PUBLIC HEALTH INFORMATION NETWORK

Conformance Clarification for EHR Certification of Electronic Syndromic Surveillance

ADT MESSAGES A01, A03, A04, and A08

HL7 Version 2.5.1

Testing Clarification for PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data (Release 1.1)

Release 1.2

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Centers for Disease Control and Prevention

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Revision	Date	Author
Changed conformance statement SS-16.	01/24/2013	R. Snelick

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TABLE OF CONTENTS

Public Health Information Network (PHIN) Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care (Release 1.1)—Testing

Conformance Clarification for Electronic Health Record (EHR) Certification of Electronic Syndromic Surveillance

This document provides testing clarification for the Centers for Disease Control and Prevention's (CDC's) PHIN Messaging Guide for Syndromic Surveillance: Emergency Department and Urgent Care Data, Release 1.1.

1.0 ERRATA

Location	Field Name	Change	Existing	Corrected
PID-1	Set ID	Changed usage (sender and receiver)	O	~~R~~
PID-5	Patient Name	Clarified how to populate field when patient name is known or unknown in conditions where patient name is desired or not desired by the receiver. The conformance requirements have been strengthen to meet the intent.	Syndromic Surveillance does not require the patient name. The Patient ID number will be used to identify uniquely the patient. HL7 does require the patient name field for a PID segment. The patient name field must still be populated even when reporting de-identified data. The first field name contains the primary or legal name of the patient. Therefore, the name type code (PID.5.7) should be "L "(Legal), when populated. When the name of the patient is known, but not desired to be sent, HL7 recommends the following: |~^^^^^S|. The "S" for the name type code (PID.5.7) in the second name field indicates that it is a pseudonym. When the name of the patient is not known, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code (PID.5.7) in the second name field indicates that it is unspecified.	Syndromic Surveillance does not require the patient name. The Patient ID number will be used to identify uniquely the patient. However, since the HL7 specification requires the patient name field for a PID segment, the patient name field must still be populated even when reporting de-identified data. The first field name contains the primary or legal name of the patient. Therefore, the name type code (PID.5.7) should be "L "(Legal), when populated. When the name of the patient is known, but not desired to be sent, the following value shall be sent: |~^^^^^S|. The "S" for the name type code (PID.5.7) in the second name field indicates that it is a pseudonym. When the name of the patient is not known, the following shall be sent: |~^^^^^U|. The "U" for the name type code (PID.5.7) in the second name field indicates that it is unspecified.
OBX-1	Set ID	Changed sender usage	O	~~R~~

Location	Field Name	Change	Existing	Corrected
PID-1	Set ID	Changed usage (sender and receiver)	O	~~R~~
OBX-2	Value Type	~~TS, XAD data types are not valid in HL7 2.5.1~~	SS-16 OBX-2 SHALL be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD')	~~SS-16 OBX-2 SHALL be valued to the Literal Value in the set ('TX', 'NM', 'CWE')~~
OBX-2	Value Type	TS, XAD data types are optional and may be sent.	SS-16 OBX-2 SHALL be valued to the Literal Value in the set ('TS', 'TX', 'NM', 'CWE', 'XAD')	**SS-16:** OBX-2 SHALL support data types 'TX', 'NM' and 'CWE' and MAY support the data types 'TS' and 'XAD'.
DG1-3.3	Name of Coding System	Updated conformance statement to reflect the correct field number.	SS-21 DG1-3.1 SHALL be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').	SS-21 DG1-3.3 SHALL be valued to one of the Literal Values in the set ('I10', 'I9CDX', 'SCT').
Table 4-2-1 Minimum Data Elements – Row 2	Facility Name	Changed usage because there is a discrepancy between the Facility Name in Section 3 and Section 4 in the implementation guide. The intent was for usage of RE.	O	RE

2.0 CONFORMANCE STATEMENTS

Location	Field Name	Existing Text	Derived Conformance Statement
PID-5	Patient Name	When the name of the patient is not known, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code (PID.5.7) in the second name field indicates that it is unspecified.	**SS-25:** If **PID-5** (Patient Name) is unknown then the first occurrence of PID-5 **SHALL NOT** be valued.
PID-5	Patient Name	When the name of the patient is not known, HL7 recommends the following: |~^^^^^^U|. The "U" for the name type code (PID.5.7) in the second name field indicates that it is unspecified.	**SS-26:** If **PID-5** (Patient Name) is unknown then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "U" (i.e., PID-5 shall be valued as |~^^^^^^U|).
PID-5	Patient Name	When the name of the patient is known, but not desired to be sent, HL7 recommends the following: |~^^^^^^S|. The "S" for the name type code (PID.5.7) in the second name field indicates that it is a pseudonym.	**SS-27:** If **PID-5** (Patient Name) is known, but not desired to be sent, then the first occurrence of PID-5 **SHALL NOT** be valued.
PID-5	Patient Name	When the name of the patient is known, but not desired to be sent, HL7 recommends the following: |~^^^^^^S|. The "S" for the name type code (PID.5.7) in the second name field indicates that it is a pseudonym.	**SS-28:** If **PID-5** (Patient Name) is known, but not desired to be sent, then the second occurrence of PID-5 **SHALL** be valued and only PID-5.7 (Name Type Code) shall be valued with the constant value "S" (i.e., PID-5 shall be valued as |~^^^^^^S|).
OBX-5.2	CWE Data Type – Chief Complaint	It is strongly recommended that text be sent to accompany any identifier.	**SS-29:** If patient's chief complaint is captured as a structured field (e.g., drop-down menu), then chief complaint **SHALL** be valued in OBX 5.2.
OBX-5.9	CWE Data Type – Chief Complaint	Provide the richest text available in this field.	**SS- 30:** If patient's chief complaint is captured as an unstructured, free-text note, then chief complaint **SHALL** be valued in OBX 5.9.
OBX-1	Set ID-OBX	For the first repeat of the OBX segment, the sequence number shall be one (1), for the second repeat, the sequence number shall be two (2), etc.	**SS-31:** The value of OBX-1 (Set ID – OBX) **SHALL** be valued sequentially starting with the value '1'.

3.0 EXAMPLE DATA

3.1 Age (Additional Example)

Example OBX Segment when patient age is not known

OBX|4|NM|21612-7^AGE TIME PATIENT
REPORTED^LN|||UNK^unknown^NULLFL|||||F|||201102171531

3.2 Facility / Visit Type

The implementation guide lists an incorrect code(1108-0) and coding system (HSLOC) for Facility/Visit Type. It should be 261QE0002X and NUCC.

Example OBX segment:
OBX|2|CWE|SS003^FACILITY / VISIT TYPE^PHINQUESTION|| 261QE0002X^EMERGENCY
CARE^NUCC||||||F|||201102091114

3.3 Message Profile Identifier

There is a space in the Message Profile Identifier which may not be apparent in the Implementation guide. The valid values should be:
"PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO" **OR**
"PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO"

4.0   VALUE SET REQUIREMENT CLARIFICATION

For conformance testing, the message elements summarized in the table below SHALL be valued with elements from the specified value sets. Value sets described in the guide for elements not in the table below will not be considered for conformance testing, as their associated message elements will not be constrained. (These unconstrained value sets in the guide are still worth consulting; they should be considered suggested usage, reflective of best and widespread practices, and may possibly become requirements in the future.) Value sets shown below are defined by their name in CDC vocabulary server - Public Health Information Network Vocabulary Access and Distribution System (PHIN VADS), which may constrain the original Health Level Seven (HL7) tables and other code systems indicated. For EHR certification, PHIN VADS will be used to test content for these elements.

The National Institute for Standards and Technology (NIST) will depend on the CDC/PHIN VADS to ensure that the values are correct and current. PHIN VADS can be accessed at http://phinvads.cdc.gov.

All the value sets associated with Syndromic Surveillance Implementation Guide (IG) can also be downloaded using the following link:

http://phinvads.cdc.gov/vads/ViewView.action?name=Syndromic%20Surveillance

The following table would provide the mapping between the value set information present in Syndromic Surveillance IG and the VADS value set. More detailed version of this mapping table and all the value set concepts can be downloaded from PHIN VADS home page (http://phinvads.cdc.gov) under hot topics "**Syndromic Surveillance**".

CDC vocabulary / PHIN VADS team can be contacted for support at PHINVS@CDC.GOV

HL7 Implementation Guide information regarding coded data elements and value sets			Code System (Standard Vocabulary Information)	CDC Vocabulary Server - PHIN VADS Information about value sets (PHIN VADS hyperlink for downloading all value sets associated with Syndromic Surveillance)		
Data Element Name from HL7 IG	HL7 Segment - Field (location)	Value Set information from IG	Code System Source (HL7 table 0396 Code)	PHIN VADS Value Set Name	PHIN VADS Hyperlinks & Value Set OID	Comments - Implementation notes
Message Structure	MSH 9.3	0354	HL70354	PHVS_Message Structure_Syndro micSurveillance	2.16.840.1.1 14222.4.11. 6047	Constrained HL7 Table 0354
Message Type	MSH 9	0076	HL70076	PHVS_Message Type_Syndromic Surveillance	2.16.840.1.1 14222.4.11. 6049	Constrained HL7 Table 0076
Universal ID Type	MSH 4.3	0301	HL70301, HL70203	PHVS_Universall DType_Syndromi cSurveillance	2.16.840.1.1 14222.4.11. 6050	Constrained HL7 Table 0301

Patient Class	PV1-2	PHVS_ Patient Class_ Syndro micSur veillanc e	HL70004	PHVS_PatientCla ss_SyndromicSur veillance	2.16.840.1.1 14222.4.11. 3404	It is recommended that PHA constrain the transmitted data from the source using the patient class code set (e.g., only transmit records where patient class = E, Emergency
Value Type	OBX-2	Value Type	HL70125	PHVS_ValueTyp e_SyndromicSurv eillance	2.16.840.1.1 14222.4.11. 6057	Constrained value set of Hl7 Table 0125 Value Type for Syndromic Surveillance (ED).
Address Type	PID 11.7		HL70190	PHVS_AddressT ype_HL7_2x	2.16.840.1.1 14222.4.11. 801	Unconstrained HL7 Table
Race	PID - 10	PHVS_ RaceCa tegory_ CDC	CDCREC	PHVS_RaceCate gory_CDC	2.16.840.1.1 14222.4.11. 836	Based upon CDCREC code system.
Facility Location (Treating) – State	OBX - XAD.4	PHVS_ State_FI PS_5-2	FIPS5_2	PHVS_State_FIPS _5-2	2.16.840.1.1 14222.4.11. 830	Numeric FIPS codes are preffered. VADS download includes alpha codes as "alternate codes".
State	PID-11.4	PHVS_ State_FI PS_5-2	FIPS5_2	PHVS_State_FIP S_5-2	2.16.840.1.1 14222.4.11. 830	It is recommended that the 2-digit (numeric) abbreviation be used for State of the patient domestic home address. VADS download includes alpha codes as "alternate codes".
Country	PID - 11.6	PHVS_ Country _ISO_3 166-1	ISO3166_1	PHVS_Country_I SO_3166-1	2.16.840.1.1 14222.4.11. 828	It is recommended that the 3-character country codes be used for Country of the patient home address.
County	PID-11.9	PHVS_ County_ FIPS_6- 4	FIPS6_4	PHVS_County_FI PS_6-4	2.16.840.1.1 14222.4.11. 829	Use numeric codes. FIPS codes syntax (2 character numeric state code + 2 character numeric county code)
Discharge Disposition	PV1-36	PHVS_ Dischar ge Dispositi on_HL7 _2x	HL70112	PHVS_Discharge Disposition_HL7_ 2x	2.16.840.1.1 14222.4.11. 915	User-defined Table 0112 - Discharge Disposition. Refer to UB-04 form for more implementation guidance.
Ethnicity	PID-22	PHVS_ Ethnicity Group_ CDC	CDCREC	PHVS_EthnicityG roup_CDC	2.16.840.1.1 14222.4.11. 837	Based upon CDCREC code system.
Facility / Visit Type	OBX.5	PHVS_ FacilityV isitType _Syndro micSurv eillance	HCPTNUCC	PHVS_FacilityVisit Type_SyndromicSu rveillance	2.16.840.1.1 14222.4.11. 3401	Relevant facility/visit type values are defined in value. OBX.3=SS003 (PHINQUESTION)

Sex	PID-8	PHVS_Sex_SyndromicSurveillance	HL70001	PHVS_Sex_SyndromicSurveillance	2.16.840.1.114222.4.11.3403	Constrained value set of Administrative Sex (HL7 Table 001)
Unique Patient Identifier	PID-3 5th component - Identifier Type Code	PHVS_IdentifierType_SyndromicSurveillance	HL70203	PHVS_IdentifierType_SyndromicSurveillance	2.16.840.1.114222.4.11.3597	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
Medical Record #	PID-3 5th component - Identifier Type Code	PHVS_IdentifierType_SyndromicSurveillance	HL70203	PHVS_IdentifierType_SyndromicSurveillance	2.16.840.1.114222.4.11.3597	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).
Unique Visiting ID	The 5th component, the Identifier Type Code	PHVS_IdentifierType_SyndromicSurveillance	HL70203	PHVS_IdentifierType_SyndromicSurveillance	2.16.840.1.114222.4.11.3597	The Unique Visiting 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).
Identifier Type Code	PID 3.5	0203	HL70203	PHVS_IdentifierType_SyndromicSurveillance	2.16.840.1.114222.4.11.3597	Constrained HL7 Table 0203
Name Type	PID 5.7		HL70200	PHVS_NameType_SyndromicSurveillance	2.16.840.1.114222.4.11.6056	Constrained Table
Age Units	OBX-6 for Age Units (CE data type) and OBX-3=21612-7 (LOINC Code)	PHVS_AgeUnit_SyndromicSurveillance	UCUM, NULLFL	PHVS_AgeUnit_SyndromicSurveillance	2.16.840.1.114222.4.11.3402	OBX-3 uses LOINC code (21612-7) as data element for Age, with numeric values in OBX-5 and UCUM age units in OBX-6
Diagnosis Type	DG1-6	PHVS_DiagnosisType_HL7_2x	HL70052	PHVS_DiagnosisType_HL7_2x	2.16.840.1.114222.4.11.827	

Chief Complaint / Reason for visit	OBX-5	PHVS_Disease_CDC	SCT	PHVS_Disease_CDC	[2.16.840.1.114222.4.11.909](#)	SNOMED value set based on disorder domain. Problem list uses SNOMED disorder domain concepts. This value set is quite big and may not fit in excel 2003. PHIN VADS download includes text, excel 97 - 2003 and excel 2010 format.
Chief Complaint / Reason for visit	OBX-5 and OBX-3=8661-1	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM	I9CDX	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM	[2.16.840.1.114222.4.11.856](#)	ICD-9 CM value set - Volume 1 and 2 (Diagnosis) codes. Value set includes ICD-9 codes with and without decimals. For electronic transaction, it is recommended to use without decimals.
Chief Complaint / Reason for visit	OBX-5	PHVS_CauseOfDeath_ICD-10_CDC	I10	PHVS_CauseOfDeath_ICD-10_CDC	[2.16.840.1.114222.4.11.3593](#)	ICD-10 CM implementation date is Oct 1st, 2014. This value set is for future use. This value set is made from CDC NCHS ICD-10 subset that has been used for reporting mortality (WHO mandate).
Diagnosis / Injury Code	DG1-3	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM	I9CDX	PHVS_AdministrativeDiagnosis_CDC_ICD-9CM	[2.16.840.1.114222.4.11.856](#)	ICD-9 CM value set - Volume 1 and 2 (Diagnosis) codes. Value set includes ICD-9 codes with and without decimals. For electronic transaction, it is recommended to use without decimals.
Diagnosis / Injury Code	DG1-3	PHVS_CauseOfDeath_ICD-10_CDC	I10	PHVS_CauseOfDeath_ICD-10_CDC	[2.16.840.1.114222.4.11.3593](#)	ICD-10 CM implementation date is Oct 1st, 2014. This value set is for future use. This value set is made from CDC NCHS ICD-10 subset that has been used for reporting mortality (WHO mandate).
Diagnosis / Injury Code	DG1-3	PHVS_Disease_CDC	SCT	PHVS_Disease_CDC	[2.16.840.1.114222.4.11.909](#)	SNOMED value set based on disorder domain. Problem list uses SNOMED disorder domain concepts. This value set is quite big and may not fit in excel 2003. PHIN VADS download includes text, excel 97 - 2003 and excel 2010 format.

Initial Pulse Oximetry	OBX-6 for Temperature Units (CE data type) and OBX-3= 59408-5 (LOINC Code)	PHVS_ PulseO ximetry Unit_U CUM	UCUM	PHVS_PulseOxi metryUnit_UCUM	[2.16.840.1.1 14222.4.11. 3590](#)	OBX-3 uses LOINC code (59408-5) as data element for pulse oximetry with numeric values in OBX-5 and UCUM pulse oximetry unit in OBX-6 (% - percentage)
Initial Temperature	OBX-6 for Temperature Units (CE data type) and OBX-3=11289-6 (LOINC Code)	PHVS_ Tempe ratureU nit_UC UM	UCUM	PHVS_Temperat ureUnit_UCUM	[2.16.840.1.1 14222.4.11. 919](#)	OBX-3 uses LOINC code (11289-6) as data element for temperature with numeric values in OBX-5 and UCUM temperature units in OBX-6 (Celsius and Fahrenheit)
Coded Data Elements	OBX-3	PHVS_ Observ ationId entifier _Syndr omicSu rveillan ce	LN, PHINQUES TION	PHVS_Observati onIdentifier_Synd romicSurveillance	[2.16.840.1.1 14222.4.11. 3589](#)	List of observation identifiers associated with syndromic surveillance that would be coming in the observation identifier field (OBX-3) in HL7 2.x messaging.

(Age, Date of Onset, Chief Complaint, Triage notes, Clinical Impression, Temperature, Pulse Oximetry, Facility - Location, Identifier, Type) |