

HITSP Immunization Query and Response Component

HITSP/C70



Healthcare Information Technology Standards Panel

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1.0 INTRODUCTION

1.1 OVERVIEW

The HITSP Immunization Query and Response Component is used for a message based exchange of immunization information. It specifies the use of HL7 Version 2.3.1 Query for Vaccination Record (VXQ), to send a query from the message sender (clinician system, schools, IIS) to the message receiver (immunization registry). It specifies how to handle no matches to a VXQ. It also specifies Response to Vaccination Query Returning Multiple PID Matches (VXX), and Vaccination Record Response (VRR) to send the result of the query from the message sender (immunization registry) to the message receiver (clinician system).

1.2 COPYRIGHT PERMISSIONS

COPYRIGHT NOTICE

© 2009 ANSI. This material may be copied without permission from ANSI only if and to the extent that the text is not altered in any fashion and ANSI's copyright is clearly noted.

Excerpts from the Centers for Disease Control and Prevention Implementation Guide for Immunizations Data Transactions using Version 2.3.1 of the Health Level Seven (HL7) Standard Protocol Version 2.2 are reproduced here with the assistance of the Centers for Disease Control and Prevention. This information is in the public domain and copies can be obtained at www.cdc.gov/vaccines.

1.3 REFERENCE DOCUMENTS

This section provides a list of key reference documents and background material.

A list of key reference documents and background material is provided in the table below. These documents can be retrieved from www.hitsp.org.

Table 1-1 Reference Documents

Reference Document	Document Description
HITSP Acronyms List	Lists and defines the acronyms used in this document
HITSP Glossary	Provides definitions for relevant terms used by HITSP documents
TN900 - Security and Privacy	TN900 is a reference document that provides the overall context for use of the HITSP Security and Privacy constructs

1.4 CONFORMANCE

This section describes the conformance criteria, which are objective statements of requirements that can be used to determine if a specific behavior, function, interface, or code set has been implemented correctly.

1.4.1 CONFORMANCE CRITERIA

In order to claim conformance to this construct specification, an implementation must satisfy all the requirements and mandatory statements listed in this specification, the associated HITSP Interoperability Specification, its associated construct specifications, as well as conformance criteria from the selected base and composite standards. A conformant system must also implement all of the required interfaces within the scope, subset or implementation option that is selected from the associated Interoperability Specification.



Claims of conformance may only be made for the overall HITSP Interoperability Specification or Capability with which this construct is associated.

1.4.2 CONFORMANCE SCOPING, SUBSETTING AND OPTIONS

A HITSP Interoperability Specification must be implemented in its entirety for an implementation to claim conformance to the specification. HITSP may define the permissibility for interface scoping, subsetting or implementation options by which the specification may be implemented in a limited manner. Such scoping, subsetting and options may extend to associated constructs, such as this construct. This construct must implement all requirements within the selected scope, subset or options as defined in the associated Interoperability Specification to claim conformance.



2.0 COMPONENT DEFINITION

2.1 CONTEXT OVERVIEW

This Component specifies use of the Centers for Disease Control and Prevention (CDC) Implementation Guide for Immunizations Data Transactions using Version 2.3.1 of the Health Level Seven (HL7) Standard Protocol – Implementation Guide Version 2.2.

As stated in the CDC Implementation Guide for Immunizations Data Transactions:

The text for the CDC Implementation Guide begins here:

This Guide is intended for use by immunization registries that want to participate in a strictly-defined record exchange agreement that limits the amount of optionality normally expected when using the HL7 standard. The Guide describes the most frequently used segments in their entirety, while giving a minimum description of segments containing only a few useful fields for registries. The Guide fully describes the fields within the segments used frequently by immunization registries, while the others are omitted in this document. With this limited scope, this *Guide* can in no way serve as a substitute for a thorough study of the entire set of HL7 specifications for electronic data interchange in health care environments.

The text for the CDC Implementation Guide ends here.

The CDC Implementation Guide for Immunizations Data Transactions defines multiple transactions related to vaccination such as VXQ (Query for Vaccination Record), the VXR (Response to Vaccination Query Returning the Vaccination Record), the VXX (Response to Vaccination Query Returning Multiple PID Matches), and the VXU (Unsolicited Vaccination Record Update). This Component addresses the use of VXQ/VXR/VXX¹.

2.1.1 COMPONENT CONSTRAINTS

Table 2-1 Component Constraints HL7 V2.3.1 VXQ/VXR/VXX

Constraint	Constraint Section
HITSP has applied constraints to message content	See Tables 2-3 through 2-6

2.1.2 COMPONENT DEPENDENCIES

Table 2-2 Component Dependencies

Standard/HITSP Component	Depends On (Name of standard/HITSP Component that it depends on)	Dependency Type (Pre-condition, Post-condition, General)	Purpose (Reason for this dependency)
HITSP/C70 Immunization Query and Response	HITSP/C80 Clinical Document and Message Terminology	General	Identifies vocabulary constrained by this Component to be applied within the exchange

2.2 RULES FOR IMPLEMENTING

Implementations of this Component shall support the VXQ (Query for Vaccination Record), the VXR (Response to Vaccination Query Returning the Vaccination Record), and the VXX (Response to Vaccination Query Returning Multiple PID Matches) messages as specified by the Centers for Disease Control and Prevention Implementation Guide for Immunizations Data Transaction using Version 2.3.1 of

¹ See HITSP/C72 Immunization Message for implementation of VXU



the Health Level Seven (HL7) Standard Protocol. Implementation Guide Version 2.2, June 2006. Implementations shall also support the HITSP constraints as defined in Tables 2-3 through 2-6.

2.2.1 DATA MAPPING

For all constraints applied to the data the reader must refer to the Centers for Disease Control and Prevention Implementation Guide for Immunizations Data Transaction using Version 2.3.1 of the Health Level Seven (HL7) Standard Protocol as well as the HITSP constraints defined in Tables 2-3 through 2-6.

The format of Data Element entry in the table below is based upon the scheme of the Implementation Guide:

For example, PID 3.3.2.8 Sex indicates the following:

PID = Patient Identification Segment

3.3.2.8 = references the section of the Implementation Guide

Sex = the name of the data field

Table 2-3 Data Mapping – Patient Identification Segment

Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions ²	Additional Specification for Component
PID 3.3.2.6 Mother's maiden name	This field contains the family name under which the mother was born (i.e., before marriage)				R2	
PID 3.3.2.7 Date of birth	This field contains the patient's date and (if applicable) time of birth				R	
PID 3.3.2.8 Sex	This field contains the patient's sex	Shall be coded as specified in HITSP/C80 Section 2.2.1.2.1.2 V3 Administrative Gender			R	
PID 3.3.2.10 Race	This field identifies the patient's race	Shall be coded as specified in HITSP/C80 Section 2.2.1.2.7 Race			R2	
PID 3.3.2.22 Ethnic group	This field further defines patient ancestry	Shall be coded as specified in HITSP/C80 Section 2.2.1.2.2 Ethnicity			R2	
PID 3.3.2.24 Multiple birth indicator	This field indicates whether the patient was part of a multiple birth				R2	
PID 3.3.2.25 Birth order	If the patient was part of a multiple birth, a number indicating the patient's birth order is entered in this field				C – Required if PID 3.3.2.24 Multiple birth indicator is valued as YES	

² Optionality = "R" for Required, "R2" for Required if Known or "O" for Optional, or "C" for Conditional



Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions ²	Additional Specification for Component
PID 3.3.2.23 Birth place	This field gives the location of the patient's birth	Shall be coded as specified in HITSP/C80 Section 2.2.1.1.1 State			R2	

Table 2-4 Data Mapping – Patient Visit Segment

Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions	Additional Specification for Component
PV1 3.3.3.20 Financial class	This field contains the financial class(es) assigned to the patient for the purpose of identifying sources of reimbursement	Shall be coded as specified in HITSP/C80 Section 2.2.3.5.5 Immunization Services Funding Eligibility			R	

Table 2-5 Data Mapping – Next of Kin Segment

Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions	Additional Specification for Component
NK1 3.4.5.2 Name	This field gives the name of the next of kin or associated party				R2	Shall contain the name of the mother. May also contain other names
NK1 3.4.5.3 Relationship	This field defines the personal relationship of the next of kin	Shall be coded as specified in HITSP/C80 Section 2.2.1.2.5 Family Relationship Type			C – Required if NK1 3.4.5.2 Name is used	
NK1 3.4.5.20 Primary language	This field identifies the next of kin/associated party's primary speaking language	Shall be coded as specified in HITSP/C80 Section 2.2.1.2.9 Language			O	

Table 2-6 Data Mapping – Pharmacy Treatment Administration Segment

Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions	Additional Specification for Component
RXA 4.8.14.15 Substance lot number	This field records the lot number of the medical substance administered				R	
RXA 4.8.14.17 Substance manufacturer	This field records the manufacturer of the medical substance administered	Shall be coded as specified in HITSP/C80 Section 2.2.3.5.2 Vaccine Manufacturer			R	



Data Element	Description	Limit/Range of values	Data Source	Destination	Requirements/Pre-conditions	Additional Specification for Component
RXA 4.8.14.5 Administered code	This field identifies the medical substance administered	Shall be coded as specified in HITSP/C80 Section 2.2.3.5.1 Vaccine Administered			R	
RXA 4.8.14.9 Administration notes	This field records free text notes from the provider administering the medication Note: One use is to indicate if the immunization is current or historical information	Shall be coded using the HITSP/C80 Section 2.2.3.5.4 Immunization Information Source			R2	This is a repeating field; the first entry shall contain the Immunization Source Code. Other entries are not constrained

Guidelines and Examples

Please refer to the selected CDC Implementation Guide for examples.

2.3 STANDARDS

2.3.1 REGULATORY GUIDANCE

Table 2-7 Regulatory Guidance³

Regulation	Description
Family Educational Rights and Privacy Act (FERPA) Department of Education Student Rule	FERPA is a Federal law that applies to educational agencies and institutions that receive funding under a program administered by the U. S. Department of Education. The statute is found at 20 U.S.C. § 1232g and the Department's regulations are found at 34 CFR Part 99
Health Insurance Portability and Accountability Act (HIPAA) -- Administrative Simplification	A listing of national standards plus rules adopted by federal regulation for electronically communicating specified administrative and financial healthcare transactions, and protecting the security and privacy of healthcare information, as applied to the three types of defined covered entities: health plans, healthcare clearinghouses, and healthcare providers who conduct any of the specified healthcare transactions. For more information see the Code of Federal Regulations, Title 45, Parts 160, et. Seq

2.3.2 SELECTED STANDARDS

Table 2-8 Selected Standards

Standard	Description
Health Level Seven (HL7) Version 2.3.1	The HL7 Version 2.3.1 Messaging Standard is an application protocol for electronic data exchange in healthcare. It and prior versions have widespread use in the U.S. and internationally. Both message formats and value sets/code tables are contained in the standard. For more information visit www.hl7.org

³ Regulatory guidance exists at the State or local level and should be consulted as applicable.



Standard	Description
Centers for Disease Control and Prevention Implementation Guide for Immunizations Data Transaction using Version 2.3.1 of the Health Level Seven (HL7) Standard Protocol. Implementation Guide Version 2.2 June 2006	This Guide is intended for use by immunization registries that want to participate in a strictly-defined record exchange agreement that limits the amount of optionality normally expected when using the HL7 standard. The Guide describes the most frequently used segments in their entirety, while giving a minimum description of segments containing only a few useful fields for registries. The Guide fully describes the fields within the segments used frequently by immunization registries, while the others are omitted in this document. With this limited scope, this <i>Guide</i> can in no way serve as a substitute for a thorough study of the entire set of HL7 specifications for electronic data interchange in health care environments. For more information visit www.cdc.gov/vaccines/programs/iis/sids/downloads/hl7guide.pdf

2.3.3 INFORMATIVE REFERENCE STANDARDS

Table 2-9 Informative Reference Standards

Standard	Description
No applicable informative reference standards	



3.0 APPENDIX

The following sections include relevant materials referenced throughout this document.

No additional information at this time.



4.0 DOCUMENT UPDATES

The following sections provide the details of updates made to this document.

4.1 DECEMBER 10, 2008

The changes in this construct address the following comments received during the Public Comment and Inspection Testing period (September 29 – October 24, 2008).

5120, 5539, 5540, 5541, 5542, 5543, 5544, 5545, 5546, 5577, 5578, 5579, 5580, 5597, and 5598

4.1.1 GLOBAL

The following changes were applied through-out the document for consistency with the HITSP suite of Interoperability Specifications

- Construct was changed from a Transaction Package to a Component
- Option number 2 – the use of HITSP/TP21 Query for Existing Data to support query and retrieval of immunization data from another clinical system was removed

4.1.2 SECTION 2.1 CONTEXT OVERVIEW

With the change to a Component this section was rewritten and discussions of interfaces, pre-conditions, process triggers, and post-conditions were removed.

4.1.3 SECTION 2.2.1 DATA MAPPING

- Minor editorial changes were made to correct typos and clarify constraints
- Tables 2-3 through 2-6: Limit/Range of values column was updated with the appropriate references from HITSP/C80 Clinical Document & Message Terminology

4.1.4 SECTION 2.3 STANDARDS

The following regulatory guidance standards were added:

- Family Educational Rights and Privacy Act (FERPA) Family Educational Rights
- HIPAA
- State and local regulatory guidance

The following Selected Standards were removed:

- Health Level Seven (HL7) Version 3.0 Continuity of Care Document (CCD)
- Integrating the Healthcare Enterprise (IHE) Patient Care Coordination (PCC) Revision 4.0, 2008 – 2009, Cross-Enterprise Sharing of Medical Summaries (XDS-MS) Integration Profile

The following Informative Standards were removed:

- Health Level Seven Clinical Document Architecture (CDA) Release 2

Minor editorial changes were made to this construct.

4.2 DECEMBER 18, 2008

Upon approval by the HITSP Panel on December 18, 2008, this document is now Released for Implementation.



4.3 JUNE 30, 2009

Revised the document based on TN903 HITSP Data Architecture:

4.3.1 SECTION 2.2.1 DATA MAPPING

- Updated Sex data element to reference C80 vocabulary for V3 Administrative Gender

Minor editorial changes were made to this construct. Removed boilerplate text for simplification. The term “actor” was replaced with “interface”.

4.4 JULY 8, 2009

Upon approval by the HITSP Panel on July 8, 2009, this document is now Released for Implementation.

