HL7 Version 2.5.1 Implementation Guide for Immunization Messaging (Release 1.5)—Addendum

This addendum consolidates the Implementation Guide information that clarifies the conformance requirements. This supplement does not specify additional requirements; it just clarifies existing ones. Value set requirements, general clarifications, and Immunization Implementation Guide errata are also provided in this addendum.

General Clarifications

In the event of a conflict between the information in the table definitions and the explanatory text of Segment Level definitions (i.e., the data type, the constrained value etc.), the source of truth is the table.

In all message definitions, the Software (SFT) segment has a Usage of O and a Cardinality of [0..*] regardless of whether or not it is explicitly listed in the Static Definition – Message Level.

In all message definitions, the Continuation Pointer (DCS) segment has a Usage of X and a Cardinality of [0..0] regardless of whether or not it is explicitly listed in the Static Definition – Message Level.

This document references both Coding Systems (AKA Code Sets) and Value Sets in relation to coded message elements (including the CE, CWE, CX, IS, ID and XCN data types). While related, these terms are distinct. A Coding System is an extensive, and in some cases extendable, list of values available for use in a message. A single Coding System may be relevant to a number of different parts of a single message. For example, HL7 table 0203 contains a list of Identifier Types. This table is called out as part of the CX data type (used in PID-3 and QPD-3) as well as the XCN data type (used in ORC-12 and RXA-10). A Coding System tends to be a very broad list and not all values are appropriate to use in a given message element. For example HL7 table 0203 contains the ID types of MR (Medical Record Number) and NPI (National Provider Identifier) which are appropriate for use in PID-3 and ORC-12 respectively. In contrast, a Value Set is a more refined list of values, taken from one or more Coding Systems, applied at a more granular level of the message and which contains only values appropriate for that location in the message. In some cases, a Value Set may have the same content as the underlying Coding System.

Note that for coded data types (a data type of CE or CWE), the Name of Coding System (CE.3/CE.6/CWE.3/CWE.6) in the message should reference the Coding System, not the Value Set. Given the distinctions between value sets and coding system, often there is confusion as to the value to send in the message in the CE and CWE data types. For coded data types, the coding system in the third component is drawn from table HL70396. Changes to Table 0396 occur frequently. The most recent version of this table is available at http://www.hl7.org/special/committees/vocab/table_0396/index.cfm which contains a list of possible values. The intended coding systems expected in coded fields are as follows:

Message Field	Field Description	Coding System for CE.3/CWE.3
ERR-2	HL7 Error Code	HL70357
ERR-5	Application Error Code	HL70533
IN1-2	Insurance Plan	HL70072
NK1-3	Relationship	HL70063

Message Field	Field Description	Coding System for CE.3/CWE.3
OBX-3	Observation ID	LN which using LOINC otherwise some other value from HL0396
OBX-6	Units	UCUM or HL70353
OBX-17	Observation Method	CDCPHINVS
ORC-17	Entering Organization	HL70362
PD1-11	Publicity Code	HL70215
PID-10	Race	CDCREC
PID-22	Ethnic Group	CDCREC
QAK-3	Message Query Name	CDCPHINVS
QPD-1	Message Query Name	CDCPHINVS
RCP-2.2	Units	HL70126
RXA-5	Administered Code	CVX when transmitting CVX codes, otherwise NDC, CPT, etc. as appropriate
RXA-7	Administered Units	UCUM
RXA-9	Administration Notes	NIP001
RXA-17	Manufacturer	MVX when transmitting MVX codes
RXA-18	Refusal Reason	NIP002
RXR-1	Route	NCIT
RXR-2	Site	HL70163

Various fields and data types, such as PID-5, PID-11 and ERL, contain references to "repetitions". The word repetition is intended to be synonymous with the word occurrence. That is, the "first repetition" is not the "second occurrence". For example if the value of PID-3 is "1234^^^AA1^MR~5678^^^AA2^DL", "1234^^^AA1^MR" is the first repetition and "5678^^^AA2^DL" is the second repetition.

All response messages (profiles Z23, Z32, Z31, Z33 and Z42) should be returned synchronously. That is, the receiving process gives the response immediately or in a short period during which the originating process will wait for the response. The originating process will not send a new message until a response has been received. A system may initiate multiple simultaneous processes if allowed, but each process must wait for a response to a given message before sending the next one. For query interactions, this behavior is controlled by the constrained value of "I" in the Query Priority (RCP-2) field. See Chapter 5 of the HL7 2.5.1 Base Standard for more details.

Profiles Z22, Z34 and Z44 have constrained values of ER for Accept Acknowledgement Type (MSH-15) and AL for Application Acknowledgement Type (MSH-16). When processing a message conformant with one of these profiles, the receiving system shall evaluate the message for unsupported message types, version ID, and processing IDs or other issues unrelated to format or content. If the message fails this validation, an ACK message conforming to profile Z23 shall be returned. This is consistent with "ER" in MSH-15. Messages which pass this initial validation are then processed and an appropriate Application level response message is returned. This is consistent with "AL" in MSH-16. Note that messages which fail the initial validation are not processed further and therefore do not have the opportunity to trigger an Application level response message. The receiving system only returns one message per incoming

message. This process is diagrammed in Figure 37 (Z22 profile), Figure 41 (Z34 profile) and Figure 44 (Z44 profile).

Chapter 2 includes a section entitled "Processing Mode" which discusses consolidation of records from multiple sources. However, messages conforming to the different profiles described by this guide may be populated with different quantities of data depending on the profile they conform to.

- Z22 (Transmit Unsolicited Vaccine Update –VXU): The goal of a Z22 message is to send up-to-date information about a vaccination event and the patient receiving the vaccine. A conformant message may contain a view of the entire patient vaccination history as known by the system originating the VXU^V04 message, but it is not required to do so. In other words, a given Z22 conformant message may only contain a subset of all vaccinations events on the patient record, typically only those that have been added, updated or deleted as part of the event leading to the triggering of a message. The receiving system is responsible for applying business rules to integrate the data received but should not assume that the message being processed represents the entire patient vaccination history. The data within any single order group (set of one ORC segment, one RXA segment and associated RXR and OBX segments, if any) should represent the complete set of data about the vaccination event as known by the system originating the message. A complete set of data is defined by the required (as per this implementation guide) and locally agreed to data elements.
- Z32 (Return complete immunization history): The goal of the Z32 is to return a complete immunization history in response to a query request. Conformant messages should contain a view of the entire patient vaccination history as known by the system that originates the RSP^K11 message. The receiving system may process the message as required by local rules and needs. Depending on the situation and construction of the receiving system data base, the content of the message may completely overwrite existing query response data or may need to be reconciled against existing data on the patient record, the latter happening when the receiving system is likely to contain data not known to the system originating the RSP^K11 message. The data within any single order group (set of one ORC segment, one RXA segment and associated RXR and OBX segments, if any) should represent the complete set of data about the vaccination event as known by the system originating the message. A complete set of data is defined by the required (as per this implementation guide) and locally agreed to data elements.
- Z42 (Return Evaluated History and Forecast): The goal of a Z42 message is to return an evaluated history and forecast in response to a query request. It is intended to be displayed back to the requesting provider to inform clinical care. The evaluated history portion of the message contains all immunizations for the patient known to the responding system. Each of these will be evaluated against a set of rules, such as ACIP. The forecast portion of the message should be considered to be a complete representation of the patient forecast. This message is not intended to return all the details expected of a complete immunization history. This message may not include information about Lot Number or other data in a complete history, for instance. A Z34 query and Z32 response should be used for that purpose. The data within any single order group (set of one ORC segment, one RXA segment and associated RXR and OBX segments, if any) should represent the complete set of data about the vaccination event as known by the system originating the message. A complete set of data is defined by the required (as per this implementation guide) and locally agreed to data elements.

Sometimes it is necessary to remove a previously submitted vaccination administration record. If the existing record must simply be deleted, that is it should never have been entered, then a second

VXU^V04 message should be sent where all data in the message, including the ORC and RXA segments, is the same as the most recent message for the administration, except for the Action Code (RXA-20) which should be D. Importantly, the filler ID in ORC-3 should be the same between messages as this ID may be crucial to identifying the correct administration to remove. Once the inaccurate data has been deleted, additional independent messages (adds, refusals, etc.) can be sent to accurately populate the receiving system.

General Errata

Any data elements with a Usage of "X" will have a Cardinality of "[0..0]".

Data Types

Clarification

Location	Existing	Clarification
Table 4-33	None	Each telecommunication use code (i.e. Phone number, email address, etc.) must be in its own occurrence. For example, a primary residence number and email address: ^PRN^PH^^^734^6777777~^NET^Internet^bjones7656@isp.com

Errata

Location	Data Type	Change	Existing	Corrected
Table 4-1	n/a	Omission correction	The XPN_M data type is not included in the list of data types used by the IG.	XPN_M is a valid data type for this IG and is included with the list in Table 4-1.
IZ-2	Composite Quantity with Units (CQ)	Error correction	IZ-2: CQ-2 (Units) shall be the literal value "RD".	IZ-2: CQ-2.1 (Units) shall be the literal value "RD".
Table 4-8	Date (DT_D)	Error correction	Definition: Specifies the century and year with optional precision to month and day.	Precision to the month and day is required for the DT_D data type. The word "optional" should be disregarded.
Table 4-8	Date (DT_D)	Error correction	Elements for hours, minutes, seconds and time zone offset have a usage of O but these elements are not allowed for Date data types.	Elements for hours, minutes, seconds and time zone offset shall no longer be listed in this table and shall not be sent when using the DT_D data type.

Location	Data Type	Change	Existing	Corrected
Table 4-8	Date (DT_D)	Error correction	Length 4..8	Length 8
Table 4-26	Time Stamp with Time Zone (TS_Z)	Error correction	Hours, Minutes and Seconds have a usage of O.	Hours, Minutes and Seconds shall have a usage of R. Sub-second data remains optional: YYYYMMDDHHMMSS[.S[S[S[S]]]]]+/-ZZZZ
Table 4-29	Extended Composite ID Number and Name (XCN)	Error correction	The usage of Identifier Type Code (XCN.13) is O.	The usage of Identifier Type Code (XCN.13) shall be C(R/X) with the Conditional Predicate of: "If the XCN-1 (id number) is valued" The Value Set shall be HL70203. The combination of the Identifier Type Code and the Assigning Authority (XCN.9) define a unique ID pool.
Table 4-30	Extended Composite Name and ID Number for Organizations.	Omission correction	A value set is not defined for XON.6.	When using the XON data type, the Assigning Authority element (XON.6) uses the HD data type which should draw the Assigning Authority from the value set of table HL70363.
Table 4-31	Extended Person Name (XPN)	Error correction	The usage of Name Type Code (XPN.7) is RE.	The usage of Name Type Code (XPN.7) shall be R. if the type of name is not known, a value of U-Unspecified should be used rather than leaving the Name Type Code empty.
Table 4-32	Extended Person Name - Maiden Name (XPN_M)	Error correction	The usage of Given Name (XPN_M.2) is RE.	The usage of Given Name (XPN_M.2) shall be O. Only the last name is required for the Maiden Name. The first name is optional.
Table 4-33	Extended Telecommunication Number (XTN)	Error correction	Area/City Code (XTN.6) and (Local Number) XTN.7 have lengths of 5 and 9 respectively.	Lengths of 3 and 7 respectively are valid to allow for sending of a 3 digit area code and 7 digit local number without including non-numeric characters as required by the NM data type.

Profile Z22

Clarifications

Location	Existing	Clarification
OBX-17	CDCPHINVS is called out as the value set for Observation Method (OBX-17).	The value set for sending the funding eligibility Observation Method in OBX-17 is PNHV_FundingEligibilityObsMethod_IIS which is described in Appendix A. Only two values, VXC40 and VXC41 are valid for this field. CDCPHINVS is to be sent as the Coding System in OBX-17.3 as given in Appendix A.
ORC-3	This shall be the unique identifier of the sending system in a given transaction. In the case where system A sends the record to system B and system B then forwards to system C, system B will send its' own unique identifier.	This statement conflicts with a previous statement correctly defining ORC-3 as the unique identifier from the system "where the order was filled". This is the correct interpretation of ORC-3. The description relating to systems A, B and C shall be disregarded.
PD1-16	This field identifies the current status of the patient in relation to the sending provider organization.	The term "sending provider organization" refers to the organization that is accountable for the content of the message. This may be an EHR for a VXU^V04 message or an IIS for an RSP^K11 message. PD1-16 should reflect the status of the patient relative to the system creating the message.
IZ-31 and 47	Current wording implies that empty repetitions of Administration Notes (RXA-9) are allowed.	The first occurrence should be either null or a value from the NIP001 value set. Any additional occurrences may be valued with text notes using the CE_TX data type if local agreement allows. Empty occurrences, other than the first, should not be sent.

Errata

Location	Change	Existing	Corrected
Table 5-1	Error correction	Usage for the NTE segment is RE.	Exchange of NTE segments is by local agreement, therefore the usage of the NTE segment is O.
Table 5-2	Omission correction	Cardinality is missing for Insurance Company ID (IN1-3), Plan Type (IN1-15) and Verification Date/Time (IN1-29).	Insurance Company ID (IN1-3), Plan Type (IN1-15) have a Cardinality of [1..1]. Verification Date/Time (IN1-29) has a Cardinality of [0..1].

Location	Change	Existing	Corrected
Table 5-2	Error correction	The comment for Verification Date/Time (IN1-29) describes the necessary precision for the field.	The comment for Verification Date/Time (IN1-29) implies that the year, month and day are optional by virtue of using the [ ] characters. Per the definition of the TS_NZ data type, precision down to the day is required. Disregard the comment and refer to the definition of TS_NZ.
IN1 segment definition	Omission correction	The Set ID (IN1-1) field definition describes the usage of IN1-1 but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the IN1 segment in the Z22 profile: IZ-69: IN1-1 (Set ID-IN1) SHALL be valued "1".
IZ-17	Error correction	VXU^VO4^VXU_V04	VXU^V04^VXU_V04
NK1 segment definition	Omission correction	The Set ID (NK1-1) field definition describes the usage of NK1-1 but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the NK1 segment in the Z22 profile: IZ-70: NK1-1 (Set ID-NK1) SHALL be valued sequentially starting with the value "1".
Table 5-7	Error correction	The Conditional Predicate for Units (OBX-6) requires that OBX-6 be populated if Data Type (OBX-2) is either "NM" or "SN"	The Conditional Predicate should only apply if Data Type (OBX-2) is "NM". The "SN" data type is not required by any Observation ID defined by this IG.
IZ-21	Error correction	The value of OBX-2 (Value Type) SHALL be one of the following: CE, NM, ST, DT, ID or TS	IZ-21 has been removed. Required Value Types are defined by the required Observation IDs (OBX-3) per profile (see the CDC-defined NIP003 table in Appendix A). By local agreement, OBX segments using other data types may be sent.
IZ-36	Error correction	If OBX-3.1 is "69764-9" and OBX-2 is "CE" then the value set for OBX-5 shall be cdcgs1vis.	If OBX-3.1 is "69764-9" and OBX-2 is "CE" then the value set for OBX-5 shall be PHVS_VISBarcodes_IIS. Note that PHVS_VISBarcodes_IIS uses values from the cdcgs1vis Coding System.

Location	Change	Existing	Corrected
OBX segment definition	Error correction	Set ID (OBX-1) Definition: This field contains the sequence number. The first instance shall be set to 1 and each subsequent instance shall be the next number in sequence. Numbering is not restarted within a message. That is, if a message had 3 order groups and each had 3 OBX, the last OBX in the message would have value of 9 for this field.	In addition to the current description, the Set ID is also allowed to restart within a message, between order groups. This is, if a message had 3 order groups and each had 3 OBX, all three order groups would contain OBX segments with Set IDs of 1, 2 and 3. Either approach, restarting or not restarting per order group, is allowed.
IZ-45	Error correction	IZ-45: If RXA-20 is valued "NA" or "RE" then ORC-3 SHALL be valued "9999".	IZ-45: If RXA-20 is valued "NA" or "RE" then ORC-3.1 SHALL be valued "9999".
Table 5-10	Error correction	Data Type for Protection Indicator Date (PD1-13), Immunization Registry Status Effective Date (PD1-17) and Publicity Code Effective Date (PD1-18) is DT_T in Table 5-10 and DT in the subsequent description section.	Data Type for Protection Indicator Date (PD1-13), Immunization Registry Status Effective Date (PD1-17) and Publicity Code Effective Date (PD1-18) is DT_D.
Table 5-11	Error correction	The Usage and Cardinality of Administrative Sex (PID-8) are RE and [0..1].	The Usage and Cardinality of Administrative Sex (PID-8) are R and [1..1]. If a sex is not definitively known, use the value U-Unknown from HL70001.
Table 5-11	Error correction	The Value Set of Race (PID-10) is HL70005.	The Value Set of Race (PID-10) is CDCREC. The coding system shall be CDCREC from the most recent version of HL70396. The values listed in Appendix A for HL70005 are still valid for CDCREC.
Table 5-12	Error correction	The length of Give Sub-ID Counter (RXA-1) and Administration Sub-ID Counter (RXA-2) is 4.	The length of Give Sub-ID Counter (RXA-1) and Administration Sub-ID Counter (RXA-2) is 1 per constraints on the values of those two fields.
Table 5-12	Error correction	The Usage of Administered Units (RXA-7) is C(R/O).	The Usage of Administered Units (RXA-7) is C(R/X).
Table 5-12	Error correction	The Value Set of Administration Notes (RXA-9) is NIP 0001.	The Value Set of Administration Notes (RXA-9) is NIP001.

Location	Change	Existing	Corrected
IZ-47	Error correction	If RA-20 is NOT valued "CP" or "PA" then the first occurrence of RXA-9.1 (admin notes) SHALL be empty and the following repetitions should be empty or valued with text notes.	If RXA-20 is NOT valued "CP" or "PA" then the first occurrence of RXA-9.1 (admin notes) SHALL be empty and the following occurrences should be empty or valued with text notes.
IZ-49	Error correction	IZ-49: If RXA-5.3 is valued "998" then RXA-6 shall be valued "999".	IZ-49: If RXA-5.1 is valued "998" then RXA-6 shall be valued "999".
RXA segment definition	Error correction	IZ-50: If the first instance of RXA-9.1 is not valued "00" then RXA-6 (administered amount) SHALL be valued "999"	IZ-50 is no longer enforced and shall be disregarded. Scenarios exist where RXA-9.1 may be a value other than "00" but an administered amount may be known and should be sent.

Profile Z23

Errata

Location	Change	Existing	Corrected
IZ-51	Error correction	MSH-9 (Message Type) SHALL contain the constant value "ACK^VO4^ACK"	MSH-9 (Message Type) SHALL contain the constant value "ACK^V04^ACK" or "ACK^Q11^ACK" depending on the type of message triggering the ACK response message.

Profile Z34

Clarifications

Location	Existing	Clarification
RCP-2 Quantity Limited Request	Definition: This field contains the maximum length of the response that can be accepted by the requesting system. Valid entries are numerical values (in the first component) given in the units specified in the second component. Default is LI (lines). The expected type is records, so the second component is constrained to RD.	The value sent in RCP-2.1 represents the maximum number of client (patient) records that should be returned in the response message. There is no maximum number of immunization records for the client in the response message. Given that RCP-2.2 is constrained to "RD&records&HL70126", the default value specified in the text is not relevant.

Errata

Location	Change	Existing	Corrected
Table 7-4	Error correction	HL70362 is called out as the Value Set for Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23).	The Value Sets to use in Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23) are defined in the XON data type. HL70362 does not apply to these fields.
Table 7-5	Omission correction	QPD fields 3 through 11 lack an explicit Cardinality.	PatientList (QPD-3) has a Cardinality of [0..*]. QPD fields 4 through 11 have a Cardinality of [0..1].
Table 7-5	Omission correction	Patient Sex (QPD-7) does not have a Value Set defined.	Patient Sex (QPD-7) uses the value set HL70001.
Table 7-5	Omission correction	Patient Multiple Birth Indicator (QPD-10) does not have a Value Set defined.	Patient Multiple Birth Indicator (QPD-10) uses the value set HL70136.
Table 7-5	Error correction	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are RE.	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are O.
QPD segment definition	Omission correction	The comment for Message Query Name (QPD-1) in Table 7-5 constrains the value of the field, but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the QPD segment in the Z34 profile: IZ-67: QPD-1 (Message Query Name) SHALL be valued "Z34^Request Immunization History^CDCPHINVS". Note that the value of QPD-1.2 in IZ-67 varies from comment in Table 7-5. The value in the Conformance Statement is the correct value.

Profile Z32

Clarifications

Location	Existing	Clarification
IZ-31 and 47	Current wording implies that empty repetitions of Administration Notes (RXA-9) are allowed.	The first occurrence should be either null or a value from the NIP001 value set. Any additional occurrences may be valued with text notes using the CE_TX data type if local agreement allows. Empty occurrences, other than the first, should not be sent.

Location	Existing	Clarification
OBX-17	CDCPHINVS is called out as the value set for Observation Method (OBX-17).	The value set for sending the funding eligibility Observation Method in OBX-17 is PNHV_FundingEligibilityObsMethod_IIS which is described in Appendix A. Only two values, VXC40 and VXC41 are valid for this field. The Coding System to be send in OBX-17.3 is CDCPHINVS as given in Appendix A.

Errata

Location	Change	Existing	Corrected
Table 8-1	Error correction	Usage for the NTE segment is RE.	Exchange of NTE segments is by local agreement, therefore the usage of the NTE segment is O.
Table 8-2	Error correction	The Cardinality of Error Location (ERR-2) has a footnote.	The footnote does not apply to the ERR segment for any profile other than the Z23 profile. The underlying HL7 Base Standard does not allow the ERR segment to repeat in an RSP^K11 message.
Table 8-2	Error correction	Length for Severity (ERR-4) is "1..1".	Length for ERR-4 is 1.
Table 8-3	Omission correction	Cardinality is missing for Insurance Company ID (IN1-3), Plan Type (IN1-15) and Verification Date/Time (IN1-29).	Insurance Company ID (IN1-3), Plan Type (IN1-15) have a Cardinality of [1..1]. Verification Date/Time (IN1-29) has a Cardinality of [0..1].
Table 8-3	Error correction	The comment for Verification Date/Time (IN1-29) describes the necessary precision for the field.	The comment for Verification Date/Time (IN1-29) implies that the year, month and day are optional by virtue of using the [ ] characters. Per the definition of the TS_NZ data type, precision down to the day is required. Disregard the comment and refer to the definition of TS_NZ.
IN1 segment definition	Omission correction	The Set ID (IN1-1) field definition describes the usage of IN1-1 but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the IN1 segment in the Z32 profile: IZ-69: IN1-1 (Set ID-IN1) SHALL be valued "1".
Table 8-4	Error correction	Usage for Delayed Acknowledgement Type (MSA-5) is O.	Usage for Delayed Acknowledgement Type (MSA-5) is "X".

Location	Change	Existing	Corrected
Table 8-5	Error correction	The Cardinality of Accept Acknowledgement Type (MSH-15) is [0..1] and the Constraint is "ER".	The Cardinality of Accept Acknowledgement Type (MSH-15) is [1..1] to match the Usage of R and the Constraint is "NE" to match IZ-53.
Table 8-5	Error correction	The Cardinality of Application Acknowledgement Type (MSH-16) is [0..1] and the Constraint is "AL".	The Cardinality of Application Acknowledgement Type (MSH-16) is [1..1] to match the Usage of R and the Constraint is "NE" to match IZ-52.
Table 8-5	Error correction	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is X.	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is O.
Table 8-5	Error correction	HL70362 is called out as the Value Set for Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23).	The Value Sets to use in Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23) are defined in the XON data type. HL70362 does not apply to these fields.
NK1 segment definition	Omission correction	The Set ID (NK1-1) field definition describes the usage of NK1-1 but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the NK1 segment in the Z32 profile: IZ-70: NK1-1 (Set ID-NK1) SHALL be valued sequentially starting with the value "1".
Table 8-8	Error correction	The Conditional Predicate for Units (OBX-6) requires that OBX-6 be populated if Data Type (OBX-2) is either "NM" or "SN"	The Conditional Predicate should only apply if Data Type (OBX-2) is "NM". The "SN" data type is not required by an Observation IDs defined by this IG.
OBX segment definition	Omission correction	IZ-44 is not listed as an applicable Conformance Statement.	IZ-44 applies to the OBX segment in the Z32 profile.
IZ-21	Error correction	The value of OBX-2 (Value Type) SHALL be one of the following: CE, NM, ST, DT, ID or TS	IZ-21 has been removed. Required Value Types are defined by the required Observation IDs (OBX-3) per profile (see the CDC-defined NIP003 table in Appendix A). By local agreement, OBX segments using other data types may be sent.

Location	Change	Existing	Corrected
IZ-36	Error correction	If OBX-3.1 is "69764-9" and OBX-2 is "CE" then the value set for OBX-5 shall be cdcgs1vis.	If OBX-3.1 is "69764-9" and OBX-2 is "CE" then the value set for OBX-5 shall be PHVS_VISBarcodes_IIS. Note that PHVS_VISBarcodes_IIS uses values from the cdcgs1vis Coding System.
ORC segment definition	Omission correction	IZ-45 is not listed as an applicable Conformance Statement.	IZ-45 applies to the ORC segment in the Z32 profile.
Table 8-12	Error correction	The Usage and Cardinality of Administrative Sex (PID-8) are RE and [0..1].	The Usage and Cardinality of Administrative Sex (PID-8) are R and [1..1]. If a sex is not definitively known, use the value U-Unknown from HL70001.
Table 8-12	Error correction	The Value Set of Race (PID-10) is HL70005.	The Value Set of Race (PID-10) is CDCREC. The coding system shall be CDCREC from the most recent version of HL70396. The values listed in Appendix A for HL70005 are still valid for CDCREC.
Table 8-13	Error correction	The Usage and Cardinality of Query Response Status (QAK-2) are RE and [0..1].	The Usage and Cardinality of Query Response Status (QAK-2) are R and [1..1].
Table 8-13	Omission correction	Query Response Status (QAK-2) has no Value Set.	The Value Set for Query Response Status (QAK-2) shall be HL70208.
Table 8-14	Omission correction	QPD fields 3 through 11 lack an explicit Cardinality.	PatientList (QPD-3) has a Cardinality of [0..*]. QPD fields 4 through 11 have a Cardinality of [0..1].
Table 8-14	Error correction	Data type of PatientMotherMaidenName (QPD-5) is XPN.	Data type of PatientMotherMaidenName (QPD-5) is XPN_M to match the data type in PID segments.
Table 8-14	Omission correction	Patient Sex (QPD-7) does not have a Value Set defined.	Patient Sex (QPD-7) uses the value set HL70001.
Table 8-14	Omission correction	Patient Multiple Birth Indicator (QPD-10) does not have a Value Set defined.	Patient Multiple Birth Indicator (QPD-10) uses the value set HL70136.
Table 8-14	Error correction	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are RE.	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are O.

Location	Change	Existing	Corrected
QPD segment definition	Omission correction	The comment for Message Query Name (QPD-1) in Table 8-14 constrains the value of the field, but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the QPD segment in the Z32 profile: IZ-67: QPD-1 (Message Query Name) SHALL be valued "Z34^Request Immunization History^CDCPHINVS". Note that the value of QPD-1.2 in IZ-67 varies from comment in Table 8-14. The value in the Conformance Statement is the correct value.
Table 8-15	Error correction	The length of Give Sub-ID Counter (RXA-1) and Administration Sub-ID Counter (RXA-2) is 4.	The length of Give Sub-ID Counter (RXA-1) and Administration Sub-ID Counter (RXA-2) is 1 per constraints on the values of those two fields.
Table 8-15	Error correction	The Usage of Administered Units (RXA-7) is C(R/O).	The Usage of Administered Units (RXA-7) is C(R/X).
Table 8-15	Error correction	The Value Set of Administration Notes (RXA-9) is NIP 0001.	The Value Set of Administration Notes (RXA-9) is NIP001.
RXA segment definition	Error correction	IZ-50: If the first instance of RXA-9.1 is not valued "00" then RXA-6 (administered amount) SHALL be valued "999"	IZ-50 is no longer enforced and shall be disregarded. Scenarios exist where RXA-9.1 may be a value other than "00" but an administered amount may be known and should be sent.

Profile Z31

Errata

Location	Change	Existing	Corrected
Table 9-1	Error correction	Usage for the PD1 segment is RE.	Usage for the PD1 segment is O.
Table 9-4	Error correction	The Cardinality of Accept Acknowledgement Type (MSH-15) is [0..1] and the Constraint is "ER".	The Cardinality of Accept Acknowledgement Type (MSH-15) is [1..1] to match the Usage of R and the Constraint is "NE" to match IZ-53.
Table 9-4	Error correction	The Cardinality of Application Acknowledgement Type (MSH-16) is [0..1] and the Constraint is "AL".	The Cardinality of Application Acknowledgement Type (MSH-16) is [1..1] to match the Usage of R and the Constraint is "NE" to match IZ-52.

Location	Change	Existing	Corrected
Table 9-4	Error correction	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is X.	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is O.
Table 9-4	Error correction	HL70362 is called out as the Value Set for Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23).	The Value Sets to use in Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23) are defined in the XON data type. HL70362 does not apply to these fields.
NK1 segment definition	Omission correction	The Set ID (NK1-1) field definition describes the usage of NK1-1 but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the NK1 segment in the Z31 profile: IZ-70: NK1-1 (Set ID-NK1) SHALL be valued sequentially starting with the value "1".
QAK segment definition	Omission correction	The Z31 profile is currently missing the Segment Level definition of the QAK segment.	Refer to the QAK Segment Level definition for the Z32 profile.
Table 9-6	Omission correction	QPD fields 3 through 11 lack an explicit Cardinality.	PatientList (QPD-3) has a Cardinality of [0..*]. QPD fields 4 through 11 have a Cardinality of [0..1].
Table 9-6	Error correction	Data type of PatientMotherMaidenName (QPD-5) is XPN.	Data type of PatientMotherMaidenName (QPD-5) is XPN_M to match the data type in PID segments.
Table 9-6	Omission correction	Patient Sex (QPD-7) does not have a Value Set defined.	Patient Sex (QPD-7) uses the value set HL70001.
Table 9-6	Omission correction	Patient Multiple Birth Indicator (QPD-10) does not have a Value Set defined.	Patient Multiple Birth Indicator (QPD-10) uses the value set HL70136.
Table 9-6	Error correction	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are RE.	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are O.
QPD segment definition	Omission correction	The comment for Message Query Name (QPD-1) in Table 9-6 constrains the value of the field, but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the QPD segment in the Z31 profile: IZ-67: QPD-1 (Message Query Name) SHALL be valued "Z34^Request Immunization History^CDCPHINVS". Note that the value of QPD-1.2 in IZ-67 varies from comment in Table 9-6. The value in the Conformance Statement is the correct value.

Location	Change	Existing	Corrected
Table 9-7	Error correction	The Usage and Cardinality of Administrative Sex (PID-8) are RE and [0..1].	The Usage and Cardinality of Administrative Sex (PID-8) are R and [1..1]. If a sex is not definitively known, use the value U-Unknown from HL70001.
Table 9-7	Error correction	The Value Set of Race (PID-10) is HL70005.	The Value Set of Race (PID-10) is CDCREC. The coding system shall be CDCREC from the most recent version of HL70396. The values listed in Appendix A for HL70005 are still valid for CDCREC.
Table-9-7	Error correction	Value Set for Ethnic Group (PID-22) references HL70189.	Value Set for Ethnic Group (PID-22) shall be CDCREC. The coding system shall be CDCREC from the most recent version of HL70396.
IZ-46	Error correction	IZ-46 is present in the document with multiple different texts including the text below in profile Z31: IZ-46: PID-1 SHALL be a positive integer.	IZ-46 is replaced in profile Z31 with the following conformance statement: IZ-72: PID-1 (Set ID-PID) SHALL be valued sequentially starting with the value "1".

Profile Z33

Errata

Location	Change	Existing	Corrected
Table 10-5	Error correction	The Cardinality of Accept Acknowledgement Type (MSH-15) is [0..1]	The Cardinality of Accept Acknowledgement Type (MSH-15) is [1..1] to match the Usage of R.
Table 10-5	Error correction	The Cardinality of Application Acknowledgement Type (MSH-16) is [0..1]	The Cardinality of Application Acknowledgement Type (MSH-16) is [1..1] to match the Usage of R.
Table 10-5	Error correction	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is X.	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is O.
Table 10-5	Error correction	HL70362 is called out as the Value Set for Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23).	The Value Sets to use in Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23) are defined in the XON data type. HL70362 does not apply to these fields.

Location	Change	Existing	Corrected
QAK segment definition	Omission correction	The Z33 profile is currently missing the Segment Level definition of the QAK segment.	Refer to the QAK Segment Level definition for the Z32 profile.
Table 10-6	Omission correction	QPD fields 3 through 11 lack an explicit Cardinality.	PatientList (QPD-3) has a Cardinality of [0..*]. QPD fields 4 through 11 have a Cardinality of [0..1].
Table 10-6	Error correction	Data type of PatientMotherMaidenName (QPD-5) is XPN.	Data type of PatientMotherMaidenName (QPD-5) is XPN_M to match the data type in PID segments.
Table 10-6	Omission correction	Patient Sex (QPD-7) does not have a Value Set defined.	Patient Sex (QPD-7) uses the value set HL70001.
Table 10-6	Omission correction	Patient Multiple Birth Indicator (QPD-10) does not have a Value Set defined.	Patient Multiple Birth Indicator (QPD-10) uses the value set HL70136.
Table 10-6	Error correction	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are RE.	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are O.
QPD segment definition	Omission correction	The comment for Message Query Name (QPD-1) in Table 10-6 constrains the value of the field, but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the QPD segment in the Z33 profile: IZ-71: QPD-1 (Message Query Name) SHALL be valued "Z34^Request Immunization History^CDCPHINVS" or "Z44^Request Evaluated History and Forecast^CDCPHINVS" depending on the query profile received. Note that the value of QPD-1.2 in IZ-71 varies from comment in Table 10-6. The value in the Conformance Statement is the correct value.

Profile Z44

Errata

Location	Change	Existing	Corrected
Tables 11-4 and 11-5	Error correction	The Z44 profile does not include the MSA and ERR segments, yet a Segment Level definition is included for both segments.	Disregard the MSA and ERR Segment Level definitions for the Z44 profile.
Table 11-6	Error correction	The Cardinality of Accept Acknowledgement Type (MSH-15) is [0..1]	The Cardinality of Accept Acknowledgement Type (MSH-15) is [1..1] to match the Usage of R.

Location	Change	Existing	Corrected
Table 11-6	Error correction	The Cardinality of Application Acknowledgement Type (MSH-16) is [0..1]	The Cardinality of Application Acknowledgement Type (MSH-16) is [1..1] to match the Usage of R.
Table 11-6	Error correction	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is X.	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is O.
Table 11-6	Error correction	HL70362 is called out as the Value Set for Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23).	The Value Sets to use in Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23) are defined in the XON data type. HL70362 does not apply to these fields.
Table 11-7	Omission correction	QPD fields 3 through 11 lack an explicit Cardinality.	PatientList (QPD-3) has a Cardinality of [0..*]. QPD fields 4 through 11 have a Cardinality of [0..1].
Table 11-7	Error correction	The value of MessageQeryName (QPD-1) is defined as: Z34^Request Complete Immunization History^CDCPHINVS	The value of MessageQeryName (QPD-1) is defined as: Z44^Request Evaluated History and Forecast^CDCPHINVS
Table 11-7	Error correction	Data type of PatientMotherMaidenName (QPD-5) is XPN.	Data type of PatientMotherMaidenName (QPD-5) is XPN_M to match the data type in PID segments.
Table 11-7	Omission correction	Patient Sex (QPD-7) does not have a Value Set defined.	Patient Sex (QPD-7) uses the value set HL70001.
Table 11-7	Omission correction	Patient Multiple Birth Indicator (QPD-10) does not have a Value Set defined.	Patient Multiple Birth Indicator (QPD-10) uses the value set HL70136.
Table 11-7	Error correction	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are RE.	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are O.
QPD segment definition	Omission correction	The comment for Message Query Name (QPD-1) in Table 11-7 constrains the value of the field, but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the QPD segment in the Z44 profile: IZ-68: QPD-1 (Message Query Name) SHALL be valued "Z44^Request Evaluated History and Forecast^CDCPHINVS".
Table 11-8	Error correction	Data type of Mother's Maiden Name is XPN_MDN.	Data type of Mother's Maiden Name is XPN_M.

Location	Change	Existing	Corrected
Table 11-9	Omission correction	The comment for Query Priority (RCP-1) in Table 11-9 constrains the value of the field, but the necessary Conformance Statement was omitted.	The following Conformance Statement now applies to the RCP segment in the Z44 profile: IZ-27: Constrain RCP-1 (Query Priority) to "I".

Profile Z42

Clarifications

Location	Existing	Clarification
ORC segment definition	A single ORC segment is defined for use with both the evaluated history and forecast sections of the message.	The population of the ORC segment will vary for evaluated history and forecast groups. For Forecast segments, Filler Order Number (ORC-3) is still required and is subject to Conformance Statement IZ-45. Placer Order Number (ORC-2) and Entering Organization (ORC-17) both have a usage of RE but are not expected for forecast ORC segments.
IZ-31 and 47	Current wording implies that empty repetitions of Administration Notes (RXA-9) are allowed.	The first occurrence should be either null or a value from the NIP001 value set. Any additional occurrences may be valued with text notes using the CE_TX data type if local agreement allows. Empty occurrences, other than the first, should not be sent.

Errata

Location	Change	Existing	Corrected
Table 12-1	Error correction	The ORC segment has a usage of O.	The ORC segment has a usage of R and a Cardinality of [1..1].
Static Definition – Segment Level	Omission correction	The ERR and MSA segments are part of the Z42 message profile but are not described.	Refer to the Segment Level definitions in the Z32 profile for the ERR and MSA segments.
Table 12-2	Error correction	The Cardinality of Accept Acknowledgement Type (MSH-15) is [0..1]	The Cardinality of Accept Acknowledgement Type (MSH-15) is [1..1] to match the Usage of R.
Table 12-2	Error correction	The Cardinality of Application Acknowledgement Type (MSH-16) is [0..1] and the Constraint is "AL".	The Cardinality of Application Acknowledgement Type (MSH-16) is [1..1] to match the Usage of R and the Constraint is "NE" to match IZ-52.

Location	Change	Existing	Corrected
Table 12-2	Error correction	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is X.	Usage for Country Code (MSH-17), Character Set (MSH-18), Principal Language of Message (MSH-19) and Alternate Character Set Handling Scheme (MSH-20) is O.
Table 12-2	Error correction	The Value Sets to use in Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23) are defined in the XON data type. HL70362 does not apply to these fields.	The Value Sets to use in Sending Responsible Organization (MSH-22) and Receiving Responsible Organization (MSH-23) are defined in the XON data type. HL70362 does not apply to these fields.
IZ-55	Error correction	Conformance Statement IZ-55 is applied to the Z42 profile, constraining Message Type (MSH-9) to "QBP^Q11^QBP_Q11".	IZ-55 does not apply and is replaced by IZ-59 which constrains Message Type (MSH-9) to "RSP^K11^RSP_K11" as is appropriate for the profile.
Table 12-3	Error correction	The Conditional Predicate for Units (OBX-6) requires that OBX-6 be populated if Data Type (OBX-2) is either "NM" or "SN"	The Conditional Predicate should only apply if Data Type (OBX-2) is "NM". The "SN" data type is not required by an Observation IDs defined by this IG.
IZ-21	Error correction	The value of OBX-2 (Value Type) SHALL be one of the following: CE, NM, ST, DT, ID or TS	IZ-21 has been removed. Required Value Types are defined by the required Observation IDs (OBX-3) per profile (see the CDC-defined NIP003 table in Appendix A). By local agreement, OBX segments using other data types may be sent.
OBX segment definition	Omission correction	IZ-44 is not listed as an applicable Conformance Statement.	IZ-44 applies to the OBX segment in the Z42 profile.
ORC segment definition	Omission correction	IZ-45 is not listed as an applicable Conformance Statement.	IZ-45 applies to the ORC segment in the Z42 profile.
Table 12-6	Error correction	The Usage and Cardinality of Administrative Sex (PID-8) are RE and [0..1].	The Usage and Cardinality of Administrative Sex (PID-8) are R and [1..1]. If a sex is not definitively known, use the value U-Unknown from HL70001.

Location	Change	Existing	Corrected
Table 12-6	Error correction	The Value Set of Race (PID-10) is HL70005.	The Value Set of Race (PID-10) is CDCREC. The coding system shall be CDCREC from the most recent version of HL70396. The values listed in Appendix A for HL70005 are still valid for CDCREC.
Table 12-7	Error correction	The Usage and Cardinality of Query Response Status (QAK-2) are RE and [0..1].	The Usage and Cardinality of Query Response Status (QAK-2) are R and [1..1].
Table 12-7	Omission	Query Response Status (QAK-2) has no Value Set.	The Value Set for Query Response Status (QAK-2) shall be HL70208.
Table 12-8	Omission correction	QPD fields 3 through 11 lack an explicit Cardinality.	PatientList (QPD-3) has a Cardinality of [0..*]. QPD fields 4 through 11 have a Cardinality of [0..1].
Table 12-8	Error correction	The value of MessageQeryName (QPD-1) is defined as: Z34^Request Complete Immunization History^CDCPHINVS	The value of MessageQeryName (QPD-1) is defined as: Z44^Request Evaluated History and Forecast^CDCPHINVS
Table 12-8	Error correction	Data type of PatientMotherMaidenName (QPD-5) is XPN.	Data type of PatientMotherMaidenName (QPD-5) is XPN_M to match the data type in PID segments.
Table 12-8	Omission correction	Patient Sex (QPD-7) does not have a Value Set defined.	Patient Sex (QPD-7) uses the value set HL70001.
Table 12-8	Omission correction	Patient Multiple Birth Indicator (QPD-10) does not have a Value Set defined.	Patient Multiple Birth Indicator (QPD-10) uses the value set HL70136.
Table 12-8	Error correction	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are RE.	Usage of Client Last Updated Date (QPD-12) and Client Last Update Facility (QPD-13) are O.
QPD segment definition	Omission correction	The comment for Message Query Name (QPD-1) in Table 12-8 constrains the value of the field, but the necessary Conformance Statement was omitted.	The following new Conformance Statement now applies to the QPD segment in the Z44 profile: IZ-68: QPD-1 (Message Query Name) SHALL be valued "Z44^Request Evaluated History and Forecast^CDCPHINVS".
Table 12-9	Error correction	The length of Give Sub-ID Counter (RXA-1) and Administration Sub-ID Counter (RXA-2) is 4.	The length of Give Sub-ID Counter (RXA-1) and Administration Sub-ID Counter (RXA-2) is 1 per constraints on the values of those two fields.
Table 12-9	Error correction	The Usage of Administered Units (RXA-7) is C(R/O).	The Usage of Administered Units (RXA-7) is C(R/X).
Table 12-9	Error correction	The Value Set of Administration Notes (RXA-9) is NIP 0001.	The Value Set of Administration Notes (RXA-9) is NIP001.

Location	Change	Existing	Corrected
RXA segment definition	Error correction	IZ-50: If the first instance of RXA-9.1 is not valued "00" then RXA-6 (administered amount) SHALL be valued "999"	IZ-50 is no longer enforced and shall be disregarded. Scenarios exist where RXA-9.1 may be a value other than "00" but an administered amount may be known and should be sent.

Value Sets

Clarifications

Location	Existing	Clarification
HL-defined Table 0136 – Yes/No indicator	A discussion of the use of Null and Empty fields in HL7 is included in this section.	The discussion of null and empty fields is contained in Chapter 3. Information contained in the definition of Table 0136 shall be disregarded.
CDC-defined NIP003 – Observation Identifiers	The table documents co-constraints for OBX-2 and OBX-5 when a particular LOINC code is sent in OBX-3.	While not all LOINC codes are appropriate to use in every profile, when a compliant system builds a message containing one of these LOINC codes they shall abide by the co-constraints outlined in the table.
CDC-defined NIP003 – Observation Identifiers	Column Header - Corresponding data type (indicate in OBX-2)	Data within this column is a mixture of base HL7 data types (CE, DT, etc.) and data type flavors defined by the implementation guide (TS_NZ). When a guide specific flavor is specified, OBX-2 of the message should be populated with the base HL7 data type for that flavor. For example, if DT_D is listed in the table, OBX-2 will be populated with DT.

Errata

Location	Change	Existing	Corrected
HL7-defined Table 0125 – Value Type	Error correction	The data types CE_TX, DT_D, TS_M, TS_NZ and TS_Z are included as valid values in the HL70125 code set.	HL70125 defines codes valid for inclusion in OBX-2. While these data types are used by the IG, they should not be messaged in OBX-2 and shall not be considered value for table HL70125.

Location	Change	Existing	Corrected
HL7-defined Table 0357 – Message Error Status Codes	Omission correction	Table 0357 doesn't currently have a code that can be used to indicate an application error.	A new code is added to HL7-defined table 0357. **Status Code:** 999 **Status Text:** Application error **Description:** Any application generated error. ERR-5 and ERR-8 will contain additional information on the nature of the error. This error is unrelated to the message structure but indicates that the system cannot use the data. When incorporating this code into ERR-3, the appropriate coding system to use in ERR-3.3 is "HL70357". This guide is extending HL7 table 0357 to include this value. Future versions of HL7 will contain this code and future releases of this guide will manage value sets using a more structured method.
CDC-defined NIP003 – Observation Identifiers	Error correction	LOINC code 59778-1 has the wrong data associated with it.	LOINC code 59778-1 is defined as follows: **Description:** Date when overdue **Corresponding data type:** DT_D **Corresponding observation value example:** 19980522

Location	Change	Existing	Corrected
CDC-defined NIP003 – Observation Identifiers	Error correction	Several LOINC codes have an incorrect Data Type (OBX-2) associated with them.	The following LOINC codes should use the DT_D data type flavor when populating OBX-5. Keep in mind that per the clarification above, OBX-2 of the message will be DT. 30946-8 30944-3 30980-7 30981-5 59777-3 59778-1 29768-9 29769-7 46250-7
PHIN_VISBarcodes_IIS	Error Correction	The coding system is specified as cdcgs1vis.	cdcgs1vis is not a valid entry in HL7 table 0396. The correct coding system to use is CDCPHINVS.
Immunization Profile Identifiers	Omission correction	The Value Set for MSH-21 (2.16.840.1.114222.4.11.3291) does not contain the value for use with the Z22 or Z23 profiles.	See below for the additional lines for the value set table.

Additional codes have been added to the Immunization Profile Identifiers – IIS Value Set (OID 2.16.840.1.114222.4.11.3291)

Concept Code	Concept Name	Definition	HL7 Table 0396 Code
Z22	Send Unsolicited Update	Send Immunization History	CDCPHINVS
Z23	Return ACK	Return Acknowledgement	CDCPHINVS

Updates have been made to the codes for User-defined Table 0064 – Financial Class. These codes are used when sending client eligibility for a funding program. Note that when an event could meet more than one eligibility, selection is based on priority and that eligibilities are mutually exclusive.

Code	Label	Definition
V01	Not VFC eligible	Client does not qualify for VFC because they do not have one of the statuses below. (V02-V05)
V02	VFC eligible – Medicaid/Medicaid Managed Care	All of the following are true: • Client is currently eligible for Medicaid or Medicaid managed care • Client is < 19 years old • The type of vaccine administered is eligible for VFC funding

Code	Label	Definition
V03	VFC eligible – Uninsured	All of the following are true: • Client does not have health insurance • Client is < 19 years old • The type of vaccine administered is eligible for VFC funding
V04	VFC eligible – American Indian/Alaska native	All of the following are true: • Client is a member of a federally recognized tribe • Client is < 19 years old • The type of vaccine administered is eligible for VFC funding
V05	VFC eligible – underinsured at FQHC/RHC/deputized provider	All of the following are true: • Client has insurance but insurance does not cover vaccines, limits the vaccines covered or caps vaccine coverage at a certain amount • Client is receiving care at an FQHC, RHC or deputized provider • Client is < 19 years old • The type of vaccine administered is eligible for VFC funding
V22	CHIP	Client is eligible for the CHIP program, a separate state health insurance that is NOT a Medicaid expansion program
V23	317	Client is eligible to receive vaccines under the state/program immunization policy and the vaccine administered is eligible for 317 funding
V24	Medicare	Client is enrolled in Medicare
V25	State program eligibility	Client is eligible for a state vaccine program
***	Specific state codes	Client is eligible for a specific state vaccine program (may be used instead of V25)

Updates have been made to the codes for Immunization Funding Source (PHVS_ImmunizationFundingSource_IIS (2.16.840.1.114222.4.11.3287)). These codes indicate the inventory stock (i.e., Public or Private – with a two-stock storage model; Public VFC, Public non-VFC, Private – with a three-stock storage model) from which each vaccine dose was taken. For publicly purchased vaccine, an IIS will use either VXC50 code (i.e., public) or the combination of VXC51 (i.e., Public VFC) and VXC52 (i.e., Public non-VFC) codes to record the inventory stock for publicly purchased vaccines.

Code	Label	Definition
PHC70	Private	Vaccine stock used was privately funded
VXC50	Public	Vaccine stock used was publicly funded
VXC51	Public VFC	Vaccine stock used was publicly funded by the VFC program
VXC52	Public non-VFC	Vaccine stock used was publicly funded by a non-VFC program

Appendix B

Clarifications

Location	Existing	Clarification
VXU Example #7	Send Information About Vaccine Information Statement (VIS) section refers the use of the Global Document Type Identifier (GDTI)	Two methods exist to transmit information in an HL7 message describing the VIS document(s) presented to patients or the legal guardians. The first involves the use of 2D VIS barcode data strings, "VIS Fully-encoded text string", while the second involves the identification of the vaccine type or group along with the VIS publication date. The use of the VIS Fully-encoded text string is highly recommended when messaging VIS information. The alternative of using the vaccine type, publication date and presentation date LOINC codes is problematic and fails in several use cases including when sending manufacturer specific VIS information (such as for HPV) or when sending the Multiple Vaccines VIS document. It is anticipated that this second method will be retired in a future release of the implementation guide. (Note: Scanning does not need to be used for this first method to work.)

The 13 digit Global Document Type Identifier (GDTI) is used to identify a document type while the 24 digit VIS Fully-encoded text string begins with "253" and includes the GDTI as well as the publication date. The VIS Fully-encoded text string represents a particular version of the VIS document. The Implementation Guide currently says that the publication date may be inferred from the fully encoded GDTI. The term "fully encoded GDTI" here refers to the VIS Fully-encoded text string (24 digits) and not the 13 digit GDTI. As stated, it is the VIS Fully-encoded text string and not the GDTI that should be sent in OBX-5. The GDTI, Fully-encoded text string, and Edition Date are available in the VIS Lookup Table (http://www.cdc.gov/vaccines/programs/iis/code-sets/vis-barcode-lookup-table.html). |
| Evaluated History and Forecast example | The example message for Evaluated History and Forecast includes only a single recommendation. | When sending multiple recommendations in a single query response message, the recommendations are sent using a single ORC/RXA pair followed by multiple sets of related OBX segments (grouped via the Sub-ID in OBX-4) for each recommendation.
See below for an example message with multiple forecasts. |

Sample message for multiple recommendations:
MSH|^~\&|MYIIS|StatePH|MyEHR|DCS|20150131145233-0500||RSP^K11^RSP_K11|3533469|P|2.5.1||||NE|NE|||||Z42^CDCPHINVS|DCS^^^^^DCS^XX^^^6439432|StatePH
MSA|AA|793543

QAK|37374859|OK|Z44^request evaluated Immunization history^CDCPHINVS
QPD|Z44^Request Evaluated History and Forecast^CDCPHINVS
|37374859|123456^^^MYEHR^MR|Child^Bobbie^Q^^^^L|Que^Suzy^^^^^M|20110214|M|10 East
Main St^^Myfaircity^GA^^^L
PID|1||123456^^^MYEHR^MR~34500907^^^MyIIS^SR|| Child^Bobbie^Q^^^^L||20110214|M|||10
East Main St^^Myfaircity^GA^^^L
<...patient history...>
ORC|RE|8788^IIS|197023^IIS
RXA|0|1|20150131|20150131|998^no vaccine admin^CVX|999|||||||||||||||NA
OBX|22|CE|30956-7^vaccine type^LN|1|03^MMR^CVX||||||F|||20150131
OBX|23|CE|59779-9^Immunization Schedule
used^LN|1|VXC16^ACIP^CDCPHINVS||||||F|||20150131
OBX|24|DT|30980-7^Date vaccination due^LN|1|20150214||||||F|||20150131
OBX|25|CE|30956-7^vaccine type^LN|2|10^IPV^CVX||||||F|||20150131
OBX|26|CE|59779-9^Immunization Schedule
used^LN|2|VXC16^ACIP^CDCPHINVS||||||F|||20150131
OBX|27|DT|30980-7^Date vaccination due^LN|2|20150214||||||F|||20150131
OBX|28|CE|30956-7^vaccine type^LN|3|107^DTAP^CVX||||||F|||20150131
OBX|29|CE|59779-9^Immunization Schedule
used^LN|3|VXC16^ACIP^CDCPHINVS||||||F|||20150131
OBX|30|DT|30980-7^Date vaccination due^LN|3|20150214||||||F|||20150131

Errata

Location	Change	Existing	Corrected
VXU Example #8	Error correction	The amount given should be 0.	The amount given should be 999.
Evaluated History and Forecast example (Important Notes)	Error correction	The observation sub-id holds to one value for each related set of observations under the vaccine group OBX.	The observation Sub-ID must be unique for each related set of observations under a given vaccine order group. Sub-IDs may be re-used between order groups in the message.

Location	Change	Existing	Corrected
Evaluated History and Forecast example	Error correction	The basic structure for the recommendation in the message is: ORC-order segment RXA-vaccine, CVX-Unspecified formulation (no dose given) OBX-the schedule OBX-the series used OBX-dose number in the series OBX-number of doses in the series OBX-earliest next dose due OBX-recommended next dose due OBX-overdue next dose due OBX-series status	The basic structure for the recommendation in the message is: ORC-order segment RXA-vaccine, CVX-No Vaccine Administered (998) OBX-the vaccine group OBX-the schedule OBX-the series used OBX-dose number in the series OBX-number of doses in the series OBX-earliest next dose due OBX-recommended next dose due OBX-overdue next dose due OBX-series status