In some cases, this may entail sending multiple chief complaint values. If both the free text chief complaint text and drop down selection chief complaint text are available, send both. Some systems may automatically overwrite chief complaint with final diagnosis when the final diagnosis code is assigned. The chief complaint text should NOT be replaced with other information either manually or by the data provider's system. Keep the chief complaint the same as how it was captured at time of admission.	OBX Segment with OBX-3 Observation Identifier of 8661-1 Chief Complaint – Reported (LOINC) and OBX-3 Value Type of TX. Free text chief complaint is entered as OBX-5 Observation Value. Example OBX Segment: OBX 3 TX 8661-1^CHIEF COMPLAINT – REPORTED^LN STOMACH ACHE THAT HAS LASTED 2 DAYS; NAUSEA AND VOMITING; MAYBE A FEVER F 201102171 531 Conformance Statement SS-005: The patient's chief complaint SHALL be captured only as an unstructured, free-text note, valued in OBX-5, TX.1. This method includes chief complaint captured from a coding system or captured as a structured field in the source system.

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST									
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING				
Encounter Reason	Short description of the provider's reason for admitting the patient	RE		Free Text Or ICD-9 codes as the following: PHVS_AdministrativeDiagnosis_CDC_ICD-9CM Or Or ICD-10 codes as the following PHVS_AdministrativeDiagnosis_ICD-10CM Or SNOMED-CT codes as the following: PHVS_Disease_CDC Conformance Statement SS-009: The implementation SHALL support all 3 value sets for Admit Reason: ICD-9 CM Administrative Diagnosis Codes; ICD-10 codes; SNOMED Disease or Disorder - 64572001 Domain.	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 self-reported chief complaint or reason for visit. Senders should send the richest and most complete description of the patient's reason for admission or encounter. If both free text and drop down selection text are available, send both. If only drop down list fields are available, then concatenate all drop down list values selected and submit.	Coded admit/encounter reasons use PV2-3 Components 1 through 3 (Identifier, text, code system id) Free text admit /encounter reason statements are documented in PV2-3.2 Text Drop-down, canned text admit /encounter reason is documented in PV2-3.2 Text				
Admit or Encounter Date / Time	Date and Time of encounter or admission	R	[11]		Helps identify temporal patterns. HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ] Required for all ADT transactions	PV1-44 Admit Date Example Admit or Encounter Date/Time: 2:06:59 PM EST on April 1, 2011 20140401140659-0500 with time zone offset or 201404011406 meets the minimum precision				

		T.	ABLE	4-2 SYNDROMIC DATA EL	EMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
Date of onset	Date that the patient began having symptoms of condition being reported	0		For OBX-3 Use: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_ Syndromic Surveillance 11368-8 Illness or injury onset date and time (LOINC)	This element is represented by the LOINC code: 11368-8 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is a Timestamp as defined by the OBX Data Type TS.	OBX Segment with OBX-3 Observation Identifier 11368-8 Illness or Injury Onset Date (LOINC) and OBX-2 Value Type of TS to allow timestamp format input (YYYYMMDD) in OBX-5 Observation Value. Example OBX Segment: OBX 7 TS 11368-8^ILLNESS OR INJURY ONSET DATE^LN 20110215 F
Patient Class	Patient classification within facility	R		For PV1-2, use HL7 Patient Class codes from: 2.16.840.1.114222.4.11.3404 PHVS_PatientClass_Syndro micSurveillance	Used to identify which data stream (setting) the record is coming from. PV1-2 Patient Class is HL7-required in the PV1 segment. Limit values only to E: Emergency; I: Inpatient; O: Outpatient If patient class is unavailable, use U to populate the field. A strict validator requires this field to be populated.	PV1-2 Patient Class Example PV1-2 Fields: I or E or O
Admission Type	This field indicates the circumstances under which the patient was or will be admitted	0		2.16.840.1.114222.4.11.913 Admission Type (HL7) In the US, it is recommended to report the UB92 FL 19 "Type of Admission" in this field.	Potentially used for filtering on ED patients to create the A03 Discharge when one is not created when an ED patient is admitted as an inpatient UB code of 1 is Emergency Type of Admission)	PV1-4 Admission Type E (Emergency), U (Urgent), A (Accident), L (Labor and Delivery), R (Routine), C (Elective), N (Newborn)

		Т	ABLE	4-2 SYNDROMIC DATA EL	EMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
	This field indicates where the patient was admitted	0	[01]	2.16.840.1.114222.4.11.918 Admission Source (HL7) This field is used on UB92 FL20 "Source of Admission". Refer to a UB specification for additional information.	Potentially used for filtering on ED patients to create the A03 Discharge when one is not created upon ED admission to inpatient	PV1-14 Admit Source May have a UB code of '7' if ED is admit source
	Hospital unit where patient is at the time the message is sent (admission and discharge)	RE	[01]	For OBX-3 use the following LOINC codes and PHIN values: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_ SyndromicSurveillance 56816-2 Patient location (LOINC) For OBX-5 Use HL7 service location codes: 2.16.840.1.113883.13.19 NHSNHealthcareServiceLocationCode	INPATIENT DATA ELEMENT OF INTEREST ONLY NOTE: this is a standardization of the PV1-3 Assigned Patient Location that will require a mapping to the Healthcare Service Location codes.	OBX Segment with OBX-3 Observation Identifier of 56816-2 Patient Location (LOINC) and OBX-2 Value Type of CWE Hospital Unit value from Healthcare Service Location code system is in OBX-5 Value Example OBX Segment OBX 3 CWE 56816-2^PATIENT LOCATION^LN 1029- 8^Medical/Surgical critical care unit^HSLOC F 20110217
Previous Hospital Unit	Hospital unit where patient was prior to the current transaction Pre-Diagnostic	0	[01]	Local location mappings only	INPATIENT DATA ELEMENT OF INTEREST ONLY Potentially used for filtering on A01 admits if the previous location was "Emergency"	PV1-6 Prior Patient Location
Diagnosis Type			[0*]	Use the following HL7	N/A FOR AMBULATORY CARE	DG1-6 Diagnosis Type
	Diagnosis / Injury Code specifying type of diagnosis	R		Diagnosis Type codes: 2.16.840.1.114222.4.11.827	It is critical to be able to distinguish among the diagnosis types when the syndromic system is receiving messages in real-time. Diagnosis Type helps identify the type/status of diagnosis since it may change over time.	Condition Predicate: If the DG1 Segment is provided, DG1-6 (Diagnosis Type) is required to be valued. Values are: A = Admitting, F = Final, W = Working

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST										
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING					
Diagnosis Additional Diagnosis	Primary diagnosis of the patient's condition Additional diagnoses of the patient's condition(s)	R	[0*]	cause-of-death titles as the following:	Diagnosis from the provider (EHR) is 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. E-codes provide useful information on the mechanism and intent of injury, place of occurrence, and activity at the time of injury. This also applies to ICD-10-CM (when it is implemented) where V, W, X, Y and selected T codes represent external cause of injury 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.						

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST										
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING					
Discharge Disposition	Patient's anticipated location or status following discharge	R	[01]	Committee (NUBC) –Patient Status (UB04 -Field 17 Codes). PHVS_DischargeDisposition HL7_2x 2.16.840.1.114222.4.11.915 Discharge Disposition (HL7)	N/A FOR AMBULATORY CARE Helps identify severity of patient's condition and any indication of death It is expected that this field will update with multiple submissions. Include both the code and text description of the code. This field should indicate patient death, if applicable.	PV1-36 Discharge Disposition PV1-36 is defined as a userdefined datatype (IS) that uses the UB92 FL22 codes as listed in the value set Condition Predicate: This data element is: Required in ADT^A03 message type/trigger event Required Empty in ADT^A08 message type/trigger event Not Supported in ADT^A01, ADT^A04 message type/trigger event					
Discharge or Disposition Date/Time	Date and time of discharge	R	[01]		N/A FOR AMBULATORY CARE HL7 Date/Time Format: YYYYMMDDHHMM[SS[.S[S[S[S]]]]] [+/-ZZZZ] Condition Predicate: This data element is: Required in ADT^A03 message type/trigger event Required Empty in ADT^A08 message type/trigger event Not Supported in ADT^A01, ADT^A04 message type/trigger event.	PV1-45 Discharge Date/Time Example Discharge Date/Time: 4:45:12 PM EST on January 13, 2011 20110113164512-0500					
Procedure Code	Procedures administered to the patient	0	[01]	CPT-4, ICD-9CM Procedure code, Volume 3 or ICD-10-PCS International Classification of Diseases, 10th Revision, Procedure Coding System (ICD-10-PCS)	If a PR1 segment is included in message then this is a required data element. Note: Each jurisdiction should define what procedure codes should be transmitted.	PR1-3 Procedure Code					

		T.	ABLE	4-2 SYNDROMIC DATA EL	EMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
Triage Notes	Triage notes for the patient visit	0		OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.358 9 PHVS_ObservationIdentifier SyndromicSurveillance 54094-8 Emergency department Triage note (LOINC) For OBX-5 use: Free text. For further guidance refer to the column – 'HL7 Location' Mapping	ED/UC DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 54094-8 in the OBX observation identifier. Triage Notes should be sent as free text. Triage notes may benefit from additional processing (e.g. negation processing, natural language processing, etc.) in order to maximize the utility of the data.	OBX Segment with OBX-3 Observation Identifier 54094-8 Emergency Department Triage Notes (LOINC) and OBX-2 Value Type of TX to allow free text input only in OBX-5 Observation Value. Example OBX Segment: OBX 7 TX 54094- 8 ^ EMERGENCY DEPARTMENT TRIAGE NOTE LN Pain a recurrent cramping sensation. F 2011 02091114
Clinical Impression	Clinical impression (free text) of the diagnosis	0		OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS_ObservationIdentifier_SyndromicSurveillance 44833-2 Preliminary diagnosis (LOINC) For OBX-5 Use: Free text. For further guidance refer to the column – 'HL7 Location' Mapping	ED/UC/AC DATA ELEMENT OF INTEREST ONLY This element is represented by the LOINC code: 44833-2 in the OBX observation identifier. Clinical Impressions should be sent as free text.	OBX Segment with OBX-3 Observation Identifier 44833-2 Preliminary Diagnosis (LOINC) and OBX-2 Value Type of TX to allow free text input only in OBX-5 Observation Value. Example OBX Segment: OBX 1 TX 44833- 2^PRELIMINARY DIAGNOSIS^LN Pain consist with appendicitis F 20 110209111

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST									
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING				
Status	Whether the patient is pregnant during the encounter	0		OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS ObservationIdentifier SyndromicSurveillance 11449-6 Pregnancy Status (LOINC) OBX-5 is Yes, No or Unknown PHVS YesNoUnknown CDC 2.16.840.1.114222.4.11.888	HL70136 if 'yes' or 'no' NULLFL if Unknown	OBX Segment with OBX-3 Observation Identifier 11449-6 Pregnancy Status (LOINC) and OBX-2 Value Type of CWE. The observation value in OBX-5 is text-only. Example OBX Segment: OBX 1 CWE 11449-6 Pregnancy Status ^LN Y^Yes^HL70136 F				

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST									
DATA ELEMENT NAME	DESCRIPTION OF FIELD	Usa	.GE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING			
Problem List	Problem list of the patient condition(s)	C			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) The certification criterion specifies that ICD-9CM or SNOMED-CT® are the code sets which must be included in Certified EHR Technology, and are therefore the code sets that would be used to record entries as structured data.	severity and chronic disease conditions, and medical and surgical	Reported^LN 5990^UTI (URINARY TRACT INFECTION)^I9CDX F 20110217			

⁹ International Society for Disease Surveillance. Electronic Syndromic Surveillance Using Hospital Inpatient and Ambulatory Clinical Care Electronic Health Record Data: Recommendations from the ISDS Meaningful Use Workgroup. 2012. Available online: http://www.syndromic.org/meaningfuluse/IAData/Recommendations.

		T.	ABLE	4-2 SYNDROMIC DATA EL	EMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET/VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
Medication List	Current medications entered as narrative	0		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		OBX Segment with OBX-3 Observation Identifier 10160- Medication Use Reported (LOINC) and OBX-2 Value Type of TX. The observation value in OBX-5 is text-only. Example OBX Segment: OBX 1 TX 10160-0 ^Medication Use Reported^LN Lasix 20 mg po bid, Simvastatin 40 mg po qd F 20110217
Medications Prescribed or Dispensed	Current medications entered as standardized codes	0	[O]	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. Any source vocabulary that is included in RxNorm, a standardized nomenclature for clinical drugs produced by the United States National Library of Medicine. (2) Standard. RxNorm, a standardized nomenclature for clinical drugs produced by the United States National Library of Medicine, August 6, 2012 Release (incorporated by reference in §170.299).	·	OBX Segment with OBX-3 Observation Identifier 8677-7 History of Medication Use - Reported (LOINC) and OBX-2 Value Type of CWE. Example OBX Segment: OBX 8 TX 8677-7^History of Medication Use Reported^LN 151679^Serzone^RXNOR M~42568^Wellbutrin^RXN ORM~431722^12 HR Tramadol 100 MG Extended Release Tablet F

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST										
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING					
Vitals	itals										
Height	Height of the patient	O		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 P 8302-2 Body height (LOINC) For OBX-6 use the following UCUM - Unified Codes for Units of Measure: 2.16.840.1.114222.4.11.891 PHVS_HeightUnit_UCUM	Allows calculation of Body Mass Index (BMI), which may be an indicator of obesity for chronic disease. Note: If BMI can be calculated within the EHR, then it is preferable to just receive BMI instead of height and weight.	OBX Segment with OBX-3 Observation Identifier 8302-2 Body Height (LOINC) and OBX-2 Value Type of NM. The height number is OBX-5 Observation Value and the height units are in OBX-6 Units. Example OBX Segment: OBX 3 NM 8302-2^BODY HEIGHT^LN 69 [in_us]^in ch [length]^UCUM 20110217					
Weight	Weight of the patient	Ο	[01]	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 P 3141-9 Body weight Measured (LOINC) For OBX-6 use the following UCUM - Unified Codes for Units of Measure: 2.16.840.1.114222.4.11.879 PHVS_WeightUnit_UCUM	Allows calculation of Body Mass Index (BMI), which may be an indicator of obesity for chronic disease. Note: If BMI can be calculated within the EHR, then it is preferable to just receive BMI instead of height and weight. Units of measure (OBX-6, (CE Data Type) must be included defining the numeric value.	OBX Segment with OBX-3 Observation Identifier 3141-9 Body Weight Measured (LOINC) and OBX-2 Value Type of NM. The weight number is OBX-5 Observation Value and the weight units are in OBX-6 Units. Example OBX Segment: OBX 3 NM 3141-9^BODY WEIGHT MEASURED^LN 120 [lb_av]^ pound [mass]^UCUM F 201 10217					

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST										
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING					
ВМІ	Body Mass Index	0		OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS ObservationIdentifier SyndromicSurveillance and 59574-4 Body mass index (LOINC)	If BMI can be calculated within the EHR, then it is preferable to just receive BMI instead of height and weight	OBX Segment with OBX-3 Observation Identifier 59574-4 Body Mass Index (LOINC) and OBX-2 Value Type of NM. The BMI number is OBX-5 Observation Value Example OBX Segment: OBX 3 NM 59574-4^Body Mass Index^LN 35 F 20110217					
Pressure	Most recent Systolic and Diastolic Blood Pressure of the patient.	0		.62 PHVS_VitalSignResult_HITS P	land a second control of	Blood Pressure is communicated using 2 different data elements for Systolic and Diastolic Blood Pressure. Example OBX Segment for Systolic Blood Pressure: OBX 5 NM 8480 - 6^SYSTOLIC BLOOD PRESSURE^LN 120 mm (hg) F 20110217 Example OBX Segment for Diastolic Blood Pressure: OBX 6 NM 8462 - 4^DIASTOLIC BLOOD PRESSURE^LN 90 mm (hg) F					

		Т	ABLE	4-2 SYNDROMIC DATA EL	EMENTS OF INTEREST	
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY	VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
	Initial temperature of the patient	O	[01]	P 11289-6 Body	This element is represented by the LOINC code: 11289-6 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is Numeric as defined by the OBX Data Type NM. Temperature: Units of Measure must also be included in OBX-6. Fahrenheit and Celsius units of measure are included in the value set.	OBX Segment with OBX-3 Observation Identifier 11289-6 Body temperature:Temp:Enctr:First (LOINC) and OBX-2 Value Type of NM. The temperature number is OBX-5 Observation Value and the temperature units are in OBX-6 Units. Example OBX Segment: OBX 3 NM 11289-6^BODY TEMPERATURE^LN 100.1 [degF]^FARENHEIT^UCUM F 20110217
,	1st recorded pulse oximetry value	0		SyndromicSurveillance 59408-5 Oxygen saturation in Arterial blood by Pulse oximetry (LOINC) OBX-6 uses a single Unit of Measure value from UCUM:	This element is represented by the LOINC code: 59408-5 in the OBX observation identifier. The actual data value occurs in the 5th field of the same OBX segment and is numeric as defined by the OBX Data Type NM. Units of measure must also be included in OBX-6. Percentage is the only value included in the value set for Pulse Oximetry.	OBX Segment with OBX-3 Observation Identifier 59408-5 OXYGEN SATURATION IN ARTERIAL BLOOD BY PULSE OXIMETRY (LOINC) and OBX-2 Value Type of NM. The number value are in OBX-5 Observation Value and the numeric units are in OBX-6 Units. Example OBX Segment: OBX 4 NM 59408 – 5^OXYGEN SATURATION IN ARTERIAL BLOOD BY PULSE OXIMETRY^LN 91 %^PERCE NT^UCUM A F 201102 17145139

	TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST										
DATA ELEMENT NAME	DESCRIPTION OF FIELD	USAGE	CARDI NALITY		IMPLEMENTATION NOTES	HL7 LOCATION MAPPING					
Risk Factors, C	isk Factors, Other Factors										
Smoking Status	Smoking status of patient	RE		OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS ObservationIdentifier SyndromicSurveillance 72166-2 Tobacco smoking status (LOINC)	This data element is a Meaningful Use requirement. Allows monitoring of chronic conditions.	Tobacco Smoking Status LOINC) and OBX-2 Value Type of CWE. The observation value in OBX-5 uses the value set defined for meaningful use.					
				OBX-5 uses a value from the following SNOMED-CT codes: 2.16.840.1.114222.4.11.6027 PHVS_SmokingStatus_MU		Example OBX Segment: OBX 1 CWE 72166- 2^TOBACCO SMOKING STATUS^LN 428071000124 103 ^Current Heavy tobacco smoker ^SCT F 20110217					
	Assessment of the intensity of medical care the patient requires.	0		OBX-3 uses a LOINC observation identifier specified in the value set: 2.16.840.1.114222.4.11.3589 PHVS ObservationIdentifier SyndromicSurveillance 11283-9 Initial Acuity (LOINC) OBX-5 uses a value from HL7 Admission Level of Care: 2.16.840.1.114222.4.11.912 Admission Level of Care (HL7)		OBX Segment with OBX-3 Observation Identifier 11283-9 Initial Acuity (LOINC) and OBX-2 Value Type of CWE. The observation value in OBX-5 uses a value set that HL7 suggests for Admission Level of Care. Example OBX Segment: OBX 1 CWE 11283 - 9^INITIAL ACUITY^LN CR^Critical^ HL70432 F 201102 17					

TABLE 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST							
DATA ELEMENT NAME	DESCRIPTION OF FIELD	Usa	GE CAI		VALUE SET /VALUE DOMAIN	IMPLEMENTATION NOTES	HL7 LOCATION MAPPING
Insurance Coverage	Health insurance coverage of the patient	C	[0*		For IN1-15 Insurance Plan ID, use Source of Payment Typology (PHDSC) 2.16.840.1.114222.4.11.3591 PHVS_SourceOfPaymentTyp ology_PHDSC		IN1-15 Insurance Plan ID Definition: This field contains the coding structure that identifies the various plan types, for example, Medicare, Medicaid, Blue Cross, HMO, etc.
Travel History	Travel History as Narrative	C	[0*		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) OBX-5 uses a text value:	Text (TX) may be the best option for travel history because of how EHRs collect the information. Special coding will need to be done by vendors to bring the highly varied travel questions and their responses into a single travel history response for public health. For example, some hospitals collect information on the time period for travel, but have different categories (past 30 days, past 21 days, etc). For the location of travel, hospitals may have a drop down list, check boxes, free text or a combination of these to list the country or region of travel. If they use a drop down they may have standard ISO codes for country.	OBX Segment with OBX-3 Observation Identifier 10182-4 History of travel Narrative (LOINC) and OBX-2 Value Type of TX. Example OBX Segment: OBX 1 TX 10182-4^History of travel Narrative ^LN Arrived home from Liberia two days ago. F 20110217