New York State Immunization Information System (NYSIIS) Local Implementation Guide for HL7 2.5.1/ 2.4 Immunization Messaging

Version *4.1*

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VERSION HISTORY

Version #	Implemented By	Revision Date	Reason
1.0	NYSIIS	Feb 2012	First Draft
1.2	NYSIIS	May 2013	Final
4.0	NYSIIS	Nov 2013	Update to vaccine tables, addition for RXA 11.4, notes for decrement to inventory (note version matched to release version)
4.1	NYSIIS	July 2014	Removal of allowance for “norfirstname” in PID-5 Correction of ORC segment example for ORC-12.2

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1. Introduction

The New York State Immunization Information System (NYSIIS) has made available an interactive user interface for authorized NYS DOH Health Commerce System (HCS) users to enter, query, and update patient immunization records. The Web interface makes NYSIIS information and functions available on desktops around the state. However, some immunization providers already store and process similar data in electronic medical record (EMR) applications and may wish to keep using those systems while also participating in the statewide central repository. Others may have different billing needs and may decide they don't want to enter data into two diverse systems. NYSIIS has been enhanced to accept HL7 Version 2.5.1/2.4 for batch loads to submit patient and immunization information to NYSIIS.

2. Background

In order for different health information systems to exchange data, the structure and content of the data to be exchanged must be standardized. Three controlling documents define how the ***NYSIIS*** HL7 data exchange interface works. They are arranged in a hierarchy of documents, each refining and constraining the HL7 Standard.

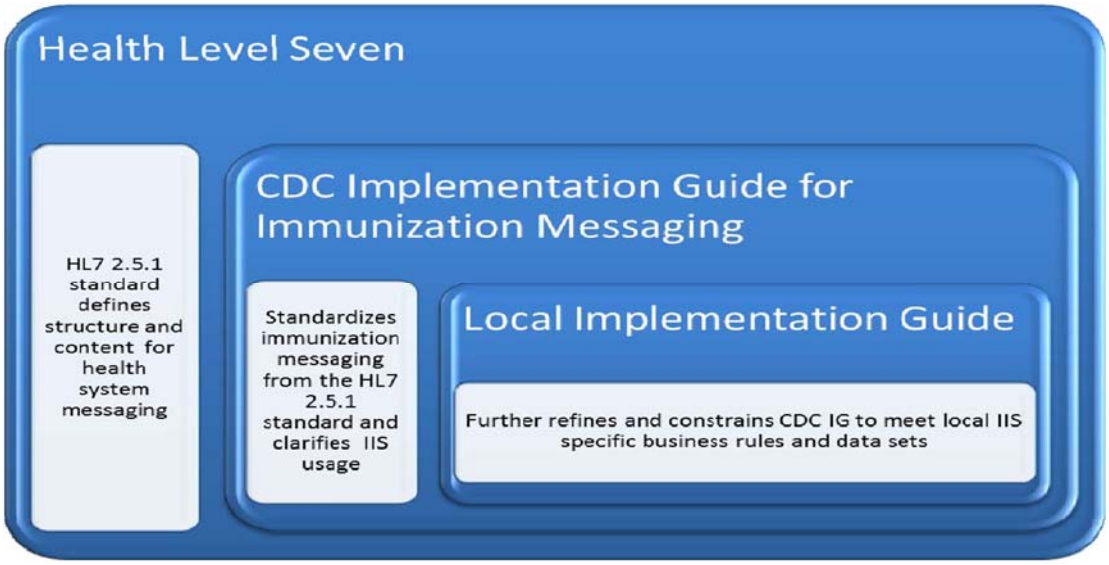


Figure 1: HL7 Controlling Document Hierarchy

The first document is the HL7 2.5.1 standard developed by Health Level Seven, a not-for-profit ANSI-accredited standards developing organization. This standard defines the structure and content of immunization messages, but leaves many specific implementation details undecided. Beneficial information on HL7 and a copy of the HL7 message standard can be obtained from the Health Level Seven website at http://www.hl7.org.

The second document is the CDC's **HL7 2.5.1 Implementation Guide for Immunization Messaging** (CDC IG). This guide gives specific instructions regarding how to report to immunization information systems, but still leaves some implementation decisions to each state IIS. This guide and other technical information can be obtained from the CDC website at http://www.cdc.gov/vaccines/programs/iis/stds/standards.htm.

The third document is broken into two parts; this document and the NYSIIS HL7 2.5.1 Query implementation guide. These two documents finalize all implementation decisions and defines exactly what ***NYSIIS*** will and will not accept. They are written in accordance with the standards set in the first two documents. These guides have taken great care to point out differences from the CDC IG by adding additional columns to the tables. In cases where this guide differs from the CDC IG, this guide will provide both the CDC IG column followed by the local usage specification. References to elements have been eliminated in instances where information was not required in the CDC guide and is not used by NYSIIS.

Included in this document are the specifications for approved NYSIIS HL7 2.4 messages.

This effort will prove highly useful in the larger interoperability effort for Electronic Health Record Systems, Indian Health Services, and any other electronic exchange that may span multiple IIS. Providing this information will allow the implementers of external systems to accurately compare the CDC IG with a local implementation guide, and compare differences between two different local implementation guides much easier than in the past.

Intended Audience

This Local IG is intended for technical groups from Immunization Information Systems (IIS) and Electronic Health Record Systems (EHR-S) that must implement these guidelines. The reader of this Local IG should have a solid HL7 foundation and be very familiar with the contents of the CDC IG (http://www.cdc.gov/vaccines/programs/iis/stds/standards.htm). Chapters 2 and 3 of the CDC IG provide HL7 foundational concepts and set the stage for this Local IG. The goal of this Local IG is to provide an unambiguous specification for creating and interpreting messages.

Scope

This Local IG is intended to facilitate the exchange of immunization records between external Health Systems and ***NYSIIS***. This includes:

- sending and receiving immunization histories for individuals
- sending and receiving demographic information about the individuals
- responding to requests for immunization histories by returning immunization histories (NOTE: Query specifications are discussed in a separate query specific local IG document.)
- reporting errors in the messaging process
- Sending observations about an immunization event

Organization and Flow

This Local IG is designed to mirror the organization and flow of the CDC IG. This chapter of the guide defines the high-level use cases supported by ***NYSIIS***. The subsequent chapters define how ***NYSIIS*** implements those use cases. Finally, this guide has appendices for the code tables and example messages.

It is important to note this guide adheres to the CDC IG on several key aspects including

- Data type specifications from chapter 3 of the CDC IG have not been redefined and usage has not been changed
- Standardized vocabulary is supported as specified in the CDC IG
- To the extent possible, data sets and business rules will adhere to the CDC IG.

In cases where differences exist between this guide and the CDC IG the differences will be clearly defined in the appropriate sections of this guide. Actors, Goals, and Messaging Transactions

Chapter 3 of the CDC IG defines actors (entities) that may be involved in sending or receiving immunization-related messages. It describes what actors are and how use cases (goals) can be associated to those actors. Finally, it associates specific HL7 messages with these use cases.
There are nine use cases defined in Chapter 3 of the CDC IG. The use cases listed in the CDC IG and supported by **NYSIIS** are:

Use Case	**Goal**	**Supported by *NYSIIS***
Send Immunization History	To send an immunization history for an individual client from one system to another. In addition to EHR-S and IIS, other systems such as vital records systems or billing systems could use this message to send immunization histories.	Yes
Receive Immunization History	To receive an unsolicited immunization history. It may be an update or a new record.	Yes
Request Immunization History	To request an immunization history from another system.	No
Return Immunization History	To return an immunization history to another system.	Yes
Accept Requested History	To accept an immunization history in response to a query for an immunization history from another system.	Yes
Send Demographic Data	To send demographic data about a person. It may be an update or a new record.	Yes
Accept Demographic Data	To accept demographic data about a person. It may be an update or a new record.	Yes (if sent in conjunction with an immunization)
Acknowledge Receipt	To acknowledge receipt of a message. This can be an immunization history, request for immunization history, demographic update, observation report or request for personal id. It may indicate success or failure. It may include error messages.	Yes
Report Error	To send error messages for rejection of a message as well as informational error messages based on incorrect content within segments that would not be required to process the message.	Yes

For detailed specifics about each use case, please refer to Chapter 2 of the CDC IG.

3. HL7 Messaging Infrastructure

The CDC IG contains basic descriptions of terms and definitions that are used in both the CDC IG and this guide. To avoid potentially ambiguous situations, the majority of the terms and definitions will not be redefined in this guide.

A key attribute to HL7 fields, components, and sub-components is the Usage Code. In the table below are the acceptable Usage Codes used in this implementation guide.

Usage Code	Interpretation	Comment
R	Required	A conforming sending application shall populate all “R” elements with a non-empty value. Conforming receiving application shall process or ignore the information conveyed by required elements. A conforming receiving application must not raise an error due to the presence of a required element, but may raise an error due to the absence or invalid valued of a required element.
RE	Required but may be empty	The element may be missing from the message, but it must be sent by the sending application if there is relevant data. A conforming sending application must be capable of providing all "RE" elements. If the conforming sending application knows the required values for the element, then it must send that element. If the conforming sending application does not know the required values, then that element will be omitted. Receiving applications will be expected to process or ignore data contained in the element, but must be able to successfully process the message if the element is omitted (no error message should be generated because the element is missing).
C	Conditional	This usage has an associated condition predicate. This predicate is an attribute within the message. **If the predicate is satisfied:** A conformant sending application must always send the element. A conformant receiving application must process or ignore data in the element. It may raise an error if the element is not present. **If the predicate is NOT satisfied:** A conformant sending application must NOT send the element. A conformant receiving application must NOT raise an error if the condition predicate is false and the element is not present, though it may raise an error if the element IS present.

Usage Code	Interpretation	Comment
CE	Conditional but may be empty	This usage has an associated condition predicate. This predicate is an attribute within the message. **If the predicate is satisfied:** If the conforming sending application knows the required values for the element, then the application must send the element. If the conforming sending application does not know the values required for this element, then the element shall be omitted. The conforming sending application must be capable of knowing the element (when the predicate is true) for all 'CE' elements. If the element is present, the conformant receiving application shall process or ignore the values of that element. If the element is not present. The conformant receiving application shall not raise an error due to the presence or absence of the element. **If the predicate is not satisfied:** The conformant sending application shall not populate the element. The conformant receiving application may raise an application error if the element is present.
O	Optional	This element may be present if specified in local profile. Local partners may develop profiles that support use of this element. In the absence of a profile, conformant sending applications will not send the element. Conformant receiving applications will ignore the element if it is sent, unless local profile specifies otherwise. Conformant receiving applications may not raise an error if it receives an unexpected optional element.
X	Not Supported	The element is not supported. Sending applications should not send this element. Receiving applications should ignore this element if present. A receiving application may raise an error if it receives an unsupported element. Any profile based on this Guide should not specify use of an element that is not supported in this Guide.

4. HL7 Data Types

The CDC IG contains clearly defined HL7 data types that are the building blocks of an HL7 message. Similar to the terms and definitions found in the HL7 Messaging Infrastructure section above, this guide will avoid potentially ambiguous situations and not attempt redefine an already clearly defined section. This guide will adhere to Chapter 4 of the CDC IG.

5. Segments and Message Details

This chapter will contain specifications for each segment used. It will indicate which fields are supported or required and describe any constraints on these fields. Chapter 6 will address how these building blocks are assembled into specific messages that meet the use cases listed in Chapter 3.

Table 5-1 Message Segments

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NYSIIS 2.4 / 2.5.1 Usage	Note
BHS (Batch Header Segment)	Segment wraps a group of 1 or more messages. These may be a mixture of acceptable message types.	Any	Optional	Optional	Used at the beginning of any batch of messages.
BTS (Batch Trailer Segment)	Segment defines the end of a batch. It is required if the message has a matching BHS.	Any	Required if message starts with BHS.	Required if message starts with BHS.	Used to mark the end of any batch of messages. If the batch starts with a BHS, then BTS is required.
ERR (Error)	Segment reports information about errors in processing the message. The segment may repeat. Each error will have its' own ERR segment.	ACK, RSP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Used to return information about errors.
FHS (File Header Segment)	Segment may be used to group one or more batches of messages.	Any	Optional	Optional	Used to mark the beginning of a file of batches.
FTS (File Trailer Segment)	The FTS segment defines the end of a file of batches. Only used when the FHS segment is used.	Any	Required to terminate a file of batches.	Required to terminate a file of batches.	Used to mark the end of a file of batches. If a file of batches begins with FHS, then FTS is required.
IN1-3 (Insurance)	Segments contain insurance policy coverage information	VXU	Optional	Not used.	Segments are not anticipated for use in immunization messages.
MSA (Message Acknowledgement)	Segment included in query response (RSP) and acknowledgment (ACK) messages. Contains information used to identify a receiver's acknowledgement to an identified prior message.	RSP, ACK	Ability to create and process, required for conformant systems.	Ability to create and process is required.	

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NYSIIS 2.4 / 2.5.1 Usage	Note
MSH (Message Segment Header)	Segment defines the intent, source, destination, and some specifics of the syntax of a message.	All	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Begins every message, includes information on message type, how to process, and who created it.
NK1 (Next of Kin)	Segment contains information about the patient's next of kin or other related/associated parties.	VXU, ADT, RSP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Used to carry information about the next of kin for a client.
NTE (Note)	Segment is used for sending notes and comments. It is used in relation to OBX in the VXU and RSP.	VXU, ADT, RSP	Ability to create and process, required for conformant systems.	Used for checking. Ability to create and process is required.	Used to carry a note related to the parent segment. Currently NYSIIS will ignore this field if sent.
OBX (Observation Result)	Carries observations about the object of its parent segment. In the VXU/RSP it is associated with the RXA. Basic format is question and answer.	ADT, VXU, RSP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Used to report one atomic part of an observation.
ORC (Order Request)	Used to transmit fields that are common to all orders (services). While not all immunizations recorded in a message are able to be associated with an order, each RXA must be associated with one ORC, per HL7 2.5.1 standard.	VXU, RSP	Ability to create and process, required for conformant systems.	(Ver 2.5.1 Only) Ability to create and process is required.	Used to give information about a group of one or more orders (RXA). In version 2.5.1 each RXA is required to have an ORC.
PD1 (Patient Demographic)	Contains patient demographic information that is likely to change. Including need to protect client information, inclusion in reminder efforts and status in the IIS.	VXU, RSP, ADT	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Used to give information about a patient. A primary is to give information about privacy and whether contact is allowed.
PID (Patient Identifier)	Contains permanent patient identifying and demographic information that is least likely to change. Primary means to share patient identification information.	VXU, ADT, RSP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Used to carry information about the patient/client.

Segment (Name/Role)	Definition	Message Usage	CDC IG Usage	NYSIIS 2.4 / 2.5.1 Usage	Note
PV1 (Patient Visit)	Segment contains information related to a specific visit.	VXU, ADT, RSP	Ability to create and process, required for conformant systems.	(Ver 2.4 only) Ability to create and process is required.	Used to carry information about a given visit. Used to carry information about client eligibility for various funding sources.
QAK (Query acknowledgement)	Segment contains information sent with responses to a query.	RSP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Specifications detailed in Query IG.
QPD (Query parameter definition)	Query parameter definition	QBP, RSP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Specifications detailed in Query IG.
RCP (Response control parameter)	Response control parameter segment	QBP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	Specifications detailed in Query IG.
RXA (Pharmacy/ Treatment Administration)	Pharmacy/Treatment Administration Segment	VXU, RSP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	
RXR (Pharmacy/ Treatment Route)	Pharmacy/Treatment Route Segment	VXU, RSP	Ability to create and process, required for conformant systems.	Ability to create and process is required.	

HL7 Message Types Used in NYSIIS BATCH Transmissions

NYSIIS uses VXU and ACK message types for batch transmissions. The VXU is used for sending new and/or updated patient demographic information and immunizations. The ACK is used to acknowledge to the sender that a message has been received. Table 1 below shows the segments that are used to construct each message type. Each segment is one line of text ending with the carriage return character. The carriage return is needed so that the HL7 messages are readable and printable. The messages may appear somewhat cryptic due to the scarcity of white space. (The standard has provisions for inclusion of binary data, but NYSIIS will not use these features.) Square brackets [ ] enclose optional segments and curly braces {} enclose segments that can be repeated. The full HL7 standard allows additional segments within these message types, but they are unused by NYSIIS. In order to remain compliant with HL7, their use will not result in an error, but NYSIIS will ignore the content of the segment. The segments that are documented here are sufficient to support the principal NYSIIS functions of storing data about patients and immunizations.

VXU Unsolicited Vaccination Record Update

FHS	File Header
BHS	Batch Header
MSH	Message Header
PID	Patient Identification
[PD1]	Patient Additional Demographic
[{NK1}]	Next of Kin / Associated Parties
[PV1]	Patient Visit
{ORC}	Order Segment
{RXA}	Pharmacy / Treatment Administration (note each RXA must have a corresponding ORC)
[RXR]	Pharmacy / Treatment Route (Only one RXR per RXA segment)
[{OBX}]	Observation/Result
BTS	Batch Trailer
FTS	File Trailer

ACK General Acknowledgment

MSH	Message Header
MSA	Message Acknowledgment
[ERR]	Error

FHS—File Header Segment

Table 5-2 File Header Segment (FHS)

File Header Segment (FHS)										
SEQ	**Element Name**	**CDC IG Usage**	**NYSIIS HL7 Version 2.4/2.5.1**			**NYSIIS HL7 VERSION 2.4**		**NYSIIS HL7 VERSION 2.5.1**		**COMMENTS/CONSTRAINT**
			NYSIIS Len	**NYSIIS Cardinality**	**NYSIIS Value Set (Table)**	**NYSIIS Usage**	**NYSIIS Data Type**	**NYSIIS Usage**	**NYSIIS Data Type**	
1	**File Field Separator**	**R**	**1**	**[1..1]**		**R**	**ST**	**R**	**ST**	**Required value is |,**
2	**File Encoding Characters**	**R**	**4**	**[1..1]**		**R**	**ST**	**R**	**ST**	**Required values are ^~\&**
3	File Sending Application	O				O	ST	O	ST	Same definition as the corresponding field in the MSH segment.
3.1	Sending Application Name	O	95	[0…1]		O	ST	O	ST	
4	File Sending Facility	O					ST	R	ST	Same definition as the corresponding field in the MSH segment.
4.1	Sending Facility Name		95			O	ST			
4.2	**NYSIIS Organization ID**		**6**	**[1…1]**		**R**	**NM**	**R**	**NM**	**Provided by NYSIIS.**
6	File Receiving Facility	O					ST	O	ST	Same definition as the corresponding field in the MSH segment.
6.1	**Name (NYSIIS)**		**6**	**[1…1]**		**O**	**ST**	**O**	**ST**	**Default 'NYSIIS '**
7	File Creation Date/Time	O	26	[			TS	R	TS	Same definition as the corresponding field in the MSH segment.
7.1	**Date of File**	**O**	**20**	**[1..1]**		**R**	**TS**	**R**	**TS**	
9	**File Name/ID**	**O**	**20**	**[0..1]**		**O**	**ST**	**O**	**ST**	**Same definition as the corresponding field in the MSH segment.**
10	File Header Comment	O	80	[0..1]		O	ST	O	ST	
11	**File Control ID**	**O**	**20**	**[0..1]**		**O**	**ST**	**O**	**ST**	
12	Reference File Control ID	O	20	[0..1]		O	ST	O	ST	

FHS field definitions

FHS-1 File Field Separator (ST) 00067

Definition: (Same definition as the corresponding field in the MSH segment.)
This field contains the separator between the segment ID and the first real fieldFHS-2-encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Required value is |, (ASCII 124).

FHS-2 File Encoding Characters (ST) 00068

Definition: (Same definition as the corresponding field in the MSH segment.)
Definition: This field contains the four characters in the following order: the component separator, repetition separator, escape characters, and subcomponent separator. The required values are ^~\& (ASCII 94, 126, 92, and 38, respectively

FHS-3 File Sending Application (HD) 00069

Definition: (Same definition as the corresponding field in the MSH segment.)
First component (3.1) Sending Application Name. This field uniquely identifies the sending application.
When sending, NYSIIS will use "NYSIIS" followed by the current version number of the registry. This field is an optional convenience. See FSH-4 and FSH-6 for the fields principally used to identify sender and receiver of the message.

FHS-4 File Sending Facility (HD) 00070

Definition: (Same definition as the corresponding field in the MSH segment). Required for Parent/Child or Vendor/Child submissions of batch files.

First Component (4.1) identifies for whom the message is being sent (the owner of the message information). When sending, NYSIIS will use "NYSIIS".
The second component (4.2), provides the NYSIIS provider ID.

When the message is being sent to NYSIIS and the Provider Organization owning the information is different than the organization transmitting the message (as in a Parent/Child or Vendor/Client relationship), you must use the NYSIIS Provider ID of the Provider Organization that is **submitting** the information preceded by a component separator (e.g., ^36). You can add the short Provider Organization name in the component prior to the provider id (e.g., VALLEY CLINIC^036.) Contact the NYSIIS Help Desk for the appropriate organization ID.

Note: If the owner of the information and the transmitter of the information are the same Provider Organization, and the Provider Organization is **not** a member of a Parent/Child or Vendor/Client relationship, this field can be left blank. The data will be loaded with the transmitting organization as the owner of the immunization records. Since there is the potential for transmitting files under an incorrect Provider Organization, we highly encourage all users to indicate the transmitting provider organization id in FHS-4. This will allow the system to verify that you are transmitting from an organization that is the owner of the immunization records.

FHS-6 File Receiving Facility (HD) 00072

Definition: (Same definition as the corresponding field in the MSH segment.)
First component (6.1) identifies the message receiver. "NYSIIS" should be used for messages to be received by NYSIIS

FHS-7 File Creation Date/Time (TS) 00073

Definition: (Same definition as the corresponding field in the MSH segment.)
First component (7.1) date and time the message was created. NYSIIS ignores any time component. See the TS data type. Date format is YYYYMMDD. Same definition as the corresponding field in the MSH segment

FHS-9 File Name/ID (ST) 00075

Definition: Name of the file as transmitted from the initiating system.

FHS-10 File Header Comment (ST) 00076

Definition: Free text, which may be included for convenience, but has no effect on processing.

FHS-11 File Control ID (ST) 00077

Definition: This field is used to identify a particular file uniquely among all files sent from the sending facility identified in FHS-4.

FHS-12 Reference File Control ID (ST) 00078

Definition: Contains the value of FHS-11-file control ID when this file was originally transmitted. Not present if this file is being transmitted for the first time.

FHS segment Example

FHS|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||filename1.hl7|WEEKLY HL7 UPLOAD|00009972

BHS—Batch Header Segment

Table 5-3 Batch Header Segment (BHS)

Batch Header Segment (BHS)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Batch Field Separator**	**R**	**1**	**[1..1]**		**R**	**ST**	**R**	**ST**	**The BHS.1 field shall be |**
2	**Batch Encoding Characters**	**R**	**4**	**[1..1]**		**R**	**ST**	**R**	**ST**	**The BHS.2 field shall be ^~\&**
3	Batch Sending Application	O				O	ST	O	ST	Same definition as the corresponding field in the MSH segment.
3.1	Sending Application Name	O	95	[0..1]		O	ST	O	ST	
4	Batch Sending Facility	O					ST	R	ST	Same definition as the corresponding field in the MSH segment.
4.1	Sending Facility Name		95			O	ST			
4.2	**NYSIIS Organization ID**		**6**	**[1..1]**		**R**	**NM**	**R**	**NM**	**Provided by NYSIIS**
6	Batch Receiving Facility	O					ST	O	ST	Same definition as the corresponding field in the MSH segment.
6.1	**Name (NYSIIS)**		**6**	**[1..1]**		**R**	**IS**	**R**	**IS**	**Default 'NYSIIS '**
7	**Batch Creation Date**	**O**					**TS**	**R**	**TS**	
7.1	**Date Of Batch**	**O**	**26**	**[1..1]**		**R**	**ST**	**R**	**ST**	**Same definition as the corresponding field in the MSH segment.**
10	Batch Comment	O	80	[0..1]		O	ST	O	ST	Null
11	**Batch Control ID**	**O**	**20**	**[1..1]**		**R**	**ST**	**R**	**ST**	**Null**
12	Reference Batch Control ID	O	20	[0..1]		O	ST	O	ST	Null

BHS Field Definitions

BHS-1 Batch Field Separator (ST) 00081

Definition: This field contains the separator between the segment ID and the first real field, BHS-2-batch encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. The required value is |,(ASCII 124). Note that this field is different from other fields and immediately follows the Segment name code.

BHS|
⇑
Separator

BHS-2 Batch Encoding Characters (ST) 00082

Definition: This field contains the four characters in the following order: the component separator, repetition separator, escape characters, and subcomponent separator. The required values are ^~\& (ASCII 94, 126, 92, and 38, respectively).

BHS-3 Batch Sending Application (HD) 00083

Definition: (Same definition as the corresponding field in the MSH segment.)
First component (3.1) Sending Application Name. This field uniquely identifies the sending application. When sending, NYSIIS will use "NYSIIS" followed by the current version number of the registry. This field is an optional convenience. See BSH-4 and BSH-6 for the fields principally used to identify sender and receiver of the message.

BHS-4 Batch Sending Facility (HD) 00084

Definition: (Same definition as the corresponding field in the MSH segment.)
First component (4.1) Sending Facility Name, identifies the organization responsible for the operations of the sending application. The first component shall be the name space id found in User-defined Table 0300.
Second component (4.2) NYSIIS Organization ID, is reserved for use of NYSIIS Organization ID.

When the message is being sent to NYSIIS and the Provider Organization owning the information is different than the organization transmitting the message (as in a Parent/Child or Vendor/Client relationship), you must use the NYSIIS Provider ID of the organization that is **submitting** the data (e.g ., the Parent or Vendor) preceded by a component separator (e.g., ^356). You can add the short Provider Organization name in the component prior to the provider id (e.g., VALLEY CLINIC-Parent^0356.) Contact the NYSIIS Help Desk for the appropriate organization ID.

BHS-6 Batch Receiving Facility (HD) 00086

Definition: (Same definition as the corresponding field in the MSH segment.)
First component (6.1) Receiving Facility Name Default is NYSIIS.

BHS-7 Batch Creation Date/Time (TS) 00087

Definition: (Same definition as the corresponding field in the MSH segment.)
First component (7.1) Date of Batch. This field contains the date/time that the sending system created the message. The degree of precision must be at least to the day, NYSIIS will ignore the time component.

BHS-10 Batch Comment/Type (ST) 00090

Definition: Free text, which may be included for convenience, but has no effect on processing.

BHS-11 Batch Control ID/Type (ST) 00091

Definition: This field is used to uniquely identify a particular batch. It can be echoed back in BHS-12-reference batch control ID if an answering batch is needed. For NYSIIS purposes, the answering batch will contain ACK messages.

BHS-12 Reference Batch Control ID /Type (ST) 00092

Definition: This field contains the value of BHS-11-batch control ID when this batch was originally transmitted. Not present if this batch is being sent for the first time. See definition for BHS-11-batch control ID.

BHS segment Example

BHS|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||||00010223

MSH—Message Header Segment

HL7 ATTRIBUTE TABLE - MSH - MESSAGE HEADER

Table 5-4 Message Header Segment (MSH)

MSH (Message Header)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Field Separator**	**R**	**1**	**[1..1]**		**R**	**ST**	**R**	**ST**	**The MSH.1 field shall be |**
2	**Encoding Characters**	**R**	**4**	**[1..1]**		**R**	**ST**	**R**	**ST**	**The MSH.2 field shall be ^~\&**
3	Sending Application			[	0361		EI	RE	HD	No constraint
3.1	Name Space ID	CE	95	[0..1]		O	-	CE	IS	
4	Sending Facility	CE			0362		HD		HD	
4.1	**NYSIIS Name**	**CD**	**95**	**[..1]**		**O**	**IS**	**RE**	**IS**	
4.2	**NYSIIS Organization ID**	**CD**	**6**	**[1..1]**	**0063**	**R**	**ST**	**R**	**CE**	**Provided by NYSIIS**
5	Receiving Application				0361		HD		HD	
5.1	**Name**	**CE**	**6**	**[1…1]**		**O**	**IS**	**R**	**IS**	If sent, please use 'NYSIIS'.
6	Receiving Facility				0362		HD		HD	
6.1	**Name**	**CE**	**6**	**[1..1]**		**O**	**IS**	**R**	**IS**	If sent, please use 'NYSIIS'.
7	Date/Time of Message			[1..1]			TS		TS	
7.1	**Date**	**R**	**26**			**O**	**TS**	**R**	**DTM**	The degree of precision must be at least to the day. NYSIIS will ignore the time component
9	Message Type						CM		MSG	
9.1	**Message**	**R**	**3**	**[1..1]**		**R**	**ID**	**R**	**ID**	
9.2	**Trigger Event**	**R**	**3**	**[1..1]**		**R**	**ID**	**R**	**ID**	
9.3	**Message Structure**	**R**	**7**		**0354**	**-**	**-**	**R**	**ID**	

MSH (Message Header)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
10	**Message Control ID**	**R**	**20**	**[1..1]**		**R**	**ST**	**R**	**ST**	
11	**Processing ID**									
11.1	**ID**	**R**	**1**	**[1..1]**		**R**	**ID**	**R**	**ID**	**The processing ID for NYSIIS is "P" for production processing.**
12	**Version ID**									
12.1	**Version ID**	**R**	**6**	**[1..1]**	**0104**	**R**	**ID**	**R**	**ID**	**2.3.1 or 2.4 or 2.5.1 as applicable**
15	**Accept acknowledgment type**	**RE**	**2**	**[0..1]**	**0155**	**O**	**ID**	**RE**	**ID**	**NYSIIS will assume ER if empty. Send as 'ER' or empty to receive error messages.**
16	**Application Acknowledgment Type**	**RE**	**2**	**[0..1]**	**0155**	**-**	**-**	**RE**	**ID**	**NYSIIS will assume ER if empty. Send as 'ER' or empty to receive error messages.**

MSH Field Definitions

MSH-1 Field Separator (ST) 00001

Definition: This field contains the separator between the segment ID and the first real field, MSH-2-encoding characters. As such it serves as the separator and defines the character to be used as a separator for the rest of the message. Required value is |, (ASCII 124).
NYSIIS requires the HL7 recommended field separator "|".

MSH-2 Encoding Characters (ST) 00002

Definition: This field contains the four characters in the following order: the component separator, repetition separator, escape character, and subcomponent separator. Required values are ^~\& (ASCII 94, 126, 92, and 38, respectively).
Example of MSH-1 and MSH-2::
MSH|^~\&|

MSH-3 Sending Application (HD) 00003

Definition: First component (3.1) Name of the sending application. This field uniquely identifies the sending application. When sending, NYSIIS will use "NYSIIS" followed by the current version number of the registry. This field is an optional convenience. See MSH-4 and MSH-6 for the fields principally used to identify sender and receiver of the message.

MSH-4 Sending Facility (HD) 00004

Definition: First Component (4.1), identifies for whom the message is being sent (the owner of the message information). When sending, NYSIIS will use "NYSIIS".

The second component (4.2), provides the NYSIIS provider ID. Contact the NYSIIS Help Desk for the appropriate organization ID.

When the message is being sent to NYSIIS and the Provider Organization owning the information is different than the organization transmitting the message (as in a Parent/Child or Vendor/Client relationship), you must use the NYSIIS Provider ID of the Provider Organization that **owns** the information preceded by a component separator (e.g., ^36). You can add the short Provider Organization name in the component prior to the provider id (e.g., VALLEY CLINIC^036.)

Note: If the owner of the information and the transmitter of the information are the same Provider Organization, and the Provider Organization is not a member of a Parent/Child or Vendor/Client relationship, this field can be left blank. The data will be loaded with the transmitting organization as the owner of the immunization records. Since there is the potential for transmitting files under an incorrect Provider Organization, we highly encourage all users to indicate the owning provider organization id in MSH-4. This will allow the system to verify that you are transmitting from an organization that is the owner of the immunization records.

MSH-5 Receiving Application (HD) 00005

Definition: *First component (5.1)* identifies the receiving application. Records submitted should use 'NYSIIS" for the receiving application.

MSH-6 Receiving Facility (HD) 00006

Definition: First component (6.1) identifies the organization responsible for the operations of the receiving application. This should be defaulted to 'NYSIIS'.

When sending, NYSIIS will use the NYSIIS Provider Organization ID assigned when the provider first registers with the NYSIIS database and NYSIIS-Web interface.

MSH-7 Date/Time Of Message (TS) 00007

Definition: *First component (7.1)* contains the date/time that the sending system created the message. The degree of precision must be at least to the day, NYSIIS will ignore the time component. The time zone must be specified and will be used throughout the message as the default time zone. Date format is YYYYMDD.

Note: This field was made required in version 2.4. Messages with versions prior to 2.4 are not required to value this field. This usage supports backward compatibility.

MSH-9 Message Type (MSG) 00009

Definition: This field contains the message type (9.1) , trigger event (9.2), message structure (9.3) , This table contains values such as VXU, QBP etc. The following table lists those anticipated to be used by IIS. Query specifications are discussed in a separate document.

Table 5-51 Message Types

Transaction	Ver 2.4 Message type	Ver 2.5.1 Message type
Unsolicited update of immunization record	VXU	VXU
Query to another system	N/A	QBP
Response to query	N/A	RSP

Refer to HL7 Table 0003 - Event type for valid values for the trigger event. This table contains values like O01, V04 etc.

For NYSIIS purposes, VXU^V04 for a message conveying patient and immunization information, or QBP^Q11 when asking for a RSP^K11 response from NYSIIS. In acknowledgement messages the value ACK is sufficient and the second component may be omitted.

Message structure component is required.

MSH-10 Message Control ID (ST) 00010

Definition: This is a required field. Message rejection will result if nothing is received in this field. The message control ID is a string (which may be a number) uniquely identifying the message among all those ever sent by the sending system. It is assigned by the sending system and echoed back in the ACK message sent in response to identify the specific record which contains errors. *It is important to have this be an ID that the provider can use to identify the patient record.*

MSH-11 Processing ID (PT) 00011

Definition: *The first component 11.1 is the processing ID.* This field is used to decide whether to process the message as defined in HL7 Application (level 7) Processing rules. Reference Table HL7 0103 in Appendix A. The choices are Production, Debugging and Training. The processing ID to be used by NYSIIS is **P** for production processing. If this field is null, an informational message is generated indicating that NYSIIS is defaulting to **P**.

MSH-12 Version ID (VID) 00012

Definition: The first component (12.1) contains the identifier of the version of the HL7 messaging standard used in constructing, interpreting, and validating the message. Only the first component need be populated. . For the parser, the version number that is read in the **first** MSH segment, of the file, will be the version assumed for the whole file. For example, use a value of "2.5.1" to indicate HL7 Version 2.5.1 or "2.4" to indicate HL7 Version 2.4.

*If there is no version number found in the first MSH segment, a hard error will occur and the file will not be processed.
**For NYSIIS to PO providers, the Exchange Data screen will need to be set to the version number that the organization has selected, in which to receive their data files. Setting the version number "tells" the writer which HL7 version format to use when generating the file in (the default will be the most recent version).

MSH-15 Accept Acknowledgment Type (ID) 00015

Definition: This field controls whether an acknowledgement is generated for the message sent. NYSIIS will accept a value of ER or AL to ask that acknowledgements be sent only for messages that cannot be processed normally. If the field is empty, NYSIIS will assume the value of ER.

MSH-16 Application Acknowledgment Type (ID) 00016

Definition: This field contains the conditions under which application acknowledgments are required to be returned in response to this message. NYSIIS will accept a value of ER or AL to ask that acknowledgements be sent only for messages that cannot be processed normally. If the field is empty, NYSIIS will assume the value of ER.

MSH segment Examples

MSH|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||VXU^V04|00000123|P|**2.4**|||ER
MSH|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||VXU^V04^**VXU_V04**|00000123|P|**2.5.1**|||ER

PID—Patient Identifier Segment

The PID is used by all applications as the primary means of communicating patient identification information. This segment contains permanent patient identifying and demographic information that, for the most part, is not likely to change frequently.

Table 5-15-Patient Identifier Segment (PID)

Patient Identifier Segment (PID)									
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Set ID – PID**	**RE**	**4**	**[0..1]**		**-**	**-**	**RE**	**SI**	
3	**Patient Identifier List**					**R**	**CX**	**R**	**CX**	
3.1	**ID**	**R**	**20**	**[1..*]**		**R**	**ST**	**R**	**ST**	
3.5	**Identifier Type Code**	**R**	**3**	**[1..*]**	**0203**	**R**	**IS**	**R**	**ID**	
5	**Patient Name**						**XPN**		**XPN**	
5.1	**Family Name**	**R**	**35**	**[1..1]**		**R**	**ST**	**R**	**FN**	
5.1.1	**Surname**	**R**	**-**	**[1..1]**		**-**	**-**	**R**	**ST**	
5.2	**Given Name**	**R**	**25**	**[1..1]**		**R**	**ST**	**R**	**ST**	**NYSIIS will not accept records with these fields blank .**
5.3	**Middle Initial or Name**	**RE**	**25**	**[1..1]**		**O**	**ST**	**RE**	**ST**	
5.4	Suffix	O	10	**[1..1]**		O	ST	O	ST	
5.7	**Name Type Code**	**RE**	**1**	**[1..1]**	**0200**	**-**	**-**	**RE**	**ID**	**New to HL7 2.5.1**
6	**Mother's Maiden Name**						**XPN**		**XPN**	
6.1	**Family/Last Name Prefix**	**RE**	**35**	**[0..1]**		**RE**	**CM**	**RE**	**FN**	
6.1.1	**Surname**	**RE**	**-**	**[0..1]**		**-**	**-**	**RE**	**ST**	
6.2	**Given Name**	**RE**	**25**	**[0..1]**		**RE**	**ST**	**RE**	**ST**	

Patient Identifier Segment (PID)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
6.3	**Second and Further Given Names or Initials Thereof**	**RE**	**30**	**[0..1]**		**-**	**-**	**RE**	**ST**	
6.7	**Name Type Code**	**RE**	**1**		**0200**	**-**	**-**	**RE**	**ID**	
7	**Date/Time of Birth**						**TS**		**TS**	**Required, must have month, day and year.**
7.1	**Date**	**R**	**26**			**R**	**TS**	**R**	**TS**	
8	**Administrative Sex**	**RE**	**1**	**[0..1]**	**0001**	**R**	**IS**	**RE**	**IS**	**M= male, F = female, U = not determined/unspecified/unknown.**
10	**Race**				**0005**		**CE**		**CE**	
10.1	**Identifier**	**RE**	**6**	**[0..*]**		**O**	**ST**	**RE**	**ST**	
11	**Patient address**						**XAD**		**XAD**	**The first repetition should be the primary address. NYSIIS will only store the first incidence.**
11.1	**Street Address**	**RE**	**55**	**[0..1]**		**O**	**ST**	**RE**	**SAD**	
11.1.1	**Street or Mailing Address**	**RE**	**-**	**[0..1]**		**-**	**-**	**R**	**ST**	
11.1.2	Street Name	RE	-	**[0..1]**		-	-	O	ST	
11.1.3	Dwelling Number	RE	-	**[0..1]**		-	-	O	ST	
11.2	**Other Designation**	**RE**	**55**	**[0..1]**		**O**	**ST**	**RE**	**ST**	
11.3	**City**	**RE**	**52**	**[0..1]**		**O**	**ST**	**RE**	**ST**	

Patient Identifier Segment (PID)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
11.4	**State**	**RE**	**2**	**[0..1]**		**O**	**ST**	**RE**	**ST**	
11.5	**Zip**	**RE**	**9**	**[0..1]**		**O**	**ST**	**RE**	**ST**	
11.6	Country	RE	2	**[0..1]**		O	ID	O	ID	
11.7	**Address Type**	**RE**	**3**	**[0..1]**	**0190**	**-**	**-**	**R**	**ID**	
11.9	County	RE	5	**[0..1]**	0289	O	IS	O	IS	For New York Counties Use table 0289
13	**Phone Number – Home**			**[0..1]**		**O**	**XTN**	**RE**	**XTN**	
13.1	[(999)] 999-9999 [X99999][C any text]	X	25	**[0..1]**		O	TN	-	-	
13.2	**Telecommunication Use Code**	**R**	**3**	**[0..1]**	**0201**	**O**	**ID**	**RE**	**ID**	
13.6	Area Code	CE	5	**[0..1]**		O	NM	CE	NM	
13.7	Phone Number	CE	8	**[0..1]**		O	NM	CE	NM	
13.8	Extension	O	6	**[0..1]**		O	NM	O	NM	
13.9	Any Text	O	-	**[0..1]**		-	-	O	ST	
22	Ethnic Group				0189		CE		CE	
22.1	**Identifier**		**6**	**[0..1]**	**0189**	**O**	**ST**	**RE**	**ST**	
24	**Multiple Birth Indicator**	**RE**	**1**	**[0..1]**		**O**	**ID**	**RE**	**ID**	**The acceptable values are Y and N. If the status is undetermined, then field shall be empty.**
25	Birth Order	CE	2	[0..1]		C	NM	CE	NM	If Multiple Birth Indicator is populated with Y, then this field should contain the number indicating the person's birth order, with 1 for the first child born and 2

Patient Identifier Segment (PID)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
										for the second.
29	**Patient Death Date and Time**	**RE**		**[0..1]**		**C**	**TS**	**RE**	**TS**	**If a death date is sent, then the Patient Registry Status in PD1-16 must indicate a value of "P" for permanently inactive/deceased and PID-30 must indicate a value of 'Y".**
29.1	**Date/Time**	**RE**	**26**			**C**	**NM**	**R**	**TS**	

PID Field Definitions

PID-1 Set ID - PID (SI) 00104

Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc.

PID-3 Patient Identifier List (CX) 00106

Definition: Sub-components 1 (ID) and 5 (identifier type code) are required in the PID-3 field. When a Provider Organization is sending to NYSIIS, use the sending system's Patient ID or other identifier if available. When NYSIIS is sending to an outside system it will use the patient's NYSIIS ID and Patient ID when it is available.
Please note that social security number cannot be sent to nor accepted by NYSIIS according to public health law.

PID-5 Patient Name (XPN) 00108

Definition: Last name and first name are required in the first two components. If the Name Type Code component is included, use L-Legal.
NYSIIS does not support repetition of this field.

PID-6 Mother's Maiden Name (XPN) 00109

Definition: This field contains the family name under which the mother was born (i.e., before marriage). It is used to distinguish between patients with the same last name. NYSIIS uses only last name (6.1) and first name (6.2). It is important to note that inclusion of this data is mandated by state public health law. NYSIIS does not support repetition of this field.

PID-7 Date/Time of Birth (TS) 00110

Definition: This field contains the patient's date of birth (YYYYMMDD). NYSIIS ignores any time component.

PID-8 Administrative Sex (IS) 00111

Definition: This field contains the patient's sex. Refer to User-defined Table 0001 - Administrative Sex for suggested values. Use F, M or U.

PID-10 Race (CE) 00113

Definition: This field refers to the patient's race. Refer to User-defined Table 0005 - Race for suggested values. NYSIIS stores and writes "Unknown" values as null. NYSIIS does not support repetition of this field.

PID-11 Patient Address (XAD) 00114

Definition: This field contains the mailing address of the patient. Address type codes are defined by HL7 Table 0190 - Address Type. |Street^PO Box^City^State^Zip^Country^^^County| For example: |123 Main St^PO BOX 1^Anytown^NY^12345^US^^^Albany|. NYSIIS does not support repetition of this field.

PID-13 Phone Number - Home (XTN) 00116

Definition: This field contains the patient's personal phone numbers. Refer to HL7 Table 0201 - Telecommunication Use Code and HL7 Table 0202 - Telecommunication Equipment Type for valid values. If PRN is specified in component 13.2 (telecommunication use code (ID) from table 0201) NYSIIS will use the 6th 7th 8th and 9th components for specification of area code (13.6), phone number (13.7), extension (13.8) , respectively. Otherwise, NYSIIS will assume that the phone number is specified in the first component in the [NNN] [(999)]999-9999[X99999][B99999][C any text] format. NYSIIS does not support repetition of this field.

PID-22 Ethnic Group (CE) 00125

Definition: This field further defines the patient's ancestry. Refer to User-defined Table 0189 - Ethnic Group. NYSIIS stores and writes "Unknown" values as null. NYSIIS does not support repetition of this field.

PID-24 Multiple Birth Indicator (ID) 00127

Definition: This field indicates whether the patient was part of a multiple birth. Refer to HL7 Table 0136 - Yes/No Indicator for valid values.
Y - the patient was part of a multiple birth
N - the patient was a single birth
Empty multiple birth status is undetermined.

If Y is entered in this field, you must supply the required information in PID-25.

PID-25 Birth Order (NM) 00128

Definition: When a patient was part of a multiple birth, a value (number) indicating the patient's birth order is entered in this field. If PID-24 is populated, then this field must be populated. Use 1 for the first born, 2 for the second, etc. This field is useful in matching patient data to existing records.

PID-29 Patient Death Date and Time (TS) 00740

Definition: This field contains the date and time at which the patient death occurred. Give the year, month, and day (YYYYMMDD). NYSIIS ignores any time component. If a death date is sent, then the Patient Registry Status in PD1-16 must indicate a value of "P" for permanently inactive/deceased and PID-30 must indicate a value of 'Y".

PID Segment Examples

PID|||23LR999^^^^PI||MAGUIRE^JERRY^M^JR|CARRINGTION^ALEXIS|20010227|M||2106-3|
123 HOLLYWOOD BLVD^^ALBANY^NY^12201^US^^^NY001||||||||||||Y|2

PD1—Patient Demographic Segment

The Patient Demographic Segment contains patient demographic information that may change from time to time. There are three primary uses for this in Immunization Messages. These include indicating whether the person wants his/her data protected, whether the person wants to receive recall/reminder notices and the person's current status in the registry.

Table 5-14-Patient Demographic Segment (PD1)

PD1 (Patient Additional Demographic)										
SEQ	ELEMENT NAME	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
11	**Publicity Code**			**[0..1]**		**-**	**-**		**CE**	
11.1	**Publicity Code**	**RE**	**3**	[0..1]	**0215**	**O**	**ST**	**RE**	**ST**	
12	**Protection indicator**	**RE**	**1**	**[0..1]**	**0136**	**O**	**ID**	**RE**	**ID**	**The value for this field has changed in version 2.5 –refer to notes below**
13	Protection Indicator effective date	CE	8	[0..1]		C	DT	CE	DT	
16	**Immunization Registry Status**	**RE**	**1**	**[0..1]**	**0441**	**C**	**IS**	**RE**	**IS**	**If a code of P is specified the PID-29, then field must contain Patient Death Date or record will be rejected.**
17	Immunization Registry Status Effective Date	CE	8	[0..1]		C	DT	CE	DT	If the registry status field is filled, then this field should be valued.
18	Publicity Code Effective Date	CE	8	[0..1]		C	DT	CE	DT	If the publicity code field is filled then this field should be valued.

PD1-11 Publicity Code (CE) 00743

Definition: Controls whether recall/reminder notices are sent. NYSIIS will recognize "01" to indicate no recall/reminder notices or "02" recall/reminder notices any method. Refer to User-defined Table 0215 - Publicity Code for suggested values.

PD1-12 Protection Indicator (ID) 00744

Definition:

Notes on use of Y for Protection Indicator in 2.5.1 Guide vs. earlier Guides.

Note that the previous Implementation Guide stated that Y meant that a person's information could be shared. This was an incorrect interpretation of the use of this field. The meaning now aligns with the definition of HL7. That is, Y means data must be protected. Existing systems that use the old meaning will need to determine how they will send the correct value in a 2.5.1 message.

Note that the value sent in a message that is based on the 2.3.1 or 2.4 version of the HL7 standard shall continue to follow the old guidance. That is, Y means sharing is allowed and N means sharing is not allowed.

Note on Null and Empty in HL7

See notes on null and empty fields in Chapter 3 of the CDC IG.

For patients under 19 years of age, any value in this field (regardless of HL7 version) is ignored because NYS legislation automatically mandates their data for inclusion in NYSIIS.

For HL7 version 2.4 or earlier:

In NYSIIS - For patients 19 years and older, if this field is filled with an **'N', indicating that the patient refused to give consent** to have their records in NYSIIS, then the incoming record is rejected because it means that the patient is legally of age and does not consent to share. If the patient is 19 years of age or older and this field is left blank or null, then the incoming record is accepted only if it matches an existing NYSIIS record where a consent is already recorded in the registry, otherwise it is rejected. If the patient is 19 years of age or older and this field is filled with a **'Y' to indicate that the patient provided consent granting permission to have their records** in NYSIIS, then the incoming record is accepted and either updates an existing record or creates a new consented record.

For HL7 version 2.5:

In NYSIIS - for patients 19 years and older, if this field is filled with an **'Y', indicating that the patient refused to give consent (e.g. they wish to have their data protected)** to have their records in NYSIIS, then the incoming record is rejected because it means that the patient is legally of age and does not consent to share. If the patient is 19 years of age or older and this field is left blank or null, then

the incoming record is accepted only if it matches an existing NYSIIS record where a consent is already recorded in the registry, otherwise it is rejected. If the patient is 19 years of age or older and **this field is filled with a 'N' to indicate that the patient provided consent** granting permission to have their records in NYSIIS, then the incoming record is accepted and either updates an existing record or creates a new consented record.

All health care providers are responsible for taking the appropriate steps to collect the necessary consent from individuals 19 years of age or older and must indicate in NYSIIS this consent to share information.

NOTE:
The Health Information Portability and Accountability Act (HIPAA) 45 CFR 164.502(b) imposes a "minimum necessary" standard on health care providers regarding disclosure of information, even when disclosures to the NYSDOH are required for public health activities. For those offices participating in electronic data submission to NYSIIS, the data file that leaves the health care provider's office should only contain information on individuals 19 years of age or older who have given their consent to participate in NYSIIS.

Please make sure to take the appropriate steps to ensure that persons who are 19 years of age or older and have not consented to participate with NYSIIS have been excluded from your data extract file prior to submission to NYSIIS.

The protection state must be actively determined by the clinician. If it is not actively determined, then the protection indicator shall be empty.

There are 3 states for the Protection Indicatory (codes are for HL7 2.5.1):

Protection State	Code
Yes, protect the data. Client (or guardian) has indicated that the information shall be protected. (Do not share data)	Y
No, it is not necessary to protect data from other clinicians. Client (or guardian) has indicated that the information does not need to be protected. (Sharing is OK)	N
No determination has been made regarding client's (or guardian's) wishes regarding information sharing	PD1-12 is empty.

PD1-13 Protection Indicator Effective Date (DT) 01566

Definition: This field indicates the effective date for PD1-12 - Protection Indicator. Format is YYYYMMDD. NYSIIS will ignore the time component.

PD1-16 Immunization Registry Status (IS) 01569

Definition: This field identifies the current status of the patient in relation to the sending provider organization.. Refer to User-defined Table 0441 - Immunization Registry Status for suggested values. If a code of P is specified the PID-29 segment must be filled in with Patient Death Date or record will be rejected.

PD1-17 Immunization Registry Status Effective Date (DT) 01570

Definition: This field indicates the effective date for the registry status reported in PD1-16 - Immunization Registry Status. Format is YYYYMMDD. NYSIIS will ignore the time component.

PD1-18 Publicity Code Effective Date (DT) 01571

Definition: This is the effective date for PD1-11 - Publicity Code. Format is YYYYMMDD. NYSIIS will ignore the time component.

PD1 Segment Example

Example including protection indicator– version 2.4
PD1||||||||||02|Y|20121102|||A|20130101|20130101

Example including protection indicator– – version 2.5.1
PD1||||||||||02|N|20121102|||A|20130101|20130101

NK1—Next of Kin Segment

The NK1 segment contains information about the patient's other related parties. Any associated parties may be identified. Utilizing NK1-1 – set ID, multiple NK1 segments can be sent to patient accounts. That is, each subsequent NK1 increments the previous set ID by 1. Therefore, if 3 NK1 were sent in one message, the first would have a set id of 1, the second would have 2 and the third would have 3.

Table 5-6-Next of Kin Segment (NK1)

Next of Kin Segment (NK1)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Set ID – NK1**	**R**	**4**	**[1..1]**		**R**	**SI**	**R**	**SI**	
2	Name						XPN		XPN	The first instance is the legal name and is required.
2.1	**Family Last Name**	**R**	**35**	**[1..1]**		**RE**	**CM**	**R**	**FN**	
2.2	**Given Name**	**R**	**25**	**[1..1]**		**RE**	**ST**	**R**	**ST**	
2.3	**Middle Initial or Name**	**RE**	**25**	**[1..1]**		**RE**	**ST**	**RE**	**ST**	
2.4	Suffix	O	10	**[1..1]**			ST	O	ST	
3	Relationship				0063				CE	
3.1	**Identifier**	**RE**	**3**	**[0..1]**	**0063**	**R**	**ST**	**R**	**ST**	
3.2	Text	CE	25	**[0..1]**		O	ST	CE	ST	
3.3	Name of Coding System	C	7	**[0..1]**		O	ST	C	ID	
4	Address			[0..1]			XAD		XAD	The first instance shall be the primary address.
4.1	**Street Address**	**RE**	**55**	**[0..1]**		**O**	**ST**	**RE**	**SAD**	
4.2	**Other Designation**	**RE**	**55**	**[0..1]**		**O**	**ST**	**RE**	**ST**	

Next of Kin Segment (NK1)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
4.3	**City**	**RE**	**52**	**[0..1]**		**O**	**ST**	**RE**	**ST**	
4.4	**State**	**RE**	**2**	**[0..1]**		**O**	**ST**	**RE**	**ST**	
4.5	**Zip**	**RE**	**9**	**[0..1]**		**O**	**ST**	**RE**	**ST**	
4.6	Country	O	2	[0..1]		O	ID	O	ID	
4.9	County	O	5	[0..1]		O	IS	O	IS	
5	Phone number						XTN		XTN	The first instance shall be the primary phone number.
5.1	**[(999)] 999-9999 [X99999][C any text]**		**25**	**[0..1]**		**O**	**TN**	**RE**	**ST**	
5.2	**Telecommunication Use Code**	**R**	**3**			**O**	**ID**	**RE**	**ID**	
5.6	Area Code	CE	5			O	NM	CE	NM	
5.7	Phone number	CE	8			O	NM	CE	NM	

NK1 Field Definitions

NK1-1 Set ID - NK1 (SI) 00190

Definition: This field contains the number that identifies this transaction. For the first occurrence of the segment, the sequence number shall be one, for the second occurrence, the sequence number shall be two, etc. Although this field is required by HL7, NYSIIS will ignore its value, and there is no requirement that the record for the same responsible person keep the same sequence number across multiple messages, in the case that information from the same record is transmitted more than once.

NK1-2 Name (XPN) 00191

Definition: This field contains the name of the next of kin or associated party. NYSIIS does not support repetition of this field. Refer to HL7 Table 0200 - Name Type for valid values.

NK1-3 Relationship (CE) 00192

Definition: This field contains the actual personal relationship that the next of kin/associated party has to the patient. Refer to User-defined Table 0063 - Relationship for suggested values. . Use the first three components of the CE data type, for example |MTH^Mother^HL70063|.

NK1-4 Address (XAD) 00193

Definition: This field contains the mailing address of the next of kin/associated party. NYSIIS does not support repetition of this field

NK1-5 Phone Number (XTN) 00194

Definition: This field contains the telephone number of the next of kin/associated party. NYSIIS does not support repetition of this field. If PRN is specified in component 2 (telecommunication use code (ID) from table 0201) NYSIIS will use the 6th 7th 8th and 9th components for specification of area code, phone number, extension and text, respectively. Otherwise, NYSIIS will assume that the phone number is specified in the first component in the [NNN] [(999)]999-9999[X99999][B99999][C any text] format. Refer to HL7 Table 0201 - Telecommunication Use Code and HL7 Table 0202 - Telecommunication Equipment Type for valid values.

NK1 Segment Example

NK1|1|CARRINGTION^ALEXIS|MTH^Mother^HL70063|123 HOLLYWOOD BLVD^^ALBANY^NY^12201^US^^^NY001|(518)123-4567

PV1—Patient Visit Segment

The PV1 segment is used to convey visit specific information. The primary use in immunization messages is to carry information about the client's eligibility status in HL7 version 2.4.

Table 5-16-Patient Visit (PV1)

Patient Visit (PV1)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
2	**Patient class**		**1**	**[1..1]**	**0004**	**R**	**IS**	**R**	**IS**	**"R", for recurring patient.**
20	**Financial Class**			**[1..1*]**	**0064**	**R**	**FC**	**-**	**-**	**VFC and effective date; Repeatable; Recorded in OBX in HL7 version 2.5.1**
20.1	**Financial Class**		**3**	**[1..1]**	**0064**	**R**	**IS**	**-**	**-**	**Recorded in OBX in HL7 version 2.5.1**
20.2.1	**Date/Time**		**26**	**[1..1]**		**R**	**NM**	**-**	**-**	
20.2	**Effective Date**		**26**	**[1..1]**		**R**	**TS**	**-**	**-**	

PV1 Field Definitions

PV1-2 Patient Class (IS) 00132

Definition: This field is used by systems to categorize patients by site. It shall be constrained to R.

PV1-20 Financial Class (FC) 00150

Definition: In HL7 version 2.4, NYSIIS defines this field as a required field and is used to report VFC eligibility. If an invalid financial class or date format is received, an INFORMATIONAL error message is generated. The entire message is NOT rejected, as this is an optional HL7 segment. The format of this field is Financial Class code described in table 0064 ^ the date in YYYYMMDD format. The date is used to associate the VFC eligibility code with shots administered with the same date. This field can be repeated.

In HL7 version 2.5 information on VFC eligibility may be reported in the OBX segment.

PV1 Segment Example (for HL7 version 2.4)

PV1||R|||||||||||||||||V02^20090914

ORC—Order Request Segment

This is a new segment not previously used by NYSIIS and needs to be included if submitting to NYSIIS using version 2.5.1 to record who entered information, who ordered the shot and what facility ordered the shot. In version 2.4 this is recorded in RXA-10 NOTE: The 'ordering' mentioned here is not related to ordering for inventory but ordering for person specific administration. Each RXA segment **must** be associated with one ORC, based on HL7 2.5.1 standard.

Table 5-13 Common Order Segment (ORC)

Common Order Segment (ORC)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Order Control**	**R**	**2**	**[1..1]**	**0119**	**-**	**-**	**R**	**ID**	
3	Filler Order Number					-	-		EI	See Guidance Below
3.1	**Entity Identifier**	**RE**	**199**	**[0..1]**		**-**	**-**	**RE**	**ST**	
3.2	Name Space ID	C	20	**[0..1]**		**-**	**-**	C	IS	
3.3	Universal ID	CE	199	**[0..1]**		**-**	**-**	CE	ST	
3.4	Universal ID Type	C	6	**[0..1]**		**-**	**-**	C	ID	
10	**Entered By**	**RE**	**2945**	**[0..1]**		**-**	**-**	**R**	**XCN**	**This is the person that entered this immunization record into the system.**
12	Ordering Provider			[0..1]		**-**	**-**	O	XCN	This shall be the provider ordering the immunization. It is expected to be empty if the immunization record is transcribed from a

Common Order Segment (ORC)										
										historical record.
12.1	ID Number	C	15			-	-	C	ST	
12.2	**Family Name**	**RE**	**194**	[0..1]		-	-	**RE**	**FN**	
12.2.1	**Surname**	**R**	**50**	**[1..1]**		-	-	**R**	**ST**	
12.2.2	Own Surname Prefix	O	20	[0..1]		-	-	O	ST	
12.2.3	Own Surname	O	50	[0..1]		-	-	O	ST	
12.2.4	Surname Prefix From Partner/Spouse	O	20	[0..1]		-	-	O	ST	
12.2.5	Surname from Partner/Spouse	O	50	[0..1]		-	-	O	ST	
12.3	**Given Name**	**RE**	**30**	[0..1]		-	-	**RE**	**ST**	
12.4	**Second and Further Given Names or Initials Thereof**	**RE**	**30**	[0..1]		-	-	**RE**	**ST**	
12.5	Suffix (e.g., JR or III)	O	20	[0..1]		-	-	O	ST	
12.6	Prefix (e.g., DR)	O	20	[0..1]		-	-	O	ST	

ORC Field Definitions

ORC-1 Order Control (ID) 00215

Definition: Determines the function of the order segment.
The value for VXU and RSP shall be RE.

Placer Order Number (ORC-2) and Filler Order Number (ORC-3) are unique identifiers from the system where an order was placed and where the order was filled. They were originally designed for managing lab orders. In the context that ORC will be used in Immunization messaging either ORC-2 or ORC-3 must be populated. They may both be populated.

ORC-2 Placer Order Number (EI) 00216

Definition: The placer order number is used to identify uniquely this order among all orders sent by a provider organization.

ORC-2 is a system identifier assigned by the placer software application. The Placer Order Number and the Filler Order Number are essentially foreign keys exchanged between applications for uniquely identifying orders and the associated results across applications. In the case where the ordering provider organization is not known, the sending system may leave this field empty.

ORC-3 Filler Order Number (EI) 00217

Definition: The filler order number is used to identify uniquely this order among all orders sent by a provider organization that filled the order.

This shall be the unique identifier of the sending system in a given transaction. In the case where a historic immunization is being recorded (i.e. from an immunization card), the sending system SHALL assign an identifier as if it were an immunization administered by a provider associated with the provider organization owning the sending system.
If the RXA is conveying information about an immunization that was not given (e.g. refusal) the filler order number shall be 9999.

ORC-10 Entered By (XCN) 00224

Definition: This identifies the individual that entered this particular order. It may be used in conjunction with an RXA to indicate who recorded a particular immunization.

ORC-12 Ordering Provider (XCN) 00226

Definition: This field contains the identity of the person who is responsible for creating the request (i.e., ordering physician). In the case where this segment is associated with a historic immunization record and the ordering provider is not known, then this field should not be populated.

ORC Segment Example (for HL7 version 2.5.1)

ORC|RE||3|||||||^Imanurse^Jim||^Imadoctor^Josephine|

RXA-- Pharmacy/Treatment Administration Segment

The RXA segment carries pharmacy administration data. It is a child of an ORC segment, which a repeating segment in the RSP and VXU messages. Because ORC are allowed to repeat an unlimited numbers of vaccinations may be included in a message. Each RXA must be preceded by an ORC in HL7 version 2.5.1.[1]

Table 5-20 Pharmacy/Treatment Administration (RXA)

RXA-- Pharmacy/Treatment Administration Segment										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Give sub-ID counter**	**R**	**4**	**[1..1]**		**R**	**NM**	**R**	**NM**	**Required by HL7. Constrain to 0 (zero) for NYSIIS.**
2	**Administration sub-ID counter**	**R**	**4**	**[1..1]**		**R**	**NM**	**R**	**NM**	**Required by HL7 Constrain to 1 for HL7 2.5.1. Constrain to '999' for HL7 2.4**
3	**Date/time start of administration**						**TS**		**TS**	
3.1	**Date**	**R**	**26**	**[1..1]**		**R**	**NM**	**R**	**DATA TYPE M**	
4	**Date/time end of administration**			**[0..1]**			**TS**		**TS**	**Required by HL7. Ignored by NYSIIS. If populated, this should be the same as Start time (RXA-3)**
4.1	**Date**		**26**	**[1..1]**		**R**	**NM**	**R**	**DATA TYPE**	

[1] The HL7 Version 2.5.1 document clearly indicates that any RXA must be associated with an ORC. In the case of immunization, each immunization will have its own ORC.

RXA-- Pharmacy/Treatment Administration Segment										
									M	
5	**Administered code**				**0292**	**R**	**CE**	**R**	**CE**	**CVX code is strongly preferred in first triplet.**
5.1	**Code**	**RE**	**3**	**[1..1]**		**O**	**ST**	**RE**	**ST**	
5.2	Code Text	CE	40			O	ST	CE	ST	
5.3	Name of Coding System	C	3			O	ST	C	ID	
5.4	**Alternate Identifier**	**RE**	**24**	**[1..1]**		**O**	**ST**	**RE**	**ST**	
5.5	**Alternate Code Text**	**RE**	**40**	**[1..1]**		**O**	**ST**	**RE**	**ST**	
5.6	Name of Alternate Coding System	C	4			O	ST	C	ID	
6	**Administered amount**	**R**	**4**	**[1..1]**		**R**	**NM**	**R**	**NM**	**If administered amount is not recorded, use 999. – NYSIIS will default to "full dose"**
7	Administered Units	CE	60	[0..1]		-	-	CE	CE	If previous field is populated by any value except 999, it is required.
9	**Administration Notes**			**[0..1]**	**NIP001**		**CE**		**CE**	**The primary use of this field is to convey if this immunization record is based on a historical record or was given by the provider recording the immunization.**
9.1	**Immunization Information Source**	**R**	**2**		**NIP001**	**O**	**ST**	**R**	**ST**	
9.2	Text	RE	200	[1..1]		-	-	RE	ST	
9.3	Name of Coding System	R	20					RE	ID	
10	Administering Provider			[0..1]		-	XCM		XCN	The person who administered the immunization.
10.2	**Family Name**	**RE**	**-**	**[0..1]**		**O**	**CM**	**RE**	**FN**	
10.2.1	**Surname**	**RE**	**-**	**[1..1]**		**O**	**-**	**R**	**ST**	

RXA-- Pharmacy/Treatment Administration Segment										
10.3	**Given Name**	**RE**	**25**	**[0..1]**		**O**	**ST**	**RE**	**ST**	
10.4	**Middle Initial or Name**	**RE**	**25**	**[0..1]**		**O**	**ST**	**RE**	**ST**	
10.5	Suffix	O	10			O	ST	O	ST	
10.6	Prefix	O	3			O	ST	O	ST	
10.7	Degree	O	3			O	IS	O	IS	
10.13	Administering Identifier type code					O	ID	-	-	
11	Administered-at Location					-	-		LA2	
11.4	**Facility (HD)**	**RE**	**259**	**[0..1]**		**O**	**HD**	**RE**	**HD**	**required if decrementing from inventory**
11.4.1	Namespace ID	CE	-			-	-	CE	IS	
11.4.2	Universal ID	CE	-			-	-	CE	ST	
11.4.3	Universal ID Type	CE	-			-	-	CE	ID	
15	**Substance Lot Number**	**RE**	**20**	**[0..1]**		**R**	**ST**	**RE**	**ST**	**Mandated by public health law 2168 for all administered immunizations. Not needed for Historical (not owned) immunizations**
16	Substance Expiration Date		-			-	-		TS	
16.1	**Time**	**R**	**-**	**[1..1]**		**-**	**-**	**R**	**DATA TYPE M**	
17	**Substance Manufacturer Name**				**0227**		**CE**		**CE**	**Mandated by public health law 2168 for all administered immunizations. Not**

RXA-- Pharmacy/Treatment Administration Segment										
										needed for Historical (not owned) immunizations
17.1	**Identifier**	**RE**	**4**	**[0..1]**	**0227**	**R**	**ST**	**RE**	**ST**	
17.2	Text	CE	95			O	ST	CE	ST	
17.3	Name of Coding System	C	3			O	ST	C	ID	
18	Substance Refusal Reason			[0..1]			CE		CE	If the Completion status is RE, then this shall be populated
18.1	**Identifier**	**RE**	**3**			**O**	**ST**	**RE**	**ST**	
18.2	Text	CE	180			O	ST	CE	ST	
18.3	Name of Coding System	C	6			O	ST	C	ID	
20	**Completion Status**	**RE**	**-**	**[0..1]**	**0322**	**-**	**-**	**RE**	**ID**	**If this field is not populated, it is assumed to be CP or complete. If the Refusal reason is populated, this field shall be set to RE.**
21	**Action Code – RXA**	**RE**	**-**	**[0..1]**	**0323**	**-**	**-**	**RE**	**ID**	

RXA Field Definitions

RXA-1 Give Sub-ID Counter (NM) 00342

Definition: Required by HL7. Use "0" for NYSIIS

RXA-2 Administration Sub-ID Counter (NM) 00344

Definition: This field is used to track multiple RXA under an ORC. Constrain to '999' for HL7 2.4, other numeric values will be ignored. For HL7 2.5.1, as each ORC has only one RXA in immunization messages, constrain to 1. Other numeric values will be ignored.

RXA-3 Date/Time Start of Administration (TS) 00345

Definition: The date this vaccination occurred. In the case of refusal or deferral, this is the date that the refusal or deferral was recorded. NYSIIS ignores any time component.

RXA-4 Date/Time End of Administration (If Applies) (TS) 00346

Definition: In the context of immunization, this is equivalent to the Start date/time. If populated it should be = RXA-3. If empty, the date/time of *RXA-3-Date/Time Start of Administration* is assumed.

RXA-5 Administered Code (CE) 00347

Definition: This field identifies the vaccine administered. NYSIIS accepts the CVX code, CPT code, Vaccine Trade Name, or Vaccine Group Code for the vaccine administered. If using the CVX code, give the CVX code in the first component and "CVX" in the third component. If using the CPT code, the vaccine group code or vaccine trade name, use components four through six. For example, give the CPT code in the fourth component and "CPT" in the sixth component, |^^^90700^DtaP^CPT|. If using vaccine group code, use "WVGC" as the name of the coding system. If using vaccine trade name, use "WVTN" as the name of the coding system. See the CE data type and HL7 - Table 0292 (CVX Codes), NYSIIS – Table CPT (CPT Codes), NYSIIS – Table WVGC (Vaccine Group Codes), and NYSIIS – Table WVTN (Vaccine Trade Names).

RXA-6 Administered Amount (NM) 00348

Definition: Dose Magnitude is the number of age appropriate doses administered. For example, a dose of 2 of a pediatric formulation would be adequate for an adult. NYSIIS and HL7 require this field to contain a value. However, a value of 1.0 will be stored in its place.

RXA-7 Administered units (CE) 00349

Definition: This field is conditional because it is required if the administered amount code does not imply units. This field must be in simple units that reflect the actual quantity of the substance administered. It does not include compound units. This field is not required if the previous field is populated with 999.

RXA-9 Administration Notes (CE) 00351

Definition: This field is used to indicate whether this immunization record is based on a historical record or was given by the reporting provider. It should contain the information source (see *NIP-defined Table 001 - Immunization Information Source)*. The first component shall contain the code, the second the free text and the third shall contain the name of the code system. (NIP001) Sending systems should be able to send this information. Receiving systems should be able to accept this information.

NYSIIS will recognize 00 to indicate new immunization administered/owned by the sending organization or 01 to indicate historical (not owned) record – source unspecified. If the source for a historical record is known, please use values 02 through 08 in Table NIP001.

For outgoing NYSIIS-Provider processing, Data Exchange will write out the corresponding immunization id in the second repeating segment.

NOTE: If this field is left blank, the immunization will be recorded as *owned* in NYSIIS. Immunizations that were *NOT* administered in your provider office should be recorded with the appropriate code from table NIP001.

NOTE: If an organization wishes to have NYSIIS inventory automatically decremented upon data exchange upload, RXA-9.1 must be populated with '00' for all owned immunizations. If any other value is used or the field is blank, inventory will not be decremented.

**To have the inventory decremention capability implemented for your organization(s) please contact NYSIIS staff.

RXA-10 Administering Provider (XCN) 00352

Definition: This field is intended to contain the name and provider ID of the person physically administering the pharmaceutical.

Previous Implementation Guides (2.3.1 and 2.4) also populated this field with local codes to indicate the name of the administering clinician (VEI) and ordering authority (OEI). NYSIIS will use components 2 – 7 to record the names. For incoming HL7 2.4 data loads, it is recommended that license information (LPN, RN, MD) be put in the 5th component (10.5) so it processes as the clinician suffix in NYSIIS.

|^GROBBERTS^DELIA^S^^MS^RN^^^^^^VEI^^~^SHAFFER^TERRENCE^P^^DR^MD^^^^^^OEI^^|

For HL7 version 2.5: The ordering and entering providers are indicated in the associated ORC segment.

RXA-11 Administered-at Location (LA2) 00353

Definition: The name and address of the facility that administered the immunization. Note that the components used are:
Component 4: The facility name/identifier.

Note: to decrement from inventory RXA- 11.4 must be populated with the same ID used in MSH 4.2. If this field is left blank or does not match then decrementing will not occur.

RXA-15 Substance Lot Number (ST) 01129

Definition: This field contains the lot number of the medical substance administered. It may remain empty only if the dose is from a historical record. NYSIIS does not support repetition of this field.
Note: If an organization wishes to have NYSIIS inventory automatically decremented upon data exchange upload, the lot number is required to be sent and must match exactly the lot number stored in the NYSIIS inventory.

Note: The lot number is the number printed on the label attached to the container holding the substance and on the packaging, which houses the container.

RXA-16 Substance Expiration Date (TS) 01130

Definition: This field contains the expiration date of the medical substance administered. It may remain empty if the dose is from a historical record.

Note: Vaccine expiration date does not always have a "day" component; therefore, such a date may be transmitted as YYYYMM.

RXA-17 Substance Manufacturer Name (CE) 01131

Definition: This field contains the manufacturer of the medical substance administered. For example, |AB^Abbott^ MVX^^^|. NYSIIS recommends use of the external code set MVX. "When using this code system to identify vaccines, the coding system component of the CE field should be valued as "MVX" not as "HL70227." NYSIIS does not support repetition of this field.

RXA-18 Substance/Treatment Refusal Reason (CE) 01136

Definition: This field contains the reason the patient refused the medical substance/treatment. Any entry in the field indicates that the patient did not take the substance. If this field is populated, RXA-20 - Completion Status must be populated with 'RE'. The vaccine that was offered should be recorded in RXA-5, with the number 0 recorded for the dose number in RXA-2. Do not record contraindications, immunities or reactions in this field. NYSIIS does not support repetition of this field.

Notes on Refusals:

a) NYSIIS only stores the fact that a refusal of a vaccine occurred, not a specific type of refusal, so all outgoing refusals will be designated as "PARENTAL DECISION." Please see the example below.
b) NYSIIS will not store refusals which do not have an 'applies to' date. It will write out multiple refusals for the same vaccine on different dates for those patients who have them.
c) The NYSIIS system will accept incoming refusals of the same vaccine on different dates and file them both. However, if they both have the same applies-to date, only one will be stored.
d) The sending organization will become the refusal owner. In general, only the organization who owns the refusal is permitted to edit it. However, in the case of parent and child organizations, the parent may edit the child's refusals and vice versa.

Here is a sample RXA segment for an MMR refusal given on the date 01/01/2007:
RXA|0|0|20070101|20070101|^^^MMR^MMR^WVGC|1.0|||||||||||00^PARENTAL REFUSAL^NIP002^^^

RXA-20 Completion Status (ID) 01223

Definition: This field indicates if the dose was successfully given. It must be populated with 'RE' if RXA-18 is populated. If a dose was not completely administered or if the dose was not potent this field may be used to label the immunization. For Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional and Organizational Extract, this field records the value 'PA' for doses which are partially administered. A partially administered dose refers to the scenario where the patient jumps and the needle breaks, resulting in an unknown quantity of vaccine entering the patient's system.

RXA-21 Action Code – RXA (ID) 01224

Definition: This field indicates the action expected by the sending system. This field has a usage of RE. If it is left empty, then receiving systems should assume that the action code is A.
At this time NYSIIS will not accept immunization record deletions.

RXA Segment Example

HL7 version 2.4

RXA|0|**999**|20050423|20050423|^^^90707^MMR^CPT|0.5|||00^New Immunization
|1234^SMITH^JOHN^J^RN^MR^^^^^^^VEI~34987^BROWN^JANET^J^MD^DR^^^^^^^OEI
|^^^CINEMA CLINIC||||CC69852||AB^ABBOTT^MVX

HL7 version 2.5.1

RXA|0|**1**|20050423|20050423|^^^90707^MMR^CPT|0.5|**ml**||00^New Immunization|
12345^SMITH^JOHN^J^RN^MR^^^^^^^VEI~3987^BROWN^JANET^J^MD^DR^^^^^^^OEI|^^^CINEMA
CLINIC||||CC69852|20071225|AB^ABBOTT^MVX

RXR-- Pharmacy/Treatment Route Segment

The Pharmacy/Treatment Route segment contains the alternative combination of route, site, administration device, and administration method that are prescribed as they apply to a particular order.

Table 5-21 Pharmacy/Treatment Route (RXR)

Pharmacy / Treatment Route (RXR)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Route of Administration**		**3**		**0162**		**CE**		**CE**	**If not entered – NYSIIS will assume based on default vaccine for vaccine group.**
1.1	**Route**	**RE**		**[1..1]**	**0162**	**R**	**ST**	**RE**	**ST**	
2	**Site**	**RE**	**60**	**[0..1]**	**0163**	**O**	**CE**	**RE**	**CWE**	**If not entered – NYSIIS will assume based on default vaccine for vaccine group.**

RXR Field Definitions

RXR-1 Route (CE) 00309

Definition: This field is the route of administration.
Refer to NYSIIS Table 0162 - Route of Administration for valid values.

RXR-2 Administration Site (CWE) 00310

Definition: This field contains the site of the administration route from NYSIIS Table 0163.

RXR Segment Example

RXR|IM|LA

OBX—Observation Result Segment

The observation result segment has many uses. It carries observations about the object of its parent segment. In the VXU/RSP it is associated with the RXA or immunization record. The basic format is a question (OBX-3) and an answer (OBX-5).

Table 5-7 Observation Segment (OBX)

Observation Segment (OBX)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Set ID-OBX**	**R**	**80**	**[1..1]**		**O**	**CE**	**R**	**SI**	
2	**Value type**	**R**	**7**	**[1..1]**	**0125**	**O**	**ST**	**R**	**ID**	
3	Observation Identifier*						ST		CE	This indicates what this observation refers to. It poses the question that is answered by OBX-5. *refer to table below
3.1	**Observation ID**	**RE**	**65536**	**[1..1]**		**R**	**Varies on Seq 2**	**RE**	**ST**	
3.2	Observation Text	CE	8	**[1..1]**		O	ST	CE	ST	
3.3	**Name of Coding System**	**C**	**6**	**[1..1]**		**R**	**ST**	**C**	**ID**	**If include OBX 3.1 must include OBX 3.3**
4	**Observation Sub-ID**	**RE**	**20**	**[1..1]**		**O**	**ST**	**RE**	**ST**	
5	**Observation Value**			**[1..1]**			**ID**		**varies**	**This is the observation value and answers the question posed by OBX-3**
5.1	**Observation Identifier**		**8**	**[1..1]**	**NIP004 NIP005 0064 NYS001**	**R**	**ST**	**RE**	**ST**	

Observation Segment (OBX)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
5.2	**Name or description of observation**	**CE**	**100**	**[1..1]**	**NIP004 NIP005 0064 NYS001**	**O**	**ST**	**RE**	**ST**	
5.3	**Name of Coding System**	**C**	**6**	**[1..1]**		**R**	**ID**	**C**	**ID**	
11	**Observation Result Status**	**R**	**20**	**[1..1]**	**0085**	**R**	**ST**	**R**	**ID**	**Constrain to F.**
14	Date/Time of Observation						ST		TS	
14.1	**Date**	**R**	**26**	**[1..1]**		**R**	**TS**	**R**	**TS**	

OBX Field Definitions

OBX-1 Set ID - OBX (SI) 00569

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.

OBX-2 Value Type (ID) 00570

Definition: This field contains the format of the observation value in OBX. If the value is CE then the result must be a coded entry. For incoming Provider-NYSIIS data, Data Exchange accepts CE for Coded Entry. However, for NYSIIS-Provider, the system will send out values of CE, TS, NM for Coded Entry, Timestamp, and Number respectively, depending on what is actually sent in OBX-5.

OBX-3 Observation Identifier (CE) 00571

Definition: This field contains a unique identifier for the observation. The format is that of the Coded Element (CE)
Please refer to the table below for the appropriate codes to report vaccine eligibility, contraindications, reactions, or adverse outcomes

Seq	Element name	VFC Eligibility	Vaccine Contraindications/ Precaution	Reaction to Imm	Vaccine Adverse Event Outcome
3	Observation Identifier				
3.1	Identifier	64994-7	30945-0	31044-1	31044-1
3.2	Text	Vaccine Eligibility	Contraindications	Reaction	Adverse Outcome
3.3	Name of Coding System	LN	LN	LN	LN

Please note in HL7 version 2.4, VFC eligibility may be reported in the PV1 segment.

For Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional and Organizational Extract, the system uses this field to send the LOINC Codes for **Series information** for combination vaccines. For each component of a combination vaccine, the system sends out a grouped set of two OBX segments. The first segment identifies the component antigen, and the second segment identifies the Series count. OBX-3 is used to identify whether the component antigen or the valid series count is noted in OBX-5 respectively.

A provider must request the capability to receive series or recommendations in batch bi-directional exchange or organizational extracts from NYSIIS. Otherwise only demographic and immunization history will be returned to the provider practice.

Please refer to the table below for the codes that will be SENT by NYSIIS in bi-directional exchange:

Seq	Element name	Component Vaccine Type	Dose Number in Series	Vaccine Due Next	Date Vaccine Due	Vaccine Due Next dose Number	Earliest Date to Give	Reason applied
3	Observation Identifier							
3.1	Identifier	38890-0	38890-0 & 30973-2	30979-9	30979-9 & 30980-7	30979 & 30973-2	30979-9 & 30981-5	30979-9 & 30982-3
3.2	Text	Component Vaccine Type	Dose number in series	Vaccine Due Next	Date Vaccine Due	Vaccine Next Due Dose Number	Earliest Date to Give	Reason applied by forecast logic to project this vaccine
3.3	Name of Coding System	LN	LN	LN	LN	LN	LN	LN

OBX-4 Observation Sub-ID (ST) 00572

Definition: This field is used to group related observations by setting the value to the same number. For example, recording VIS date and VIS receipt date for a combination vaccination requires 6 OBX segments. One OBX would indicate the vaccine group. It would have a pair of OBX indicating the VIS publication date and the VIS receipt date. These would have the same OBX-4 value to allow them to be linked. The second set of three would have another OBX-4 value common to each of them.

This field may be used to link related components of an observation. Each component of the observation would share an Observation sub-id.
For example:
OBX|1|LN|^observation 1 part 1^^^^^|1|…
OBX|2|LN|^ observation 1 part 2^^^^^|1|…
OBX|3|DT|^a different observation^^^^^|2|…

Example:
OBX|1|CE|38890-0^COMPONENT VACCINE TYPE^LN|1|45^HEP B, NOS^CVX|||||F|<CR> **OBX**|2|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|1|20010711|||||F|<CR> **OBX**|3|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|1|19901207|||||F|<CR> **OBX**|4|CE|38890-0^COMPONENT VACCINE TYPE^LN|2|17^HIB,NOS^CVX|||||F|<CR> **OBX**|5|TS|29768-9^DATE VACCINE INFORMATION STATEMENT PUBLISHED^LN|2|19981216|||||F|<CR> **OBX**|6|TS|29769-7^DATE VACCINE INFORMATION STATEMENT PRESENTED^LN|2|19901207|||||F|<CR>

Also used by NYSIIS, for sending out Series Information and Recommendations, the number in this field groups together related OBX segments. For example, a single recommendation for DTaP is sent in a grouped set of five OBX segments, all with the same sub-identifier in OBX-4. The sub-identifier increments sequentially.

For example, NYSIIS sends out five grouped OBX segments for each recommendation. The following is a single MMR recommendation, all sharing the same Observation sub-ID of 4 in OBX-4.

OBX|16|CE|30979-9^Vaccines Due Next^LN^^^|4|03^MMR^CVX^90707^MMR^CPT|||||F|
OBX|17|TS|30979-9&30980-7^Date Vaccine Due^LN^^^|4|20050407|||||F|
OBX|18|NM|30979-9&30973-2^Vaccine due next dose number^LN^^^|4|2|||||F|
OBX|19|TS|30979-9&30981-5^Earliest date to give^LN^^^|4|20021105|||||F|
OBX|20|CE|30979-9&30982-3^Reason applied by forecast logic to project this vaccine^LN^^^|4|^ACIP schedule|||||F|

OBX-5 Observation Value (varies) 00573

Definition: Text reporting Contraindication, Precaution, or Immunity (NIP004), Reaction (NYS001), or Event Consequence (NIP005). NYSIIS has imposed a CE data type upon this field.

The first component (5.1) is required for text reporting Contraindication, Precaution, or Immunity (NIP004), Reaction (NYS001), or Event Consequence (NIP005). (e.g., |PERTCONT^Pertussis contra^NYSIIS^^^|)

The second component (5.2) is text summarizing contraindication, reaction or event. For component 5.3 use 'NIP004' for contraindication; 'NIP005' for reaction; 'NYS001' for adverse events; HL70064 for VFC Eligibility

OBX|1|CE|64994-7^vaccination eligibility^LN|1|V04^VFC eligible A/AN^HL70064|||||F|||20090415<CR>

OBX|1|CE|30945-0^Contraindication^LN||21^acute illness^NIP004^^^||||||F|||20090415<CR>
OBX|1|CE|30945-0^Contraindication^LN||33A^history of varicella^NIP004^^^||||||F|||20080715<CR>
OBX|1|CE|31044-1^Reaction^LN||HYPOTON^hypotonic^NYS001^^^||||||F|||20090415<CR>
OBX|1|CE|30944-1^Adverse Outcome^LN||E^er room^NIP005^^^||||||F|||20090415<CR>

For Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional, and Organizational Extract, this field holds the value observed for series information and recommendations. The value corresponds to the LOINC in OBX-3. For example, for recommendations, the fourth OBX segment is for the Earliest date. OBX-3 contains the code 30981-5 and OBX-5 contains the actual earliest date as follows:

OBX|4|TS|30981-5^Earliest date to give^LN^^^|4|20010519|||||F|

Please see the end of the OBX field notes for complete examples of how NYSIIS sends Series for combination vaccines and Recommendations.

OBX-11 Observation Result Status (ID) 00579

Definition: This field contains the observation result status. The expected value is F or final.

OBX-14 Date/Time of the Observation (TS) 00582

Definition: Records the time of the observation. It is the physiologically relevant date-time or the closest approximation to that date-time of the observation. NYSIIS ignores any time component.

NOTE 1: The only valid OBX Observation Identifier (OBX-03) for an **ADT^A31** message type is Contraindication/Precaution (30945-0).
NOTE 2: All OBX messages with an observation identifier of Vaccination Contraindication/Precaution will be returned in an outgoing file in a separate ADT message for the patient.

NOTE 3: Complete Example of NYSIIS's use of OBX to send Series Information for Combination Vaccines

A single dose of combination vaccine may have a different series dose count for each component. For Batch HL7 NYSIIS-Provider, Batch HL7 Bi- directional, and Organizational Extract, the system sends a grouped set of two OBX segments for each component in a combination vaccine. For example, a single dose of Dtap-Hib is sent as below. The first and second OBX segments express the dose count of 1 for DTaP. The third and fourth OBX segments express the dose count of 3 for Hib.

RXA|0|999|19810807|19810807|50^DtaP-Hib^CVX^90721^DtaP-Hib^CPT|1.0|||01^^^^^~32851914^NYSIIS immunization id^IMM_ID^^^||||||||||
OBX|1|CE|38890-0^COMPONENT VACCINE TYPE^LN|1|20^DTaP^CVX^90700^DTaP^CPT||||||F|
OBX|2|NM|38890-0^Dose number in series^LN|1|1||||||F| **OBX**|3|CE|38890-0^COMPONENT VACCINE TYPE^LN|2|17^Hib^CVX^90737^Hib^CPT||||||F|
OBX|4|NM|38890-0^Dose number in series^LN|2|3||||||F|

NOTE 4: Complete Example of NYSIIS's use of OBX to send Recommendation Information

For Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional, and Organizational Extract, where the provider practice has indicated to NYSIIS staff that they wish to receive recommendations, a single recommendation is sent in a grouped set of five OBX-segments, which follow a place-holder RXA segment that does not represent any actual immunization administered to the patient. The five OBX segments in order express the Vaccine of the recommendation, the recommended date, the dose of the next vaccine due, the earliest date to give, and the reason for the recommendation, which is always the ACIP schedule.

RXA|0|0|20010407|20010407|998^No Vaccine Administered^CVX|999|0 **OBX**|1|CE|30979-9^Vaccines Due Next^LN^^^|1|20^DTP/aP^CVX^90700^DTP/aP^CPT||||||F|
OBX|2|TS|30980-7^Date Vaccine Due^LN^^^|1|20010607||||||F| **OBX**|3|NM|30973-2^Vaccine due next dose number^LN^^^|1|1||||||F| **OBX**|4|TS|30981-5^Earliest date to give^LN^^^|1|20010519||||||F|
OBX|5|CE|30982-3^Reason applied by forecast logic to project this vaccine^LN^^^|1|^ACIP schedule||||||F|
OBX|11|CE|30979-9^Vaccines Due Next^LN^^^|3|45^HepB^CVX^90731^HepB^CPT||||||F|
OBX|12|TS|30980-7^Date Vaccine Due^LN^^^|3|20010407||||||F|
OBX|13|NM|30973-2^Vaccine due next dose number^LN^^^|3|1||||||F|
OBX|14|TS|30981-5^Earliest date to give^LN^^^|3|20010407||||||F|
OBX|15|CE|30982-3^Reason applied by forecast logic to project this vaccine^LN^^^|3|^ACIP schedule||||||F|

The ability to send Recommendations in these grouped OBX segments applies to HL7 Version 2.4 and HL7 2.5.1. It applies to Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional, Real-time HL7, and Organizational Extract. Some configuration is needed to send

Recommendations in this way. On the Manage Data Exchange Screen, the **Send HL7 Series/Recommend** option displays, and the user must select either “Recommendations Only” or “Both” from the pick list.

The Send Series/Recommend option is also available for Organizational Extract upon request to NYSIIS staff.
If the provider does not request series or recommendations in the organizational extract then the system will omit sending the grouped

BTS—Batch Trailer Segment

Table 5-8 Batch Trailer Segment (BTS)

Batch Trailer Segment (BTS)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Batch Message Count**	**O**	**10**	**[1..1]**		**R**	**ST**	**R**	**ST**	
2	Batch Comment	O	80	[0..1]		O	ST	O	ST	Not defined by CDC IG, see HL7 definition.

BTS-1 - BTS-3 Not anticipated to be used for immunization messages.

BTS-1 Batch Message Count

Definition: This field contains the count of the individual messages contained within the batch.

BTS-2 Batch Comment/Type (ST) 00090 (HL7 Definition)

Definition: This field is a comment field that is not further defined in the HL7 protocol.
Free text, which can be included for convenience, has no effect on processing

BTS-3 Batch Totals/Type (NM) 00095 (HL7 Definition)

Definition: We encourage new users of this field to use the HL7 Version 2.4/2.5 data type of NM and to define it as "repeating." This field contains the batch total. If more than a single batch total exists, this field may be repeated.

BTS Segment Example

BTS|1

FTS—File Trailer Segment

Table 5-9 File Trailer Segment (FTS)

File Trailer Segment (FTS)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**File Batch Count**	**O**	**10**	**[0..1]**		**R**	**NM**	**R**	**NM**	
2	File Trailer Comment	O	80	[0..1]		O	ST	O	ST	

FTS field definitions

FTS-1 File Batch Count

Definition: The number of batches contained in this file. NYSIIS normally sends one batch per file and discourages sending multiple batches per file.

FTS-2 File Trailer Comment

Definition: Free text, which may be included for convenience, but has no effect on processing.

FTS Segment Example

FTS|1

MSA—Message Acknowledgement Segment

Table 5-10 Message Acknowledgement Segment (MSA)

Message Acknowledgement Segment (MSA)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Acknowledgment Code**	**R**	**2**	**[1..1]**	**0008**	**R**	**ID**	**R**	**ID**	
2	**Message Control ID**	**R**	**20**	**[1..1]**		**R**	**ST**	**R**	**ST**	
3	Text Message	O	80	[0..1]		O	ST	O	ST	

MSA Field Definitions

MSA-1 Acknowledgment Code (ID) 00018

Definition: This field contains an acknowledgment code. See message processing rules. AA (Application Accept) means the message was processed normally. AE (Application Error) means an error prevented normal processing. An error message will be put in MSA-3, and for ACK messages the optional ERR segment will be included.

MSA-2 Message Control ID (ST) 00010

Definition: This field contains the message control ID of the message sent by the sending system. It allows the sending system to associate this response with the message for which it is intended. This field echoes the message control id sent in MSH-10 by the initiating system.

MSA-3 Text Message (ST) 00020

Definition: This field contains the text message of the error message, used when MSA-1 does not have the normal value of AA.

MSA Segment Example

MSA|AA|DTP24|Record rejected. CPT Code, Vaccine Group and Tradename are not a valid combination.

ERR—Error Segment

Note that the ERR-1 field is **not** supported in Version 2.5.1. It may continue to be used for versions 2.4 and earlier as specified in the earlier IG. It is the ONLY field that will be included in an ERR segment if the MSH indicates that the message with the error was a version prior to 2.5.

Table 5-11 Error Segment (ERR)

Error Segment (ERR)										
SEQ	Element Name	CDC IG Usage	NYSIIS HL7 Version 2.4/2.5.1			NYSIIS HL7 VERSION 2.4		NYSIIS HL7 VERSION 2.5.1		COMMENTS/CONSTRAINT
			NYSIIS Len	NYSIIS Cardinality	NYSIIS Value Set (Table)	NYSIIS Usage	NYSIIS Data Type	NYSIIS Usage	NYSIIS Data Type	
1	**Error Code and Location**	**O**		**[0..0]**		**R**	**ST**	-	-	
1.1	**Segment ID**	**O**	**80**	**[0..1]**		**0**	**ST**	**R**	**ST**	
1.2	**Sequence**			**[0..1]**		**R**	**NM**	**R**	**NM**	
1.3	**Field Position**			**[0..1]**		**O**	**NM**	**O**	**NM**	
1.4	**Code Identifying Error**			**[0..1]**	**0357**	**O**	**NM**	**O**	**NM**	
2	**Error Location**	**RE**		**[0..1]**[2]		**-**	**-**	**RE**	**ERL**	**Only applicable to 2.5**
3	**HL7 Error Code**	**R**		**[1..1]**	**0357**	**-**	**-**	**R**	**CWE**	**Only applicable to 2.5**
3.1	**Error Code**			**[1..1]**	**0357**	**-**	**-**	**R**	**NM**	**Only applicable to 2.5**
3.2	**Description**			**[1..1]**	**0357**	**-**	**-**	**R**	**ST**	**Only applicable to 2.5**
3.3	**Table Name**			**[1..1]**	**0357**	**-**	**-**	**R**	**ST**	**Only applicable to 2.5 – "HL70357"**
4	**Severity**	**R**		**[1..1]**	**0516**	**-**	**-**	**R**	**ID**	**Only applicable to 2.5**

ERR field definitions:

Note: ERR-1 is not supported for use in messages starting with version 2.5.

For version 2.4

<segment ID (ST)>^<sequence (NM)>^<field position (NM)>^<field component ordinal number (NM)

The first component (1.1) identifies the segment ID containing the error. The second component (1.2) identifies the input file line number of the segment containing the error. The third component (1.3) identifies by ordinal number the field containing the error. The fourth component (1.4) identifies, by ordinal number, the field component containing the error (0 is used if not applicable) The remaining five components of the CE data type are not valued and their '^' separators are not generated. Note that error text is transmitted in field MSA-3. For example, if the NK1 segment is missing a mandatory field:

ERR|NK1^10^2^1

This error message identifies the NK1 segment occurring on line 10 of the input file whose mandatory second field (Name) is missing the mandatory 1st component (Family Name).

ERR-2 Error Location (ERL) 01812

Definition: Identifies the location in a message related to the identified error, warning or message. Each error will have an ERR, so no repeats are allowed on this field. This field may be left empty if location is not meaningful. For example, if is unidentifiable, an ERR to that effect may bereturned.

ERR-3 HL7 Error Code (CWE) 01813

Definition: Identifies the HL7 (communications) error code. Refer to HL7 Table 0357 – Message Error Condition Codes for valid values.

ERR-4 Severity (ID) 01814

Definition: Identifies the severity of an application error. Knowing if something is Error, Warning or Information is intrinsic to how an application handles the content. Refer to HL7 Table 0516 - Error severity for valid values. If ERR-3 has a value of "0", ERR-4 will have a value of "I".

ERR Segment Example

ERR|RXA^1^5

6. Messages for Transmitting Immunization Information

This chapter describes each of the messages used to accomplish the use cases described in Chapter 3. These messages are built from the segments described in Chapter 6, Segments and Message Details. The Segments are built using the Data Types specified in Chapter 5. Readers are referred to these chapters for specifics on these components. Issues related to segments and fields that are message specific will be addressed in this chapter.

Table 6-1-Supported Messages

Message	Purpose	Related Messages	Associated Profiles	*NYSIIS* Supported
VXU	Send Immunization History	ACK	VXU^V04	Yes
QBP	Request Immunization History and Request Person Id	RSP	Z34^CDC	Yes Specifications detailed in Query IG.
RSP	Respond to Request for Immunization Record and Respond to Request for Person Id	QBP	Z31^CDC Z32^CDC	Yes Specifications detailed in Query IG.
ACK	Send Message Acknowledgement	VXU, QBP		Yes
ADT	Send Person Demographic Data	ACK		No

Send Immunization History--VXU

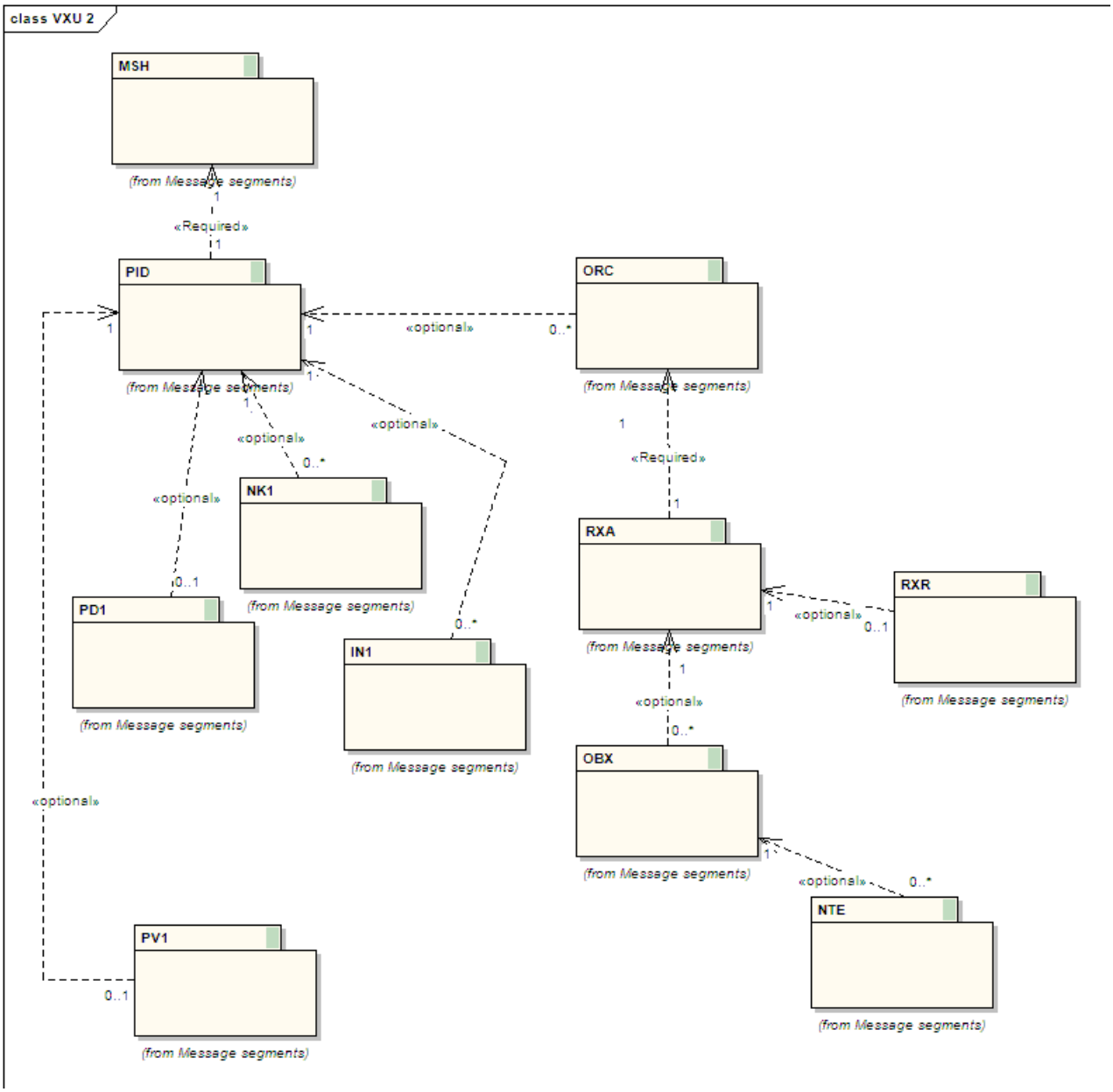
Systems may send unsolicited immunization records using a VXU. This may be a record that is new to the receiving system or may be an update to an existing record. The following table lists the segments that are part of a VXU. See Appendix B for detailed activity diagrams and example messages that illustrate the processing of this message.

Table 6-2--VXU Segment Usage

Segment	CDC IG Cardinality	*NYSIIS* Cardinality	CDC IG Usage	*NYSIIS* Usage	Comment
MSH	[1..1]	[1..1]	R	R	Every message begins with an MSH.
PID	[1..1]	[1..1]	R	R	Every VXU has one PID segment.
PD1	[0..1]	[0..1]	RE	RE	Every PID segment in VXU may have one or less PD1 segment. Required for over 18.

Segment	CDC IG Cardinality	*NYSIIS* Cardinality	CDC IG Usage	*NYSIIS* Usage	Comment
NK1	[0..*]	[0..1*]	RE	RE	The PID segment in a VXU may have zero or more NK1 segments.
PV1	[0..1]	[0..1]	RE	RE	The PID segment in a VXU may have zero or one PV1 segment. Subsequent messages regarding the same patient/client may have a different PV1 segment.
Begin Order group					**Each VXU may have zero or more Order groups**
ORC	[1..*]	[1..1*]	R	R	The PID segment in a VXU may have one or more ORC segments.
RXA	[1..1]	[1..1]	R	R	Each ORC segment in a VXU must have one RXA segment. Every RXA requires an ORC segment.
RXR	[0..1]	[0..1]	RE	RE	Every RXA segment in a VXU may have zero or one RXR segments.
OBX	[0..*]	[0..1*]	RE	RE	Every RXA segment in a VXU may have zero or more OBX segments.
NTE	[0..1]	[0..1]	RE	RE	Every OBX segment in a VXU may have zero or one NTE segment.
End Order Group					

The following diagram illustrates the relationships of the segments. The cardinality is displayed on the association links. Note that in order for a segment to be present in a message, it must be associated with any parent segments. For example, the NTE segment can only be included in a message as a sub-segment to an OBX. Further, the OBX can only be present as a child of an RXA. Finally, a segment that is required and a child of another segment must be present if the parent is present. If the parent is not present, it is NOT permitted.


class VXU 2
MSH
(from Message segments)
1
«Required»
1
PID
ORC
1
1
«optional»
0..*
(from Message segments)
(from Message segments)
1
1
«optional»
«optional»
0..*
«optional»
NK1
(from Message segments)
0..1
PD1
(from Message segments)
0..*
IN1
(from Message segments)
1
«Required»
1
RXA
(from Message segments)
1
«optional»
0..1
RXR
(from Message segments)
1
«optional»
0..*
OBX
(from Message segments)
1
«optional»
0..*
NTE
(from Message segments)
«optional»
0..1
PV1
(from Message segments)

Acknowledging a Message—ACK

The ACK returns an acknowledgement to the sending system. This may indicate errors in processing.

Table 6-3 Message Acknowledgement Segment (ACK)

Segment	CDC IG Cardinality	*NYSIIS* Cardinality	CDC IG Usage	*NYSIIS* Usage	Comment
MSH	(1..1)	(1..1)	R	R	
MSA	(1..1)	(1..1)	R	R	
[{ERR}]	(0..*)	(0..1*)	RE	RE	Include if there are errors.

Note: For the general acknowledgment (ACK) message, the value of MSH-9-2-Trigger event is equal to the value of MSH-9-2-Trigger event in the message being acknowledged. The value of MSH-9-3-Message structure for the general acknowledgment message is always ACK.

Query and Response Profile (QBP/RSP)

Query specifications available in separate documentation

Appendix A: See Separate Code Table Document

Appendix B: Guidance on Usage and Example Messages

VXU Example 1 v2.4

FHS|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||filename1.hl7|WEEKLY HL7 UPLOAD|00009972
BHS|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||||00010223
MSH|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||VXU^V04|00000123|P|**2.4**|||ER
PID|||23LR999^^^^PI||MAGUIRE^JERRY^M^JR|CARRINGTON^ALEXIS|20010227|M||2106-3|123 HOLLYWOOD BLVD^^ALBANY^NY^12201^US^^^NY001||||||||||||Y|2
PD1||||||||||02|Y||||A
NK1|1|CARRINGTON^ALEXIS|MTH^Mother^HL70063|123 HOLLYWOOD BLVD^^ALBANY^NY^12201^US^^^NY001|(518)123-4567
NK1|2|MAGUIRE^JERRY|FTH^Father^HL70063
PV1||R|||||||||||||||||V01^20050423|
RXA|0|**999**|20050423|20050423|03^^CVX^90707^MMR^CPT|0.5|||00^^NIP002|123456789^SMITH^JOHN^J^RN^MR^^^^^^^^VEI~321654987^BROWN^JANET^J^MD^DR^^^^^^^OEI|^^^CINEMA CLINIC||||CC69852||AB^ABBOTT^MVX
RXR|IM|LA
OBX|1|CE|31044-1^Reaction^LN|1|CRYING^CRYING^NYS001|||||F|||20050423
BTS|1
FTS|1

Note:
Patient is under 19 therefore the protection indicator (PD1-12.1) would not be needed as they are visible to other providers. This has been added for illustration. No Financial information in OBX in v2.4

VXU Example 2 v2.5.1

FHS|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||filename1.hl7|WEEKLY HL7 UPLOAD|00009972
BHS|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||||00010223
MSH|^~\&|MYEHR|CINEMA CLINIC^3681||NYSIIS|20120302||VXU^V04^**VXU_V04**|00000123|P|**2.5.1**|||ER
PID|||23LR999^^^^PI||MAGUIRE^JERRY^M^JR^L|CARRINGTON^ALEXIS|20010227|M||2106-3|123 HOLLYWOOD BLVD^^ALBANY^NY^12201^US^^^NY001||||||||||||Y|2
PD1||||||||||02|N||||A
NK1|1|CARRINGTON^ALEXIS|MTH^Mother^HL70063|123 HOLLYWOOD BLVD^^ALBANY^NY^12201^US^^^NY001|(518)123-4567
NK1|2|MAGUIRE^JERRY|FTH^Father^HL70063
ORC| RE||27312005^DCS|||||||^GREEN^CASSANDRA||^BROWN^JANET^J^^DR
RXA|0|**1**|20050423|20050423|03^^CVX^90707^MMR^CPT|0.5|**ml**||00^**New Immunization Administered^NIP002**|123456789^SMITH^JOHN^J^RN^MR^^^^^^^VEI~321654987^BROWN^JANET^J^MD^DR^^^^^^^OEI|^^^CINEMA CLINIC||||CC69852|**20061212**|AB^ABBOTT^MVX
RXR|IM|LA
OBX|1|CE|**64994-7^vaccine fund pgm elig cat^LN|1|V01^Not VFC eligible ^HL70064**||||||F|||20050423
OBX|2|CE|31044-1^Reaction^LN|1|CRYING^CRYING^NYS001|||||F|||20050423
BTS|1
FTS|1

Note:

Patient is under 19 therefore the protection indicator (PD1-12.1) would not be needed as they are visible to other providers. However in version 2.5.1 "Y" would mean that consent was required for this patient. This has been added for illustration.

Information to transmit	Data value to be entered	Segment	HL7 v2.4	HL7 v2.5.1
Patient 1				
File Header Segment (FHS)		**FHS Segment**		
• Field Separator	|	FHS-1.1	✓	✓
• Encoding Characters	^~\&	FHS-2	✓	✓
• Sending Application	MyEHR	FHS-3.1	✓	✓
• Sending Facility's NYSIIS Name	Cinema Clinic	FHS-4.1	✓	✓
• Sending Facility's NYSIIS ID	3681	FHS-4.2	✓	✓
• Receiving Facility Name	NYSIIS	FHS-6.1	✓	✓
• Date of Message	March 02, 2002	FHS-7.1	✓	✓
• Filename	filename1.hl7	FHS-9.1	✓	✓
• File Header Comment	WEEKLY HL7 UPLOAD	FHS-10.1	✓	✓
• File Control ID	00009972	FHS-11.1	✓	✓
Batch Header Segment (BHS)		**BHS Segment**		
• Batch Field Separator	|	BHS-1.1	✓	✓
• Batch Encoding Characters	^~\&	BHS-2	✓	✓
• Batch Sending Application Name	MyEHR	BHS-3.1	✓	✓
• Batch Sending Facility's NYSIIS Name	Cinema Clinic	BHS-4.1	✓	✓
• Sending Facility's NYSIIS ID	3681	BHS-4.2	✓	✓
• Receiving Facility Name	NYSIIS	BHS-6.1	✓	✓
• Date of Batch	March 02, 2002	BHS-7.1	✓	✓
• Batch Control ID	00010223	BHS-11.1	✓	✓
Message Header (MSH)		**MSH Segment**		
• Field Separator	|	MSH-1.1	✓	✓
• Encoding Characters	^~\&	MSH-2	✓	✓
• Sending Application	MyEHR	MSH-3.1	✓	✓
• Sending Facility's NYSIIS Name	Cinema Clinic	MSH-4.1	✓	✓
• Sending Facility's NYSIIS ID	3681	MSH-4.2	✓	✓
• Receiving Facility Name	NYSIIS	MSH-6.1	✓	✓
• Date of Message	March 02, 2002	MSH-7.1	✓	✓
• Message	VXU	MSH-9.1	✓	✓
• Message Trigger Event	V04	MSH-9.2	✓	✓

• **Message Structure**	**VXU_V04**	**MSH-9.3**	N/A	✓
Information to transmit	**Data value to be entered**	**Segment**	**HL7 v2.4**	**HL7 v2.5.1**
• Message control ID	00000123	MSH-10.1	✓	✓
• Processing ID	P	MSH-11.1	✓	✓
• Version (HL7)	2.4 (or 2.5.1)	MSH-12.1	✓	✓
• Accept Acknowledgement Type	ER	MSH-15.1	✓	✓
Patient Identifying and Demographic Info. (PD1)		**PID Segment**		**PID Segment**
• Chart Number (ID on Cinema Clinic's system)	23LR999	PID-3.1	✓	✓
• Identifier Type Code	PI	PID-3.5	✓	✓
• Family Name	MAGUIRE	PID-5.1	✓	✓
• Given (First) Name	JERRY	PID-5.2	✓	✓
• Middle Name OR Initial	M	PID-5.3	✓	✓
• Suffix	JR	PID-5.4	✓	✓
• **Name Type Code**	**L**	**PID-5.7**	**N/A**	✓
• Mother's maiden family name	CARRINGTON	PID-6.1	✓	✓
• Mother's First Name	ALEXIS	PID-6.2	✓	✓
• Birth date	February 27, 1996	PID-7.1	✓	✓
• Sex	M	PID-8.1	✓	✓
• Race	2106-3	PID-10.1	✓	✓
• Street Address	123 HOLLYWOOD BLVD	PID-11.1	✓	✓
• City	ALBANY	PID-11.3	✓	✓
• State	NY	PID-11.4	✓	✓
• Zip Code	12222	PID-11.5	✓	✓
• County Code	NY001	PID-11.9	✓	✓
• Multiple Birth Indicator	Y (patient was born as part of a multiple birth)	PID-24.1	✓	✓
• Birth Order	2 (second birth of a multiple birth)	PID-25.1	✓	✓
Additional Patient Demographic Information (PD1)		**PD1 Segment**		
• Publicity Code	02	PD1-11.1	✓	✓
• Protection Indicator (in v2.4, Yes means patients over 19 are visible to other provider but in v2.5.1 Yes means they are not visible)	Y	PD1-12.1	✓	✓
• Patient Registry Status	A (client is active in the registry)	PD1-16.1	✓	✓

Information to transmit	Data value to be entered	Segment	HL7 v2.4	HL7 v2.5.1
• **Responsible Person (parent or other person who cares for patient)**		**NK1 Segment**		
• Set ID	1	NK1-1.1	✓	✓
• Family Name	CARRINGTON	NK1-2.1	✓	✓
• Given Name	ALEXIS	NK1-2.2	✓	✓
• Relationship to patient	MTH	NK1-3.1	✓	✓
• Text (relationship)	MOTHER	NK1-3.2	✓	✓
• Name of coding system	HL70063	NK1-3.3	✓	✓
• Address	123 HOLLYWOOD BLVD ALBANY, NY 12222, NY001	NK1-4	✓	✓
• Phone	(518) 123-4567	NK1-5	✓	✓
Responsible Person #2		**NK1 Segment**		
• Set ID	2	NK1-1.1	✓	✓
• Family Name	MAGUIRE	NK1-2.1	✓	✓
• Given Name	JERRY	NK1-2.2	✓	✓
• Relationship to patient	FTH	NK1-3.1	✓	✓
• Text (relationship)	FATHER	NK1-3.2	✓	✓
• Name of coding system	HL70063	NK1-3.3	✓	✓
***Financial Information** --- v2.4 (and 2.3.1) use PV1 segment , v2.5.1 uses OBX segment		**PV1 Segment / OBX Segment**		
• Set ID	1	OBX-1.1	**N/A**	✓
• Value Type	CE	OBX-2.1	**N/A**	✓
• Observation ID	64994-7	OBX-3.1	**N/A**	✓
• Observation Text	*VACCINE FUND PGM ELIG CAT*	OBX-3.2	**N/A**	✓
• Name of Coding System	LN	OBX-3.3	**N/A**	✓
• Observation Identifier	V01	OBX-5.1	**N/A**	✓
• Name of Observation	Not VFC elig	OBX-5.2	**N/A**	✓
• Name of Coding System	HL70064	OBX-5.3	**N/A**	✓
• Observation Result	F	OBX-11.1	**N/A**	✓
• Date of Observation	July 23, 1999	OBX-14.1	**N/A**	✓
• **Patient Class**	**R**	**PV1-2.1**	✓	**N/A**
• **Financial Class (VFC status)**	**V01**	**PV1-20.1**	✓	**N/A**
• **Effective Date**	**April 23, 2005**	**PV1-20.2**	✓	**N/A**
Order Request Segment (ORC)		**ORC Segment**		

• Order Control	**RE**	**ORC-1.1**	**N/A**	✓
Information to transmit	**Data value to be entered**	**Segment**	**HL7 v2.4**	**HL7 v2.5.1**
• **Entity Identifier**	**27311999**	**ORC-3.1**	N/A	✓
• **Name**	**DCS**	**ORC-3.2**	N/A	✓
• **Entered By Last Name**	**Green**	**ORC-10.2**	N/A	✓
• **Entered By First Name**	**Cassandra**	**ORC-10.3**	N/A	✓
• **Family Name (Administering Provider)**	**Brown**	**ORC-12.2**	N/A	✓
• **Given name**	**Janet**	**ORC-12.3**	N/A	✓
• **Middle Name or Initial**	**J**	**ORC-12.4**	N/A	✓
• **Prefix**	**DR.**	**ORC-12.6**	N/A	✓
Immunization (RXA)		**RXA Segment**		**RXA Segment**
• Sub-ID counter	0	RXA-1.1	✓	✓
• Administration Sub-ID counter	999	RXA-2.1	✓	✓
• Date Start of Administration	April 23, 2005	RXA-3.1	✓	✓
• Date End of Administration	April 23, 2005	RXA-4.1	✓	✓
• Vaccine Code	90707	RXA-5.4	✓	✓
• Code Text	MMR	RXA-5.5	✓	✓
• Name of Coding System	CPT	RXA-5.6	✓	✓
• Administered amount (Dose size)	0.5	RXA-6.1	✓	✓
• **Administered Units**	**ml**	**RXA-7.1**	**N/A**	✓
• Immunization information source.	00	RXA-9.1	✓	✓
• **Immunization information source. (Text)**	**New Immunization administered**	**RXA-9.2**	**N/A**	✓
• Family Name (Administering Provider)	Smith	RXA-10.2	✓	✓
• Given name	John	RXA-10.3	✓	✓
• Middle Name or Initial	J	RXA-10.4	✓	✓
• Suffix	RN	RXA-10.5	✓	✓
• Prefix	MR	RXA-10.6	✓	✓
• Administering Identifier type code	VEI	RXA-10.13	✓	✓
RXA-10 Segment can be repeated to show Ordering Provider (who order the vaccine if applicable)				
• Family Name (Ordering Provider)	Brown	RXA-10.2	✓	✓
• Given name	Janet	RXA-10.3	✓	✓
• Middle Name or Initial	J	RXA-10.4	✓	✓
• Suffix	MD	RXA-10.5	✓	✓

Information to transmit	Data value to be entered	Segment	HL7 v2.4	HL7 v2.5.1
• Prefix	DR	RXA-10.6	✓	✓
• Degree		RXA-10.7	✓	✓
• Administering Identifier type code	OEI	RXA-10.13	✓	✓
• Administering Organization	Cinema Clinic	RXA-11.4	✓	✓
• Substance Lot Number	CC69852	RXA-15.1	✓	✓
• **Substance Expiration Date**	**December 12,2006**	**RXA-16.1**	**N/A**	✓
• Substance Manufacturers Identifier	AB	RXA-17.1	✓	✓
• Manufacturer Name	Abbott	RXA-17.2	✓	✓
• Name of Coding System	MVX	RXA-17.3	✓	✓
Route of Administration (RXR)		**RXR Segment**		
• Route of Administration	IM	RXR-1.1	✓	✓
• Site of Administration	LA	RXR-2.1	✓	✓
Reaction --- Observation Result Segment (OBX)		**OBX Segment**		
• Set ID	2***	OBX-1.1	✓	✓
• Value Type	CE	OBX-2.1	✓	✓
• Observation Identifier	31044-1	OBX-3.1	✓	✓
• Observation Text	Reaction	OBX-3.2	✓	✓
• Name of Coding System	LN	OBX-3.3	✓	✓
• Observation Sub ID	1	OBX-4.1	✓	✓
• Observation Identifier	Crying	OBX-5.1	✓	✓
• Name or description of observation	Crying	OBX-5.2	✓	✓
• Name of Coding System	NYS001	OBX-5.3	✓	✓
• Observation Result Status	F	OBX-11.1	✓	✓
• Date	April 23, 2005	OBX-14.1	✓	✓
Batch Trailer Segment (BTS)		**BTS Segment**		
• Batch Message Count	1	BTS-1.1	✓	✓
File Trailer Segment (FTS)		**FTS Segment**		
• File Batch Count	1	FTS-1.1	✓	✓