February 8, 2016

HEALTH INFORMATION TECHNOLOGY (HIT)
STANDARDS TESTING INFRASTRUCTURE

HL7 Version 2.5.1 PHIN MESSAGING GUIDE FOR SYNDROMIC SURVEILLANCE: EMERGENCY DEPARTMENT, URGENT CARE, INPATIENT AND AMBULATORY CARE SETTINGS, Release 2.0

ADT MESSAGES A01, A03, A04 and A08
Optional ORU^R01 Message Notation for Laboratory Data

NIST Clarifications and Validation Guidelines

Version 1.0

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DOCUMENT CHANGE HISTORY

Version No.	Description of Change	Date Published
1.0	Initial Release	February 8, 2016

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1.0 INTRODUCTION

This document lists conformance testing issues and associated policies derived by NIST, in collaboration with the CDC, based on a review of the HL7 Version 2.5.1 PHIN Messaging Guide for Syndromic Surveillance: Emergency Department, Urgent Care, Inpatient and Ambulatory Care Settings, Release 2.0, April 21, 2015, and Erratum to the CDC PHIN 2.0 Implementation Guide, August 20, 2015. The policies listed in this document are implemented in the NIST syndromic surveillance conformance test suite.

2.0 VALIDATION POLICIES

Decision Identifier	Message Element	Title	Description	Decision
NIST-1	PR1	PR1 will be validated against HL7 definition	The PR1 segment is nested under the PROCEDURE group. PROCEDURE is optional.	Since PR1 is part of an optional group, the NIST test tool will validate it against the HL7 definition and not the IG definition.
NIST-2	IN1	IN1 will be validated against HL7 definition	The IN1 segment is nested under the INSURANCE group. INSURANCE is optional.	Since IN1 is part of an optional group, the NIST test tool will validate it against the HL7 definition and not the IG definition.
NIST-3	CX-5 XAD-7 (under OBX-5) PV1-19.5 (SS-025)	Optional element will be validated against HL7 definition	Some elements are defined as optional but the guide adds requirements such as value set or conformance statements. This is in contradiction with the guide itself (See TABLE 4-1: COLUMN HEADINGS FOR DATA ELEMENTS OF INTEREST TABLES, Sender Usage/Receiver (RCVR) Usage, O – Optional) Elements listed with O-Optional usage will need to use recommended value sets and conformance requirements as specified. As a clarification from the Messaging Guide and Erratum.	Any optional element (group, segment, field, component or subcomponent) will be validated against the HL7 definition. Any added (provisional) requirement will NOT be checked against.
NIST-4	MSG-3	MSG-3 (Message Structure) length	MSG-3 has a length of 3 in the guide, but it is 7 in HL7 v2.5.1.	The NIST test tool will allow a length of 7 in MSG-3(Message Structure).
NIST-5	OBX-2	HD value added to PHVS_ValueType_SyndromicSurveillance	Based on the example in table 9 (pg. 155) for Facility Identifier (Treating), the use of "HD" should be allowed in field OBX-2.	• The value "HD" has been added to the value set "PHVS_ValueType_SyndromicSurveillance" for validation purposes. • PHINVADS will be updated with the "HD" value **Comment**: Origin is table HL70125
NIST-6	MSH-15	MSH-15 usage and value	The usage of MSH-15 is not clear, as there is a conflict in the erratum. In erratum item #2.2, the usage of MSH-15 is defined as C(R/X) with the condition predicate "For MSH-21 Message Profile ID PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.114222.4.10.3^ISO" In erratum item #4.2, the usage of MSH-15 is defined as "varies". PH_SS-Ack^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08,	MSH-15 will be implemented as defined here in the NIST test tool: PH_SS-Ack^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08 Usage ="R", Constant = AL, Card = [1..1] Message Types = ACK^A01, ACK^A03, ACK^A04, ACK^A08 Usage ="O", Card = [0..1] PH_SS-NoAck^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08 Usage = "R", Constant = NE, Card = [1..1] Message Types = ACK^A01, ACK^A03, ACK^A04, ACK^A08

Decision Identifier	Message Element	Title	Description	Decision
			ORU^R01 Usage = R, Constant = AL, Card = [1..1] PH_SS-NoAck^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08, ORU^R01 Usage = R, Constant = NE, Card = [1..1] Message Type = ACK^A01, ACK^A03, ACK^A04, ACK^A08, ACK^R01 Usage = X, Card = [0..0]	Usage ="X", Card = [0..0] All the context-based test cases will use "PH_SS-Ack" profiles, so the test tool will test for the "most constrained" profile. The context free section of the tool will contain all the "PH_SS-Ack" and "PH_SS-NoAck" profiles for all message types.
NIST-7	MSH-16	MSH-16 usage	The usage of MSH-16 is not clear, as there is a conflict in the erratum. In erratum item #2.3, the usage of MSH-16 is defined as C(R/X) with the condition predicate "For MSH-21 Message Profile ID PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.114222.4.10.3^ISO" In erratum item #4.3, the usage of MSH-16 is defined as "varies". PH_SS-Ack^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08, ORU^R01 Usage = RE, Card = [0..1] Message Type = ACK^A01, ACK^A03, ACK^A04, ACK^A08, ACK^R01 Usage = X, Card = [0..0]	MSH-16 will be implemented as defined here in the NIST test tool: PH_SS-Ack^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08 Usage ="RE", Card = [0..1] Message Type = ACK^A01, ACK^A03, ACK^A04, ACK^A08, ACK^R01 Usage = X, Card = [0..0] PH_SS-NoAck^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08 Usage = "O", Card = [0..1] Message Types = ACK^A01, ACK^A03, ACK^A04, ACK^A08 Usage ="O", Card = [0..1] All the context-based test cases will use "PH_SS-Ack" profiles, so the test tool will test for the "most constrained" profile. The context free section of the tool will contain all the "PH_SS-Ack" and "PH_SS-NoAck" profiles for all message types.
NIST-8	CE-4 (OBX-5) CE-5 (OBX-5) CE-6 (OBX-5)	CE-4, CE-5 & CE-6 definition under OBX-5	The definition of the CE datatype is missing its three last components.	The NIST test Tool will validate those component against their HL7 definition : CE-4: length="20", datatype="ST", usage="O" CE-5: length="199", datatype="ST", usage="O" CE-6: length="20", datatype="ID", usage="O", table="HL70396"
NIST-9	HD-3 MSG-1 MSG-2 MSG-3	Validation when both an HL7 table and a value set are defined in the guide	Some elements have both an HL7 table and a specific value set defined in the comments.	The NIST test tool will only validate against the value set and NOT against the given HL7 table (unless the values from the HL7 table are included in the value set).

Decision Identifier	Message Element	Title	Description	Decision
NIST-10	CE-3 CE-6 CWE-3 CWE-6	CE-3, CE-6, CWE-3, CWE-6 value set definition	The IG defines table HL70396 for elements CE-3, CE-6 CWE-3 & CWE-6. NIST asserts that the value set binding of "PHVS_CodingSystem_HL7_2x_Table0396" is more appropriate to use in those data elements.	The NIST validation tool will use value set "PHVS_CodingSystem_HL7_2x_Table0396" instead of HL70396 in order to validate elements CE-3, CE-6, CWE-3, and CWE-6.
NIST-11	CWE-3 CWE-6	CWE-3 & CWE-6 condition predicates This addresses an error in the erratum.	The CWE.3 condition predicate is defined as: Condition Predicate: If CE .1 (Identifier) is valued. The CWE.6 condition predicate is defined as: Condition Predicate: If CE .3 (Identifier) is valued.	The NIST test tool will validate against the following condition predicates: CWE.3 Condition Predicate: If CWE.1 (Identifier) is valued. CWE.6 Condition Predicate: If CWE.4 (Alternate Identifier) is valued.
NIST-12	EI-1 EI-2 EI-3 EI-4	EI definition	The definition if the EI datatype is not clear. See HD - hierarchic designator - "Namespace ID". See HD - hierarchic designator - "Universal ID". See HD - hierarchic designator - Universal ID Type".	The NIST test tool will validate the EI datatype against the following definition : EI-1 : length="199", datatype="ST", usage="RE" EI-2 : length="20", datatype="IS", usage="R" EI-3 : length="199", datatype="ST", usage="R" EI-4 : length="6", datatype="ID", usage="R", value set="PHVS_UniversalIDType_SyndromicSurveillance"
NIST-13	PID-5	XPN definition	The usage of the XPN components is not defined in either the IG or the errata document. NIST Reasoning: The XPN datatype definition (with usages) is nowhere to be found in the guide or errata. NIST based this definition on the fact that the only field using this datatype is PID-5. There is a conformance statement SS-023: PID-5 (Patient Name) SHALL be valued as |~^^^^^^S| or |~^^^^^^U|). This effectively makes the usages for most elements "X".	The XPN datatype will be implemented in the NIST tool as following : Family Name: Usage=X Given Name: Usage=X Second and Further Given Names or Initials Thereof: Usage=X Suffix (e.g., JR or III): Usage=X Prefix (e.g., DR): Usage=X Degree (e.g., MD): Usage=X Name Type Code: Usage=R Name Representation Code: Usage=X Name Context: Usage=X Name Validity Range: Usage=X Name Assembly Order: Usage=X Effective Date: Usage=X Expiration Date: Usage=X Professional Suffix: Usage=X
NIST-14	multiple locations	Codes added to PHVS_CodingSystem_HL7_2x_Table0396	Some codes need to be added to "PHVS_CodingSystem_HL7_2x_Table0396" value set.	The code "HCPTNUCC" is added to the value set (based on the NUCC Provider Codes in the "HL7 Table 0396 Code" column in the PHVS_FacilityVisitType_SyndromicSurveillance named in the PHIN Guide 2.0)

Decision Identifier	Message Element	Title	Description	Decision
NIST-15	PR1-3.1	PR1-3.3 condition predicate	The condition predicate on PR1-3 should be defined at the datatype level, in the appropriate datatype flavor	The predicate will be implemented as such, at the datatype level: Condition Predicate: If CE.1 (Identifier) is valued. Note that it won't affect validation in the NIST test tool, as the test tool will be validating against the HL7 definition of PR1.
NIST-16	OBX-5.6 (CWE)	OBX-5.6 (CWE) condition predicate	The condition predicate on OBX-5 should be defined at the datatype level, in the appropriate datatype flavor	The predicate will be implemented as such, at the datatype level: Condition Predicate: If CWE.4 (Identifier) is valued.
NIST-17	XAD-1 (OBX)	XAD-1 (OBX) condition predicate	The predicate only applies to OBX-5.1 when OBX-2 = "XAD"	The OBX-5.1 predicate is implemented as followed in the NIST tool: OBX-5.1 usage: C(R/O) Predicate: If OBX-2 = "XAD" and OBX-3="SS002". The profile viewer will not display this predicate for the moment, but validation will be performed against it in both context free and context based validation.
NIST-18	PV1-19.1	SS-001 not testable	Conformance statement SS-001 is not testable. Conformance Statement SS-001: 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).	The NIST test tool will not test conformance against SS-001 Verbiage added to Notes For Testers in Test Tool instructing the Testers to manually inspect the messages to verify that the value of PV1-19 is the same for all Test Step messages for a given Test Case
NIST-19	PV1-19.1	SS-002 not testable	Conformance statement SS-002 is not testable. Conformance Statement SS-002: 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).	The NIST test tool will not test conformance against SS-002
NIST-20	N/A	SS-003 not testable	Conformance statement SS-003 is not testable. Conformance Statement SS-003: Laboratory results should be sent as soon as they are available with a minimum delay. They shall be sent within a maximum 24 hours of receipt by the data center. There is no need to delay either ADT or laboratory	The NIST test tool will not test conformance against SS-003

Decision Identifier	Message Element	Title	Description	Decision
			messages, and this should not be done.	
NIST-21	OBX-5	SS-005 not testable at profile level	Conformance statement SS-005 is not testable at the profile level. 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.	This will be tested at the test case level.
NIST-22	PV2-3	SS-009 not testable at profile level	Conformance statement SS-009 is not testable at the profile level. Conformance Statement SS-009: The implementation SHALL support all 3 value sets for PV2-3 (Admit Reason): ICD-9 CM Administrative Diagnosis Codes; ICD-10 codes; SNOMED Disease or Disorder - 64572001 Domain Codes.	This will be tested at the test case level.
NIST-23	DG1-3	SS-011 not testable at profile level	Conformance statement SS-011 is not testable at the profile level. Conformance Statement SS-011: The implementation SHALL support all 3 value sets for DG1-3 (Diagnosis Code): PHVS_AdministrativeDiagnosis_CDC_ICD-9CM, PHVS_AdministrativeDiagnosis_CDC_ICD-10CM, and PHVS_Disease_CDC for Primary and Additional Diagnosis data elements.	This will be tested at the test case level.
NIST-24	MSH-21	SS-017 implementation	The conformance statement SS-017 should be split into different conformance statements instead of merging requirement about different profiles. Also, the cardinality of MSH-21 is [1..1], however the associated conformance statements have the phrasing "An instance…". The intent is cardinality of [1..*] to match the conformance statement.	SS-017 will be implemented and tested in the NIST test tool as defined here: All PH_SS-Ack profiles SS-017-ack : An instance of MSH.21 (Message Profile Identifier) SHALL contain the constant value: PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO All PH_SS-NoAck profiles SS-017-no-ack : An instance of

Decision Identifier	Message Element	Title	Description	Decision
			The rational for [1..*] is that local-level profiles can further constrain this national-level profile to meet jurisdictional needs. Additional profiles identifiers would indicate the local profiles (typically 1 additional).	MSH.21 (Message Profile Identifier) SHALL contain the constant value: PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO The testing of batch is out of scope for the NIST test tool, so there won't be any PH_SS-Batch profile available in the test tool. MSH-21 cardinality has been changed from [1..1] to [1..*]. The conformance statement has not been modified except as noted above to split.
NIST-25	PV1-44	SS-010 implementation	SS-010 needs to be clarified since PV1-44 (Admit Date/Time) is not a primitive element.	SS-010 will be implemented as such in the NIST test tool : PV1-44.1 (Admit Date/Time.Time) SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]]][+/-ZZZZ]'
NIST-26	MSH-7	SS-013 implementation	SS-013 needs to be clarified since MSH-7 (Date/Time of Message) is not a primitive element.	SS-013 will be implemented as such in the NIST test tool : MSH-7.1 (Date/Time of Message.Time) SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]]][+/-ZZZZ]'
NIST-27	MSH-11	SS-015 implementation	SS-015 needs to be clarified since MSH-11 (Processing ID) is not a primitive element.	SS-015 will be implemented as such in the NIST test tool: MSH-11.1 (Processing ID.Processing ID) SHALL have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training.
NIST-28	MSH-12	SS-016 implementation	SS-016 needs to be clarified since MSH-12 (Version ID) is not a primitive element.	SS-016 will be implemented as such in the NIST test tool : MSH-12.1 (Version ID.Version ID) SHALL have a value '2.5.1'
NIST-29	EVN-2	SS-018 implementation	SS-018 needs to be clarified since EVN-2 (Recorded Date/Time of Message) is not a primitive element.	SS-018 will be implemented as such in the NIST test tool : EVN-2.1 (Recorded Date/Time of Message.Time) SHALL be expressed with a minimum precision of the nearest minute, and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]]][+/- ZZZZ]'
NIST-30	PID-29	SS-036 implementation	SS-036 needs to be clarified since PID-29 (Patient Death and Time) is not a primitive element.	SS-036 will be implemented as such in the NIST test tool : If valued, PID-29.1 (Patient Death and Time.Time), SHALL be expressed with a minimum precision

Decision Identifier	Message Element	Title	Description	Decision
				of the nearest minute and be represented in the following format:'YYYYMMDDHHMM[SS[.S[S[S]]]][+/- ZZZZ]'
NIST-31	PV1-45	SS-045 implementation	SS-045 needs to be clarified since PV1-45 (Discharge Date/Time) is not a primitive element.	SS-045 will be implemented as such in the NIST test tool : PV1-45.1 (Discharge Date/Time.Time) SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]]] [+/-ZZZZ]'
NIST-32	MSH-15	MSH-15 conformance statements added	There is no explicit conformance statement capturing the requirements for MSH-15.	The following conformance statements will be implemented in the NIST test tool: PH_SS-Ack profiles: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'AL'. PH_SS-NoAck profiles: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'NE'.
NIST-33	HD.1 (HL70300) MSH-3 & MSH-5 (HL703061) MSH-4 & MSH-6 (HL703062) CX.4 (HL70363) XCN.9 (HL70363)	Locally defined value sets/HL7 tables excluded from validation	Some HL7 tables are locally defined therefore the NIST test tool cannot validate against them.	The following HL7 tables are excluded from validation for both context free and context based validation : HL70300 HL70361 HL70362 HL70363 The validation will issue an alert.
NIST-34	PV2-3 (PHVS_Disease_CDC) DG1-3 (PHVS_Disease_CDC)	Partial exclusion of large value sets	The NIST test tool will not handle large value sets.	For large value sets, the value set values will be restricted to the codes used in the test cases in context based validation. In context free validation, these value sets will be completely excluded from validation. The large value sets include : PHVS_Disease_CDC PHVS_AdministrativeDiagnosis_CDC_ICD-9CM PHVS_AdministrativeDiagnosis_CDC_ICD-10CM
NIST-35	OBX-3	OBX-3 value set definition is incomplete	The IG defines the value set for OBX-3 as "PHVS_ObservationIdentifier_SyndromicSurveillance" in section 3.6.8. However in section 4.2, table 4-2 SYNDROMIC DATA ELEMENTS OF INTEREST, it indicates that the value set	The NIST test tool will validate OBX-3 against both value sets : "PHVS_ObservationIdentifier_SyndromicSurveillance" and "PHVS_VitalSignResult_HITSP"

Decision Identifier	Message Element	Title	Description	Decision
			"PHVS_VitalSignResult_HITSP" could also be used for OBX-3.	
NIST-36	PV2-3 DG1-3	Creation of custom value set for validating PV2-3 & DG1-3	As the PHVS_Disease_CDC, PHVS_AdministrativeDiagnosis_CDC_ICD-9CM and PHVS_AdministrativeDiagnosis_CDC_ICD-10CM values sets were partially excluded because there are too large, a NIST custom value needs to be created for validation purposes.	The following value set was created: [NIST]PHVS_Disease_CDC&PHVS_AdministrativeDiagnosis_CDC_ICD-9CM&PHVS_AdministrativeDiagnosis_CDC_ICD-10CM It only contains the codes used in PV2-3 & DG1-3 in the NIST context-based example messages. This value set will be used in context-based validation only. No validation will be performed against this value set in context free validation. The validation tool will issue an alert.
NIST-37	PV2-3 DG1-3	Codes system check for PV2-3 & DG1-3	As the custom NIST value set for PV2-3 & DG2-3 is excluded from context free validation, an additional check for the value of PV2-3.3 & DG1-3.3 needs to be added.	The NIST test tool will validate in both context free and context based against the following conformance statements: PV2-3.3 SHALL be valued "I9CDX" or "I10C" or "SCT". DG1-3.3 SHALL be valued "I9CDX" or "I10C" or "SCT".
NIST-38	N/A	PH_SS-Ack & PH_SS-NoAck testing	The PH_SS-Ack and PH_SS-NoAck only differ on MSH-15 value and MSH-16 usage. NIST has made the decision not to include test cases for PH_SS-NoAck in context-based validation since the test cases would be nearly exact and offer no additional capabilities testing.	Context-based test case will only test for the PH_SS-Ack profiles. Users will have the opportunity to test their PH_SS-NoAck messages in context free testing, if needed.
NIST-39	multiple locations	NIST derived conformance statements	Some requirements implemented in the tool are not explicitly written in the IG. NIST has implemented such requirements as "derived" conformance statements.	NIST-SS-001: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'AL'. (PH_SS-Ack A01 profile) NIST-SS-002: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'NE'. (PH_SS-NoAck A01 profile) NIST-SS-003: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'AL'. (PH_SS-Ack A04 profile) NIST-SS-004: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'NE'. (PH_SS-NoAck A04 profile) NIST-SS-005: MSH-15 (Accept Acknowledgment Type) SHALL be

Decision Identifier	Message Element	Title	Description	Decision
				the literal value: 'AL'. (PH_SS-Ack A08 profile)

NIST-SS-006: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'NE'. (PH_SS-NoAck A08 profile)

NIST-SS-007: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'AL'. (PH_SS-Ack A03 profile)

NIST-SS-008: MSH-15 (Accept Acknowledgment Type) SHALL be the literal value: 'NE'. (PH_SS-NoAck A03 profile)

NIST-SS-009: PV2-3.3 SHALL be valued "I9CDX" or "I10C" or "SCT". (All profiles)

NIST-SS-010: DG1-3.3 SHALL be valued "I9CDX" or "I10C" or "SCT". (All profiles)

NIST-SS-011: If OBX 3.1 (Observation Identifier) is valued with 8661-1 CHIEF COMPLAINT–REPORTED (LOINC), then OBX-2 (Value Type) SHALL be valued 'TX'. (All profiles)

NIST-SS-012: If OBX 3.1 (Observation Identifier) is valued with SS002 TREATING FACILITY LOCATION (PHINQUESTION), then OBX-2 (Value Type) SHALL be valued 'XAD'. (All profiles)

NIST-SS-013: IN1-1(SetID) for the first instance of an IN1 Segment SHALL have the Literal Value of '1'. Each following occurrence SHALL be numbered consecutively. (All profiles) |
| NIST-40 | OBX-3 | Creation of custom value set for validating OBX-3 | The NIST testing tool is not capable at that time to handle validation against multiple value sets when at least one of the value sets contains codes from different code systems. | The following value set was created: [NIST] PHVS_ObservationIdentifier_SyndromicSurveillance&; PHVS_VitalSignResult_HITSP

It contains the codes from value sets PHVS_ObservationIdentifier_SyndromicSurveillance and PHVS_VitalSignResult_HITSP. This value set will be used in context based and context free validation (and is only applicable for ONC |

Decision Identifier	Message Element	Title	Description	Decision
				2015 Edition Certification Capability Testing)
NIST-41	PID-5	Change PID- 5 cardinality to [2..2]	The cardinality of the PID-5 is defined as [1..*], but there is a conformance statement (SS-023: PID-5 (Patient Name) SHALL be valued as |~^^^^^^S| or |~^^^^^^U|).) that sets the cardinality of that element to exactly 2 occurrences.	The cardinality of PID-5 will be set to [2..2] in the NIST test tool.
NIST-42	MSH-4.3	Allow L or M or N to be valid values for MSH-4.3 based on "L,M,N" listed in PHVS_UniversalIDType_SyndromicSurveillance	L,M,N appears all on one row in PHVS_UniversalIDType_SyndromicSurveillance, and the NIST test tool checks for L,M,N instead of L or M or N in the MSH-4.3 field.	Since the intent of L,M,N in PHVS_UniversalIDType_Syndromic Surveillance is to allow any one of these values to populate MSH-4.3, the NIST test tool will validate for and allow L or M or N.

3.0 ERRATA

Errata Identifier	Reference	Message Element	Title	Description	Decision
ERR-1	NIST-4	MSG-3	MSG-3 (Message Structure) length	MSG-3 has a length of 3 in the guide, but it is 7 in HL7 v2.5.1.	The NIST test tool will allow a length of 7 in MSG-3(Message Structure).
ERR-2	NIST-24	MSH-21	SS-017 implementation	The conformance statement SS-017 should be split into different conformance statements instead of merging requirement about different profiles. Also, the cardinality of MSH-21 is [1..1], however the associated conformance statements have the phrasing "An instance…". The intent is cardinality of [1..*] to match the conformance statement. The rational for [1..*] is that local-level profiles can further constrain this national-level profile to meet jurisdictional needs. Additional profiles identifiers would indicate the local profiles (typically 1 additional).	SS-017 will be implemented and test in the NIST test tool as defined here: All PH_SS-Ack profiles SS-017-ack : An instance of MSH.21 (Message Profile Identifier) SHALL contain the constant value: PH_SS-Ack^SS Sender^2.16.840.1.114222.4.10.3^ISO All PH_SS-NoAck profiles SS-017-no-ack : An instance of MSH.21 (Message Profile Identifier) SHALL contain the constant value: PH_SS-NoAck^SS Sender^2.16.840.1.114222.4.10.3^ISO The testing of batch is out of scope for the NIST test tool, so there won't be any PH_SS-Batch profile available in the test tool. MSH-21 cardinality has been changed from [1..1] to [1..*]. The conformance statement has not been modified except as noted above to split.
ERR-3	NIST-5	OBX-2	HD value added to PHVS_ValueType _SyndromicSurveillance	Based on the example in table 9 (pg. 155) for Facility Identifier (Treating), the use of "HD" should be allowed in field OBX-2.	• The value "HD" has been added to the value set "PHVS_ValueType_Syndromic Surveillance" for validation purposes. • PHINVADS will be updated with the "HD" value **Comment**: Origin is table HL70125
ERR-4	NIST-6	MSH-15	MSH-15 usage and value	The usage of MSH-15 is not clear, as there is a conflict in the erratum. In erratum item #2.2, the usage of MSH-15 is defined as C(R/X) with the condition predicate "For MSH-21 Message Profile ID PH_SS-Ack^SS	MSH-15 will be implemented as defined here in the NIST test tool : PH_SS-Ack^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08 Usage ="R", Constant = AL, Card = [1..1] Message Types = ACK^A01,

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Errata Identifier	Reference	Message Element	Title	Description	Decision
				Sender^2.16.840.1.11422 2.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.1142 22.4.10.3^ISO" In erratum item #4.2, the usage of MSH-15 is defined as "varies". PH_SS-Ack^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08, ORU^R01 Usage = R, Constant = AL, Card = [1..1] PH_SS-NoAck^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08, ORU^R01 Usage = R, Constant = NE, Card = [1..1] Message Type = ACK^A01, ACK^A03, ACK^A04, ACK^A08, ACK^R01 Usage = X, Card = [0..0]	ACK^A03, ACK^A04, ACK^A08 Usage ="O", Card = [0..1] PH_SS-NoAck^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08 Usage = "R", Constant = NE, Card = [1..1] Message Types = ACK^A01, ACK^A03, ACK^A04, ACK^A08 Usage ="X", Card = [0..0] All the context based test cases will use "PH_SS-Ack" profiles, so the test tool will test for the "most constrained" profile. The context free section of the tool will contain all the "PH_SS-Ack" and "PH_SS-NoAck" profiles for all message types.
ERR-5	NIST-7	MSH-16	MSH-16 usage	The usage of MSH-16 is not clear, as there is a conflict in the erratum. In erratum item #2.3, the usage of MSH-16 is defined as C(R/X) with the condition predicate "For MSH-21 Message Profile ID PH_SS-Ack^SS Sender^2.16.840.1.11422 2.4.10.3^ISO or PH_SS-Ack^SS Receiver^2.16.840.1.1142 22.4.10.3^ISO" In erratum item #4.3, the usage of MSH-16 is defined as "varies". PH_SS-Ack^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08, ORU^R01 Usage = RE, Card = [0..1] Message Type =	MSH-16 will be implemented as defined here in the NIST test tool : PH_SS-Ack^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08 Usage ="RE", Card = [0..1] Message Type = ACK^A01, ACK^A03, ACK^A04, ACK^A08, ACK^R01 Usage = X, Card = [0..0] PH_SS-NoAck^SS Sender Profile Message Types = ADT^A01, ADT^A03, ADT^A04, ADT^A08 Usage = "O", Card = [0..1] Message Types = ACK^A01, ACK^A03, ACK^A04, ACK^A08 Usage ="O", Card = [0..1] All the context based test cases will use "PH_SS-Ack" profiles, so the test tool will test for the "most constrained" profile. The context free section of the tool will contain all the "PH_SS-

Errata Identifier	Reference	Message Element	Title	Description	Decision
				ACK^A01, ACK^A03, ACK^A04, ACK^A08, ACK^R01 Usage = X, Card = [0..0]	Ack" and "PH_SS-NoAck" profiles for all message types.
ERR-6	NIST-8	CE-4 (OBX-5) CE-5 (OBX-5) CE-6 (OBX-5)	CE-4, CE-5 & CE-6 definition under OBX-5	The definition of the CE datatype is missing its three last components.	The NIST test Tool will validate those component against their HL7 definition : CE-4: length="20", datatype="ST", usage="O" CE-5: length="199", datatype="ST", usage="O" CE-6: length="20", datatype="ID", usage="O", table="HL70396"
ERR-7	NIST-10	CE-3 CE-6 CWE-3 CWE-6	CE-3, CE-6, CWE-3, CWE-6 value set definition	The IG defines table HL70396 for elements CE-3, CE-6 CWE-3 & CWE-6. NIST asserts that the value set binding of "PHVS_CodingSystem_HL7_2x_Table0396" is more appropriate to use in those data elements.	The NIST validation tool will use value set "PHVS_CodingSystem_HL7_2x_Table0396" instead of HL70396 in order to validate elements CE-3, CE-6, CWE-3, and CWE-6.
ERR-8	NIST-11NIST-11	CWE-3 CWE-6	CWE-3 & CWE-6 condition predicates This addresses an error in the erratum.	The CWE.3 condition predicate is defined as: Condition Predicate: If CE .1 (Identifier) is valued. The CWE.6 condition predicate is defined as: Condition Predicate: If CE .3 (Identifier) is valued.	The NIST test tool will validate against the following condition predicates: CWE.3 Condition Predicate: If CWE.1 (Identifier) is valued. CWE.6 Condition Predicate: If CWE.4 (Alternate Identifier) is valued.
ERR-9	NIST-12	EI-1 EI-2 EI-3 EI-4	EI definition	The definition if the EI datatype is not clear. See HD - hierarchic designator - "Namespace ID". See HD - hierarchic designator - "Universal ID". See HD - hierarchic designator - Universal ID Type".	The NIST test tool will validate the EI datatype against the following definition : EI-1 : length="199", datatype="ST", usage="RE" EI-2 : length="20", datatype="IS", usage="R" EI-3 : length="199", datatype="ST", usage="R" EI-4 : length="2", datatype="ID", usage="R", value set="PHVS_UniversalIDType_Syndromic Surveillance"
ERR-10	NIST-13	PID-5	XPN definition	The usage of the XPN components is not defined in either the IG or the errata document. NIST Reasoning: The XPN datatype definition (with usages) is nowhere to be found in the guide or errata. NIST based this definition on the fact that the only field using this datatype is PID-5.	The XPN datatype will be implemented in the NIST tool as following : Family Name: Usage=X Given Name: Usage=X Second and Further Given Names or Initials Thereof: Usage=X Suffix (e.g., JR or III): Usage=X Prefix (e.g., DR): Usage=X Degree (e.g., MD): Usage=X Name Type Code: Usage=R Name Representation Code: Usage=X

Errata Identifier	Reference	Message Element	Title	Description	Decision
				There is a conformance statement SS-023: PID-5 (Patient Name) SHALL be valued as |~^^^^^^S| or |~^^^^^^U|). This effectively makes the usages for most elements "X".	Name Context: Usage=X Name Validity Range: Usage=X Name Assembly Order: Usage=X Effective Date: Usage=X Expiration Date: Usage=X Professional Suffix: Usage=X
ERR-11	NIST-14	multiple locations	Codes added to PHVS_CodingSystem_HL7_2x_Table0396	Some codes need to be added to "PHVS_CodingSystem_HL7_2x_Table0396" value set.	The code "HCPTNUCC" is added to the value set (based on the NUCC Provider Codes in the "HL7 Table 0396 Code" column in the PHVS_FacilityVisitType_SyndromicSurveillance named in the PHIN Guide 2.0)
ERR-12	NIST-25	PV1-44	SS-010 implementation	SS-010 needs to be clarified since PV1-44 (Admit Date/Time) is not a primitive element.	SS-010 will be implemented as such in the NIST test tool : PV1-44.1 (Admit Date/Time.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]'
ERR-13	NIST-26	MSH-7	SS-013 implementation	SS-013 needs to be clarified since MSH-7 (Date/Time of Message) is not a primitive element.	SS-013 will be implemented as such in the NIST test tool : MSH-7.1 (Date/Time of Message.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]'
ERR-14	NIST-27	MSH-11	SS-015 implementation	SS-015 needs to be clarified since MSH-11 (Processing ID) is not a primitive element.	SS-015 will be implemented as such in the NIST test tool: MSH-11.1 (Processing ID.Processing ID) SHALL have a value in the set of literal values: "P" for Production, "D" for Debug or "T" for Training.
ERR-15	NIST-28	MSH-12	SS-016 implementation	SS-016 needs to be clarified since MSH-12 (Version ID) is not a primitive element.	SS-016 will be implemented as such in the NIST test tool : MSH-12.1 (Version ID.Version ID) SHALL have a value '2.5.1'
ERR-16	NIST-29	EVN-2	SS-018 implementation	SS-018 needs to be clarified since EVN-2 (Recorded Date/Time of Message) is not a primitive element.	SS-018 will be implemented as such in the NIST test tool : EVN-2.1 (Recorded Date/Time of Message.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]'

Errata Identifier	Reference	Message Element	Title	Description	Decision
ERR-17	NIST-30	PID-29	SS-036 implementation	SS-036 needs to be clarified since PID-29 (Patient Death and Time) is not a primitive element.	SS-036 will be implemented as such in the NIST test tool : If valued, PID-29.1 (Patient Death and Time.Time), SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format:'YYYYMMDDHHMM[SS[.S[S[S]]]]][+/- ZZZZ]'
ERR-18	NIST-31	PV1-45	SS-045 implementation	SS-045 needs to be clarified since PV1-45 (Discharge Date/Time) is not a primitive element.	SS-045 will be implemented as such in the NIST test tool : PV1-45.1 (Discharge Date/Time.Time) SHALL be expressed with a minimum precision of the nearest minute and be represented in the following format: 'YYYYMMDDHHMM[SS[.S[S[S]]]]] [+/-ZZZZ]'
ERR-19	NIST-41	PID-5	Change PID-5 cardinality to [2..2]	The cardinality of the PID-5 is defined as [1..*], but there is a conformance statement (SS-023: PID-5 (Patient Name) SHALL be valued as |~^^^^^S| or |~^^^^^U|).) that sets the cardinality of that element to exactly 2 occurrences.	The cardinality of PID-5 will be set to [2..2] in the NIST test tool.