

Community-wide Interoperable EHRs Immunization Reporting via EHRs Use Case

New York State Immunization Information System (NYSIIS)

Use Case Overview

Version 1.0

Prepared by
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1. Description of NYSIIS Use Case

Background

- In August 2006, NYS enacted legislation (PHL 2168) requiring any health care provider who administers immunizations to individuals under the age of 19 to report that shot within 14 days. The legislation allow for New York City to maintain its Citywide Immunization Registry (CIR). Providers in NYC are required to report to CIR and providers in the rest of the state report to the New York State Immunization Information System (NYSIIS). CIR and NYSIIS will exchange information between jurisdictions.
- In December of 2006, NYS contracted with EDS to develop and implement a web based immunization information system (IIS) to be operational by January 2008. This application will have two means for health care provider to be able to meet the legislative mandate to report. First, they can enter directly into the web application, or second, they may send an electronic extract from other systems they may use that can be imported by the new NYSIIS web application.

Goals:

- Year 1-2: Immunizations administered in NYS to individuals under 19 will be reported within 14 days of administration
- Year 3-5: Providers will be able to submit queries to NYSIIS to search for an individual's immunization history.
- Key principles that the project will abide by include:
 - Data exchange and queries will adhere to the file specifications provided by the state.

2. Scope of NYSIIS Use Cases

This use case will present the NYSIIS work flow, perspectives, pre and post conditions for reporting of an immunization event and submission of queries. The grant projects will iteratively refine this document and maintain it so that it can be translated into technical requirements.

This document will focus on a high-level use case for the project.

Included in this document are the New York City's Citywide Immunization Registry (CIR) file specifications for flat file and HL7 batch data exchange. At a minimum, providers exchanging with NYC can follow the flat file specification (UPIF guide). Applicants in NYC are required to follow the NYS HL7 batch file specifications.

3. Stakeholders for Use Case

- New York State Immunization Program
- Health care provider
- Patient

4. Pre-Conditions

- Health care provider has signed NYSIIS user agreement
- Health care provider is located in NYS and NYC and has administered an immunization to individuals under 19
- Provider's EHR will be able to record data elements required by PHL 2168 needed to report
- Message and queries sent from a provider's EHR to NYSIIS adheres to the approved NYSIIS data exchange file specifications

5. Obstacles to Implementation of Use Case

- None

6. Post-Conditions

- Auditable mechanism for validating timeliness and quality of data exchanged between provider's EHR and NYSIIS.
- Oversight mechanism for quality assurance, security and Service Level Agreements.

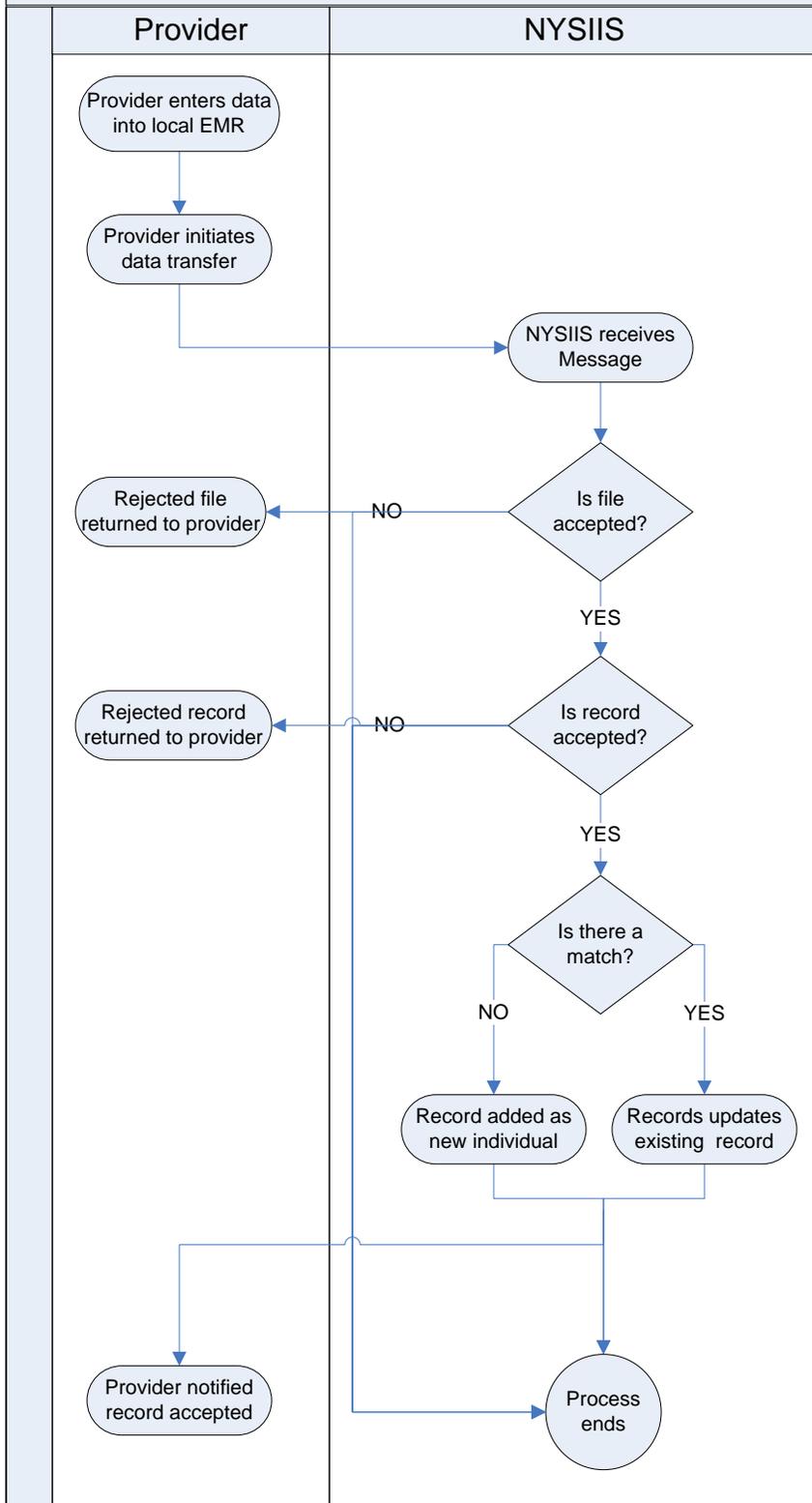
8. Details of Use Case 1: Reporting of Immunization Event Scenarios and Perspectives

Process 8.1:

Providers using the data exchange approach can report the immunization events for a single individual record.

- a. Health care provider enters information into the electronic health record (EHR) system currently being used by their practice.
- b. Health care provider initiates data transfer to NYSIIS. This transfer must be in compliance with the NYSIIS data exchange format and protocol.
- c. NYSIIS receives the files and verifies the format is appropriate.
 - i. If rejected, health care provider will be notified that files were rejected
 - ii. If accepted, system will continue processing
- d. NYSIIS then begins processing the file on an individual's immunization(s) submitted by health care provider. Three different outcomes can occur.
 - i. The record submitted to NYSIIS did not have enough information or had incorrect data and was rejected. Rejected messages do not get included into NYSIIS. NYSIIS will respond back to the health care provider that message was rejected. The health care provider should review the information and check its validity before submitting
 - ii. The record submitted to NYSIIS does not have a match and add as new person. NYSIIS will respond back to the health care provider that message was received.
 - iii. The record submitted to NYSIIS does have a match and information submitted by health care provider is used to update the matched record with new shot information or corrected information. NYSIIS will respond back to the health care provider that message was received again.

8.1 Health Care Provider Reports Individual Immunization Event

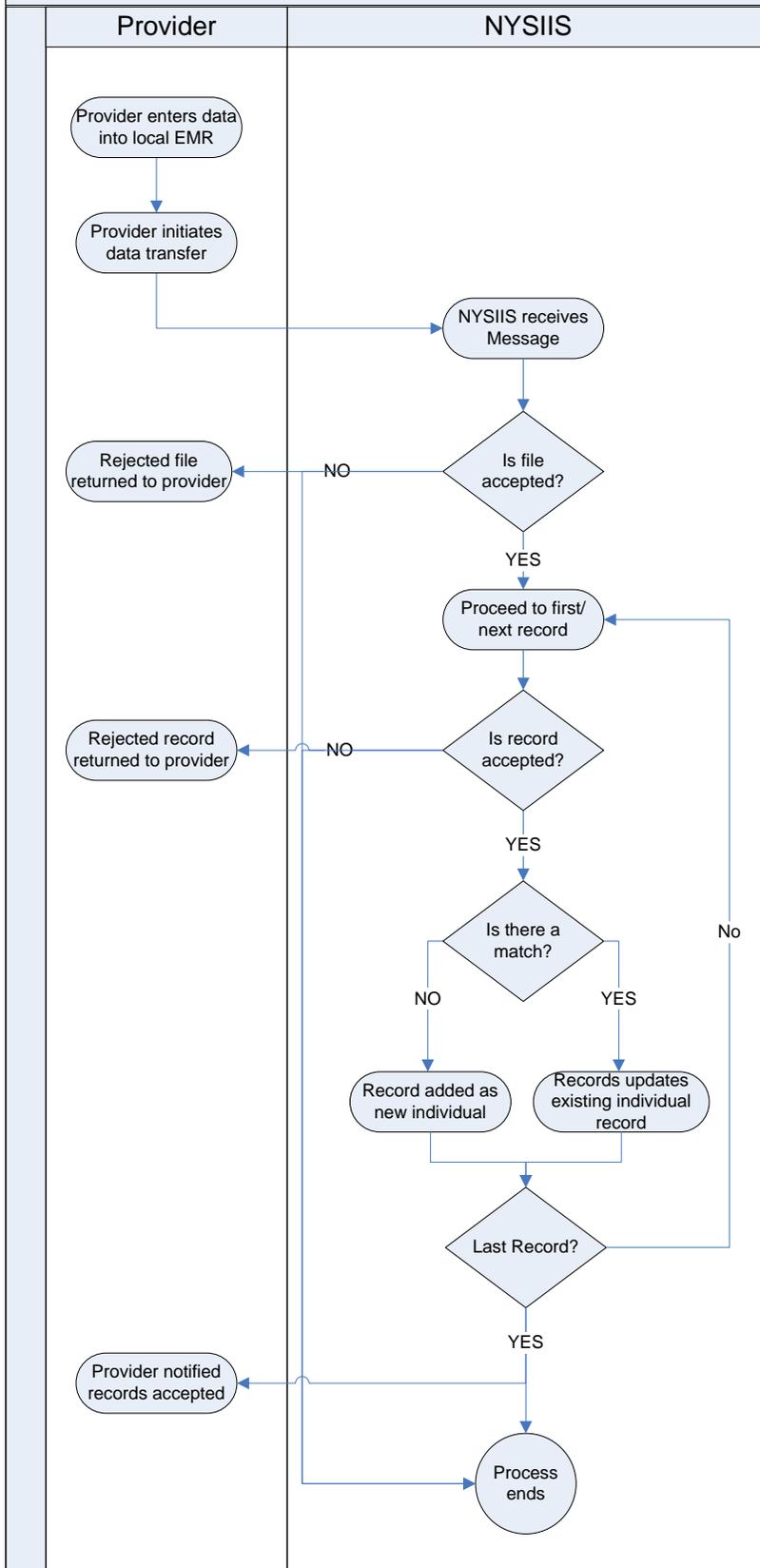


Process 8.2

Providers using the data exchange approach can report multiple individuals' immunization event(s) in a batch submission. The process differs from 8.1 in that each record will be assessed as if it is a new record or an update to an existing one.

- a. Health care provider enters information into the electronic health record (EHR) system currently being used by their practice.
- b. Health care provider initiates data transfer from EHR to NYSIIS. This transfer must be in compliance with the NYSIIS data exchange format and protocol.
- c. NYSIIS receives the files and verifies the format is appropriate.
 - i. If rejected, health care provider will be notified that files were rejected
 - ii. If accepted, system will continue processing
- d. NYSIIS then begins processing the file on immunizations on multiple individuals submitted by health care provider and begins processing. Each individual record will be assessed. Three different outcomes can occur.
 - i. Some of the individuals submitted to NYSIIS may not be a match and will be added as a new person. NYSIIS will respond back to the health care provider that a message was received.
 - ii. Some of the individuals submitted to NYSIIS may match an individual already in NYSIIS and information submitted by health care provider is used to update the matched record with new shot information or corrected information. NYSIIS will respond back to the health care provider that a message was received.
 - iii. Some of the records submitted to NYSIIS may not have enough information or incorrect data and were rejected. Rejected messages do not get included into NYSIIS. NYSIIS will respond back to the health care provider that records were rejected. The health care provider should review the information and check its validity before submitting again.

8.2 Provider Reports Multiple Immunization Event



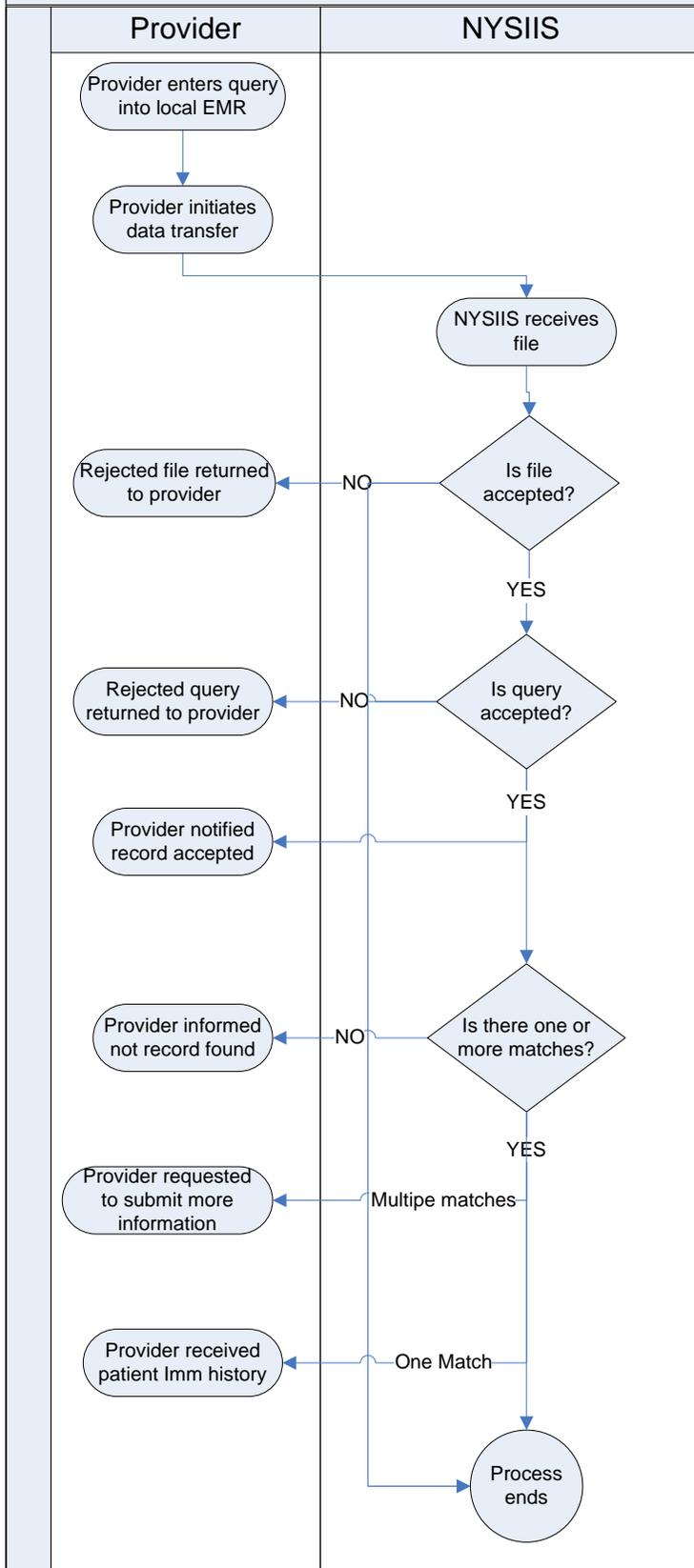
9. Details of Use Case 2: Searching for Individual's Immunization History Scenarios and Perspectives

Process 9.1:

Provider currently has a child under their care who they want to access the current immunization history from NYSIIS.

- a. Providers enter information required for submission of query.
- b. Provider submits query to NYSIIS. This transfer must be in compliance with the NYSIIS data exchange format and protocol.
- c. NYSIIS receives the files and verifies the format is appropriate.
 - i. If rejected, provider will be notified that files was rejected
 - ii. If accepted, system will continue processing
- d. NYSIIS receives the files and verifies the format is appropriate.
 - i. If rejected, provider will be notified that files was rejected
 - ii. If accepted, system will continue processing
- e. NYSIIS will process the query for individual immunization history. There are four possible outcomes
 - i. NYSIIS was able to find an exact match for the individual whose information was submitted.
 - ii. NYSIIS will respond by sending back to the provider with individual's immunization information
 - iii. NYSIIS was unable to find a match. NYSIIS will respond to the provider letting them know that no record was found.
 - iv. NYSIIS may find several possible matches. NYSIIS will respond that more than one record was found and additional information required for a unique match. The provider should send a new query with additional information to help find a unique match.
- f. NYSIIS may reject queries for insufficient information or errors in the data. NYSIIS will respond that the queries were rejected. The provider should review the information and check it's validity before submitting again.

9.1 Health Care Provider Query for Individual Immunization History



Appendix I
New York State Immunization Information System
Data Exchange

Revised 9/18/2007

Data Exchanges Through **NYSIIS**
Organization Extracts

Data Exchanges Through NYSIIS

The data exchange feature of NYSIIS gives you the capability to automatically exchange immunization batch files. Only NYSIIS users with roles of "Data Exchange," "HMO User," or "Administrator" will be able to perform data exchanges. HMO users will need to follow the steps in the "HMO Data Exchanges" section of this chapter.

Provider Organization Data Exchanges

Prior to performing a data exchange, your provider organization will need to contact the NYSIIS project manager and arrange for your organization to be set up to perform data exchanges. You will need to provide the following information regarding the exchange:

- File format: Indicate Health Level 7 (HL7), Flat File, or Custom Flat File.
- Direction of data: Indicate whether the data will be bidirectional, provider organization to NYSIIS, or NYSIIS to provider organization, Custom Flat File Format can only be provider organization to NYSIIS.
- Type of transmission: Indicate whether the exchange will be a test or an actual production transfer.
- Custom Flat File Information: Indicate the Custom Flat File Template Name, File Length, and the Starting position of the standard fields in your file for the Client, Immunization, and Comment File.

| Define Custom Flat File Template Name: | |
|---|--------------------------|
| Client File Information | |
| File Length: | |
| Field Name(field length) | Starting Position |
| Record Identifier(24): | |
| Client Status(1): | |
| First Name(25): | |
| Middle Name(25): | |
| Last Name(35): | |
| Name Suffix(10): | |
| Birth Date(8) MMDDYYYY: | |
| Death Date(8) MMDDYYYY: | |
| Mothers First Name(25): | |
| Mothers Maiden Last Name(35): | |
| Sex (Gender)(1): | |
| Race(1): | |
| Ethnicity(2): | |
| Contact Allowed(2): | |
| Consent to Share(1): | |
| Chart Number(20): | |
| Field Name(field length) | Starting Position |
| Responsible Party First Name(25): | |
| Responsible Party Middle Name(25): | |
| Responsible Party Last Name(35): | |
| Responsible Party Relationship(2): | |
| Street Address(55): | |
| PO Box Route Line(55): | |
| Other Address Line(55): | |
| City(52): | |
| State(2): | |
| Zip(9): | |

| | |
|--|--------------------------|
| County(5): | |
| Phone(17): | |
| Sending Organization(5): | |
| Immunization File Information | |
| File Length: | |
| Field Name(field length) | Starting Position |
| Record Identifier(24): | |
| Vaccine Group*(16): either Vaccine group or CPT Code is required | |
| CPT Code*(5): either Vaccine group or CPT Code is required | |
| Trade Name(24): | |
| Vaccination Date(8)MMDDYYYY: | |
| Administration Route Code(2): | |
| Body Site Code(4): | |
| Reaction Code(8): | |
| Manufacturer Code(4): | |
| Immunization Information Source(2): | |
| Lot Number(30): | |
| Provider Name(50): | |
| Administered By Name(50): | |
| Site Name(30): | |
| Sending Organization(5): | |
| VFC Eligibility Status(4): | |
| Vaccine Purchased With(3): | |
| Comment File Information | |
| File Length: | |
| Field Name(field length) | |
| Record Identifier(24): | |
| Comment Code(2): | |
| Applies to Date(8)MMDDYYYY: | |
| Fields in blue are required fields. | |

To perform a data exchange, follow these steps:

1. Click on Exchange Data under Data Exchange on the menu panel. Depending upon the type of file format and direction of data you will be using, one or more of the following fields will display:
 - Job Name: Fill in a name for the data exchange, if desired. If left blank, NYSIIS will use the current date for a job name.
 - Client File Name: This field is required if you have chosen "bidirectional" or "provider organization to NYSIIS" as a data direction, and your file format is Flat File, or your file format is a Custom Flat File. Press Browse; to select the appropriate Client File Name.
 - Immunization File Name: This field is required if you have chosen "bidirectional" or "provider organization to NYSIIS" as a data direction, and your file format is Flat File, or your file format is a Custom Flat File. Press Browse to select the appropriate Immunization File Name.
 - Comment File Name: This optional field will appear if you exchange data via Flat File format and have chosen "bidirectional" or "provider organization to NYSIIS" as a data direction, or if you exchange data via Custom Flat File format.
 - HL7 File Name: This field is required for users who are exchanging data using the HL7 file format. Press Browse to select the HL7 file you wish to upload.

2. Press the Upload or Request Download button on your screen, whichever is displayed.
3. The Exchange Data Result screen will display. This screen will list the files that were uploaded using "bidirectional" or "provider organization to NYSIIS" data directions and will confirm or provide the job name to the user.
4. Press Check Status.
5. The Exchange Data Status screen will display. This screen will contain the job name, user name, exchange data date, process start and end date , and status of the current job.
6. Press REFRESH periodically to check the status of the job.
7. When a job is completed, the job name will appear underlined and in blue. Under the status column, one of three messages may appear.
 - Complete: This message indicates the job has completed processing.
 - Error: This message indicates the job could not be processed because of formatting errors.
 - Exception: This message indicates that the job could not be processed because of an internal system error.
8. Click on the underlined job name.
9. If the job completed successfully, the Job Detail screen will display.

This screen contains three sections:

- Download Files for: <Job Name>: This section contains all output files available for you to download, including the Response Files and any "NYSIIS to provider organization" download files. Click on the blue, underlined download name to download the file.
 - Download Log for: <Job Name>: This section contains information regarding activity of the download file(s), including file name, user name, and date and time of the download(s).
 - Summary Information for: <Job Name>: This section contains all information pertinent to the exchanged data file received and processed.
10. If the job did not complete successfully, the Job Error screen will display. This screen will contain an explanation of why the exchange data could not be processed, contains the original uploaded file(s), and lists information regarding the activity of the downloaded file(s).

HMO Data Exchanges

Prior to performing an HMO data exchange, your HMO will need to contact the NYSIIS project manager and arrange for your organization to be set up to perform data exchanges. You will need to provide the following information regarding the exchange:

- *File format*: Indicate HL7 or Flat File.
- *Type of transmission*: Indicate whether the exchange will be a test or an actual production transfer.

To perform an HMO Data Exchange, follow these steps:

1. Click on Submit HMO Data or Submit HMO Query under the Data Exchange menu option. Depending

upon the selection made and the type of file format you are set up to use, one or more of the following fields will display:

- Job Name: Fill in a name for the data exchange, if desired. If left blank, NYSIIS will use the current date for a job name.
- Client File Name: This field is required if your file format is Flat File. Press Browse to select the appropriate Client File Name.
- Immunization File Name: This optional field will appear if you exchange data via Flat File format. Press Browse to select the appropriate Immunization File. The Immunization File must contain at least one immunization.
- Comment File Name: This optional field will appear if you exchange data via Flat File format.
- HL7 File Name: This field is required for users who are exchanging data using the HL7 file format. Press Browse to select the HL7 file you wish to upload.
- Query File Name: This field is required for users who are running an HMO query. Press Browse to select the appropriate query file. For the format of the HMO query, please see the HMO Query Specification.

2. Press Upload.
3. The Exchange Data Result screen will display. This screen will list the files that were uploaded and will confirm or provide the job name to the user.
4. Press the Check Status button.
5. The Exchange Data Status screen will display. This screen will contain the job name, user name, exchange data date, process start and end date, and status of the current job.
6. Press Refresh | periodically to check the status of the job.
7. When a job is completed, the job name will appear underlined and in blue. Under the status column, one of three messages may appear:
 - Complete: This message indicates the job has completed processing.
 - Error: This message indicates the job could not be processed because of formatting errors.
 - Exception: This message indicates that the job could not be processed because of an internal system error.
8. Click on the underlined job name.
9. If the job completed successfully, the Job Detail screen will display. For jobs created from the Submit HMO Data menu option, these sections will display:
 - Download Files for: <Job Name>: This section contains all output files available for you to download, including the Response Files and any "NYSIIS to provider organization" download files. Click on the blue, underlined download name to download the file.
 - Download Log for: <Job Name>: This section contains information regarding activity of the download file(s), including file name, user name, and date and time of the download(s).

- Summary Information for: <Job Name>: This section contains all information pertinent to the exchanged data file received and processed.

For jobs created using the Submit HMO Query menu option, the following sections will display

- Download Files for: <Job Name>: Contains the Demographic File, Immunization File, and Exception File, all available for download by clicking on the underlined file name.
 - Download Log for: <Job Name>: Contains information regarding activity of the download files.
10. If the job did not complete successfully, the Job Error screen will display. This screen contains an explanation of why the exchange data could not be processed contains the original uploaded file(s), and lists information regarding the activity of the downloaded file(s).

Organizational Extracts

The organizational extract feature allows data exchange users to generate a report showing clients selected by organization, county, vaccine group, client status, and date ranges.

To generate an organizational extract, follow these steps:

1. Click on Organizational Extract under Data Exchange on the menu panel.
2. Select Organization ID(s): *This section will only display for providers with child organizations entered in NYSIIS.*
 - All Clients for Parent and All Child Organizations: Click this option to request that NYSIIS return all clients in parent and child organizations.
 - All Clients for Parent Organization: Click this option to request that NYSIIS return clients associated only with the parent organization.
 - All Clients for These Child Organizations: Click this option to request that NYSIIS return all clients in selected child organizations. If you choose this option, select the desired child organization(s) by double clicking the organization name or by highlighting the name and pressing ADD.
3. Select County(s): Indicate whether you wish to return clients from all counties or only those clients with residence within the counties selected. If you choose to return only clients from selected counties, choose the desired counties by double clicking the organization name or by highlighting the name and pressing Add j.
4. Select the Vaccine Group(s): Indicate whether you wish to return all clients regardless of vaccine history, or return only those clients that have had an immunization from one of the selected vaccine groups. If you choose to return only clients with immunizations from selected vaccine groups, choose the desired vaccine group(s) by double clicking the group name or by highlighting the name and pressing ADD.
5. Select Date Criteria:

-
- No Date Criteria: Click this option to indicate that you want NYSIIS to return clients regardless of the date the client or immunizations were last updated.
 - Vaccine Administration Date Range: Click this option to indicate that you want NYSIIS to return only clients that have had an immunization within the date range entered. Once the option is selected, two text boxes with calendar controls will appear to the right of the line. Enter dates in the MMDDYYYY format in both the From and To text boxes.
 - Birth Date Range: Click this option to indicate that you want NYSIIS to return only clients with a date of birth within the date range entered. Once this option is selected, two text boxes with calendar controls will appear to the right of the line. Enter dates in the MMDDYYYY format in both the From and To text boxes.

Client Update Date Range: Click this option to indicate that you want NYSIIS to return only clients that have been updated within the date range entered. Once the option is selected, two text boxes with calendar controls will appear to the right of the line. Enter dates in MMDDYYYY format in both the From and To text boxes.

6. Select Client Status:

- All — Indicate that you want all active, inactive, and permanently inactive/deceased clients to be returned by clicking this option.
- Active — Indicate that you want NYSIIS to return only active clients by clicking this option.
- Inactive — Indicate that you want NYSIIS to return clients with an inactive association by clicking this option.
- Permanently Inactive/Deceased — Indicate that you want NYSIIS to return only clients with a permanently inactive/deceased association by clicking this option.

7. Select Extract Format:

- Job Name — Enter a name for the extract job, or leave this field blank and NYSIIS will assign an extract name using the current date.
- NYSIIS Flat File Format — Click on this option to select flat file format. NYSIIS defaults to this format if no other option is selected.
- HL7 2.3.1 Transaction Format — Click on this option to select this HL7 format.

8. Press Generate).

9. The Exchange Data Status screen will display. Press Refresh periodically to check status. When the organizational extract is complete, the job name will be underlined and in blue.

10. Click on the extract job name.

11. Click on the Client File, Immunization File, or Comment File link at the Job Detail screen.

12. Press Back on your browser to return to the Job Detail screen.

Appendix II

New York State Immunization Information System Flat File Specification Version 1.0

(Revised 9/18/2007)

Immunization data is passed to the central registry using three flat files containing client, immunization, and comment information (optional) respectively. The files will be linked via a 24-character Record Identifier supplied by the provider of the file. This identifier will uniquely identify each client and will appear in each immunization and comment (optional) record to link the immunization and comment (optional) to the client. Character fields need to be left justified and blank-filled, number fields right justified and blank-filled, and date fields in format MMDDYYYY with leading zeroes. If a site is unable to supply any information for a specified field, the entire field needs be filled with blanks.

Below are the fields to include in each of the files. Files need to be generated using the ASCII character set. Records will be fixed length and need to be terminated with a carriage return/line feed. Files may be transferred to NYSIIS either by using the online data exchange module in NYSIIS or by extracting to CD-ROM and mailed to NYS DOH Immunization Program at TBD .

When submitting data, please submit as much as possible of the listed elements below for completeness. At a minimum all fields that are in **BOLD** lettering are required by New York State Legislation and need to be submitted to NYSIIS, however if your system is not capable of exporting some of the required fields by New York State Legislation it is expected that any of the required information that can not be submitted by data exchange will be subsequently added through the user interface to complete the record.

7. Client Data

| 7.1 Column | Data type | Required | Default | Notes |
|---------------------------------|-----------|----------|---------|--|
| Record Identifier | Char(24) | Y | | Supplied by sender, used to link a Client to Immunization records. |
| Patient Status | Char(1) | | A | Use the NYSIIS code set for Client Status . |
| First Name | Char(25) | Y | | If client does not have a first name,"NO FIRST NAME" must be entered in this field. |
| Middle Name | Char(25) | | | |
| Last Name | Char(35) | Y | | |
| Name Suffix | Char(10) | | | JR, III, etc. |
| Birth Date | Date(8) | Y | | MMDDYYYY |
| Death Date | Date(8) | | | MMDDYYYY |
| Mothers First Name | Char(25) | | | |
| Mothers Maiden Last Name | Char(35) | | | |
| Sex (Gender) | Char(1) | | | Use the NYSIIS code set for Sex (Gender). |
| Race | Char(1) | | | Use the NYSIIS code set for Race . |
| Ethnicity | Char(2) | | | Use the NYSIIS code set for Ethnicity . |

| 7.1 Column | Data type | Required | Default | Notes |
|--------------------------------|-----------|----------|---------|--|
| Filler | Char(9) | | | This field should be filled in with blanks. It was used for the Social Security Number field and is not used at all in the NYSIIS system. |
| Contact Allowed | Char(2) | | 02 | Controls whether notices are sent. Use the NYSIIS code set for Contact . If <null> default to 02. |
| Consent to Share | Char(1) | | <null> | Indicates whether the patient has given written consent to share data with the registry. For patients Over 19, use Y, N or <null>. For patients over 19, these rules apply: Records with 'N' are rejected. Records with null are only accepted if they match with an existing Yes record. Patients Under 19 are mandated in, so the system accepts all data, regardless of the value of this indicator. |
| Patient ID | Char(20) | | | Identifier within the sending organization's system |
| Responsible Party First Name | Char(25) | | | |
| Responsible Party Middle Name | Char(25) | | | |
| Responsible Party Last Name | Char(35) | | | |
| Responsible Party Relationship | Char(2) | | | Use the NYSIIS code set for Relationship . |
| Street Address | Char(55) | | | |
| PO Box Route Line | Char(55) | | | |
| Other Address Line | Char(55) | | | |
| City | Char(52) | | | |
| State | Char(2) | | | |
| Zip | Char(9) | | | If +4 zip is used, the first 5 characters and second 4 characters are concatenated into a single value, without separators. |
| County | Char(5) | | | Use the NYSIIS code set for County . |
| Phone | Char(17) | | | Format as digits only starting with the area code, ex. 6081234567. |
| Sending Organization | Char(5) | | | This is ID of the provider organization that owns this client and corresponding immunization records. Contact the NYSIIS Help Desk for the appropriate organization ID. * This field is optional if an organization is sending all of its own records. This field is required if an organization other than the organization that owns the record(s) is transmitting this file. |

8. Immunization Data

| 8.1 Column | Data type | Required | Default | Notes |
|-------------------|-----------|----------|---------|---|
| Record Identifier | Char(24) | Y | | Supplied by sender, used to link Immunizations to a Clients record. |

| | | | | |
|---------------------------------|-----------------|----------|----|---|
| Vaccine Group | Char(16) | * | | Use the NYSIIS code set for Vaccine Codes. |
| CPT Code | Char(5) | * | | *Either Vaccine Group or CPT Code is required. |
| Trade Name | Char(24) | | | Use the NYSIIS code set for Vaccine Codes . |
| Vaccination Date | Date(8) | Y | | MMDDYYYY |
| Administration Route Code | Char(2) | | | Use the NYSIIS code set for Administration Route . |
| Body Site Code | Char(4) | | | Use the NYSIIS code set for Body Site . |
| Reaction Code | Char(8) | | | Use the NYSIIS code set for Reaction . |
| Manufacturer Code | Char(4) | | | Use the NYSIIS code set for Manufacturers. |
| Immunization Information Source | Char(2) | | 01 | Indicates whether this immunization was administered by your organization or the immunization information is historical from client record. Use the NYSIIS code set for Immunization Information Source . |
| Lot Number | Char(30) | | | Converted records will be stored in NYSIIS as historical records, so the Lot Number will not correspond to inventory tracked in NYSIIS, but Lot Number can still be stored as historical information. |
| Provider Name | Char(50) | | | The historical provider name. |
| Administered By Name | Char(50) | | | The name of the person who administered the vaccination. |
| Site Name | Char(30) | | | The name of the clinic site where the vaccination occurred. |
| Sending Organization | Char(5) | | | This is ID of the provider organization that owns this client and corresponding immunization records. Contact the NYSIIS Help Desk for the appropriate organization ID. * This field is optional if an organization is sending all of its own records. This field is required if an organization other than the organization that owns the record(s) is transmitting this file. |
| VFC Eligibility Status | Char(4) | | | Populate with appropriate HL7 table 0064 values – Valid Values V00 (VFC Eligibility not determined/unknown), V01 (Not VFC eligible), V02 (VFC Eligible - Medicaid/Medicare Managed Care), V03 (VFC Eligible – Uninsured), V04 (VFC Eligible – American Indian /Alaskan Native), V05 (VFC Eligible – Underinsured), and CH00 (S-Chip Coverage Not VFC eligible). |
| Vaccine Purchased With | Char(3) | | | Populate with appropriate value from HL7 table NIP008 – Valid values PVF (private fund) or PBF (public funds) |

9. Comment Code (Optional File – Not Required)

| 9.1 Column | Data type | Required | Default | Notes |
|--------------------------|-----------------|----------|---------|---|
| Record Identifier | Char(24) | Y | | Supplied by sender, used to link Comments to a Clients record. This field is required if a comment code is being sent. |
| Comment Code | Char(2) | Y | | Use the NYSIIS code set for Comments. |
| Applies to Date | Date(8) | | | The date to which the comment applies. MMDDYYYY |

Notes on Refusals:

Refusals are sent in the optional Comment file. Please bear the following in mind when sending in refusals or receiving output flat files from NYSIIS.

- a) The NYSIIS system will write out multiple refusals for the same vaccine on different dates for those clients who have them.
- b) 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, then only one will be stored.
- c) The sending organization in the client file 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.

10. Examples

11.

12. Records need to be **blank** filled. In the following example, blanks are represented with the '*' character for illustrative purposes.

12.1.1.1.1

12.1.1.1.2 Client Record

```
12345*****AMELANA*****RAE*****MAERZ*****08141985*****MARY*****
*****CARPENTER*****FWNH*****02Y*****33DAVID*****RAPHAEL*****MAERZ*****
*****33125*WEST*STREET*****
*****DANE*****NY5352912341843*****6085556543*****
```

Immunization Record

```
12345*****DTAP*****TETRAMUNE*****10091985*****00*****
*****
*****
```

Comment Code Record

```
12345*****3110091985
```

| Table Item | Code | Description |
|-----------------------------|----------------------|---|
| Administration Route | ID | Intradermal |
| | IM | Intramuscular |
| | IN | Intranasal |
| | IV | Intravenous |
| | PO | Oral |
| | SC | Subcutaneous |
| | TD | Transdermal |
| | MP | Multiple Puncture (Small Pox) |
| Body Site | LA | Left Arm |
| | LG | Left Gluteous Medius |
| | LT | Left Thigh |
| | LD | Left Deltoid |
| | LVL | Left Vastus Lateralis |
| | LLFA | Left Lower Forearm |
| | RA | Right Arm |
| | RG | Right Gluteous Medius |
| | RT | Right Thigh |
| | RD | Right Deltoid |
| | RVL | Right Vastus Lateralis |
| | RLFA | Right Lower Forearm |
| | Client Status | A |
| M | | Moved or Gone Elsewhere |
| N | | Inactive |
| P | | Permanently Inactive – Deceased Clients |
| Comments | 03 | Allergy to baker's yeast (anaphylactic) |
| | 04 | Allergy to egg ingestion (anaphylactic) |
| | 05 | Allergy to gelatin (anaphylactic) |
| | 06 | Allergy to neomycin (anaphylactic) MMR & IPV |
| | 07 | Allergy to Streptomycin (anaphylactic) |
| | 08 | Allergy to Thimerosal (anaphylactic) |
| | 10 | Anaphylactic(life-threatening) reaction of previous doses of nonspecific vaccine group. |
| | 22 | Chronic illness |

| Table Item | Code | Description |
|------------|--------|---|
| | 21 | Current acute illness, moderate to severe |
| | 14 | Current diarrhea, moderate to severe |
| | 16 | Current fever with moderate-to-severe illness |
| | 18 | Guillain-Barre Syndrome (GBS) within 6 weeks after DTP/DTaP |
| | 26 | Hepatitis B ANTIBODY to surface antigen, positive(immune) |
| | 26 | Hepatitis B titer – immune |
| | 29 | History of Pertussis |
| | 31 | History of Rubella |
| | 33A | History of Varicella/chicken pox |
| | 23 | Immune globulin(IG) administration, recent or simultaneous |
| | 24 | Immunity: Diphtheria |
| | 25 | Immunity: Haemophilus Infuluenzae type B |
| | HEPA_I | Immunity: Hepatitis A |
| | 26 | Immunity: Hepatitis B |
| | 27 | Immunity: Measles |
| | 28 | Immunity: Mumps |
| | 29 | Immunity: Pertussis |
| | 30 | Immunity: Poliovirus |
| | 31 | Immunity: Rubella |
| | 32 | Immunity: Tetanus |
| | 33 | Immunity: Varicella (chicken pox) |
| | 34 | Immunodeficiency (family history)OPV & VZV |
| | 35 | Immunodeficiency (household contact) OPV |
| | 36 | Immunodeficiency (in recipient) OPV & MMR & VZV |
| | 27 | Measles titer – immune |
| | 28 | Mumps titer – immune |
| | 37 | Neurologic disorders, underlying (seizure disorder) |
| | 38 | Otitis media (ear infection) moderate to severe |
| | P1 | Refusal of DT |
| | P2 | Refusal of DtaP |
| | P3 | Refusal of HepB |
| | P4 | Refusal of Hib |
| | P5 | Parental refusal of MMR |
| | P6 | Refusal of Pneumococcal |
| | P7 | Refusal of Polio |

| Table Item | Code | Description |
|-------------------|-------------|--|
| | P8 | Refusal of TD |
| | P9 | Refusal of Varicella |
| | P10 | Refusal of Smallpox |
| | PB | Refusal of HepA |
| | PC | Refusal of Influenza |
| | PG | Refusal of Pertussis |
| | 39 | Pregnancy (in recipient) |
| | 31 | Rubella titer – immune |
| | 40 | Thrombocytopenia |
| | 41 | Thrombocytopenia purpura (history) |
| | 33 | Varicella titer – immune |
| | | |
| Contact | 01 | No contact allowed – Notices are not to be sent. |
| | 02 | Contact Allowed – Notices will be sent. |
| | | |
| County | NY001 | Albany |
| | NY003 | Allegany |
| | NY005 | Bronx |
| | NY007 | Broome |
| | NY009 | Cattaraugus |
| | NY011 | Cayuga |
| | NY013 | Chautauqua |
| | NY015 | Chemung |
| | NY017 | Chenango |
| | NY019 | Clinton |
| | NY021 | Columbia |
| | NY023 | Cortland |
| | NY025 | Delaware |
| | NY027 | Dutchess |
| | NY029 | Erie |
| | NY031 | Essex |
| | NY033 | Franklin |
| | NY035 | Fulton |
| | NY037 | Genesee |
| | NY039 | Greene |
| | NY041 | Hamilton |
| | NY043 | Herkimer |
| | NY045 | Jefferson |
| | NY047 | Kings |
| | NY049 | Lewis |
| | NY051 | Livingston |
| | NY053 | Madison |
| | NY055 | Monroe |
| | NY057 | Montgomery |
| | NY059 | Nassau |
| | NY061 | New York |
| | NY063 | Niagara |

| Table Item | Code | Description |
|--|---------------|--|
| | NY065 | Oneida |
| | NY067 | Onondaga |
| | NY069 | Ontario |
| | NY071 | Orange |
| | NY073 | Orleans |
| | NY075 | Oswego |
| | NY077 | Otsego |
| | NY079 | Putnam |
| | NY081 | Queens |
| | NY083 | Rensselaer |
| | NY085 | Richmond |
| | NY087 | Rockland |
| | County | NY091 |
| NY093 | | Schenectady |
| NY095 | | Schoharie |
| NY097 | | Schuyler |
| NY099 | | Seneca |
| NY089 | | St. Lawrence |
| NY101 | | Steuben |
| NY103 | | Suffolk |
| NY105 | | Sullivan |
| NY107 | | Tioga |
| NY109 | | Tompkins |
| NY111 | | Ulster |
| NY113 | | Warren |
| NY115 | | Washington |
| NY117 | | Wayne |
| NY119 | Westchester | |
| NY121 | Wyoming | |
| NY123 | Yates | |
| Ethnicity | NH | Non-Hispanic |
| | H | Hispanic |
| Immunization Information Source | 00 | Administered Vaccine by providing organization |
| | 01 | Historical recorded from client record |
| Manufacturers | AB | Abbott Laboratories (<i>Ross Products Division</i>) |
| | AD | Adams Laboratories |
| | ALP | Alpha Therapeutic Corporation |
| | AR | Armour (Inactive use ZLB) |
| | AVB | Aventis Behring L.L.C. (<i>Centeon and Armour Pharmaceutica, Inactive use ZLB</i>) |
| | AVI | Aviron |
| | BA | Baxter Healthcare Corporation (Inactive use BAH) |
| | BAH | Baxter Healthcare Corporation (<i>Hyland, Immuno Intl. AG, and N. Amer. Vac</i>) |
| | BAY | Bayer (Including Miles And Cutter) |

| Table Item | Code | Description |
|------------|------|--|
| | BP | Berna Products (Inactive use BPC) |
| | BPC | Berna (<i>Including Swiss Serum And Vib</i>) |
| | CEN | Centeon (Inactive use AVB) |
| | CHI | Chiron Corporation |
| | CMP | Celltech Medeva Pharmaceuticals (Inactive use NOV) |
| | CNJ | Cangene Corporation |
| | CON | Connaught (Inactive use PMC) |
| | DVC | DynPort Vaccine Company, LLC |
| | EVN | Evans Medical Limited (Inactive use NOV) |
| | GEO | GeoVax Labs, Inc |
| | GRE | Greer Laboratories Inc. |
| | IAG | Immuno International Ag (Inactive use BAH) |
| | IM | Merieux (Inactive use PMC) |
| | IUS | Immuno-U.S., Inc. |
| | JPN | Osaka University (Biken) |
| | KGC | Korea Green Cross Corporation |
| | LED | Lederle (Inactive use WAL) |
| | MA | Massachusetts Public Health Biologic Lab (Inactive use MBL) |
| | MBL | Massachusetts Biologics Laboratories |
| | MED | Medimmune, Inc. |
| | MIL | Miles (Inactive use BAY) |
| | MIP | Bioport Corporation (formerly Michigan Biologic Prod Inst.) |
| | MSD | Merck & Co., Inc. |
| | NAB | NABI (formerly North American Biologicals) |
| | NAV | North American Vaccine, Inc. (Inactive use BAH) |
| | NOV | Novartis Pharmaceutical Corp. (<i>Ciba-Geigy and Sandoz</i>) |
| | NVX | Novavax, Inc |
| | NYB | New York Blood Center |
| | OTC | Organon Teknika Corporation |
| | ORT | Ortho-Clinical Diagnostics (formerly Ortho Diagnostic Systems, Inc.) |
| | PMC | Aventis Pasteur (<i>Connaught and Pasteur Merieux</i>) |
| | PD | Parkedale Pharmaceuticals (formerly Parke-Davis) |
| | PRX | Praxis Biologics (Inactive use WAL) |
| | PWJ | Powerject Pharmaceuticals (<i>Celltech Medeva and Evans Medical</i>) |
| | SCL | Sclavo, Inc. |

| Table Item | Code | Description |
|---------------------|------|--|
| | SI | Swiss Serum and Vaccine Inst. (Inactive use BPC) |
| | SKB | GlaxoSmithKline (<i>SmithKline Beecham and Glaxo Wellcome</i>) |
| | SOL | Solvay Pharmaceuticals |
| | TAL | Talecris Biotherapeutics (includes Bayer Biologicals) |
| | USA | Us Army Med Research |
| | VXG | VaxGen |
| | WA | Wyeth-Ayerst (Inactive use WAL) |
| | WAL | Wyeth-Ayerst (<i>Lederle and Praxis</i>) |
| | ZLB | ZLB Behring (includes Aventis Behring and Armour Pharmaceutical Company) |
| | OTH | Other manufacturer |
| | UNK | Unknown |
| | | |
| Race | I | American Indian or Alaska Native |
| | A | Asian or Pacific Islander |
| | B | Black or African-American |
| | W | White |
| | O | Other |
| Race | U | Unknown |
| | | |
| Relationship | 18 | Self |
| | 61 | Aunt |
| | 62 | Brother |
| | 33 | Father |
| | 87 | Foster Father |
| | 88 | Foster Mother |
| | 97 | Grandfather |
| | 98 | Grandmother |
| | 26 | Guardian |
| | 32 | Mother |
| | B7 | Sister |
| | 64 | Spouse |
| | 48 | Stepfather |
| | 49 | Stepmother |
| | D3 | Uncle |
| | | |

| Table Item | Code | Description |
|-------------------------------|-----------------|--|
| Reaction Codes | 10 | Anaphylactic reaction |
| | CRYING | Persistent crying lasting >= 3 hours within 48 hours of immunization |
| | ERVISIT | Emergency room/doctor visit required |
| | FEVER105 | Temperature >= 105 (40.5 C) within 48 hours of immunization |
| | HYPOTON | Hypotonic-hyporesponsive collapse within 48 hours of immunization |
| | PERTCONT | Pertussis allergic reaction |
| | SEIZURE | Seizure occurring within 3 days |
| | TETCONT | Tetanus allergic reaction |
| | | |
| Sex (Gender) | F | Female |
| | M | Male |
| | U | Unknown |
| | | |
| Vaccine Purchased With | PVF | Private Funds |
| | PBF | Public Funds |
| | | |
| VFC Eligibility Status | V00 | VFC Eligibility not determined/unknown |
| | V01 | Not VFC Eligible |
| | V02 | VFC Eligible – Medicaid/Medicare Managed Care |
| | V03 | VFC Eligible – Uninsured |
| | V04 | VFC Eligible – American Indian /Alaskan Native |
| | V05 | VFC Eligible – Underinsured |
| | CH00 | S-Chip Coverage Not VFC eligible. |
| | | |

VACCINE CODES

| CPT | CVX | Group | Vaccine | 12.1.2 Trade Name | Description | MFG |
|-------|---------|------------|------------------------------|-----------------------------|--|-----|
| 90476 | 54 | Adeno | Adeno T4 | Adeno T4 | Adenovirus type 4, live oral | WAL |
| 90477 | 55 | | Adeno T7 | Adeno T7 | Adenovirus type 7, live oral | WAL |
| | 82 | | Adeno, NOS | | Recorded as CVX 54 | |
| 90581 | 24 | Anthrax | Anthrax | Anthrax | Anthrax | MIP |
| 90585 | 19 | BCG | BCG-TB | BCG-TB | Bacillus Calmette-Guerin TB | OTC |
| 90586 | | | BCG-BC | BCG-BC | Bacillus Calmette-Guerin bladder cancer | OTC |
| 90728 | | | BCG, NOS | | BCG, NOS | |
| 90725 | 26 | Cholera | Cholera-Injectable | Cholera-I | Cholera injectable | CHI |
| 90592 | | | Cholera-Oral | Cholera-O | Cholera Oral | CHI |
| 90719 | | Diphtheria | Diphtheria | Diphtheria | Diphtheria | PD |
| 90700 | 20 | DTP/aP | DTaP | Acel-Imune | Diphtheria, tetanus, acellular pertussis | WAL |
| | | | | Certiva | | BAH |
| | | | | Infanrix | | SKB |
| | | | | Tripedia | | PMC |
| 90701 | 01 | | DTP | DTP | Diphtheria, tetanus, whole cell pertussis | PMC |
| 90702 | 28 | | DT | DT | Diphtheria tetanus pediatric | PMC |
| 90720 | 22 | | DTP-Hib | Tetramune | DTP – Hib combination | WAL |
| 90721 | 50 | | DTaP-Hib | TriHIBit | DtaP-Hib combination | PMC |
| 90723 | 110 | | DTAP-HepB-Polio | Pediarix | DTAP-HepB-Polio combination | SKB |
| 90698 | 120 | | DtaP-Hib-IPV | Pentacel | DtaP-Hib-IPV combination | PMC |
| | 106 | | DTAP, 5 pertussis antigens | DAPTACEL | Diphtheria, tetanus, acellular pertussis, 5 antigens | PMC |
| | 107 | | DTaP, NOS | | Recorded as CVX 20 | |
| | 102 | | DTP-HIB-Hep B | | DTP-HIB Hep B vaccine | |
| 90655 | 15 | Influenza | Influenza, Perservative-Free | Fluvirin, Preservative-Free | Influenza preservative free | CHI |
| | | | | Fluzone, Preservative-Free | | PMC |
| 90656 | | | | Fluvirin, Preservative-Free | | CHI |
| | | | | Fluzone, Preservative-Free | | PMC |
| 90657 | | | Influenza | Flu-Immune | Influenza split virus | WAL |
| | | | | Flu-Shield | | WAL |
| | | | | Fluzone | | PMC |
| | | | | Fluvirin | | CHI |
| | | | | Fluogen | | PD |
| | | | | Fluarix | | SKB |
| 90658 | | | | Flu-Immune | | WAL |
| | | | | Flu-Shield | | WAL |
| | | | | Fluzone | | PMC |
| | | | | Fluvirin | | CHI |
| | Fluogen | PD | | | | |
| | Fluarix | SKB | | | | |
| 90659 | 16 | | Influenza, Whole virus | | Influenza whole virus | |
| 90660 | 111 | | Flu-nasal | Flu-Mist | Influenza live, for intranasal use | WAL |
| 90724 | 88 | | Influenza, NOS | Flu-Deleted | Influenza, NOS | |
| | | | Flu-Unspecified | | | |
| 90632 | 52 | HepA | HepA adult | Havrix adult | Hepatitis A adult | SKB |
| | | | | VAQTA adult | | MSD |

| CPT | CVX | Group | Vaccine | 12.1.2 Trade Name | Description | MFG | |
|-------|-----|-----------------|------------------------------------|------------------------|---|--------------------------------------|-----|
| 0633 | 83 | | HepA ped-2 dose | Havrix ped/adol 2 dose | Hepatitis A pediatric/adolescent 2 dose | SKB | |
| | | | | VAQTA ped-2 | | MSD | |
| 90634 | 84 | | HepA ped-3 dose | Havrix ped/adol 3 dose | Hepatitis A pediatric/adolescent 3 dose | SKB | |
| | | | | | | MSD | |
| 90636 | 104 | | HepA-HepB Adult | Twinrix | Hepatitis A & Hepatitis B adult | SKB | |
| 90730 | 85 | | Hep A, NOS | | Hep A, NOS | | |
| | 31 | | Hep A-peds, NOS | | Recorded as CVX 85 | | |
| 90636 | 104 | | HepA-HepB Adult | Twinrix | Hepatitis A & Hepatitis B adult | SKB | |
| 90723 | 110 | | DTAP-HepB-Polio | Pediarix | DTAP-HepB-Polio combination | SKB | |
| 90731 | 45 | | Hep B, NOS | | Hep B, NOS | | |
| 90740 | 44 | HepB | Hep B-dialysis 3 dose | | Hepatitis B Dialysis 3 dose | | |
| 90743 | 43 | | HepB adult | Recombivax-Adult | Hepatitis B adult dose 1ml | MSD | |
| | | | | Engerix-B-Adult | | SKB | |
| 90744 | 08 | | HepB pediatric | Recombivax-Peds | Hepatitis B pediatric/adolescent .5ml | MSD | |
| | | | | Engerix-B-Peds | | SKB | |
| 90745 | 42 | | Hep B, adolescent/high risk infant | | Hep B, adolescent/high risk infant | | |
| 90746 | 43 | | HepB adult | Recombivax-Adult | Hepatitis B adult dose 1ml | MSD | |
| | | | | Engerix-B-Adult | | SKB | |
| 90747 | 44 | | HepB-dialysis 4 dose | Recombivax-dialysis | Hepatitis B Dialysis 4 dose | MSD | |
| | | | | Engerix-B dialysis | | SKB | |
| 90748 | 51 | | HepB-Hib | Comvax | HepB-Hib Combination | MSD | |
| | | | HepB-Unspecified | | | | |
| 90645 | 47 | | Hib | Hib-HbOC | HibTITER | Hemophilus influenza b HbOC 4 dose | WAL |
| 90646 | 46 | | | Hib-PRP-D | ProHIBit | Hemophilus influenza b PRP-D booster | PMC |
| 90647 | 49 | | | Hib-OMP | PedvaxHIB | Hemophilus influenza b OMP 3 dose | MSD |
| 90648 | 48 | Hib-PRP-T | | OmniHib | Hemophilus influenza b PRP-T 4 dose | PMC | |
| | | | | ActHib | | | |
| 90720 | 22 | DTP-Hib | | Tetramune | DTP – Hib combination | WAL | |
| 90721 | 50 | DtaP-Hib | | TriHIBit | DtaP-Hib combination | PMC | |
| 90737 | 17 | | | | Hib,NOS | | |
| 90748 | 51 | HepB-Hib | | Comvax | HepB-Hib combination | MSD | |
| 90698 | 120 | DtaP-Hib-IPV | | Pentacel | DtaP-Hib-IPV combination | PMC | |
| | | Hib-Unspecified | | | | | |
| | 118 | HPV | HPV, bivalent | Cervaix | Human Papilloma Virus | SKB | |
| 90649 | 62 | | HPV, Quadrivalent | Gardasil | Human Papilloma Virus | MSD | |
| 90281 | 86 | Ig | Ig | Ig | Ig human | | |
| 90283 | 87 | | IgIV | IgIV | Ig IV human | | |
| | | | | Flebogamma | | | |
| 90287 | 27 | | Botulinum-antitoxin | Botulinum-antitoxin | Botulinum antitoxin equine | | |
| 90288 | | | Botulism | BabyBIG | Botulism Immune Globulin | | |
| | | | | Botulism | | | |
| | | | | BIG | | | |
| 90291 | 29 | | CMV-IgIV | CMV-IgIV | Cytomegalovirus Ig IV human | | |
| 90399 | | | Ig | Ig | Unlisted immune globulin | | |
| 90296 | 12 | | Diphtheria-antitoxin | Diphtheria-antitoxin | Diphtheria antitoxin, equine | | |
| 90371 | 30 | | HBIG | HBIG | Hepatitis B Ig human | | |
| 90375 | 34 | | RIg | Rig | Rabies Ig human | | |
| 90376 | 34 | | RIg-HT | RIg-HT | Rabies Ig heat treated human | | |

| CPT | CVX | Group | Vaccine | 12.1.2 Trade Name | Description | MFG |
|-------|-----|--------------------|--|----------------------|---|---|
| 90378 | 93 | | RSV-IgIM | RSV-IgIM | Respiratory syncytial virus Ig | |
| 90379 | 71 | | RSV-IgIV | RSV-IgIV | Respiratory syncytial virus Ig IV | |
| 90384 | | | Rho(D)Full | Rho(D)Full | Rho(D)Ig Rhlg human full-dose | |
| 90385 | | | Rho(D)Mini | Rho(D)Mini | Rho(D)Ig Rhlg human mini-dose | |
| 90386 | | | Rho(D)IV | Rho(D)IV | Rho(D)Ig Rhlg human IV | |
| 90389 | 13 | | TiG | BayTet | Tetanus Ig human | |
| | | | | TiG | | |
| 90393 | 79 | | Vaccinia immune globulin | Vaccinia-Ig | Vaccinialg human | |
| 90396 | 36 | | VZIg | VZIg | Varicella-zoster Ig human | |
| | 117 | | VZIG (IND) | VariZIG | | CNJ |
| | | Varicella IG | | | | |
| 90665 | 66 | Lyme | Lyme | LYMERix | Lyme disease | SKB |
| 90735 | 39 | Encephalitis | Japanese encephalitis | JE-Vax | Japanese encephalitis | JPN |
| 90705 | 05 | Measles | Measles | Measles | Measles live 1964-1974 (Eli Lilly) | MSD |
| | | | | Attenuvax | Measles live | MSD |
| 90708 | 04 | Measles-Rubella | Measles-Rubella (MERU) | M-R-VAX | Measles and rubella live | MSD |
| | | | | | | MSD |
| 90704 | 07 | Mumps | Mumps | Mumps | Mumps 1950-1978 | MSD |
| | | | | Mumpsvax | Mumps live | MSD |
| 90709 | | Rubella-Mumps, NOS | | | | |
| | 38 | Rubella-Mumps | Rubella-Mumps | Biavax II | Rubella and mumps live | MSD |
| | | | | Mumps-Rubella (MURU) | | |
| 90707 | 03 | MMR | MMR | MMR II | Measles, mumps and rubella live | MSD |
| 90710 | 94 | | | MMRV | MMRV | Measles, mumps, rubella, varicella live |
| 90733 | 32 | Meningo | Meningococcal | MENOMUNE | Meningococcal polysaccharide | PMC |
| 90734 | 114 | | Meningococcal polysaccharide conjugate | Menactra | Meningococcal [Groups A, C, Y and W-135] Polysaccharide Diphtheria Toxoid Conjugate Vaccine | PMC |
| | 108 | | Meningococcal, NOS | | | Meningococcal, NOS |
| 90715 | 115 | Pertussis | Tdap > 7 Years | Adacel | Tdap > 7 years | PMC |
| | | | | Boostrix | | |
| 90712 | 02 | Polio | Polio oral | ORIMUNE | Poliovirus OPV live oral | WAL |
| 90713 | 10 | | Polio injectable | IPOL | Poliovirus inactivated IPV | PMC |
| 90723 | 110 | | DTAP-HepB-Polio | Pediarix | DTAP-HepB-Polio combination | SKB |
| 90698 | 120 | | DtaP-Hib-IPV | Pentacel | DtaP-Hib-IPV combination | PMC |
| | 89 | | Polio-Unspecified | | | Polio, NOS |
| 90727 | 23 | Plague | Plague | Plague | Plague | GRE |
| 90732 | 33 | Pneumo-Poly | Pneumococcal 23 | PNU-IMUNE23 | Pneumococcal polysaccharide 23 valent | WAL |
| | | | | Pneumovax23 | | |
| 90669 | 100 | Pneumococcal | Pneumo-conjugate | Prevnar | Pneumococcal conjugate polyvalent | WAL |
| | 109 | | Pneumococcal-Unspecified | | | |
| 90675 | 18 | Rabies | Rabies-intramuscular | RabAvert | Rabies intramuscular | CHI |
| | | | | Imovax Rabies I.M. | | |
| 90676 | 40 | | Rabies-intradermal | Imovax Rabies I.D. | Rabies intradermal | PMC |
| 90726 | 90 | Rabies-NOS | | | Rabies not otherwise specified | |
| 90680 | 74 | Rotavirus | Rotavirus, Tet | RotaShield | Rotavirus tetravalent live oral (removed on 10/16/1999) | WAL |
| 90680 | 116 | | Rotavirus, Pent | RotaTeq | Rotavirus pentavalent (after 02/02/2006) | MSD |
| | 119 | | Rotavirus, monovalent | Rotarix | | SKB |

| CPT | CVX | Group | Vaccine | 12.1.2 Trade Name | Description | MFG |
|-------|-----|---------------|------------------------------|------------------------------|---|-----|
| | 122 | | Rotavirus | | (between 10/16/1999 and 02/01/2006) | |
| 90706 | 06 | Rubella | Rubella | Rubella | Rubella live | MSD |
| | | | | Meruvax II | | MSD |
| 90708 | 04 | | Measles-Rubella | Measles-Rubella (MERU) | Measles and rubella live | MSD |
| | | | | M-R-VAX | | MSD |
| 90709 | | | Rubella-Mumps NOS | | Rubella-Mumps, NOS | |
| | 38 | Rubella-Mumps | Mumps-Rubella (MURU) | Rubella and mumps live | MSD | |
| | | | Biavax II | | MSD | |
| | 75 | Smallpox | Smallpox | Dryvax | Vaccinia(Smallpox) dry | WAL |
| | 105 | | Vaccinia (Smallpox), diluted | Vaccinia (smallpox), diluted | Vaccinia (smallpox), diluted | |
| 90718 | 09 | Td | Td | Td | Tetanus and diphtheria adult | PMC |
| | 09 | | | DECAVAC (prior to 7/1/2005) | | PMC |
| 90714 | 113 | | Td preservative free | DECAVAC | Td preservative free – CPT code is effective 7/1/2005 | PMC |
| 90715 | 115 | | TdaP > 7 Years | Adacel | TdaP > 7 years | PMC |
| | | Boostrix | | SKB | | |
| 90703 | 35 | Tetanus | Tetanus | TT | Tetanus | PMC |
| | 112 | | Tetanus Toxoid, NOS | | Recorded as CVX 35 | |
| 90690 | 25 | Typhoid | Typhoid-oral | Vivotif Berna/Ty21a | Typhoid oral | |
| 90691 | 101 | | Typhoid-ViCPS | Typhim Vi | Typhoid VI capsular polysaccharide | PMC |
| 90692 | 41 | | Typhoid-H-P | Typhoid | Typhoid heat and phenol inactivated | |
| 90693 | 53 | | Typhoid-AKD | Typhoid-AKD | Typhoid acetone-killed, dried (military) | |
| 90714 | 91 | | Typhoid-NOS | | Typhoid not otherwise specified (after 7/1/2005, no CPT code is associated with this vaccine group) | |
| 90710 | 94 | Varicella | MMRV | MMRV | | MSD |
| 90716 | 21 | | Varicella | Varivax | Varicella live | MSD |
| 90717 | 37 | Yellow Fever | Yellow Fever | YF-VAX | Yellow Fever live | PMC |
| 90736 | 121 | Zoster | Zoster (shingles), live | Zostavax | Zoster (shingles), live | MSD |

Appendix III

New York State Immunization Information System *HL7 2.4 Batch & Real-time Transfer Specification*

GTS Version 1.0

Last Updated: September 18, 2007

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New York State Immunization Information System

HL7 2.4 Batch & Real-time Transfer Specification

13.

14. Introduction

The New York State Immunization Information System (NYSIIS) has made available an interactive user interface on the World Wide Web for authorized 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 their own information systems 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 disparate systems. NYSIIS has been designed to accept HL7 Version 2.4 for batch loads to submit patient and immunization information to NYSIIS. NYSIIS also allows providers to submit patient and immunization information through a real-time system using HL7 2.4 formatted VXQ^V01 Message (Query for Vaccination Record) and a VXU^V04 Message (Unsolicited Vaccination Update) and receive from NYSIIS the resulting HL7 2.4 Response Message in real time. Specifications for HL7 2.4 Real-time start on page 25.

15. The Health Level Seven (HL7) Standard

The ANSI HL7 standard is widely used for data exchange in the health care industry, see references below for additional information. The full standard is quite lengthy, covering a variety of situations in patient care and health care finance and no single application is likely to use all of its content. The CDC has worked with HL7 developers to create a set of messages that permit exchange of immunization data, see references below for additional information. This document covers the subset of HL7 that will be used for patient and immunization records exchanged between NYSIIS and outside systems.

- The basic unit transmitted in an HL7 implementation is the **message**.
- Messages are made up of several **segments**, each of which is one line of text, beginning with a three-letter code identifying the segment type.
- Segments are in turn made up of several **fields** separated by a delimiter character, “|”.

```
MSH|^~&|VALLEY CLINIC^^^||NYSIIS^^^|19991005032342||VXU^V04|682299|P^|2.4^^|||ER
PID|||79928^^^PI|A5SMIT0071^^^|SMITH^MARY^T^^^|JOHNSON^^^^^|19951212|F|||
RXA|0|999|19970903|19970903|^90701^DTP^CPT|0.5
```

The details of how HL7 messages are put together, for NYSIIS purposes, will be explained later in this document. The example above shows the essentials of what a message looks like. In this example, a message is being sent on behalf of Valley Clinic to NYSIIS. The message consists of three segments. NOTE: Valley Clinic may or may not be the actual transmitter of the message. The transmitter of the message will be identified by NYSIIS from log-in information and not from an HL7 message.

- The Message Header segment (**MSH**) identifies the owner (**VALLEY CLINIC**) of the information being sent and the receiver (**NYSIIS**). It also identifies the message as being of type **VXU**. The VXU is an Unsolicited Vaccination Record Update, which is one of the message types defined by HL7.
- The Patient Identification segment (**PID**) gives the patient's name (**MARY T SMITH**), birth date (**19951212**, in YYYYMMDD format), and other identifying fields.
- The Pharmacy Administration segment (**RXA**) tells that a DTP vaccine, with CPT code 90701, was administered on September 3, 1997 (formatted as 19970903). Many fields are optional and this example may have more information included in it. Some segments can be repeated within a single message. In this example, the message could have included a second RXA segment to record another immunization given.

HL7 does not specify how messages are transmitted. It is flexible enough to be used for both real-time interaction and large batches. The standard defines file header and file trailer segments that are used when a number of messages are gathered into a batch for transmission as a file. NYSIIS will use batch files of messages to communicate with outside systems.

16. Scope of This Document

The General Transfer Specification (GTS) documented here supports automated exchange of data between the NYSIIS repository and outside systems. This allows both the patient and immunization records to be available in both systems, so as to avoid the need to enter data twice. The remainder of this document specifies how HL7 file messages are constructed for the purposes of NYSIIS. This document does not cover the step by step methods that are used to transmit files between NYSIIS central repository and any outside systems such as PHINMS messaging for Real-time or batch transactions. It covers only a small subset of the very extensive HL7 standard. Files of messages constructed from the guidelines in this document will fall within the HL7 standard, but there is a wide variety of other possible HL7 messages that are outside the scope of this document.

17. References

- See Version 2.1 (September 2002) of the Health Level 7 standard for a full description of all messages, segments, and fields. Information regarding HL7 is at www.hl7.org.
 - The National Immunization Program within the Center for Disease Control (<http://www.cdc.gov/vaccines/programs/iis/stds/downloads/hl7guide.doc>) has published an Implementation Guide for Immunization Data with the purpose of keeping the use of HL7 for immunization data as uniform as possible.
-

18. HL7 Message Types Used in NYSIIS Batch Transmissions

NYSIIS uses three message types for batch transmissions: ADT, VXU and ACK. The ADT is used for sending patient demographic information updates without any immunizations. (NYC will not accept ADT's. Updates to demographic information should be in a VXU). 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; thus, an ADT message type could be composed of just MSH and PID segments. Also, any number of NK1 segments could be included in the message. 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 the recipient can ignore the content of the message. The segments that are documented here are sufficient to support the principal NYSIIS functions of storing data about patients and immunizations.

Table 1

18.1 ADT

Update Patient Information

| | | |
|----------|------------------------|----------------------------------|
| MSH | | Message Header |
| PID | Patient Identification | |
| [[NK1]] | | Next of Kin / Associated Parties |
| [{*OBX}] | Observation/Result | |

18.2 VXU

Unsolicited Vaccination Record Update

| | | |
|---------|---|-------------------------------------|
| MSH | Message Header | |
| PID | Patient Identification | |
| [PD1] | Patient Additional Demographic | |
| [[NK1]] | Next of Kin / Associated Parties | |
| [PV1] | Patient Visit | |
| {RXA} | | Pharmacy / Treatment Administration |
| [RXR] | Pharmacy / Treatment Route (Only one RXR per RXA segment) | |

[[OBX]] Observation/Result*

18.3 ACK

General Acknowledgment

MSH

Message Header

MSA Message Acknowledgment
[ERR] Error

*The only OBX segment that is valid within an ADT message is one that specifies a CONTRAINDICATION in the OBX-03 Value Type field. (i.e., 30945-0^Contraindication^LN)

RECOMMENDATIONS:

NYSIIS will NOT accept an ADT message (unsolicited demographic update) for a new patient. ADT message is only used to update existing patient demographic information to patients existing in NYSIIS. Therefore, it is best to include the demographic information in a VXU message whenever possible, as this message type accommodates BOTH immunization information and demographic update information. If submitting a new patient it must follow the VXU message format for the new patient within the file.

When a VXU^V04 (Unsolicited Vaccination Record Update) message type is sent with no RXA segment, a check is done to verify if the patient exists in NYSIIS or not. If the patient already exists in NYSIIS, then the demographic update will occur (*if all other update business rules apply). If the patient is new to NYSIIS, then the patient will be rejected per current business rules.

19. Message Segments: Field Specifications and Usage

19.1 HL7 Segment Structure

Each segment consists of several fields that are separated by “|”, which is the field separator character. The tables below define how each segment is structured and contain the following columns:

1. **SEQ** The ordinal position of the field in the segment. Since NYSIIS does not use all possible fields in the HL7 standard, these are not always consecutive.
2. **LEN** Maximum length of the field
3. **DT** HL7 data type of the field. See below for definition of HL7 data types.
4. **R/M** R means required by HL7, and M means mandated by NYS legislation. Blank indicates an optional field.
5. **RP/#** Y means the field may be repeated any number of times, an integer gives the maximum number of repetitions, and a blank means no repetition is permitted.
6. **TBL#** Number of the table giving valid values for the field.
7. **ELEMENT NAME** HL7 name for the field.

- **HL7 data types.** Each field has an HL7 data type. Appendix A of this document lists and defines the HL7 data types needed for NYSIIS. The elemental data types Numeric (NM) and String (ST) consist of one value, while some data types, such as Extended Person Name (XPN) are composites.
- **Delimiter characters.** Field values of composite data types consist of several components separated by the **component separator**, “^”. When components are further divided into sub-components, these are separated by the **sub-component separator**, “&”. Some fields are defined to permit repetition separated by the **repetition character**, “~”. When these special characters need to be included within text data, their special interpretations are prevented by preceding them with the **escape character**, “\”.

```
MSH|^~\&| .....
XXX|field1|component1^component2^subcomponent3.1&subcomponent3.2^component4| .....
YYY|repetition1~repetition2| .....
ZZZ|data includes escaped \|~ special characters| .....
```

In the example above, the Message Header segment uses the field separator, "|", immediately after the "MSH" code that identifies the segment. This establishes what character serves as the field separator throughout the message. The next field, the four characters "^~\&", establishes, in order, the component separator character, the repetition character, the escape character, and the sub-component separator character that will apply throughout the message. The hypothetical "XXX" segment includes field1 with no internal structure, but the next field has several components separated by "^", and the third of these is made up of two sub-components separated by "&". The hypothetical "YYY" segment's first field permits repetition, in this example the two values "repetition1" and "repetition2". The hypothetical "ZZZ" segment's field has a text value that includes the characters "|~", and these are escaped to prevent their normal structural interpretation.

In NYSIIS, sub-components, repetition and text values requiring the escape character will be rare. Components within fields are common, since names and addresses are represented this way. HL7 permits the use of other delimiters besides the recommended ones and the delimiters used in each message are given in the Message Header segment. NYSIIS will always use the recommended delimiters when sending files and requires their use for files received.

19.2 Rules for Sending Systems

The following rules are used by sending systems to construct HL7 messages.

- Encode each segment in the order specified in the message format.
- Begin the segment with the 3-letter segment ID (for example RXA).
- Precede each field with the data field separator ("|").
- Use HL7 recommended encoding characters ("^~\&").
- Encode the data fields in the order given in the table defining segment structure.
- Encode the data field according to its HL7 data type format.
- Do not include any characters for fields not present in the segment. Since later fields in the segment are encoded by ordinal position, fields that are not present do not reduce the number of field separators in the segment. For example, when the second and third fields are not present, the field separators maintain the ordinal position of the fourth field: |field1|||field4
- Data fields that are present but explicitly null are represented by empty double quotes "".
- Trailing separators may optionally be omitted. For example, |field1|field2||| is equivalent to |field1|field2, when field3 and subsequent fields are not present.
- End each segment with the segment terminator (always the carriage return character, ASCII hex 0D).

The following rules are used by receiving systems to process HL7 messages.

- Treat data segments that are expected but not present as if all data fields in the segment were not present.
- Require use of HL7 recommended Field Separator |, and Encoding characters ^~\& for encoding messages.
- Ignore any data segment that is included but not expected, rather than treating it as an error. The HL7 message types used by NYSIIS may include many segments besides the ones in this document, and NYSIIS ignores them. NYSIIS will not send messages with segments not documented in this specification, but reserves the right to specify more segments at a later date. The rule to ignore unexpected segments facilitates this kind of change.
- Ignore data fields found but not expected within a segment.

The message segments below are needed to construct message types that are used by NYSIIS. Each segment is given a brief description excerpted from the HL7 standard. The tables define what fields make up each segment. Since NYSIIS does not use all the fields that HL7 defines, there are sometimes gaps in the ordinal sequence of fields. Following HL7 rules, the gaps do not diminish the number of field separators within the segment. For example, if the second and third fields in a segment are not present, their field separators remain in order to indicate that the next field present is the fourth: field1|||field4 .

19.2.1 ERR

The ERR segment is used to add error comments to acknowledgment messages.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|-------------------------|
| 1 | 80 | CM | R | Y | | Error Code and Location |

Field Notes:

ERR-1 A composite field with four components.

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

The first component identifies the segment ID containing the error. The second component identifies the input file line number of the segment containing the error. The third component identifies by ordinal number the field containing the error. The fourth component 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).

19.2.2 MSA

The MSA segment contains information sent while acknowledging another message.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|---------------------|
| 1 | 2 | ID | R | | 0008 | Acknowledgment Code |
| 2 | 20 | ST | R | | | Message Control ID |
| 3 | 80 | ST | | | | Text Message |

Field Notes:

- MSA-1 Acknowledgement code giving receiver's response to a message. 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 The message control ID from MSH-10 in the message being acknowledged. This allows the sending system to associate this response with the message being responded to.
- MSA-3 Text of error message, used when MSA-1 does not have the normal value of AA.

19.2.3 MSH

The MSH segment defines the intent, source, destination and some specifics of the syntax of a message.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|-----|-----|------|------|----------------------------|
| 1 | 1 | ST | R | | | Field Separator |
| 2 | 4 | ST | R | | | Encoding Characters |
| 3 | 180 | HD | | | | Sending Application |
| 4 | 180 | HD | | | | Sending Facility |
| 5 | 180 | HD | | | | Receiving Application |
| 6 | 180 | HD | | | | Receiving Facility |
| 7 | 26 | TS | | | | Date/Time Of Message |
| 9 | 7 | CM | R | | | Message Type |
| 10 | 20 | ST | R | | | Message Control ID |
| 11 | 3 | PT | R | | 0103 | Processing ID |
| 12 | 60 | VID | R | | 0104 | Version ID |
| 15 | 2 | ID | | | 0155 | Accept Acknowledgment Type |

Field Notes:

- MSH-1 Determines the field separator in effect for the rest of this message. NYSIIS requires the HL7 recommended field separator of "|".
- MSH-2 Determines the component separator, repetition separator, escape character, and sub-component separator in effect for the rest of this message. NYSIIS requires the HL7 recommended values of ^~\&.
- MSH-3 Name of 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 Identifies for whom the message is being sent (the owner of the message information). When sending, NYSIIS will use "NYSIIS". When the message is being sent to NYSIIS and the Provider Organization owning the information is different than the organization transmitting the message, use either the NYSIIS Provider ID of the Provider Organization that owns the information preceded by a component separator (e.g., ^36^) or the short Provider

Organization name (e.g., NYSIIS^^.) Contact the NYSIIS Help Desk for the appropriate organization ID. If the owner of the information and the transmitter of the information are the same Provider Organization, this field can be left blank.

- MSH-6 Identifies the message receiver. When sending, NYSIIS will use the short Provider Organization name assigned when the provider first registers with the NYSIIS database and NYSIIS-Web interface.
- MSH-7 Date and time the message was created. NYSIIS ignores any time component. See the TS data type.
- MSH-9 This is a required field. Two components of this field give the HL7 message type (see Table 0076) and the HL7 triggering event (see Table 0003). Within HL7, the triggering event is considered to be the real-world circumstance causing the message to be sent. For NYSIIS purposes, this field should have the value ADT^A31 for a message conveying patient information or the value VXU^V04 for a message conveying patient and immunization information. In acknowledgement messages the value ACK is sufficient and the second component may be omitted.
- MSH-10 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.
- MSH-11 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 This is a required field. 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 “2.3.1” to indicate HL7 Version 2.3.1 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 This field controls whether an acknowledgement is generated for the message sent. NYSIIS suggests a value of ER 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.

19.2.4

19.2.5 PID

The PID segment 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.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|-----|-----|------|------|-----------------------------|
| 3 | 20 | CX | R | Y | 0203 | Patient ID (Internal ID) |
| 5 | 48 | XPN | R | Y | | Patient Name |
| 6 | 48 | XPN | M | Y | | Mother's Maiden Name |
| 7 | 26 | TS | M | | | Date/Time of Birth |
| 8 | 1 | IS | M | | 0001 | Sex |
| 10 | 80 | CE | | Y | 0005 | Race |
| 11 | 106 | XAD | | Y | | Patient Address |
| 13 | 40 | XTN | | | | Phone number – home |
| 22 | 80 | CE | | Y | 0189 | Ethnic Group |
| 24 | 1 | ID | | | 0136 | Multiple Birth Indicator |
| 25 | 2 | NM | | | | Birth Order |
| 29 | 26 | TS | | | | Patient Death Date and Time |

Field Notes:

- PID-3 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.
- PID-5 See the XPN data type. Last name and first name are required in the first two components. If the Name Type Code component is included, use L-Legal **NOTE: If patient does not have a first name, NO FIRST NAME must be entered.** NYSIIS does not support repetition of this field.
- PID-6 See the XPN data type. In this context, where the mother's name is used for patient identification, NYSIIS uses only last name and first name. A mother's legal name might also appear in the context of an NK1 segment. NYSIIS does not support repetition of this field.
- PID-7 Give the year, month, and day of birth (YYYYMMDD). NYSIIS ignores any time component.
- PID-8 See Table 0001. Use F, M, or U.
- PID-10 See Table 0005. NYSIIS stores and writes “Unknown” values as null. NYSIIS does not support repetition of this

field.

PID-11 See the XAD data type. NYSIIS does not support repetition of this field.

PID-13 See the XTN data type. Version 2.4 includes the support of the N, X, B and C sequences. 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

PID-22 See Table 0189. NYSIIS stores and writes “Unknown” values as null. NYSIIS supports repetition of this field.

PID-24 Use Y to indicate that the client was born in a multiple birth.

PID-25 Relevant when patient was born in a multiple birth. Use 1 for the first born, 2 for the second, etc. This field is useful in matching patient data to existing records.

PID-29 The date of death, if patient is deceased. Give the year, month, and day (YYYYMMDD). NYSIIS ignores any time component. If a death date is sent, then the Patient Registry Status in PD1-14 must indicate a value of “P” for permanently inactive/deceased.

PD1

The PD1 carries patient additional demographic information that is likely to change.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|---|
| 11 | 80 | CE | | | 0215 | Publicity Code |
| 12 | 1 | ID | | | 0136 | Protection Indicator |
| 13 | 8 | DT | | | | Protection Indicator effective date |
| 16 | 1 | IS | | | 0441 | Immunization registry status |
| 17 | 8 | DT | | | | Immunization registry status effective date |

Field Notes:

PD1-11 Controls whether recall/reminder notices are sent. NYSIIS will recognize “01” to indicate no recall/reminder notices or “02” recall/reminder notices any method.

PD1-12 Controls whether a patient (19 years or older) has given consent to have data created or modified in the registry. For patients Under 19 years of age, any value in this field is ignored because legislation automatically mandates their data for inclusion in the registry. For patients 19 years and older, N - the incoming record is rejected because it means that the patient is legally of age and does not consent to share. Null - the incoming record is accepted if it matches one existing consented record already in the registry, otherwise it is rejected. Yes - the incoming record is accepted and either updates an existing record or creates a new consented record.

PD1-13 Effective date for protection indicator reported in PD1-12. Format is YYYYMMDD.

PD1-16 Identifies the registry status of the patient. See table NIP006. 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 Effective date for registry status reported in PD1-16. Format is YYYYMMDD.

PD1-18 Effective date for publicity code reported in PD1-11. Format is YYYYMMDD.

19.2.6 NK1

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.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|-----|-----|------|------|---------------------|
| 1 | 4 | SI | R | | | Set ID - NK1 |
| 2 | 48 | XPN | | Y | | Name |
| 3 | 60 | CE | | | 0063 | Relationship |
| 4 | 106 | XAD | | Y | | Address |
| 5 | 40 | XTN | | Y | | Phone Number |

Field Notes:

- NK1-1 Sequential numbers. Use “1” for the first NK1 within the message, “2” for the second, and so forth. 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 of the responsible person who cares for the client. See the XPN data type. NYSIIS does not support repetition of this field.
- NK1-3 Relationship of the responsible person to the patient. See data type CE and Table 0063 in the HL7 tables. Use the first three components of the CE data type, for example [MTH^Mother^HL70063].
- NK1-4 Responsible person’s mailing address. See the XAD data type. NYSIIS does not support repetition of this field. If responsible person is Mother the Address that is used in this field will become the patients address.
- NK1-5 Responsible person’s phone number. 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.

19.2.7 PV1

The PV1 segment is used to send visit-specific information.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|------------------------|
| 2 | 1 | IS | R | | 0004 | Patient Class |
| 20 | 50 | FC | M | Y | 0064 | Financial Class |

Field Notes:

- PV1-2 See table 0004. NYSIIS will store and write a value of “R” (recurring patient) for this field.
- PV1-20 See table 0064. NYSIIS defines this field as a required field. 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 as described in table 0064 ^ then the date in YYYYMMDD format.

19.2.8 RXA

The RXA carries pharmacy administration data. It is a repeating segment and can record unlimited numbers of vaccinations.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|-----|-----|------|--------|-----------------------------------|
| 1 | 4 | NM | R | | | Give Sub-ID Counter |
| 2 | 4 | NM | R | | | Administration Sub-ID Counter |
| 3 | 26 | TS | R | | | Date/Time Start of Administration |
| 4 | 26 | TS | R | | | Date/Time End of Administration |
| 5 | 100 | CE | R | | | Administered Code |
| 6 | 20 | NM | R | | | Administered Amount |
| 9 | 200 | CE | | Y | NIP001 | Administration Notes |
| 10 | 200 | XCN | | Y | | Administering Provider |
| 11 | 200 | CM | | | | Administered-at location |
| 15 | 20 | ST | M | Y | | Substance Lot Number |
| 17 | 60 | CE | M | Y | 0227 | Substance Manufacturer Name |
| 18 | 200 | CE | | Y | NIP002 | Substance Refusal Reason |

Field Notes:

RXA-1 Required by HL7. Use “0” for NYSIIS.

RXA-2 Required by HL7. For Provider-NYSIIS loads, Data Exchange expects incoming values of 999 for this field. Other numeric values are ignored.

NYSIIS Data Exchange sends out series information in this field, provided the system is configured to do so. For example, if a dose evaluates to (3 of 4) in the Wizard, then the system sends the number 3 in RXA-2. If the dose violates a specific Wizard rule, then the system sends 777 in RXA-2. In all other cases, the number 999 is sent in RXA-2. For combination vaccines, 999 is always sent in RXA-2, and the series count for each component antigen in the combination vaccine is sent in grouped OBX segments, which follow the RXA segment. Please see the field notes on OBX-3, OBX-4 and OBX-5.

The ability to send series information in RXA-2 only applies to HL7 Version 2.4. It applies to Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional, Real-time HL7, and Organizational Extract. Some configuration is needed to send series information in RXA-2. On the Manage Data Exchange Screen, the **Send HL7 Series/Recommend** option displays, and the user must select either “Series Only” or “Both” from the pick list. (This option is hidden if Flat File or HL7 Provider-NYSIIS is chosen.)

The Send Series/Recommend option also displays on the Organization Extract Screen when the user chooses the HL7 2.4 Transaction Format.

If the user configures the system so that it will **not** send series information, then the system always sends 999 RXA-2.

In the following example, the dose of Encephalitis is the 3rd dose in the series.

RXA|0|3|20010207|20010207|39^Japanese encephalitis^CVX^90735^Japanese encephalitis^CPT|1.0|||01^^^~32851911^NYSIIS immunization id^IMM_ID^^|

RXA-3 Date the vaccine was given. NYSIIS ignores any time component.

RXA-4 Required by HL7. Ignored by NYSIIS, which will use the value in RXA-3.

RXA-5 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 WCPT (CPT Codes), NYSIIS – Table WVGC (Vaccine Group Codes), and NYSIIS – Table WVTN (Vaccine Trade Names).

RXA-6 Dose Magnitude is the number of age appropriate doses administered. For example, a dose magnitude 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-9 NYSIIS will recognize 00 to indicate Administered Vaccine or 01 to indicate Historical Record. . When sending, NYSIIS will include the corresponding immunization id in the second repeating segment.

|01^^^^~999999^NYSIIS immunization id^IMM_ID^^|

- RXA-10 Identifies the name of the person physically administering the vaccine (the vaccinator). NYSIIS will use components 2 – 7 to record the name and does not support repetition of this field.
- RXA-11 NYSIIS will use this field to identify the facility where the vaccine was administered. Place the facility name in component 4.
- RXA-15 Manufacturer’s lot number for the vaccine. NYSIIS does not support repetition of this field.
- RXA-17 Vaccine manufacturer from Table 0227, for example |AB^Abbott^ MVX^^|. The HL7 2.4 specification 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 When applicable, this field records the reason the patient refused the vaccine. See table NIP002. Any entry in this field indicates that the patient did not take the substance. 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 write out 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, then 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 For Batch HL7 WIR-PO, Batch HL7 Bi-directional, Real-time HL7, 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.

19.2.9 RXR

The Pharmacy/Treatment Route Segment contains the alternative combination of route and site.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|--------------|
| 1 | 60 | CE | R | | 0162 | Route |
| 2 | 60 | CE | | | 0163 | Site |

Field Notes:

- RXR-1 This is the route of administration from table 0162.
- RXR-2 This is the site of the route of administration from table 0163.

19.2.10 OBX

The Observation/Result Segment is used to transmit an observation.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-------|----|-----|------|------|----------------------------------|
| 1 | 4 | SI | | | | Set ID-OBX |
| 2 | 3 | ID | | | | Value type |
| 3 | 80 | CE | R | | | Observation Identifier |
| 4 | 20 | ST | | | | Observation sub-ID |
| 5 | 65536 | - | M | Y | | Observation Value |
| 11 | 1 | ID | R | | 0085 | Observation Result Status |
| 14 | 26 | TS | | | | Date/Time of the observation |

Field Notes:

OBX-1 Sequential numbers. Use “1” for the first OBX within the message, “2” for the second, and so forth.

OBX-2 This field contains the data type which defines the format of the observation value in OBX-5. 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 When indicating a **Vaccination Contraindication/Precaution**, use 30945-0 in this field and enter a Contraindication, Precaution, or Immunity code (NIP004) in OBX-5.

Example: OBX|1|CE|30945-0^Contraindication^LN||21^acute illness^NIP^^^|F|

When indicating a **Reaction to Immunization**, use 31044-1 in this field and enter a Reaction code (WIR001) in OBX-5.

Example: OBX|1|CE|31044-1^Reaction^LN||HYPOTON^hypotonic^NYSIIS^^^|F|

When indicating a **Vaccination Adverse Event Outcome**, use 30948-4 in this field and enter an Event Consequence code (NIP005) in OBX-5.

Example: OBX|1|CE|30948-4^Adverse Outcome^LN||E^er room^NIP^^^|F|

For Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional, Real-time HL7, 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.

Here are the LOINC Codes that the system sends in OBX-3 for Series information for combination vaccines.

| LOINC Code | Description |
|-----------------|---|
| 38890-0 | Component Vaccine Type. This term is used to distinguish separate vaccine components of a multiple antigen vaccine. Included in LOINC 1/2005. |
| 38890-0&30973-2 | Dose Number in Series |

In the following example, the LOINC Codes are highlighted in OBX-3. These two OBX segments together express that a dose of combination vaccine counts for the 1st dose of DTaP in the DTaP series.

OBX|1|CE|38890-0^COMPONENT VACCINE TYPE^LN|1|20^DTaP^CVX^90700^DTaP^CPT|||||F|
OBX|2|NM|38890-0&30973-2^Dose number in series^LN|1|1|||||F|

Please see the end of the OBX field notes for a complete example of how NYSIIS sends Series information for combination vaccines.

For Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional, Real-time HL7, and Organizational Extract, the system uses this field to send the LOINC Codes for **Recommendations**. For each recommendation, the system sends a grouped set of five OBX segments. Here are the LOINC Codes that the system sends out in OBX-3 for Recommendations. The LOINC itself is sent in OBX-3 in order to identify what the value in OBX-5 represents.

| LOINC Code | Description |
|-----------------|--|
| 30979-9 | Vaccines Due Next |
| 30979-9&30980-7 | Date Vaccine Due |
| 30979-9&30973-2 | Vaccine due next dose number |
| 30979-9&30981-5 | Earliest date to give |
| 30979-9&30982-3 | Reason applied by forecast logic to project this vaccine |

In the following example, the LOINC Codes are highlighted in OBX-3 for a single recommendation of HepB.

```

OBX|11|CE|30979-9^Vaccines Due Next^LN^^|3|45^HepB^CVX^90731^HepB^CPT|||||F|
OBX|12|TS|30979-9&30980-7^Date Vaccine Due^LN^^|3|20050103|||||F|
OBX|13|NM|30979-9&30973-2^Vaccine due next dose number^LN^^|3|1|||||F|
OBX|14|TS|30979-9&30981-5^Earliest date to give^LN^^|3|20050103|||||F|
OBX|15|CE|30979-9&30982-3^Reason applied by forecast logic to project this vaccine^LN^^|3|^ACIP schedule|||||F|

```

Please see the end of the OBX field notes for a complete example of how NYSIIS sends Recommendations.

OBX-4 For sending out Series Information and Recommendations, the number in this field groups together related OBX segments. For example, a single recommendation for DTP/aP 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 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 of which is required. (e.g., |PERTCONT^Pertussis contra^NYSIIS^^^|)

For Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional, Real-time HL7, 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 30979-9&30981-5 and OBX-5 contains the actual earliest date as follows:

```

OBX|4|TS|30979-9&30981-5^Earliest date to give^LN^^|1|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 Required for HL7. Use “F” for NYSIIS.

OBX-14 Records the 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, Real-time HL7, 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&30973-2^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&30973-2^Dose number in series^LN|2|3|F|
```

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

20.

For Batch HL7 NYSIIS-Provider, Batch HL7 Bi-directional, Real-time HL7, and Organizational Extract, 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|30979-9&30980-7^Date Vaccine Due^LN^|1|20010607|F|
OBX|3|NM|30979-9&30973-2^Vaccine due next dose number^LN^|1|1|F|
OBX|4|TS|30979-9&30981-5^Earliest date to give^LN^|1|20010519|F|
OBX|5|CE|30979-9&30982-3^Reason applied by forecast logic to project this vaccine^LN^|1|^ACIP
schedule|F|
OBX|6|CE|30979-9^Vaccines Due Next^LN^|2|85^HepA^CVX^90730^HepA^CPT|F|
OBX|7|TS|30979-9&30980-7^Date Vaccine Due^LN^|2|20030407|F|
OBX|8|NM|30979-9&30973-2^Vaccine due next dose number^LN^|2|1|F|
OBX|9|TS|30979-9&30981-5^Earliest date to give^LN^|2|20020407|F|
OBX|10|CE|30979-9&30982-3^Reason applied by forecast logic to project this vaccine^LN^|2|^ACIP
schedule|F|
OBX|11|CE|30979-9^Vaccines Due Next^LN^|3|45^HepB^CVX^90731^HepB^CPT|F|
OBX|12|TS|30979-9&30980-7^Date Vaccine Due^LN^|3|20010407|F|
OBX|13|NM|30979-9&30973-2^Vaccine due next dose number^LN^|3|1|F|
OBX|14|TS|30979-9&30981-5^Earliest date to give^LN^|3|20010407|F|
OBX|15|CE|30979-9&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 only applies to HL7 Version 2.4. 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. (This option is hidden if Flat File or HL7 Provider-NYSIIS is chosen.)

The Send Series/Recommend option also displays on the Organization Extract Screen when the user chooses the HL7 2.4 Transaction Format.

If the user configures the system so that it will **not** send recommendations, then the system will omit sending the grouped set of five OBX segments entirely.

21. Batch Files of HL7 Messages

The definitions above tell how to create messages containing patient and immunization data. Each message can logically stand on its own and HL7 is compatible with various methods of online and batch transmission. NYSIIS uses batch files to transmit many messages together. HL7 provides special header and footer segments to structure batch files. These segments are not part of any message, but serve to bracket the messages defined above. The structure of a batch file is as follows.

```

FHS                (file header segment)
{
  BHS              (batch header segment)
  { [MSH          (zero or more HL7 messages)
    ....
    ....
    ....
  ] }
  BTS              (batch trailer segment)
}
FTS                (file trailer segment)

```

21.1 FHS

File Header Segment

The FHS segment is used to head a file (group of batches).

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|---------------------------------|
| 1 | 1 | ST | R | | | File Field Separator |
| 2 | 4 | ST | R | | | File Encoding Characters |
| 3 | 15 | ST | | | | File Sending Application |
| 4 | 20 | ST | M | | | File Sending Facility |
| 6 | 20 | ST | M | | | File Receiving Facility |
| 7 | 26 | TS | M | | | File Creation Date/Time |
| 9 | 20 | ST | M | | | File Name/ID |
| 10 | 80 | ST | | | | File Header Comment |
| 11 | 20 | ST | M | | | File Control ID |
| 12 | 20 | ST | | | | Reference File Control ID |

Field Notes:

FHS-1 Same definition as the corresponding field in the MSH segment.

FHS-2 Same definition as the corresponding field in the MSH segment.

FHS-3 Same definition as the corresponding field in the MSH segment.

FHS-4 Same definition as the corresponding field in the MSH segment.

FHS-6 Same definition as the corresponding field in the MSH segment.

FHS-7 Same definition as the corresponding field in the MSH segment.

FHS-9 Name of the file as transmitted from the initiating system.

FHS-10 Free text, which may be included for convenience, but has no effect on processing.

FHS-11 This field is used to identify a particular file uniquely among all files sent from the sending facility identified in FHS-4.

FHS-12 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.

21.2 FTS

File Trailer Segment

The FTS segment defines the end of a file.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|-------------------------|
| 1 | 10 | NM | M | | | File Batch Count |
| 2 | 80 | ST | | | | File Trailer Comment |

Field Notes:

FTS-1 The number of batches contained in this file. NYSIIS normally sends one batch per file and discourages sending multiple batches per file.

FTS-2 Free text, which may be included for convenience, but has no effect on processing.

21.2.1.1

21.3 BHS

Batch Header Segment

The BHS segment defines the start of a batch.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|----------------------------------|
| 1 | 1 | ST | R | | | Batch Field Separator |
| 2 | 4 | ST | R | | | Batch Encoding Characters |
| 3 | 15 | ST | | | | Batch Sending Application |
| 4 | 20 | ST | M | | | Batch Sending Facility |
| 6 | 20 | ST | M | | | Batch Receiving Facility |
| 7 | 26 | TS | M | | | Batch Creation Date/Time |
| 10 | 80 | ST | | | | Batch Comment |
| 11 | 20 | ST | M | | | Batch Control ID |
| 12 | 20 | ST | | | | Reference Batch Control ID |

Field Notes:

BHS-1 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 segment. NYSIIS requires | (ASCII 124).

BHS-2 This field contains the four characters in the following order: the component separator, repetition separator, escape characters and sub-component separator. NYSIIS requires ^~\&, (ASCII 94, 126, 92 and 38 respectively).

BHS-3 Same definition as the corresponding field in the MSH segment.

BHS-4 Same definition as the corresponding field in the MSH segment.

BHS-6 Same definition as the corresponding field in the MSH segment.

BHS-7 Same definition as the corresponding field in the MSH segment.

BHS-10 Free text, which may be included for convenience, but has no effect on processing.

BHS-11 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 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*.

21.3.1

21.4 BTS

Batch Trailer Segment

The BTS segment defines the end of a batch.

| SEQ | LEN | DT | R/M | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|----------------------------|
| 1 | 10 | ST | M | | | Batch Message Count |
| 2 | 80 | ST | | | | Batch Comment |

Field Notes:

BTS-1 This field contains the count of the individual messages contained within the batch.

BTS-2 Free text, which can be included for convenience, has no effect on processing.

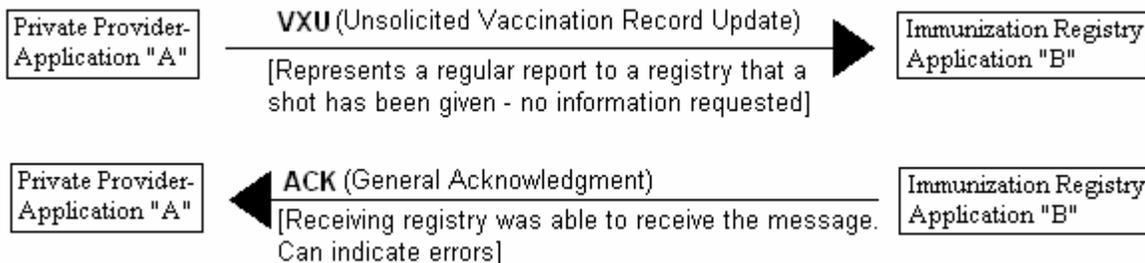
File Interchange between NYSIIS and Outside Systems using the Batch user interface

The central repository of NYSIIS contains records of patients from around the state. Patient and immunization records flow both ways between NYSIIS and outside systems. Data, for a particular client, is transmitted by NYSIIS to an outside system (Provider Organization) only if the patient is identified as having an Active relationship with that Organization AND the relationship was created by transmitting the patient's record to NYSIIS or by creating the relationship via the NYSIIS-Web interface. So, an exchange of information about a given patient is always initiated by the outside system. There are three options for exchanging data with NYSIIS:

- (1) The Provider Organization can send data to NYSIIS and request that no data is returned from NYSIIS, which is a Provider Organization to NYSIIS data transfer.
- (2) The Provider Organization can request data from NYSIIS while not providing data to NYSIIS, which is a NYSIIS to Provider Organization data transfer.
- (3) The Provider Organization can send data to NYSIIS and NYSIIS will return any updated information regarding any patients that have an Active relationship with that Provider Organization, which is a Bi-directional data transfer.

HL7 messages are always part of a two-way exchange between an initiating system and a responder. Sometimes the initial message implies specific data to be sent in a response. Other times, as is the case with NYSIIS patient and immunization data, the principal response of the responder is to process the message and post whatever it contains to its own database. For these cases, the responder provides the ACK message type in an HL7 format, which contains no new application data, but allows the receiver to inform the initiator that the message has been received and processed successfully. If an error prevents successful processing, optional parts of the ACK message will allow this to be communicated as well.

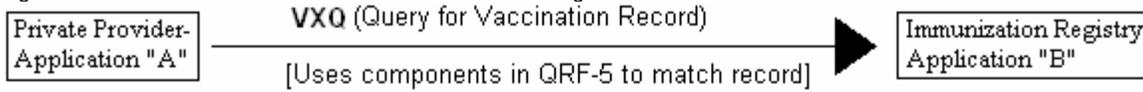
For exchanges between NYSIIS and outside systems, which is a Provider Organization to NYSIIS data transfer, it is the responsibility of the outside system to initiate the transfer of the first file, containing ADT(only for updating demographic information) and/or VXU messages with patient and immunization data for adding or updating patient and immunization data. After processing those messages, NYSIIS responds with a response file of ACK messages.



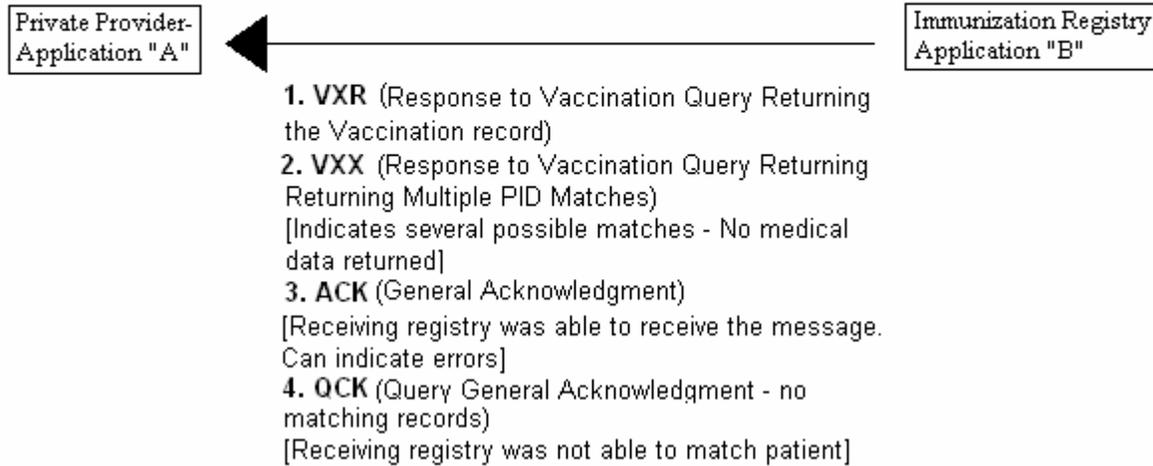
| Provider Organization | | NYSIIS | |
|-----------------------|--|---|--|
| | | Outgoing | Receiving |
| 1. | Creates a file of patient and immunization records that have changed since they were last transmitted to NYSIIS. | | |
| 2. | Transmits the file to NYSIIS through the user interface. | | |
| 3. | | | Processes the file received, creates a file of ACK messages. |
| 4. | | Posts the ACK file for the initiator to pick up via the web-interface of the original file submitted. | |
| 5. | Processes the ACK file to confirm success of the file transmission. | | |

For exchanges between NYSIIS and outside systems, which is a Bi-directional data transfer, it is the responsibility of the outside system to

initiate the transfer of the first file, containing ADT(only for updating demographic information) and/or VXU messages with patient and immunization date for adding or updating patient and immunization data. After processing those messages, NYSIIS responds with a response file of ACK messages. At the same time or soon after, NYSIIS also creates another file of ADT and VXU messages, containing the full patient record(if the patient was new), to send to the Provider Organization that initiated the first transfer. It is the responsibility of the Provider Organization as receiver to transmit back a file of ACK messages.



Possible responses:



| Provider Organization | | NYSIIS | |
|-----------------------|--|---|---|
| | | Outgoing | Receiving |
| 1. | Creates a file of patient and immunization records that have changed since they were last transmitted to NYSIIS. | | |
| 2. | Transmits the file to NYSIIS through the user interface. | | |
| 3. | | | Processes the file received, creates a file of ACK messages. |
| 4. | | | Creates a file of any active patient and immunization records that have changed since they were last transmitted to this Provider Organization. |
| 5. | | Posts the ACK file for the initiator to pick up via the web-interface of the original file submitted. | |
| 6. | | Posts the file of patient and immunization records that have changed since they were last transmitted to this Provider Organization to pick up via the web-interface. | |
| 7. | Processes the ACK file to confirm success of the file transmission. | | |

| | | | |
|----|--|--|--|
| 8. | Processes the file of patient and immunization records that have changed since they were last transmitted to this Provider Organization. | | |
|----|--|--|--|

The 15th field, in the MSH message header segment, allows the initiator to ask that the message be acknowledged only in the case of an error and NYSIIS supports this in order to minimize the number of ACK messages transmitted. In this case, the ACK file contains only error messages (an optional form of the ACK message type). The original messages, with no answering error messages, are implicitly acknowledged as successfully processed. If all messages in a batch are successful, the answering ACK file will only contain file batch headers and footers, with no actual ACK messages. For Step 2, in the above table, it is permissible for a Provider Organization to send a file containing only file batch headers and footers as a way of triggering the file that NYSIIS creates in Step 6. It is also possible that the file, NYSIIS creates in Step 6, will contain only file batch headers and footers if there are no records to send.

Examples

To illustrate how a NYSIIS HL7 file is put together we will document how the fictional organization, Valley Clinic, formats patient and immunization records to be transmitted to NYSIIS. The following table displays the information to be transmitted and it is organized into HL7 segments and fields. For example, PID-3 refers to the third field in the Patient Identification segment.

| Information to transmit | Data value to be entered | HL7 Format |
|---|---|-------------|
| • Patient #1 | | PID segment |
| • Chart Number (ID on Valley Clinic's system) | 45LR999 | PID-3 |
| • Name | GEORGE M MILLER JR | PID-5 |
| • Mother's maiden name | MARTHA OLSON | PID-6 |
| • Birth date | February 27, 1995 | PID-7 |
| • Sex | M | PID-8 |
| • Address | 123 MAIN ST ALBANY, NY 53000, 1843 | PID-11 |
| • Birth Place | WI025, WI | PID-23 |
| • Multiple Birth Indicator | Y (patient was born as part of a multiple birth) | PID-24 |
| • Birth Order | 2 (second birth of a multiple birth) | PID-25 |
| • Publicity Code | 02 | PD1-11 |
| • Protection Indicator | Y (patient records are visible by other provider organizations) | PD1-12 |
| • Patient Registry Status | A (client is active in the registry) | PD1-14 |
| • Responsible Person (parent or other person who cares for patient) | | NK1 segment |
| • Name | MARTHA MILLER | NK1-2 |
| • Relationship to patient | MTH | NK1-3 |
| • Address | 123 MAIN ST ALBANY, NY 53000, 1843 | NK1-4 |
| • Phone | 608 123 4567 | NK1-5 |
| • Responsible Person | | NK1 segment |
| • Name | GEORGE MILLER | NK1-2 |
| • Relationship to patient | FTH | NK1-3 |
| • Patient #2 | | PID segment |
| • Chart Number | 23LK729 | PID-3 |
| • Name | MARIA CALIFANO | PID-5 |
| • Mother's maiden name | ANGELICA DISTEFANO | PID-6 |
| • Birth date | April 13, 1998 | PID-7 |
| • Sex | F | PID-8 |
| • Patient Class | R | PV1-2 |
| • Financial Class | V04 | PV1-20 |
| • Immunization | | RXA segment |
| • Date administered | July 23, 1999 | RXA-3 |
| • Vaccine | DtaP | RXA-5 |

| Information to transmit | Data value to be entered | HL7 Format |
|---------------------------------------|---|-------------|
| • CPT Code | 90700 | RXA-5 |
| • Dose size | 0.5 | RXA-6 |
| • Administering Provider Organization | Valley Clinic | RXA-10 |
| • Immunization | | RXA segment |
| • Date administered | July 23,1999 | RXA-3 |
| • Vaccine | MMR | RXA-5 |
| • CPT Code | 90707 | RXA-5 |
| • Dose size | 0.5 | RXA-6 |
| • Administering Provider Organization | Valley Clinic | RXA-10 |
| • Patient #3 | | PID segment |
| • Chart Number | 92HG9257 | PID-3 |
| • Name | JOSEPH FISHER | PID-5 |
| • Mother's maiden name | MARY LASOWSKI | PID-6 |
| • Birth date | May 28, 1998 | PID-7 |
| • Sex | M | PID-8 |
| • Immunization | | RXA segment |
| • Patient Class | R | PV1-2 |
| • Financial Class | V04 | PV1-20 |
| • Date administered | July 29, 1999 | RXA-3 |
| • Vaccine | MMR | RXA-5 |
| • CPT Code | 90707 | RXA-5 |
| • Dose | 0.5 | RXA-6 |
| • Administering Provider Organization | Valley Clinic | RXA-10 |
| • Lot number | AD19487 | RXA-15 |
| • Lot expiration date | December 12, 1999 | RXA-16 |
| • Lot manufacturer | FLYBYNIGHT LABORATORIES (this manufacturer is not found in the valid list in HL7 Table 0227, and the invalid value will cause NYSIIS to reject the message with an error message) | RXA-17 |

In an HL7 message, each segment is a single text line, ending with the carriage return character. In the examples, long lines are broken artificially for display purposes and the carriage return character is denoted by <CR>.

```
FHS|^~\&|VALSYS|VALCLIN||NYSIIS|19990802091523||filename1.hl7|WEEKLY HL7
  UPLOAD|00009972<CR>
BHS|^~\&|VALSYS|VALCLIN||NYSIIS|19990802091523|||00010223<CR>
MSH|^~\&|VALSYS|VALCLIN||NYSIIS|19990802091524||ADT^A31|00000123|P|2.4||AL<CR>
PID|||45LR999^^^^PI||MILLER^GEORGE^M^JR|OLSON^MARTHA|19950227|M|||123 MAIN
  ST^^ALBANY^NY^53000^US^^^FULTON|||000111222|||US^WI^1843|Y|2<CR>
PD1|||02^REMINDER/RECALL - ANY MENTOD^HL70215|Y|A<CR>
NK1|1|MILLER^MARTHA|MTH^Mother^HL70063|123 MAIN ST^^ALBANY^NY^53000^US^^^1843
  |(608)123-4567<CR>
NK1|2|MILLER^GEORGE|FTH^Father^HL70063<CR>
MSH|^~\&|VALSYS|VALCLIN||NYSIIS|19990802091524||VXU^04|00000124|P|2.4||ER<CR>
PID|||66782^^^^SR^~23LK729^^^^PI|CALIFANO^MARIA|DISTEFANO^ANGELICA|19980413|F<CR>
PV1|R|||V04^19990723|<CR>
RXA|0|999|19990723|19990723|^^^90700^DTaP^CPT|0.5|||VALCLIN<CR>
RXA|0|999|19990723|19990723|^^^90707^MMR^CPT|0.5|||VALCLIN<CR>
MSH|^~\&|VALSYS|VALCLIN||NYSIIS|19990802091526||VXU^04|00000125|P|2.4||ER<CR>
PID|||927389^^^^SR^~92HG9257^^^^PI|FISHER^JOSEPH|LASOWSKI^MARY|19980528|M<CR>
PV1|R|||V04^19990729|<CR>
RXA|0|999|19990729|19990729|^^^90707^MMR^CPT|0.5|||VALCLIN|||AD19487|
```

```

19991212|ZZ^FLYBYNIGHT LABORATORIES^HL70227|||A<CR>
BTS|3<CR>
FTS|1<CR>

```

Note: When a patient is being introduced to NYSIIS, the VXU message must precede the ADT message, since NYSIIS must have at least one immunization for a patient before being added to the database. Sending ADT and VXU messages for the same patient is redundant, since the VXU message is capable of reporting all information that is also found in the ADT. In the example above, Valley Clinic sends a file of three HL7 messages to NYSIIS. Batch header/footer segments bracket the messages. The first message type is an ADT, which is used to send patient demographic data without including immunization information. This message type MUST follow a VXU message for the patient if the patient is new to the NYSIIS system.

Patient George M Miller Jr. is identified by Valley Clinic's Patient ID, 45LR999, in his PID segment. The message could have included George's NYSIIS ID number in field PID-3, but does not have to, if it is not recorded in Valley Clinic's system. George's mother's maiden name, birth date, sex, and address also serve to identify him. Some other optional fields are not present, including some fields from the full HL7 standard not defined in this document because they are not used by NYSIIS. Fields not present do not diminish the number of "|" delimiters, so later fields can be identified by ordinal position in the segment. Two NK1 segments give some information for George's mother and father, just the minimum required for his father, with address and telephone fields for his mother.

The next two PID segments in the second and third messages give a NYSIIS patient ID in field PID-3. This must have been transmitted earlier from NYSIIS to Valley Clinic's system. In this case it is legitimate to omit more of the optional PID fields, since NYSIIS must have at least the minimum required information for these patients even to create a record. However, if there is a possibility that Valley Clinic has new or changed information to send to NYSIIS, these fields should be present, and it does no harm to repeat fields even if they have been transmitted previously.

```

FHS|^~\&|NYSIIS|NYSIIS||VALCLIN|19990803200106||filename2.hl7||000023479|00009972<CR>
BHS|^~\&|NYSIIS|NYSIIS||VALCLIN|19990803200116|||00004321|00010223<CR>
MSH|^~\&|NYSIIS|NYSIIS||VALCLIN|19990803200117||ACK|00000456|P|2.4<CR>
MSA|AA|00000123<CR>
MSH|^~\&|NYSIIS|NYSIIS||VALCLIN|19990803200119||ACK|00000458|P|2.4<CR>
MSA|AE|00000125|INVALID MANUFACTURER CODE<CR>
ERR|RXA^152^17^1<CR>
BTS|2|<CR>
FTS|1<CR>

```

NYSIIS answers the file from the above example with a file of ACK messages. Valley Clinic's message 00000123 had the value AL in field MSH-15, asking for acknowledgements of all messages. The value AA in MSA-1 indicates that this message was processed without error. The next message, 00000124, uses the value ER to ask for acknowledgement only in case of errors, so this message is acknowledged implicitly by the absence of an ACK message for it. This example while legitimate is for purposes of illustration and most providers will probably prefer to follow the NYSIIS recommendation of error acknowledgements only. The last message, 00000125, did contain an error, and the ERR segment in its acknowledgement indicates the segment ID (RXA) of the segment, the line number (152) where it appears in the input file, the errant field (17) and the field component (1). The MSA segment contains the error message. Errors will be generated for missing required data, invalid data or any other deviance from the form and content of messages as specified in this document. If all three messages in the first file above had requested error acknowledgement only and none had any errors, then the answering file from NYSIIS would contain just the FSH, BHS, BTS, and FTS segments. All the messages would be implicitly acknowledged as successfully processed.

In the sample file exchange above, the outside system initiated the exchange with the file of ADT and VXU segments and NYSIIS responded with ACK segments. The format is identical when NYSIIS sends ADT and VXU segments out and the ACK responses are similar too. In the FHS, BHS, and MSH segments, the values of the fourth and sixth fields are reversed to show sender and receiver. NYSIIS always sends its own patient identifier in the required field PID-03 and includes the outside system's identifier in PID-03 if known. Outside systems are encouraged to store NYSIIS's patient ID, and use it in PID-03 when sending to NYSIIS. This provides a firm basis for patient identification makes processing easier for the NYSIIS system and avoids errors in storing patient information, such as creation of duplicate records when an insufficiently identified patient record cannot be matched with a record already in the NYSIIS database. Though NYSIIS makes a great effort to match patient records effectively, use of the NYSIIS patient ID is the best guarantee of clean and useful data.

22. Real-time Processing through PHINMS

“Real-time” processing refers to the ability to transmit an HL7 2.4 formatted VXQ^V01 Message (Query for Vaccination Record) and a VXU^V04 Message (Unsolicited Vaccination Update) and receive from NYSIIS the resulting HL7 2.4 Response Message in real time. A provider organization will query a registry to get information on a certain patient (i.e. send an HL7 2.4 VXQ^V01 message) and will receive an HL7 2.4 Message Response (i.e. VXR^V03, VXX^V02, ACK or QAK) to that query in real time

In order to have this capability, provider organizations need to perform the following:

1. Obtain or develop, install and configure a patient interface capable of transmitting an HL7 formatted Message file via the Electronic Business using eXtensible Markup Language (eXML) infrastructure to securely transmit public health information over the Internet to the Public Health Information Network Messaging System (PHINMS) Message Receiver.
The CDC provides, free of charge, their PHINMS client Message Sender for communication with their PHINMS Message Receiver. Alternatively, the provider may choose to develop their own eXML Message Sender to communicate with the PHINMS Message Receiver.
2. The provider organization will submit a text file containing HL7 2.4 formatted VXQ^V01 and VXU^V04 Messages (up to 1000 messages are accepted) to be delivered via their eXML-based patient Message Sender to the NYSIIS PHINMS Message Receiver. NYSIIS will process the Messages and send back via the PHINMS Message Receiver a file of HL7 2.4 formatted Response Messages, one per associated query or vaccination update request.
3. It is the responsibility of the provider organization to obtain or develop, install and configure an eXML patient Message Sender for sending the HL7 2.4 formatted Message Requests and receiving the resulting HL7 2.4 formatted Message Response file generated by NYSIIS.
4. The provider organization will need to obtain from NYSIIS a CPA (Collaboration Protocol Agreement) for access to the NYSIIS Real-time system.
5. The provider organization will need to obtain the NYSIIS SSL certificate for secure access. See Appendix C (Obtaining the NYSIIS SSL Certificate) for detailed instructions. Please note: your certificate must be renewed annually. You will need to repeat the procedure detailed in Appendix C on an annual basis.

****NYSIIS PROVIDES NEITHER INSTALLATION, CONFIGURATION NOR TECHNICAL SUPPORT FOR THE EBXML PATIENT MESSAGE SENDER.**

Full documentation and contact information for the PHINMS product may be found at the following link:

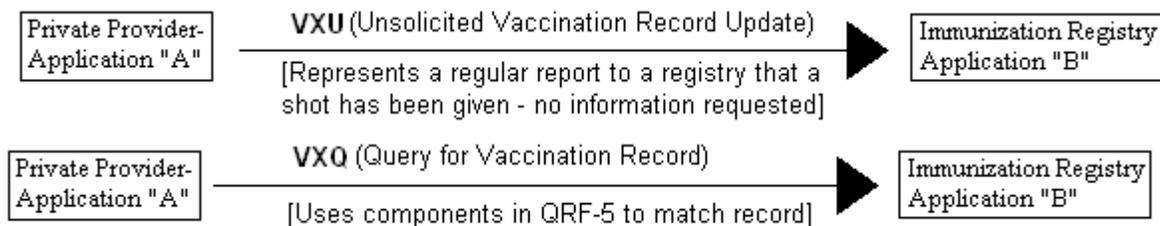
<http://www.cdc.gov/phin/>

Full documentation for the eXML specification may be found at the following link:

<http://www.ebxml.org/specs>

PHINMS is eXML version 2.0 compliant.

The following section outlines the various message types that are sent in real-time files.



Private Provider-Application "A"



Immunization Registry Application "B"

1. **VXR** (Response to Vaccination Query Returning the Vaccination record)
2. **VXX** (Response to Vaccination Query Returning Multiple PID Matches)
[Indicates several possible matches - No medical data returned]
3. **ACK** (General Acknowledgment)
[Receiving registry was able to receive the message. Can indicate errors]
4. **QCK** (Query General Acknowledgment - no matching records)
[Receiving registry was not able to match patient]

Real-time files that provider organizations send to the NYSIIS can contain any of the following message types:

22.1 VXU^V04

Unsolicited Vaccination Update

| | | |
|----------------------|--|-------------|
| MSH | Message Header | |
| PID | Patient Identification | |
| [PD1] | Patient Additional Demographic | |
| [[NK1]] | | Next of Kin |
| / Associated Parties | | |
| <hr/> | | |
| [PV1] | Patient Visit | |
| RXA | Pharmacy / Treatment Administration (at least ONE RXA is REQUIRED by NYSIIS) | |
| [RXR] | Pharmacy / Treatment Route (Only one RXR per RXA segment) | |
| [[OBX]] | Observation/Result | |

22.2 VXQ^V01

Query for Vaccination Record

| | |
|-----|--|
| MSH | Message Header Segment |
| QRD | Query Definition Segment |
| QRF | Query Filter Segment (NYSIIS has made this segment REQUIRED) |

Real-time (response) files that the NYSIIS sends to provider organizations can contain any of the following message types:

22.3 VXR^V03

Response TO Vaccination Query Returning the Vaccination Record

| | |
|---------|---|
| MSH | Message Header Segment (One per message) |
| MSA | Message Acknowledgment Segment (One per message) |
| QRD | Query Definition Segment (One per message) |
| QRF | Query Filter Segment (One per message—required by NYSIIS) |
| PID | Patient Identification Segment (One per matching patient) |
| [PD1] | Additional Demographics |
| [[NK1]] | Next of Kin Segment (Optional, zero or more per matching patient) |
| [PV1] | |
| [[| |
| RXA | Pharmacy Administration |

| | |
|-----------|---|
| [RXR] | Pharmacy Route |
| [{{OBX}}] | Observation/Result Contraindications or Reactions |
| }} | |
| [{{OBX}}] | Observation/Result Vaccines Due Next |

22.4 VXX^V03

Response TO Vaccination Query (Returning Multiple PID Matches)

Returning Multiple PID Matches will occur if any number other than 1 is in the QRD-07 segment of the query being sent in as explained on page 28 explaining the QRD segment.

| | |
|-----------|---|
| MSH | Message Header Segment (One per message) |
| MSA | Message Acknowledgment Segment (One per message) |
| QRD | Query Definition Segment (One per message) |
| QRF | Query Filter Segment (One per message—required by NYSIIS) |
| { | |
| PID | Patient Identification Segment (One per matching patient) |
| [{{NK1}}] | Next of Kin Segment (Optional, zero or more per matching patient) |
| } | |

22.5 ACK

General Acknowledgment

| | |
|-------|--------------------------------|
| MSH | Message Header Segment |
| MSA | Message Acknowledgment Segment |
| [ERR] | Error |

22.6 QCK

Query General Acknowledgment

| | |
|-------|--------------------------------|
| MSH | Message Header Segment |
| MSA | Message Acknowledgment Segment |
| [ERR] | Error |
| [QAK] | Query Acknowledgment Segment |

Page 39 of this document outlines the rules/specifications needed to construct a HL7 message. These same rules must be applied for Real-time message processing. ****Note:** Batch Message Headers (i.e. FHS, BHS) and footers (i.e. FTS, BTS) are NOT required for Real-time processing.

The message segments below are needed to construct message types that are used by NYSIIS. Each segment is given a brief description excerpted from the HL7 standard. The tables define what fields make up each segment. Since NYSIIS does not use all the fields that HL7 defines, there are sometimes gaps in the ordinal sequence of fields. Following HL7 rules, the gaps do not diminish the number of field separators within the segment. For example, if the second and third fields in a segment are not present, their field separators remain in order to indicate that the next field present is the fourth: field1|||field4.

22.7 MSH

Message Header Segment

For VXU and VXQ message types, the MSH segment must be constructed according to normal HL7 format specifications (refer to Pg. 5 of this document). For Real-time processing, NYSIIS limits the number of MSH segments that can be processed in a single file. Files containing more than 1000 MSH segments will be rejected and an ACK message will be generated, informing the provider that 1000 is the maximum number of MSH segments that NYSIIS accepts for Real-time processing.

This is to minimize any impact on actual production performance of NYSIIS in normal usage.

22.8

22.9

22.10 VXU^V04

Unsolicited Vaccination Record Update

As stated earlier in this document, the VXU message is used for sending patient demographic and immunization specific data. This message type can be sent via Real-time. VXU segments should be constructed according to normal HL7 format specifications (refer to pages 5-9 of this document). A VXU message must be received in the HL7 2.4 format; NYSIIS does not support prior HL7 versions for Real-time processing. NYSIIS validates the version by reading the MSH-12 field. A VXU message must contain |2.4^^| in MSH-12.

Immunization deletions can be submitted for both batch HL7 2.4 and Real-time submissions. To indicate a deletion, the RXA-21 field mut be populated with a value of “D”. Below is an example of a RXA deletion segment. If the number of deletions received through batch exceeds 5% of the total number of immunizations or more than 50 immunizations are marked for deletion, NYSIIS will reject the file.

RXA|0|999|19860715|19860715|^90718^Td^CPT|0|||05^^^^^^|^208^^^^^^^^^^^^^^^|D|

22.11 VXQ^V01

Query for Vaccination Record

When a health care provider (participating in an immunization registry) needs to obtain a complete patient vaccination record, a VXQ (query) is sent to the immunization registry for the definitive (last updated) immunization record. The three segments that make up a VXQ message are the MSH (message header), QRD (query definition) and QRF (query filter). For a VXQ message, the MSH-09 field must contain |VXQ^V01| and the segments must be in the following sequence order:

MSH|^~\&|NYSIISPH|NYSIISPH|NYSIISPH|NYSIISPH|200212091511||VXQ^V01|0000001|P^|2.4|||ER
QRD|19970522|R||000000001|||25^RD|4211^KENNEDY^JOHN^FITZGERALD^JR|VXI|^VACCINE INFORMATION^HL700048|^S11S|
QRF|MA0000|||256946789~19900607~MA~MA99999999~88888888~KENNEDY^JACQUELINE^LEE~BOUVIER~898666725~KENNEDY^JOHN^FITZGERALD~822546618|

The QRD and QRF segments are outlined in detail below.

22.12 QRD

Query Definition Segment

Used to define a query.

| SEQ | LEN | DT | R/O | RP/# | TBL# | ELEMENT NAME |
|-----|-----|------------|----------|----------|-------------|---------------------------------------|
| 1 | 26 | TS | R | | | Query date/time |
| 2 | 1 | ID | R | | 0106 | Query Format Code |
| 3 | 1 | ID | R | | 0091 | Query Priority |
| 4 | 10 | ST | R | | | Query ID |
| 5 | 1 | ID | O | | 0107 | Deferred response type |
| 6 | 26 | TS | O | | | Deferred response date/time |
| 7 | 10 | CQ | R | | 0126 | Quantity limited request |
| 8 | 60 | XCN | R | Y | | Who subject filter |
| 9 | 60 | CE | R | Y | 0048 | What subject filter |
| 10 | 60 | CE | R | Y | | What department data code |
| 11 | 20 | CM | O | Y | | What data code value qualifier |
| 12 | 1 | ID | O | | 0108 | Query results level |

Field Notes:

QRD-01 Date the query was generated by the application program. NYSIIS requires this field and verifies that a valid date is

- received. The minimum format of YYYYMMDD is required. A null/invalid value results in message rejection.
- QRD-02 Query/response format code. NYSIIS requires this field and only accepts a value of “R”. A null/invalid value results in message rejection.
- QRD-03 Time frame in which the response is expected. NYSIIS requires this field and only accepts a value of “T”. A null/invalid value results in message rejection.
- QRD-04 Unique identifier for the query assigned by the querying application. NYSIIS requires this field and null/invalid values result in message rejection. This field is returned intact by NYSIIS in a response (VXR or VXX).
- QRD-05 Used to indicate a deferred response. This is an optional field. NYSIIS does not support a deferred response.
- QRD-06 Used to indicate the date/time of the deferred response. This is an optional field. NYSIIS does not support a deferred response.
- QRD-07 Maximum length of the response that can be accepted by the requesting system. NYSIIS requires this field and only accepts a value of “RD” in the 2nd component. The 1st component is a numerical value. A null/invalid value in either sub-component results in message rejection. NYSIIS will interpret the units as the maximum number of client MATCHES to be returned via a VXX response message.

*Note: NYSIIS will return a maximum of 10 records per query message submitted. If a value of 0 (zero) is received (i.e. |0^RD|) then NYSIIS will return the maximum allowable number of patients found to be matching the NYSIIS.

- QRD-08 Identifies the subject of the query or whom the inquiry is about. The 1st component is optional. It is used to identify the NYSIIS ID for the patient, if known. The 2nd component is required by NYSIIS. If the first or last name OR both names are missing (regardless if there are repeating full names after the first) it results in message rejection. NYSIIS supports repetition of this field.

Note: If the 1st component is used, NYSIIS will find the patient in the registry with the matching internal ID. If a match is found, NYSIIS will then compare the first and last name along with the birth date of both the matched patient and the patient in the QRD. If the name and birth date is exact, the patient is returned in a VXR. If a patient isn’t found using the internal ID, NYSIIS will ignore that value and find patients that match the remaining information.

- QRD-09 Describes the kind of information required to satisfy the request. NYSIIS requires this field and a value of “VXI” must populate the 1st component. NYSIIS supports repetition of this field. Null/invalid values result in message rejection if the field does not repeat. If the field repeats there must be at least one value of “VXI” to be valid.
- QRD-10 Identifies the “what” department data code. NYSIIS requires this field and supports repetition of it. Null/invalid values will result in message rejection.
- QRD-11 Further refines the inquiry by data code qualifiers by providing a window or range. This is an optional and repeatable field.
- QRD-12 Used to control level of detail in results. This field is optional and will be populated by NYSIIS with the total count of PID matches found in NYSIIS when Query results in a VXX Response Message.

Example:

QRD|19970522|R||0000001|||25^RD|4211^KENNEDY^JOHN^FITZGERALD^JR|VXI|^VACCINEINFORMATION^HL700048|^S11S|20

QRF – Query Filter Segment – REQUIRED by NYSIIS

Used with the QRD segment to further refine the content of a query.

| SEQ | LEN | DT | R/O | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|---|
| 1 | 20 | ST | R | Y | | Where subject filter |
| 2 | 26 | TS | O | | | When data start date/time |
| 3 | 26 | TS | O | | | When data end date/time |
| 4 | 60 | ST | O | Y | | What user qualifier |
| 5 | 60 | ST | O | Y | | Other query subject filter |
| 6 | 12 | ID | O | Y | 0156 | Which data/time qualifier |
| 7 | 12 | ID | O | Y | 0157 | Which date/time status qualifier |
| 8 | 12 | ID | O | Y | 0158 | Date/time selection qualifier |
| 9 | 60 | TQ | O | Y | | When quantity/timing qualifier |

Field Notes:

-
- QRF-01 Identifies the department, system or subsystem to which the query pertains. NYSIIS requires this field. A null/invalid value results in message rejection.
 - QRF-02 Data representing dates and times (registries do not value this component). This is an optional field.
 - QRF-03 Data representing dates and times (registries do not value this component). This is an optional field.
 - QRF-04 An identifier to further define characteristics of the data of interest. This is an optional field.
 - QRF-05 This field is used by registries to transmit up to ten separate search “keys”. NYSIIS requires this field and does NOT support repetition. The 2nd component (patient DOB) is minimally required by NYSIIS. A null/invalid format results in message rejection. Format is YYYYMMDD.

Example:

QRF|MA0000|||256946789~1990607~MA~MA9999999~8888888~KENNEDY^JACQUELINE^LEE~BOUVIER~898666725~KENNEDY^JOHN^FITZGERALD~822546618|

VXR^V03 – Response TO Vaccination Query (Returning the Vaccination Record)

When a patient has been uniquely identified (there is only one “match” to the query), the response to the query is a VXR^V03 message that is generated and sent back to the querying organization.

22.13 VXR segment detail

Several segments make up the VXR message type. The following segments have been outlined previously in this document and will follow the same formatting for the VXR message type.

MSH, MSA, QRD, QRF, PID, PD1, NK1, PV1, RXA, RXR, OBX (Observation/Result Contraindications or Reactions)

In addition to supplying the querying organization with patient specific demographic and immunization data (contained in the above segments), the VXR message also specifies “Observation/Result Vaccines Due Next” information. This information is supplied by generating a minimum of 3 OBX segments per 1 recommendation. NYSIIS will report the Vaccination Schedule in the OBX segments through the specification of the LOINC code 30979-9 (Vaccines Due Next) and its sub-components in OBX-03. NYSIIS requires specification of OBX-05 when OBX-03 is specified and valid. Further, NYSIIS has superimposed a CE data type on the OBX-05 field. The corresponding observation values will be specified in OBX-05. Combinations are as follows:

OBX-03

30979-9

30979-9&30980-7

30979-9&30981-5

OBX-05

HL70292 (Codes for vaccines administered CVX)

Date Vaccine Due (NYSIIS provides date recommended)

Earliest date to give (NYSIIS provides)

Below you’ll find an example of what a recommendation might look like in a VXR message response (see **bolded** OBX’s below).

```
MSH|^~\&||NYSIIS||QUERYING ORG|20040101101||VXR^V04|001|P^|2.4|||ER
MSA|AA|001|
QRD|20040120|R||001|||1^RD|01^LAST NAME^FIRST^MIDDLE^JR|VXI^VACCINE INFORMATION^HL700048|^S11S||1|
QRF|MA000|||~19900607~WI~STATEBIR#~MA#~KENNEDY^JACQUELINE^LEE~BOUVIER~898666725~KENNEDY^JOHN^FITZ
GERALD~822546618~587421369~19630119~MN~MN99999999~88888888~DOE^JANE^ROSE~SMITH~999999999~SMITH^JOHN^I~
999999999|
PID|||1912484^^^^PI^~1234567^^^^SR^||Trolly^Eliot^J^Sr^|^^^^^|19090509|M||^^^^^|12017 N ROCK INN
RD^^ALBANY^NY^54412^USA^^^^|(715)384-8649^^^^^^^^|||^^^^^|^^^^^|
PD1|||||01^^^^^Y|||A||
NK1|1|Hamus^Eugene^J^Sr^|SEL^SELF^HL70063|12017 N ROCK INN RD^^ALBANY^NY^54412^USA^^^^|(715)384-8649^^^^^^^^^|
PV1|I|||||V00^20031208|
RXA|0|999|20021001|20021001|^90721^Diphtheria, Tetanus, Acellular Pertussis + HIB^CPT|0||^Health Assessment & Promotion
(HAP)^Y|||||^HL70227|||200210141430
RXR|IM^^^^^|LA^^^^^
OBX|1|CE|30979-9^Vaccine due next^LN|1|20^DTAP^CVX^^^|
OBX|2|TS|30979-9&30980-7^Date vaccine due^LN|1|20040130^^^^^|
OBX|3|NM|30979-9&30981-5^Earliest date to give^LN|1|20040111^^^^^|
```

22.14 VXX^V03

Response TO Vaccination Query (Returning Multiple PID Matches)

When a health care provider participating in an immunization registry needs to obtain a complete patient vaccination record, a query (VXQ message) is sent to the immunization registry for the definitive (last updated) immunization record. When a query results in multiple patient matches, the VXX message response is generated. The VXX contains multiple patients and their demographic information but does not contain their vaccination information. The number of matches that NYSIIS generates will depend on what is specified in the first component of the incoming VXQ (QRD-07 Quantity Limited request field). NYSIIS will interpret the quantity specified in this field as the maximum number of client matches that the requester desires.

For example:

If the query results in 100 matches and the original quantity specified in QRD-07 was 10, then NYSIIS generates 10 PID (and if applicable, associated NK1) segments in the VXX response message.

22.15 ACK

Acknowledgment Messages (with Errors)

ACK messages are generated for message rejections and for informational error messages. Three conditions that result in message rejection are:

1. Sequencing (i.e. a PID segment must follow an MSH segment).
2. Segment required fields contain no data.
3. Segment required fields contain invalid data.

An ACK is also generated when an informational error message has occurred, but it has not resulted in message rejection (i.e. NK1 segment contains no last name). In this case, the segment is ignored but the remainder of the message is processed. An ACK message is generated with a message informing the sender of the problem. The error message in the text does NOT include "Message Rejected". The ACK contains the MSH, MSA and ERR segments.

The MSH segment is generated according to normal HL7 processing guidelines. The MSA and ERR segments are detailed below:

22.16 MSA

Message Acknowledgment Segment

| SEQ | LEN | DT | R/O | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|-----------------------------|
| 1 | 2 | ID | R | | 0008 | Acknowledgment code |
| 2 | 20 | ST | R | | | Message control ID |
| 3 | 80 | ST | O | | | Text message |
| 4 | 15 | NM | O | | | Expected sequence number |
| 5 | 1 | ID | B | | 0102 | Delayed acknowledgment type |
| 9 | 100 | CE | O | | | Error condition |

Field Notes:

MSA-01 The acknowledgment code indicates whether the message was accepted, rejected, error, etc... This is a required field. NYSIIS generates an "AE" for messages resulting in informational or rejection errors. An "AA" is generated for a simple acknowledgment acceptance.

MSA-02 The message control ID is the unique ID that is sent by the sending system. This is a required field. It allows the sending system to associate each message with a response. In a response, this will be the same as the control ID that was sent in MSH-10 by the sending system.

MSA-03 This optional field further describes an error condition. When a message has been rejected, NYSIIS generates "Message Rejection" as the first portion of the text describing the error message. Informational messages will not contain "Message Rejection".

MSA-04 This optional numeric field is used in the sequence number protocol. NYSIIS does not generate this field.

MSA-05 Delayed Acknowledgement type. NYSIIS does not generate this field.

MSA-06 Error Condition. NYSIIS does not generate this field.

22.17 ERR

Error Segment

The Error segment (ERR) is used to add error comments to acknowledgment messages. If the message was rejected for functional reasons, this segment will locate the error and describe it using locally established codes. Field components include: <segment ID (ST)>^<sequence (NM)>^<field position (NM)>^<code identifying error (CE)>

| SEQ | LEN | DT | R/O | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|-------------------------|
| 1 | 80 | CM | R | | 0357 | Error code and location |

Example:

ACK

```
MSH|^~\&||ZZ000||QUERYING ORG|20040101101||VXQ^V01|001|P^|2.4||ER
MSA|AE|001|Invalid relationship code. Defaulting to Guardian|3||102^Invalid data value^HL70357^^^
ERR|NK1^16^3^0
```

22.18 QCK

Query General Acknowledgment

A QCK message is generated when NYSIIS has processed the query message, but no match was found to the query parameters in the database. NYSIIS does NOT generate this response message for anything other than no match found (for successful VXQ processing). Remember, error messages are reported through the use of the ACK response message; therefore, the optional [ERR] segment will never be generated for the QCK response message.

The MSH segment is generated according to normal HL7 processing guidelines. The MSA and QAK segments are detailed below:

22.19 MSA

Message Acknowledgment Segment

| SEQ | LEN | DT | R/O | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|------|-----------------------------|
| 1 | 2 | ID | R | | 0008 | Acknowledgment code |
| 2 | 20 | ST | R | | | Message control ID |
| 3 | 80 | ST | O | | | Text message |
| 4 | 15 | NM | O | | | Expected sequence number |
| 5 | 1 | ID | B | | 0102 | Delayed acknowledgment type |
| 9 | 100 | CE | O | | | Error condition |

Field Notes:

- MSA-01 The acknowledgment code indicates whether the message was accepted, rejected, error, etc...This is a required field. NYSIIS generates an AA for this field if no match is found in NYSIIS. An AR is generated if a match is found, but the "Allow sharing of data" indicator is No.
- MSA-02 The message control ID is the unique ID that is sent by the sending system. This is a required field. It allows the sending system to associate each message with a response. In a response, this will be the same as the control ID that was sent in MSH-10 by the sending system.
- MSA-03 This optional field further describes an error condition. When a message has been rejected, NYSIIS generates "Message Rejection" as the first portion of the text describing the error message. Informational messages will not contain "Message Rejection".
- MSA-04 This optional numeric field is used in the sequence number protocol. NYSIIS does not generate this field.
- MSA-05 Delayed Acknowledgement type. NYSIIS does not generate this field.
- MSA-06 Error Condition. Refer to HL7 table 0357 for possible values.

22.20 QAK

Query Acknowledgment Segment

| SEQ | LEN | DT | R/O | RP/# | TBL# | ELEMENT NAME |
|-----|-----|----|-----|------|-------|-----------------------|
| 1 | 32 | ST | | | 00696 | Query Tag |
| 2 | 2 | ID | O | | 00708 | Query response status |

Field Notes:

- QAK-01 This field is valued by the initiating system to identify the query and can be used to match response messages to the originating query. If it is valued, the responding system is required to echo it back as the first field in the QAK. NYSIIS uses the value specified in the QRD-04 (of the VXQ) for the QAK-01 query tag value.
- QAK-02 This field allows the responding system to return a precise response status. Refer to HL7 table 0208 for values. NYSIIS only generates NF (no data found, no errors) for this field.

Example:

QCK

MSH|^~\&||ZZ000||QUERYING ORG|20040101101||VXX^V02|007|P^|2.4||ER

MSA|AR|007|Patient has an Allow sharing of immunization data indicator = No||500^Record Not Released^HL70357^^^|

QAK|01|NF|

This concludes real-time processing.

23. Appendix A -- HL7 Data Types

The following descriptions of HL7 data types are excerpted or adapted from the HL7 standard. See the field notes within each segment definition above on how to use data types in particular fields. Some data types have complex definitions much of which do not apply to NYSIIS usage, and for these we omit much of the HL7 definition of the data type, referring instead to the field notes in the segment definitions.

23.1.1

23.2 CE

Coded Element

Components: <identifier (ST)> ^ <text (ST)> ^ <name of coding system (ST)> ^ <alternate identifier (ST)> ^ <alternate text (ST)> ^ <name of alternate coding system (ST)>

Example:

|F-11380^CREATININE^I9^2148-5^CREATININE^LN|

This data type transmits codes and the text associated with the code. To allow all six components of a CE data type to be valued, the maximum length of this data type must be at least 60.

Identifier (ST)

Sequence of characters (the code) that uniquely identifies the item being referenced by the <text>. Different coding schemes will have different elements here.

Text (ST)

Name or description of the item in question. E.g., myocardial infarction or X-ray impression. Its data type is string (ST).

Name of coding system (ST)

Each coding system is assigned a unique identifier. This component will serve to identify the coding scheme being used in the identifier component. The combination of the **identifier** and **name of coding system** components will be a unique code for a data item. Each system has a unique identifier. ASTM E1238-94, Diagnostic, procedure, observation, drug ID, and health outcomes coding systems are identified in the tables in Section 7.1.4 [of the full HL7 standard], "Coding schemes." Others may be added as needed. When an HL7 table is used for a CE data type, the *name of coding system* component is defined as *HL7nnnn* where *nnnn* is the HL7 table number.

Alternate components

These three components are defined analogously to the above for the alternate or local coding system. If the Alternate Text component is absent, and the Alternate Identifier is present, the Alternate Text will be taken to be the same as the Text component. If the Alternate Coding System component is absent, it will be taken to mean the locally defined system.

Note: The presence of two sets of equivalent codes in this data type is semantically different from a repetition of a CE-type field. With repetition, several distinct codes (with distinct meanings) may be transmitted.

Note: For HL7-defined tables which have not been adopted from some existing standard, the third component, "name of coding system," is constructed by appending the table number to the string "HL7." Thus, the field *RXR-2-site*, is a CE data type which refers to HL7 table number 0163. Its "name of coding system" component is "HL70163".

23.3 CM

Composite

Components: <point of care (IS)> ^ <room (IS)> ^ <bed (IS)> ^ <facility (HD)> ^ <location status (IS)> ^ <patient location type (IS)> ^ <building (IS)> ^ <floor (IS)> ^ <street address (ST)> ^ <other designation (ST)> ^ <city (ST)> ^ <state or province (ST)> ^ <zip or postal code (ST)> ^ <country (ID)> ^ <address type (ID)> ^ <other geographic designation (ST)>

Subcomponents of facility (HD): <namespace ID (IS)> & <universal ID (ST)> & <universal ID type (ID)>

Example:

|^^^Valley Clinic|

Definition: The first component contains the inpatient or outpatient location at which the drug or treatment was administered (if applicable). The default (null) value is the current census location for the patient. Site-specific table. The first eight components have the same form as the first eight components of *PVI-3-assigned patient location*. The final eight components replace the ninth component of *PVI-3-assigned patient location* and represent the full address specification.

23.4 CX

Extended Composite ID with Check Digit

NYSIIS uses this data type only for client identification in Patient Identification (PID) segments. See the field notes for values used for NYSIIS.

23.5 HD

Hierarchic Designator

NYSIIS uses this data type only to identify sender and receiver in Message Header (MSH) segments. See the field notes for values used for NYSIIS.

23.6 ID

Coded Value for HL7 Defined Tables

The value of such a field follows the formatting rules for a ST field except that it is drawn from a table of legal values. There shall be an HL7 table number associated with ID data types. Examples of ID fields include religion and sex. This data type should be used only for HL7 tables. The reverse is not true, since in some circumstances it is more appropriate to use the CE data type for HL7 tables.

23.6.1

23.7 IS

Coded Value for User Defined Tables

The value of such a field follows the formatting rules for a ST field except that it is drawn from a site-defined (or user-defined) table of legal values. There shall be an HL7 table number associated with IS data types. An example of an IS field is the *Event reason code* defined in Section 3.3.1.4 [of the full HL7 standard], “Event reason code.” This data type should be used only for user-defined tables. The reverse is not true, since in some circumstances, it is more appropriate to use the CE data type for user-defined tables.

23.8 NM

Numeric

A number represented as a series of ASCII numeric characters consisting of an optional leading sign (+ or -), the digits and an optional decimal point. In the absence of a sign, the number is assumed to be positive. If there is no decimal point the number is assumed to be an integer. Examples:

|999|

|-123.792|

Leading zeros, or trailing zeros after a decimal point, are not significant. For example, the following two values with different representations, “01.20” and “1.2”, are identical. Except for the optional leading sign (+ or -) and the optional decimal point (.), no non-numeric ASCII characters are allowed. Thus, the value <12 should be encoded as a structured numeric (SN) (preferred) or as a string (ST) (allowed, but not preferred) data type.

23.9 SI

Sequence ID

A non-negative integer in the form of a NM field. See the field notes in segments using this data type for specifications of SI fields.

23.10 ST

String Data

String data is left justified with trailing blanks optional. Any displayable (printable) ACSII characters (hexadecimal values between 20 and 7E, inclusive, or ASCII decimal values between 32 and 126), except the defined delimiter characters.

Example:

```
|almost any data at all|
```

To include any HL7 delimiter character (except the segment terminator) within a string data field, use the appropriate HL7 escape sequence.

Usage note: the ST data type is intended for short strings (e.g., less than 200 characters). For longer strings the TX or FT data types should be used.

23.11 TS

Time Stamp

Format: YYYY[MM[DD[HHMM[SS[.S[S[S[S]]]]]]]]][+/-ZZZZ]^<degree of precision>

Contains the exact time of an event, including the date and time. The date portion of a time stamp follows the rules of a date field and the time portion follows the rules of a time field. The specific data representations used in the HL7 encoding rules are compatible with ISO 8824-1987(E).

In prior versions of HL7, an optional second component indicates the degree of precision of the time stamp (Y = year, L = month, D = day, H = hour, M = minute, S = second). This optional second component is retained only for purposes of backward compatibility.

By site-specific agreement, YYYYMMDD[HHMM[SS[.S[S[S[S]]]]]]][+/-ZZZZ]^<degree of precision> may be used where backward compatibility must be maintained.

In the current and future versions of HL7, the precision is indicated by limiting the number of digits used, unless the optional second component is present. Thus, YYYY is used to specify a precision of "year," YYYYMM specifies a precision of "month," YYYYMMDD specifies a precision of "day," YYYYMMDDHH is used to specify a precision of "hour," YYYYMMDDHHMM is used to specify a precision of "minute," YYYYMMDDHHMMSS is used to specify a precision of seconds, and YYYYMMDDHHMMSS.SSSS is used to specify a precision of ten thousandths of a second. In each of these cases, the time zone is an optional component. Maximum length of the time stamp is 26. Examples:

```
|19760704010159-0600| 1:01:59 on July 4, 1976 in the Eastern
Standard Time zone.
|19760704010159-0500| 1:01:59 on July 4, 1976 in the Eastern
Daylight Saving Time zone.
|198807050000| Midnight of the night extending from July 4 to
July 5, 1988 in the local time zone of the sender.
|19880705| Same as prior example, but precision extends
only to the day. Could be used for a
birthdate, if the time of birth is unknown.
```

The HL7 Standard strongly recommends that all systems routinely send the time zone offset but does not require it. All HL7 systems are required to accept the time zone offset, but its implementation is application specific. For many applications the time of interest is the local time of the sender. For example, an application in the Eastern Standard Time zone receiving notification of an admission that takes place at 11:00 PM in San Francisco on December 11 would prefer to treat the admission as having occurred on December 11 rather than advancing the date to December 12.

One exception to this rule would be a clinical system that processed patient data collected in a clinic and a nearby hospital that happens to be in a different time zone. Such applications may choose to convert the data to a common representation. Similar concerns apply to the transitions to and from daylight saving time. HL7 supports such requirements by requiring that the time zone information be present when the information is sent. It does not, however, specify which of the treatments discussed here will be applied by the receiving system.

23.12 XAD

Address

Components: <street address (ST)> ^ <other designation (ST)> ^ <city (ST)> ^ <state or province (ST)> ^ <zip or postal code(ST)> ^ <country (ID)> ^ < address type (ID)> ^ <other geographic designation (ST)>^ <county/parish code (IS)> ^ <census tract (IS)> ^ <address representation code (ID)>

Example:

|1234 Easy St.^Ste. 123^San Francisco^CA^95123^USA^B^^SF^^|

Street address (ST)

The street or mailing address of a person or institution.

Other designation (ST)

Second line of address. In general, it qualifies address. Examples: Suite 555 or Fourth Floor.

City (ST)

State or province (ST)

State or province should be represented by the official postal service codes for that country.

Zip or postal code (ST)

Zip or postal codes should be represented by the official codes for that country. In the US, the zip code takes the form 99999[-9999], while the Canadian postal code takes the form A9A-9A9.

Country (ID)

Defines the country of the address. See Table 0212.

Address type (ID)

Address type is optional.

Other geographic designation (ST)

Other geographic designation includes country, bioregion, SMSA, etc.

County code (IS)

A code that represents the county in which the specified address resides. Refer to *user-defined table 0289 - County*. When this component is used to represent the county, component 8 “other geographic designation” should not duplicate it (i.e., the use of “other geographic designation” to represent the county is allowed only for the purpose of backward compatibility, and should be discouraged in this and future versions of HL7).

Census tract (IS)

An optional code that represents the census track in which the specified address resides. NYSIIS does not store this value.

23.13 XCN

Extended Composite ID Number and Name for Persons

NYSIIS uses this data type only to identify Provider Organizations that administer immunizations. See the field notes for segment RXA.

23.14 XPN

Extended Person Name

Components: <family name (ST)> & <last name prefix (ST)> ^ <given name (ST)> ^ <middle initial or name (ST)> ^ <suffix (e.g., JR or III) (ST)> ^ <prefix (e.g., DR) (ST)> ^ <degree (e.g., MD) (ST)> ^ <name type code (ID) > ^ <name representation code (ID)>

Example:

|Smith&St^John^J^III^DR^PHD^L|

Family name (ST)

Last Name Prefix (ST)

Given name (ST)
Middle initial or name (ST)

Suffix (ST)

Used to specify a name suffix (e.g., Jr. or III).

Prefix (ST)

Used to specify a name prefix (e.g., Dr.).

Degree (ST)

Used to specify an educational degree (e.g., MD).

Name type code (ID)

A code that represents the type of name. Refer to *HL7 table 0200 - Name type* for valid values.

Table 0200 - Name type

| Value | Description |
|-------|--------------|
| A | Alias Name |
| L | Legal Name |
| D | Display Name |
| M | Maiden Name |
| C | Adopted Name |

Note: The legal name is the same as the current married name.

Name representation code (ID)

This component can be used when names are represented in ideographic or non-alphabetic systems. NYSIIS ignores this component.

23.15 XTN

Extended Telecommunication Number

Components: [NNN] [(999)]999-9999 [X99999] [B99999] [C any text] ^ <telecommunication use code (ID)> ^ <telecommunication equipment type (ID)> ^ <email address (ST)> ^ <country code (NM)> ^ <area/city code (NM)> ^ <phone number (NM)> ^ <extension (NM)> ^ <any text (ST)>

Example:

(415)555-3210^ORN^FX^

[(999)] 999-9999 [X99999] [C any text]

Defined as the TN data type, except that the length of the country access code has been increased to three.

Telecommunication use code (ID)

A code that represents a specific use of a telecommunication number. Refer to *HL7 table 0201 - Telecommunication use code* for valid values.

Table 0201 - Telecommunication use code

| Value | Description |
|-------|--------------------------|
| PRN | Primary Residence Number |
| ORN | Other Residence Number |
| WPN | Work Number |
| VHN | Vacation Home Number |
| ASN | Answering Service Number |
| EMR | Emergency Number |
| NET | Network (email) Address |
| BPN | Beeper Number |

23.15.1.1

Telecommunication equipment type (ID)

A code that represents the type of telecommunication equipment. Refer to *HL7 table 0202 - Telecommunication equipment type* for valid values. Table 0202 - Telecommunication equipment type

| Value | Description |
|----------|--|
| PH | Telephone |
| FX | Fax |
| MD | Modem |
| CP | Cellular Phone |
| BP | Beeper |
| Internet | Internet Address: Use Only If Telecommunication Use Code Is NET |
| X.400 | X.400 email address: Use Only If Telecommunication Use Code Is NET |

Email address (ST)

Country code (NM)

Area/city code (NM)

Phone number (NM)

Extension (NM)

Any text (ST)

24. Appendix B -- HL7 Tables

The following tables give valid values for fields in the segments defined above, in the cases where the field definitions reference an HL7 table number. The tables are considered to be part of the HL7 standard, but those tables designated as type User have values determined by NYSIIS

| Type | Table | Name | Value | Description |
|------|-------|---------------------------------|--------|---|
| HL7 | 0001 | 24.1 Sex | | |
| | 0001 | | F | Female |
| | 0001 | | M | Male |
| | 0001 | | O | Other |
| | 0001 | | U | Unknown |
| HL7 | 0003 | 24.2 Event Type | | |
| | 0003 | | A31 | ADT/ACK - Update patient information |
| | 0003 | | V04 | VXU - Unsolicited vaccination record update |
| HL7 | 0004 | 24.3 Patient class | | |
| | 0004 | | E | Emergency |
| | 0004 | | I | Inpatient |
| | 0004 | | O | Outpatient |
| | 0004 | | P | Preadmit |
| | 0004 | | R | Recurring |
| | 0004 | | B | Obstetrics |
| HL7 | 0005 | 24.4 Race | | |
| | 0005 | | 1002-5 | American Indian or Alaska Native |
| | 0005 | | 2028-9 | Asian |
| | 0005 | | 2076-8 | Native Hawaiian or Other Pacific Islander |
| | 0005 | | 2054-5 | Black or African-American |
| | 0005 | | 2106-3 | White |
| | 0005 | | 2135-2 | Hispanic or Latino |
| | 0005 | | 2186-5 | Not Hispanic or Latino |
| | 0005 | | 2131-1 | Other Race |
| | 0005 | | Null | Unknown |
| HL7 | 0008 | 24.5 Acknowledgment Code | | |
| | 0008 | | AA | Application Accept |
| | 0008 | | AE | Application Error |
| | 0008 | | AR | Application Reject |
| User | 0063 | 24.6 Relationship | | |
| | 0063 | | ASC | Associate |
| | 0063 | | BRO | Brother |
| | 0063 | | CGV | Care giver |
| | 0063 | | CHD | Child |
| | 0063 | | DEP | Handicapped dependent |
| | 0063 | | DOM | Life partner |
| | 0063 | | EMC | Emergency contact |
| | 0063 | | EME | Employee |
| | 0063 | | EMR | Employer |
| | 0063 | | EXF | Extended family |
| | 0063 | | FCH | Foster Child |
| | 0063 | | FND | Friend |
| | 0063 | | FTH | Father |
| | 0063 | | GCH | Grandchild |
| | 0063 | | GRD | Guardian |
| | 0063 | | GRP | Grandparent |
| | 0063 | | MGR | Manager |
| | 0063 | | MTH | Mother |
| | 0063 | | NCH | Natural child |
| | 0063 | | NON | None |
| | 0063 | | OAD | Other adult |

| Type | Table | Name | Value | Description |
|------|-------|---|--------------------------------|--|
| | 0063 | | OTH | Other |
| | 0063 | | OWN | Owner |
| | 0063 | | PAR | Parent |
| | 0063 | | SCH | Stepchild |
| | 0063 | | SEL | Self |
| | 0063 | | SIB | Sibling |
| | 0063 | | SIS | Sister |
| | 0063 | | SPO | Spouse |
| | 0063 | | TRA | Trainer |
| | 0063 | | UNK | Unknown |
| | 0063 | | WRD | Ward of court |
| HL7 | 0064 | 24.7 Financial class | | |
| | 0064 | V00 | VFC Eligibility Unknown | VFC eligibility not determined/unknown |
| | 0064 | V01 | Not VFC Eligible | Not VFC Eligible |
| | 0064 | V02 | Medicaid/Medicare Managed Care | VFC Eligible – Medicaid/Medicare Managed Care |
| | 0064 | V03 | Uninsured | VFC eligible – Uninsured |
| | 0064 | V04 | American Indian/Alaskan Native | VFC eligible – American Indian/Alaskan Native |
| | 0064 | V05 | Underinsured | VFC Eligible – Underinsured |
| | 0064 | CH00 | Child Health Plus B | S-Chip Coverage Not VFC eligible. |
| HL7 | 0076 | 24.8 Message Type | | |
| | 0076 | | ACK | General acknowledgment message |
| | 0076 | | ADR | ADT response |
| | 0076 | | ADT | ADT message |
| | 0076 | | QCK | Query general acknowledgment |
| | 0076 | | VXQ | Query for vaccination record |
| | 0076 | | VXX | Vaccination query response with multiple PID matches |
| | 0076 | | VXR | Vaccination query record response |
| | 0076 | | VXU | Unsolicited vaccination record update |
| | 0076 | | ORU | Unsolicited observation results |
| HL7 | 0085 | 24.9 Observation result status codes | | |
| | 0085 | | O | Order detail description only |
| HL7 | 0103 | 24.10 Processing ID | | |
| | 0103 | | P | Production |
| HL7 | 0104 | 24.11 Version ID | | |
| | 0104 | | 2.3.1 | Release 2.3.1 1999 |
| | 0104 | | 2.4 | Release 2.4 2000 |
| HL7 | 0136 | 24.12 Yes/No Indicator | | |
| | 0136 | | Y | Yes |
| | 0136 | | N | No |
| HL7 | 0155 | 24.13 Accept/Application Acknowledgment Conditions | | |
| | 0155 | | ER | Error/reject conditions only |
| HL7 | 0162 | 24.14 Route of Administration | | |
| | 0162 | | ID | Intradermal |
| | 0162 | | IM | Intramuscular |
| | 0162 | | IN | Intranasal |

| Type | Table | Name | Value | Description |
|------|-------|---|--------|--|
| | 0162 | | IV | Intravenous |
| | 0162 | | PO | Oral |
| | 0162 | | SC | Subcutaneous |
| | 0162 | | TD | Transdermal |
| | 0162 | | MP | Multiple Puncture (Small Pox) |
| HL7 | 0163 | 24.15 Administrative Site | | |
| | 0163 | | LT | Left Thigh |
| | 0163 | | LA | Left Arm |
| | 0163 | | LD | Left Deltoid |
| | 0163 | | LG | Left Gluteus Medius |
| | 0163 | | LVL | Left Vastus Lateralis |
| | 0163 | | LLFA | Left Lower Forearm |
| | 0163 | | RA | Right Arm |
| | 0163 | | RT | Right Thigh |
| | 0163 | | RVL | Right Vastus Lateralis |
| | 0163 | | RG | Right Gluteus Medius |
| | 0163 | | RD | Right Deltoid |
| | 0163 | | RLFA | Right Lower Forearm |
| HL7 | 0189 | 24.16 Ethnic Group | | |
| | 0189 | | 2135-2 | Hispanic |
| | 0189 | | 2186-5 | Non-Hispanic |
| | 0189 | | Null | Unknown |
| HL7 | 0203 | 24.17 Identifier Type | | |
| | 0203 | | BR | Birth Registry Number |
| | 0203 | | MA | Medicaid Number |
| | 0203 | | MC | Medicare Number |
| | 0203 | | MR | Medical Record Number |
| | 0203 | | PI | Patient Internal Identifier |
| | 0203 | | PN | Person Number |
| | 0203 | | PRN | Provider Number |
| | 0203 | | PT | Patient External Identifier |
| | 0203 | | RRI | Regional Registry ID |
| | 0203 | | SR | State Registry Identifier |
| | 0203 | | SS | Social Security Number |
| User | 0212 | 24.18 Nationality | | |
| | 0212 | | CA | Canada |
| | 0212 | | US | United States of America |
| User | 0215 | 24.19 Publicity Code | | |
| | 0215 | | 01 | No reminder/recall |
| | 0215 | | 02 | Yes reminder/recall – any method |
| HL7 | 0227 | 24.20 Manufacturers of vaccines (code = MVX) | | |
| | 0227 | | AB | Abbott |
| | 0227 | | AD | Adams |
| | 0227 | | ALP | Alpha |
| | 0227 | | AR | Armour (Inactive – use ZLB) |
| | 0227 | | AVB | Aventis Behring (Inactive use ZLB) |
| | 0227 | | AVI | Aviron |
| | 0227 | | BA | Baxter (Inactive - use BAH) |
| | 0227 | | BAH | Baxter Health Care |
| | 0227 | | BAY | Bayer |

| Type | Table | Name | Value | Description |
|------|----------------------|-------------------------------------|-------|---|
| | 0227 | | BP | Berna (Inactive – use BPC) |
| | 0227 | | BPC | Berna Products Corporation |
| | 0227 | | CEN | Centeon L.L.C. (Inactive – use ZLB) |
| | 0227 | | CHI | Chiron Corporation |
| | 0227 | | CMP | Celltech Medeva Pahn (Inactive – use NOV) |
| | 0227 | | CNJ | Cangene Corporation |
| | 0227 | | CON | Connaught (Inactive – use PMC) |
| | 0227 | | DYN | DynPort Vaccine Company, LLC |
| | 0227 | | EVN | Evans (Inactive – use NOV) |
| | 0227 | | GRE | Greer |
| | 0227 | | IAG | Immuno International AG (Inactive – use BAH) |
| | 0227 | | IM | Merieux (Inactive – Use PMC) |
| | 0227 | | IUS | Immuno-US |
| | 0227 | | JPN | The Research foundation for Microbial Diseases of Osaka U. |
| | 0227 | | KGC | Korea Green Cross |
| | 0227 | | LED | Lederle (Inactive – use WAL) |
| | 0227 | | MA | Massachusetts Public Health (Inactive -Use MBL) |
| | 0227 | | MBL | Massachusetts Biologic Laboratories |
| | 0227 | | MED | MedImmune |
| | 0227 | | MIL | Miles (Inactive – use BAY) |
| | 0227 | | MIP | BioPort |
| | 0227 | | MSD | Merck |
| | 0227 | | NAB | North American Biologicals, Inc. |
| | 0027 | | NAV | North American Vaccine (Inactive – use BAH) |
| | 0227 | | NYB | New York Blood Center |
| | 0227 | | NOV | Novartis |
| | 0227 | | NVX | Novavax, Inc |
| | 0227 | | OTC | Organon Teknika |
| | 0227 | | ORT | Ortho |
| | 0227 | | PD | Parkdale Pharmaceuticals (formerly Parke Davis) |
| | 0227 | | PMC | Aventis Pasteur Inc. (formerly Pasteur Merieux Connaught) |
| | 0227 | | PRX | Praxis Biologics (Inactive – use WAL) |
| | 0227 | | PWJ | Powderject Pharmaceutical |
| | 0227 | | SCL | Sclavo |
| | 0227 | | SOL | Solvay Pharmaceuticals |
| | 0227 | | SKB | GlaxoSmithKline |
| | 0227 | | SI | Swiss Serum and Vaccine Inst. (Inactive – use BPC) |
| | 0227 | | TAL | Talecris Biotherapeutics (includes Bayer Biologicals) |
| | 0227 | | USA | United States Army Medical Research |
| | 0227 | | VXG | VaxGen |
| | 0227 | | WA | Wyeth-Ayerst (Inactive – use WAL) |
| | 0227 | | WAL | Wyeth-Ayerst |
| | 0227 | | ZLB | ZLB Behring (includes Aventis Behring and Armour Pharmaceutical Co) |
| | 0227 | | OTH | Other |
| | 0227 | | UNK | Unknown manufacturer |
| User | 0289 | 24.21 County (New York only) | | |
| | 0289 | | NY001 | Albany |
| | 0289 | | NY003 | Allegany |
| | 0289 | | NY005 | Bronx |
| | 0289 | | NY007 | Broome |
| | 0289 | | NY009 | Cattaraugus |
| | 0289 | | NY011 | Cayuga |

| Type | Table | Name | Value | Description |
|------|----------------------|------|-------|--------------------|
| | 0289 | | | NY013 Chautauqua |
| | 0289 | | | NY015 Chemung |
| | 0289 | | | NY017 Chenango |
| | 0289 | | | NY019 Clinton |
| | 0289 | | | NY021 Columbia |
| | 0289 | | | NY023 Cortland |
| | 0289 | | | NY025 Delaware |
| | 0289 | | | NY027 Dutchess |
| | 0289 | | | NY029 Erie |
| | 0289 | | | NY031 Essex |
| | 0289 | | | NY033 Franklin |
| | 0289 | | | NY035 Fulton |
| | 0289 | | | NY037 Genesee |
| | 0289 | | | NY039 Greene |
| | 0289 | | | NY041 Hamilton |
| | 0289 | | | NY043 Herkimer |
| | 0289 | | | NY045 Jefferson |
| | 0289 | | | NY047 Kings |
| | 0289 | | | NY049 Lewis |
| | 0289 | | | NY051 Livingston |
| | 0289 | | | NY053 Madison |
| | 0289 | | | NY055 Monroe |
| | 0289 | | | NY057 Montgomery |
| | 0289 | | | NY059 Nassau |
| | 0289 | | | NY061 New York |
| | 0289 | | | NY063 Niagara |
| | 0289 | | | NY065 Oneida |
| | 0289 | | | NY067 Onondaga |
| | 0289 | | | NY069 Ontario |
| | 0289 | | | NY071 Orange |
| | 0289 | | | NY073 Orleans |
| | 0289 | | | NY075 Oswego |
| | 0289 | | | NY077 Otsego |
| | 0289 | | | NY079 Putnam |
| | 0289 | | | NY081 Queens |
| | 0289 | | | NY083 Rensselaer |
| | 0289 | | | NY085 Richmond |
| | 0289 | | | NY087 Rockland |
| | 0289 | | | NY091 Saratoga |
| | 0289 | | | NY093 Schenectady |
| | 0289 | | | NY095 Schoharie |
| | 0289 | | | NY097 Schuyler |
| | 0289 | | | NY099 Seneca |
| | 0289 | | | NY089 St. Lawrence |
| | 0289 | | | NY101 Steuben |
| | 0289 | | | NY103 Suffolk |
| | 0289 | | | NY105 Sullivan |
| | 0289 | | | NY107 Tioga |
| | 0289 | | | NY109 Tompkins |
| | 0289 | | | NY111 Ulster |
| | 0289 | | | NY113 Warren |
| | 0289 | | | NY115 Washington |
| | 0289 | | | NY117 Wayne |
| | 0289 | | | NY119 Westchester |
| | 0289 | | | NY121 Wyoming |

| Type | Table | Name | Value | Description |
|------|----------------------|--|-------|---|
| | 0289 | | NY123 | Yates |
| NIP | NIP001 | 24.22 Immunization Information Source | | |
| | NIP001 | | 00 | New Immunization Record |
| | NIP001 | | 01 | Historical Information |
| NIP | NIP002 | 24.23 Substance Refusal Reason | | |
| | NIP002 | | 00 | Parental Refusal |
| | NIP002 | | 01 | Religious Exemption |
| NIP | NIP004 | 24.24 Contraindications, Precautions | | |
| | NIP004 | | 03 | Allergy to baker's yeast (anaphylactic) |
| | NIP004 | | 04 | Allergy to egg ingestion (anaphylactic) |
| | NIP004 | | 05 | Allergy to gelatin (anaphylactic) |
| | NIP004 | | 06 | Allergy to neomycin (anaphylactic) |
| | NIP004 | | 07 | Allergy to streptomycin (anaphylactic) |
| | NIP004 | | 08 | Allergy to thimerosal (anaphylactic) |
| | NIP004 | | 09 | Allergy to previous dose of this vaccine or to any of its unlisted vaccine components (anaphylactic) |
| | NIP004 | | 10 | Anaphylactic (life-threatening) reaction of previous dose of this vaccine |
| | NIP004 | | 11 | Collapse or shock like state within 48 hours of previous dose of DTP/DTaP |
| | NIP004 | | 12 | Convulsions (fits, seizures) within 3 days of previous dose of DTP/DTaP |
| | NIP004 | | 13 | Persistent, inconsolable crying lasting 3 hours within 48 hours of previous dose of DTP/DTaP |
| | NIP004 | | 14 | Current diarrhea, moderate to severe |
| | NIP004 | | 15 | Encephalopathy within 7 days of previous dose of DTP |
| | NIP004 | | 16 | Current fever with moderate-to-severe illness |
| | NIP004 | | 17 | Fever of 40.5 C (105 F) within 48 hours of previous dose of DTP/DTaP |
| | NIP004 | | 18 | Gullain-Barre syndrome (GBS) within 6 weeks of previous dose of DTP/DTaP |
| | NIP004 | | 19 | HIV infection (in household contact) |
| | NIP004 | | 20 | HIV infection (in recipient) |
| | NIP004 | | 21 | Current acute illness, moderate to severe (with or without fever) (e.g. diarrhea, otitis media, vomiting) |
| | NIP004 | | 22 | Chronic illness (e.g. chronic gastrointestinal disease) |
| | NIP004 | | 23 | Immune globulin (IG) administration, recent or simultaneous |

| Type | Table | Name | Value | Description |
|--------|--------|--------------------------------------|----------|--|
| | NIP004 | | 24 | Immunity: diphtheria |
| | NIP004 | | 25 | Immunity: Haemophilus influenzae type B (Hib) |
| | NIP004 | | HEPA_I | Immunity: hepatitis A |
| | NIP004 | | 26 | Immunity: hepatitis B |
| | NIP004 | | 27 | Immunity: measles |
| | NIP004 | | 28 | Immunity: mumps |
| | NIP004 | | 29 | Immunity: pertussis |
| | NIP004 | | 30 | Immunity: poliovirus |
| | NIP004 | | 31 | Immunity: rubella |
| | NIP004 | | 32 | Immunity: tetanus |
| | NIP004 | | 33 | Immunity: varicella (chicken pox) |
| | NIP004 | | 33A | History of Varicella |
| | NIP004 | | 34 | Immunodeficiency (family history) |
| | NIP004 | | 35 | Immunodeficiency (household contact) |
| | NIP004 | | 36 | Immunodeficiency (hematologic and solid tumors, congenital immunodeficiency, long-term immunosuppressive therapy, including steroids) (in recipient) |
| | NIP004 | | 37 | Neurologic disorders, underlying (including seizure disorders, cerebral palsy, and developmental delay) |
| | NIP004 | | 38 | Otitis media (ear infection) moderate to severe (with or without fever) |
| | NIP004 | | 39 | Pregnancy (in recipient) |
| | NIP004 | | 40 | Thrombocytopenia |
| | NIP004 | | 41 | Thrombocytopenic purpura (history) |
| NIP | NIP005 | 24.25 Event Consequence | | |
| | NIP005 | | D | Patient Died |
| | NIP005 | | L | Life threatening illness |
| | NIP005 | | E | Required emergency room/doctor visit |
| | NIP005 | | H | Required hospitalization |
| | NIP005 | | P | Resulted in prolongation of hospitalization |
| | NIP005 | | J | Resulted in permanent disability |
| NIP | NIP006 | 24.26 Patient Registry Status | | |
| | NIP006 | | A | Active |
| | NIP006 | | N | Inactive |
| | NIP006 | | P | Permanently inactive (dead) |
| | NIP006 | 24.27 | M | Moved or Gone Elsewhere |
| NYSIIS | NYS001 | 24.28 Reaction Codes | | |
| | NYS001 | | PERTCONT | Pertussis allergic reaction |
| | NYS001 | | TETCONT | Tetanus allergic reaction |
| | NYS001 | | HYPOTON | Hypotonic-hyporesponsive collapse within 48 hours of immunization |
| | NYS001 | | SEIZURE | Seizure occurring within 3 days |
| | NYS001 | | CRYING | Persistent crying lasting >= 3 hours within 48 hours of |

| Type | Table | Name | Value | Description |
|--------|--------|--|--------------|---|
| | | | | immunization |
| | NYS001 | | FEVER105 | Temperature >= 105 (40.5 C) within 48 hours of immunization |
| NYSIIS | WVGC | 24.29 Vaccine Group Code (WVGC) | | |
| | WVGC | | Adeno | Adeno |
| | WVGC | | Anthrax | Anthrax |
| | WVGC | | BCG | BCG |
| | WVGC | | Cholera | Cholera |
| | WVGC | | Diphtheria | Diphtheria Antitoxin |
| | WVGC | | DTP/aP | Diphtheria, Tetanus, Acellular Pertussis |
| | WVGC | | Encephalitis | Encephalitis |
| | WVGC | | HepA | Hepatitis A |
| | WVGC | | HepB | Hepatitis B |
| | WVGC | | Hib | Hib |
| | WVGC | | HPV | Human Papilloma Virus |
| | WVGC | | Ig | Ig |
| | WVGC | | Influenza | Influenza |
| | WVGC | | Lyme | Lyme |
| | WVGC | | Measles | Measles Virus Vaccine |
| | WVGC | | MMR | Measles, Mumps, Rubella |
| | WVGC | | Meningo | Meningitis |
| | WVGC | | Mumps | Mumps Virus Vaccine |
| | WVGC | | Pertussis | Pertussis |
| | WVGC | | Plague | Plague |
| | WVGC | | Pneumococcal | Pneumonia Conjugate |
| | WVGC | | Pneumo-Poly | Pneumonia Polysaccharide |
| | WVGC | | Polio | Poliomyelitis |
| | WVGC | | Rabies | Rabies |
| | WVGC | | Rotavirus | Rotavirus |
| | WVGC | | Rubella | Rubella Virus Vaccine |
| | WVGC | | Tetanus | Tetanus Diphtheria |
| | WVGC | | Td | Tetanus Diphtheria |
| | WVGC | | Typhoid | Typhoid |
| | WVGC | | Smallpox | Vaccinia |
| | WVGC | | Varicella | Varicella |
| | WVGC | | Yellow Fever | Yellow Fever |
| | WVGC | | Zoster | Zoster |
| NYSIIS | WVTN | 24.30 Vaccine Trade Name (WVTN) | | |
| | WVTN | | Acel-Imune | DTaP |
| | WVTN | | ActHib | Hib-PRP-T |
| | WVTN | | Adacel | TdaP > 7 years |
| | WVTN | | Adeno T4 | Adeno T4 |
| | WVTN | | Adeno T7 | Adeno T7 |
| | WVTN | | Anthrax | Anthrax |
| | WVTN | | Attenuvax | Measles |
| | WVTN | | BabyBIG | Botulism |
| | WVTN | | BayTet | Tlg |
| | WVTN | | BCG-Cancer | BCG-BC |
| | WVTN | | BCG-TB | BCG-TB |
| | WVTN | | Biavax II | Rubella-Mumps |

| Type | Table | Name | Value | Description |
|------|-------|------|-----------------------------|---------------------------------|
| | WVTN | | BIG | Botulism |
| | WVTN | | Boostrix | Tdap > 7 years |
| | WVTN | | Botulinum-antitoxin | Botulinum-antitoxin |
| | WVTN | | Botulism | Botulism |
| | WVTN | | Certiva | DTaP |
| | WVTN | | Cholera-I | Cholera-Inject |
| | WVTN | | Cholera-O | Cholera-Oral |
| | WVTN | | CMV-IgIV | CMV-IgIV |
| | WVTN | | Comvax | HepB-Hib |
| | WVTN | | DAPTACEL | DTaP,5 pertussis antigens |
| | WVTN | | DECAVAC | Td |
| | WVTN | | Diphtheria | Diphtheria |
| | WVTN | | Diphtheria-antitoxin | Diphtheria-antitoxin |
| | WVTN | | Dryvax | Smallpox |
| | WVTN | | DT | DT-Peds |
| | WVTN | | DTP | DTP |
| | WVTN | | Engerix-B Adult | HepB-Adult |
| | WVTN | | Engerix-B dialysis | HepB-Dialysis 4 dose |
| | WVTN | | Engerix-B Peds | HepB-Peds |
| | WVTN | | Flebogamma | IgIV |
| | WVTN | | Flu-Deleted | FLU, NOS |
| | WVTN | | Flu-Imune | Influenza |
| | WVTN | | Flu-Mist | FLU-Nasal |
| | WVTN | | Flu-Shield | Influenza |
| | WVTN | | Fluogen | Influenza |
| | WVTN | | Fluvirin | Influenza |
| | WVTN | | Fluvirin, Preservative-free | Preservative-Free Influenza |
| | WVTN | | Fluzone | Influenza |
| | WVTN | | Fluzone, Preservative-free | Preservative-Free Influenza |
| | WVTN | | Gardasil | HPV, Quadrivalent |
| | WVTN | | Havrix-Adult | HepA-Adult |
| | WVTN | | Havrix-Peds 2 Dose | HepA-Ped 2 Dose |
| | WVTN | | Havrix-Peds 3 Dose | HepA-Peds |
| | WVTN | | HBIg | HBIg |
| | WVTN | | Hib-TITER | Hib-HbOC |
| | WVTN | | Ig | Ig |
| | WVTN | | IgIV | IgIV |
| | WVTN | | Imovax Rabies ID | Rabies-ID |
| | WVTN | | Imovax Rabies IM | Rabies-IM |
| | WVTN | | Infanrix | DTaP |
| | WVTN | | IPOL | Polio-Inject |
| | WVTN | | JE-Vax | Japanese Enceph |
| | WVTN | | LYMERix | Lyme |
| | WVTN | | M-R-VAX | Measles-Rubella |
| | WVTN | | Measles | Measles |
| | WVTN | | Measles-Rubella (MERU) | Measles-Rubella |
| | WVTN | | Menactra | Meningococcal conjugate vaccine |
| | WVTN | | MENOMUNE | Meningococcal |
| | WVTN | | Meruvax II | Rubella |
| | WVTN | | MMR II | MMR |
| | WVTN | | MMRV | MMRV |
| | WVTN | | Mumps | Mumps |
| | WVTN | | Mumps-Rubella (MURU) | Rubella-Mumps |
| | WVTN | | Mumpsvax | Mumps |
| | WVTN | | OmniHib | Hib-PRP-T |

| Type | Table | Name | Value | Description |
|------|-------|------|------------------------------|------------------------------|
| | WVTN | | ORIMUNE | Polio-Oral |
| | WVTN | | Pediarix | DTAP/Polio/Hep B |
| | WVTN | | Pentacel | DtaP-Hib-IPV |
| | WVTN | | PedvaxHIB | Hib-OMP |
| | WVTN | | Plague | Plague |
| | WVTN | | Pneumovax 23 | Pneumococcal 23 |
| | WVTN | | PNU-IMUNE 23 | Pneumococcal 23 |
| | WVTN | | Prevnar | Pneumo-Conjugate |
| | WVTN | | ProHIBit | Hib-PRP-D |
| | WVTN | | RabAvert | Rabies-IM |
| | WVTN | | Recombivax Peds | HepB-Peds |
| | WVTN | | Recombivax-Adult | HepB-Adult |
| | WVTN | | Recombivax-Dialysis | HepB-Dialysis 4 dose |
| | WVTN | | Rho(D)Full | Rho(D)Full |
| | WVTN | | Rho(D)IV | Rho(D)IV |
| | WVTN | | Rho(D)Mini | Rho(D)Mini |
| | WVTN | | RIg | RIg |
| | WVTN | | RIg-HT | RIg-HT |
| | WVTN | | RotaShield | Rotavirus |
| | WVTN | | RSV-IgIM | RSV-IgIM |
| | WVTN | | RSV-IgIV | RSV-IgIV |
| | WVTN | | Rubella | Rubella |
| | WVTN | | Td | Td |
| | WVTN | | Tetramune | DTP-Hib |
| | WVTN | | TIg | TIg |
| | WVTN | | TriHIBit | DTaP-Hib |
| | WVTN | | Tripedia | DTaP |
| | WVTN | | TT | Tetanus |
| | WVTN | | Twinrix | HepA-HepB Adult |
| | WVTN | | Typhim Vi | Typhoid-ViCPs |
| | WVTN | | Typhoid | Typhoid-HP |
| | WVTN | | Typhoid-AKD | Typhoid-AKD |
| | WVTN | | Vaccinia (smallpox), diluted | Vaccinia (smallpox), diluted |
| | WVTN | | Vaccinia immune globulin VIG | Vaccinia immune globulin VIG |
| | WVTN | | VAQTA-Adult | HepA-Adult |
| | WVTN | | VAQTA-Peds 2 Dose | HepA-Ped 2 Dose |
| | WVTN | | Varivax | Varicella |
| | WVTN | | Vivotif Berna/Ty21a | Typhoid-Oral |
| | WVTN | | VZIg | VZIg |
| | WVTN | | YF-VAX | Yellow Fever |
| | WVTN | | Zostavax | Zoster (shingles), live |

24.31

24.32 CPT Codes (WCPT) and CVX Codes (292)

| CPT | CVX | Group | Vaccine | 24.32.1 Trade Name | Description | MFG |
|-------|----------|------------|------------------------------|-----------------------------|--|-----|
| 90476 | 54 | Adeno | Adeno T4 | Adeno T4 | Adenovirus type 4, live oral | WAL |
| 90477 | 55 | | Adeno T7 | Adeno T7 | Adenovirus type 7, live oral | WAL |
| | 82 | | Adeno, NOS | | Recorded as CVX 54 | |
| 90581 | 24 | Anthrax | Anthrax | Anthrax | Anthrax | MIP |
| 90585 | 19 | BCG | BCG-TB | BCG-TB | Bacillus Calmette-Guerin TB | OTC |
| 90586 | | | BCG-BC | BCG-BC | Bacillus Calmette-Guerin bladder cancer | OTC |
| 90728 | | | BCG, NOS | | BCG, NOS | |
| 90725 | 26 | Cholera | Cholera-Injectable | Cholera-I | Cholera injectable | CHI |
| 90592 | | | Cholera-Oral | Cholera-O | Cholera Oral | CHI |
| 90719 | | Diphtheria | Diphtheria | Diphtheria | Diphtheria | PD |
| 90700 | 20 | DTP/aP | DTaP | Acel-Imune | Diphtheria, tetanus, acellular pertussis | WAL |
| | | | | Certiva | | BAH |
| | | | | Infanrix | | SKB |
| | Tripedia | PMC | | | | |
| 90701 | 01 | | DTP | DTP | Diphtheria, tetanus, whole cell pertussis | PMC |
| 90702 | 28 | | DT | DT | Diphtheria tetanus pediatric | PMC |
| 90720 | 22 | | DTP-Hib | Tetramune | DTP – Hib combination | WAL |
| 90721 | 50 | | DTaP-Hib | TriHIBit | DtaP-Hib combination | PMC |
| 90723 | 110 | | DTAP-HepB-Polio | Pediarix | DTAP-HepB-Polio combination | SKB |
| 90698 | 120 | | DtaP-Hib-IPV | Pentacel | DtaP-Hib-IPV combination | PMC |
| | 106 | | DTAP, 5 pertussis antigens | DAPTACEL | Diphtheria, tetanus, acellular pertussis, 5 antigens | PMC |
| | 107 | | DTaP, NOS | | Recorded as CVX 20 | |
| | 102 | | DTP-HIB-Hep B | | DTP-HIB Hep B vaccine | |
| 90655 | 15 | Influenza | Influenza, Preservative-Free | Fluvirin, Preservative-Free | Influenza preservative free | CHI |
| | | | | Fluzone, Preservative-Free | | PMC |
| 90656 | | | | Fluvirin, Preservative-Free | | CHI |
| | | | | Fluzone, Preservative-Free | | PMC |
| 90657 | | | Influenza | Flu-Immune | Influenza split virus | WAL |
| | | | | Flu-Shield | | WAL |
| | | | | Fluzone | | PMC |
| | | | | Fluvirin | | CHI |
| | | | | Fluogen | | PD |
| | | | | Fluarix | | SKB |
| 90658 | | | | Flu-Immune | | WAL |
| | | | | Flu-Shield | | WAL |
| | | | | Fluzone | | PMC |
| | | | | Fluvirin | | CHI |
| | Fluogen | PD | | | | |
| | Fluarix | SKB | | | | |
| 90659 | 16 | | Influenza, Whole virus | | Influenza whole virus | |
| 90660 | 111 | | Flu-nasal | Flu-Mist | Influenza live, for intranasal use | WAL |
| 90724 | 88 | | Influenza, NOS | Flu-Deleted | Influenza, NOS | |
| | | | Flu-Unspecified | | | |
| 90632 | 52 | HepA | HepA adult | Havrix adult | Hepatitis A adult | SKB |
| | | | | VAQTA adult | | MSD |

| CPT | CVX | Group | Vaccine | 24.32.1 Trade Name | Description | MFG | |
|-------|-----|-----------------|------------------------------------|------------------------|---|--------------------------------------|-----|
| 0633 | 83 | | HepA ped-2 dose | Havrix ped/adol 2 dose | Hepatitis A pediatric/adolescent 2 dose | SKB | |
| | | | | VAQTA ped-2 | | MSD | |
| 90634 | 84 | | HepA ped-3 dose | Havrix ped/adol 3 dose | Hepatitis A pediatric/adolescent 3 dose | SKB | |
| | | | | | | MSD | |
| 90636 | 104 | | HepA-HepB Adult | Twinrix | Hepatitis A & Hepatitis B adult | SKB | |
| 90730 | 85 | | Hep A, NOS | | Hep A, NOS | | |
| | 31 | | Hep A-peds, NOS | | Recorded as CVX 85 | | |
| 90636 | 104 | | HepA-HepB Adult | Twinrix | Hepatitis A & Hepatitis B adult | SKB | |
| 90723 | 110 | | DTAP-HepB-Polio | Pediarix | DTAP-HepB-Polio combination | SKB | |
| 90731 | 45 | | Hep B, NOS | | Hep B, NOS | | |
| 90740 | 44 | HepB | Hep B-dialysis 3 dose | | Hepatitis B Dialysis 3 dose | | |
| 90743 | 43 | | HepB adult | Recombivax-Adult | Hepatitis B adult dose 1ml | MSD | |
| | | | | Engerix-B-Adult | | SKB | |
| 90744 | 08 | | HepB pediatric | Recombivax-Peds | Hepatitis B pediatric/adolescent .5ml | MSD | |
| | | | | Engerix-B-Peds | | SKB | |
| 90745 | 42 | | Hep B, adolescent/high risk infant | | Hep B, adolescent/high risk infant | | |
| 90746 | 43 | | HepB adult | Recombivax-Adult | Hepatitis B adult dose 1ml | MSD | |
| | | | | Engerix-B-Adult | | SKB | |
| 90747 | 44 | | HepB-dialysis 4 dose | Recombivax-dialysis | Hepatitis B Dialysis 4 dose | MSD | |
| | | | | Engerix-B dialysis | | SKB | |
| 90748 | 51 | | HepB-Hib | Comvax | HepB-Hib Combination | MSD | |
| | | | HepB-Unspecified | | | | |
| 90645 | 47 | | Hib | Hib-HbOC | HibTITER | Hemophilus influenza b HbOC 4 dose | WAL |
| 90646 | 46 | | | Hib-PRP-D | ProHIBit | Hemophilus influenza b PRP-D booster | PMC |
| 90647 | 49 | | | Hib-OMP | PedvaxHIB | Hemophilus influenza b OMP 3 dose | MSD |
| 90648 | 48 | Hib-PRP-T | | OmniHib | Hemophilus influenza b PRP-T 4 dose | PMC | |
| | | | | ActHib | | | |
| 90720 | 22 | DTP-Hib | | Tetramune | DTP – Hib combination | WAL | |
| 90721 | 50 | DtaP-Hib | | TriHIBit | DtaP-Hib combination | PMC | |
| 90737 | 17 | | | | Hib,NOS | | |
| 90748 | 51 | HepB-Hib | | Comvax | HepB-Hib combination | MSD | |
| 90698 | 120 | DtaP-Hib-IPV | | Pentacel | DtaP-Hib-IPV combination | PMC | |
| | | Hib-Unspecified | | | | | |
| | 118 | HPV | | HPV, bivalent | Cervaix | Human Papilloma Virus | SKB |
| 90649 | 62 | | HPV, Quadrivalent | Gardasil | Human Papilloma Virus | MSD | |
| 90281 | 86 | Ig | Ig | Ig | Ig human | | |
| 90283 | 87 | | IgIV | IgIV | Ig IV human | | |
| | | | | Flebogamma | | | |
| 90287 | 27 | | Botulinum-antitoxin | Botulinum-antitoxin | Botulinum antitoxin equine | | |
| 90288 | | | Botulism | BabyBIG | Botulism Immune Globulin | | |
| | | | | Botulism | | | |
| | | | | BIG | | | |
| 90291 | 29 | | CMV-IgIV | CMV-IgIV | Cytomegalovirus Ig IV human | | |
| 90399 | | | Ig | Ig | Unlisted immune globulin | | |
| 90296 | 12 | | Diphtheria-antitoxin | Diphtheria-antitoxin | Diphtheria antitoxin, equine | | |
| 90371 | 30 | | HBIG | HBIG | Hepatitis B Ig human | | |
| 90375 | 34 | | RIg | Rig | Rabies Ig human | | |
| 90376 | 34 | | RIg-HT | RIg-HT | Rabies Ig heat treated human | | |

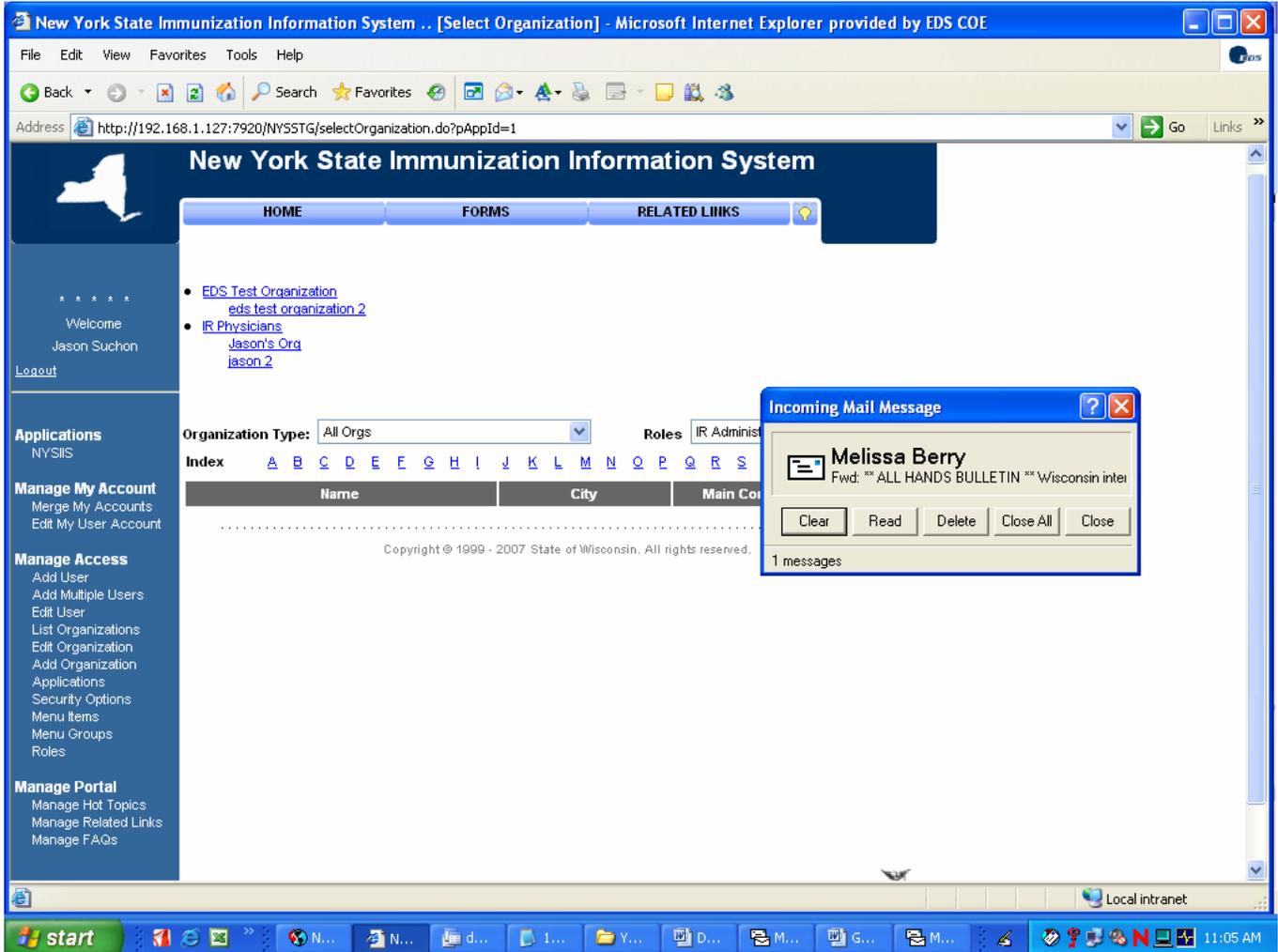
| CPT | CVX | Group | Vaccine | 24.32.1 Trade Name | Description | MFG |
|-------|-----|--------------------|--|----------------------|---|---|
| 90378 | 93 | | RSV-IgIM | RSV-IgIM | Respiratory syncytial virus Ig | |
| 90379 | 71 | | RSV-IgIV | RSV-IgIV | Respiratory syncytial virus Ig IV | |
| 90384 | | | Rho(D)Full | Rho(D)Full | Rho(D)Ig Rhlg human full-dose | |
| 90385 | | | Rho(D)Mini | Rho(D)Mini | Rho(D)Ig Rhlg human mini-dose | |
| 90386 | | | Rho(D)IV | Rho(D)IV | Rho(D)Ig Rhlg human IV | |
| 90389 | 13 | | TiG | BayTet | Tetanus Ig human | |
| | | | | TiG | | |
| 90393 | 79 | | Vaccinia immune globulin | Vaccinia-Ig | Vaccinialg human | |
| 90396 | 36 | | VZIg | VZIg | Varicella-zoster Ig human | |
| | 117 | | VZIG (IND) | VariZIG | | CNJ |
| | | Varicella IG | | | | |
| 90665 | 66 | Lyme | Lyme | LYMERix | Lyme disease | SKB |
| 90735 | 39 | Encephalitis | Japanese encephalitis | JE-Vax | Japanese encephalitis | JPN |
| 90705 | 05 | Measles | Measles | Measles | Measles live 1964-1974 (Eli Lilly) | MSD |
| | | | | Attenuvax | Measles live | MSD |
| 90708 | 04 | Measles-Rubella | Measles-Rubella (MERU) | M-R-VAX | Measles and rubella live | MSD |
| | | | | | | MSD |
| 90704 | 07 | Mumps | Mumps | Mumps | Mumps 1950-1978 | MSD |
| | | | | Mumpsvax | Mumps live | MSD |
| 90709 | | Rubella-Mumps, NOS | | | | |
| | 38 | Rubella-Mumps | Rubella-Mumps | Biavax II | Rubella and mumps live | MSD |
| | | | | Mumps-Rubella (MURU) | | |
| 90707 | 03 | MMR | MMR | MMR II | Measles, mumps and rubella live | MSD |
| 90710 | 94 | | | MMRV | MMRV | Measles, mumps, rubella, varicella live |
| 90733 | 32 | Meningo | Meningococcal | MENOMUNE | Meningococcal polysaccharide | PMC |
| 90734 | 114 | | Meningococcal polysaccharide conjugate | Menactra | Meningococcal [Groups A, C, Y and W-135] Polysaccharide Diphtheria Toxoid Conjugate Vaccine | PMC |
| | 108 | | Meningococcal, NOS | | | Meningococcal, NOS |
| 90715 | 115 | Pertussis | Tdap > 7 Years | Adacel | Tdap > 7 years | PMC |
| | | | | Boostrix | | |
| 90712 | 02 | Polio | Polio oral | ORIMUNE | Poliovirus OPV live oral | WAL |
| 90713 | 10 | | Polio injectable | IPOL | Poliovirus inactivated IPV | PMC |
| 90723 | 110 | | DTAP-HepB-Polio | Pediarix | DTAP-HepB-Polio combination | SKB |
| 90698 | 120 | | DtaP-Hib-IPV | Pentacel | DtaP-Hib-IPV combination | PMC |
| | 89 | | Polio-Unspecified | | | Polio, NOS |
| 90727 | 23 | Plague | Plague | Plague | Plague | GRE |
| 90732 | 33 | Pneumo-Poly | Pneumococcal 23 | PNU-IMUNE23 | Pneumococcal polysaccharide 23 valent | WAL |
| | | | | Pneumovax23 | | |
| 90669 | 100 | Pneumococcal | Pneumo-conjugate | Prevnar | Pneumococcal conjugate polyvalent | WAL |
| | 109 | | Pneumococcal-Unspecified | | | |
| 90675 | 18 | Rabies | Rabies-intramuscular | RabAvert | Rabies intramuscular | CHI |
| | | | | Imovax Rabies I.M. | | |
| 90676 | 40 | | Rabies-intradermal | Imovax Rabies I.D. | Rabies intradermal | PMC |
| 90726 | 90 | Rabies-NOS | | | Rabies not otherwise specified | |
| 90680 | 74 | Rotavirus | Rotavirus, Tet | RotaShield | Rotavirus tetravalent live oral (removed on 10/16/1999) | WAL |
| | 116 | | Rotavirus, Pent | RotaTeq | Rotavirus pentavalent (after 02/02/2006) | MSD |
| | 102 | | Rotavirus | | | (between 10/16/1999 and 02/01/2006) |

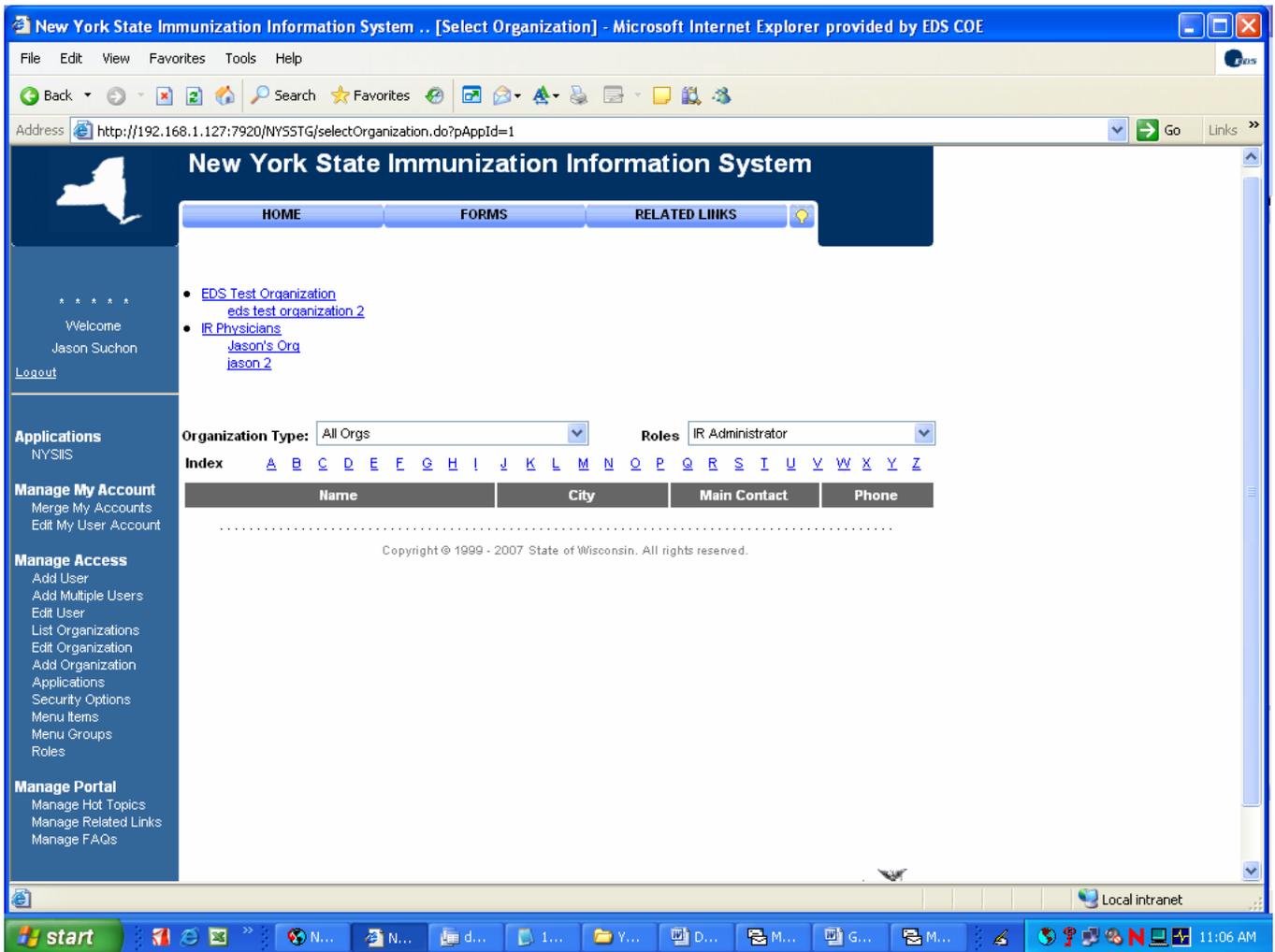
| CPT | CVX | Group | Vaccine | 24.32.1 Trade Name | Description | MFG |
|-------|-----|---------------|------------------------------|------------------------------|---|-----|
| | 119 | | Rotavirus, monovalent | Rotarix | | SKB |
| 90706 | 06 | Rubella | Rubella | Rubella | Rubella live | MSD |
| | | | | Meruvax II | | MSD |
| 90708 | 04 | | Measles-Rubella | Measles-Rubella (MERU) | Measles and rubella live | MSD |
| | | | | M-R-VAX | | MSD |
| 90709 | | | Rubella-Mumps NOS | | Rubella-Mumps, NOS | |
| | 38 | Rubella-Mumps | Mumps-Rubella (MURU) | Rubella and mumps live | MSD | |
| | | | Biavax II | | MSD | |
| | 75 | Smallpox | Smallpox | Dryvax | Vaccinia(Smallpox) dry | WAL |
| | 105 | | Vaccinia (Smallpox), diluted | Vaccinia (smallpox), diluted | Vaccinia (smallpox), diluted | |
| 90718 | 09 | Td | Td | Td | Tetanus and diphtheria adult | PMC |
| | | | | DECAVAC (prior to 7/1/2005) | | PMC |
| 90714 | 113 | | Td preservative free | DECAVAC | Td preservative free – CPT code is effective 7/1/2005 | PMC |
| 90715 | 115 | | Tdap > 7 Years | Adacel | Tdap > 7 years | PMC |
| | | | Boostrix | SKB | | |
| 90703 | 35 | Tetanus | Tetanus | TT | Tetanus | PMC |
| | 112 | | Tetanus Toxoid, NOS | | Recorded as CVX 35 | |
| 90690 | 25 | Typhoid | Typhoid-oral | Vivotif Berna/Ty21a | Typhoid oral | |
| 90691 | 101 | | Typhoid-ViCps | Typhim Vi | Typoid VI capsular polysaccharide | PMC |
| 90692 | 41 | | Typhoid-H-P | Typhoid | Typhoid heat and phenol inactivated | |
| 90693 | 53 | | Typhoid-AKD | Typhoid-AKD | Typhoid acetone-killed, dried (military) | |
| 90714 | 91 | | Typhoid-NOS | | Typhoid not otherwise specified (after 7/1/2005, no CPT code is associated with this vaccine group) | |
| 90710 | 94 | Varicella | MMRV | MMRV | | MSD |
| 90716 | 21 | | Varicella | Varivax | Varicella live | MSD |
| 90717 | 37 | Yellow Fever | Yellow Fever | YF-VAX | Yellow Fever live | PMC |
| 90736 | 121 | Zoster | Zoster (shingles), live | Zostavax | Zoster (shingles), live | MSD |

25. Appendix C – Obtaining the NYSIIS Real Time SSL Certificate

The following instructions detail obtaining the NYSIIS SSL certificate using Internet Explorer. Instructions for importing the certificate into the PHINMS 2.1 client certificate store are also given. If you are not using the PHINMS 2.1 client, follow the export instructions and contact your company technical support team for help with importing the certificate file into your company certificate store.

25.1 EXPORTING THE NYSIIS SSL CERTIFICATE



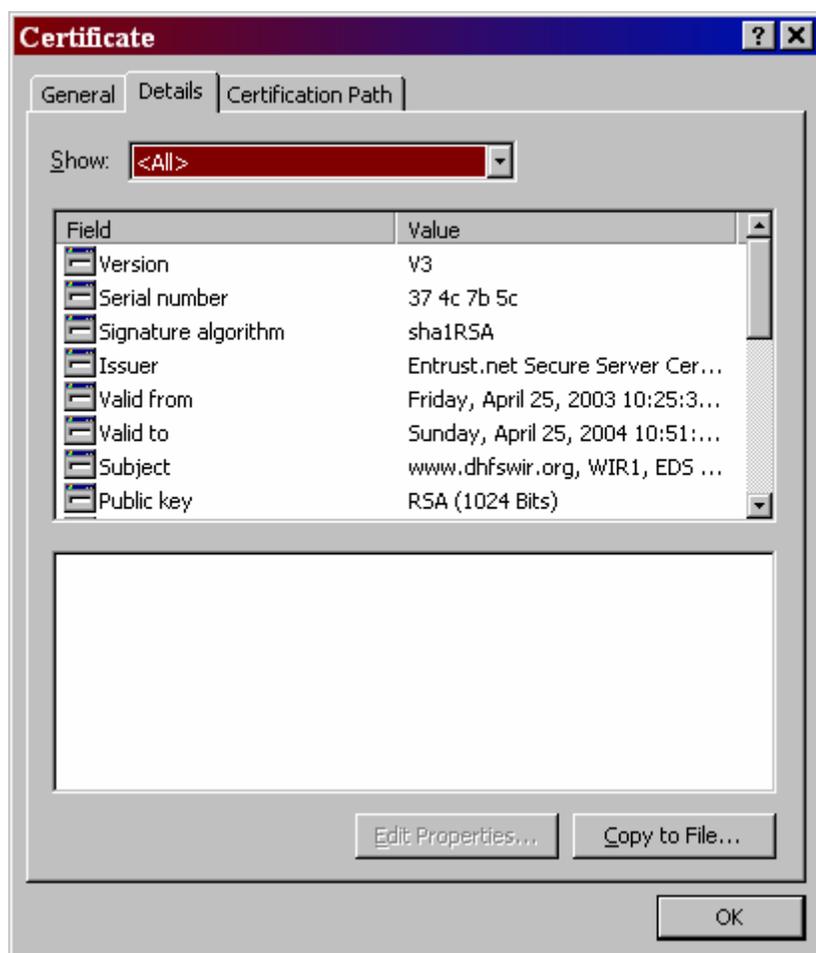


Go to <https://www.dhfwir.org>

If presented with a Certificate Prompt, select Yes. (This prompt will appear only for first time users.)
Double-click on the locked padlock icon in the lower right-hand corner of the screen.



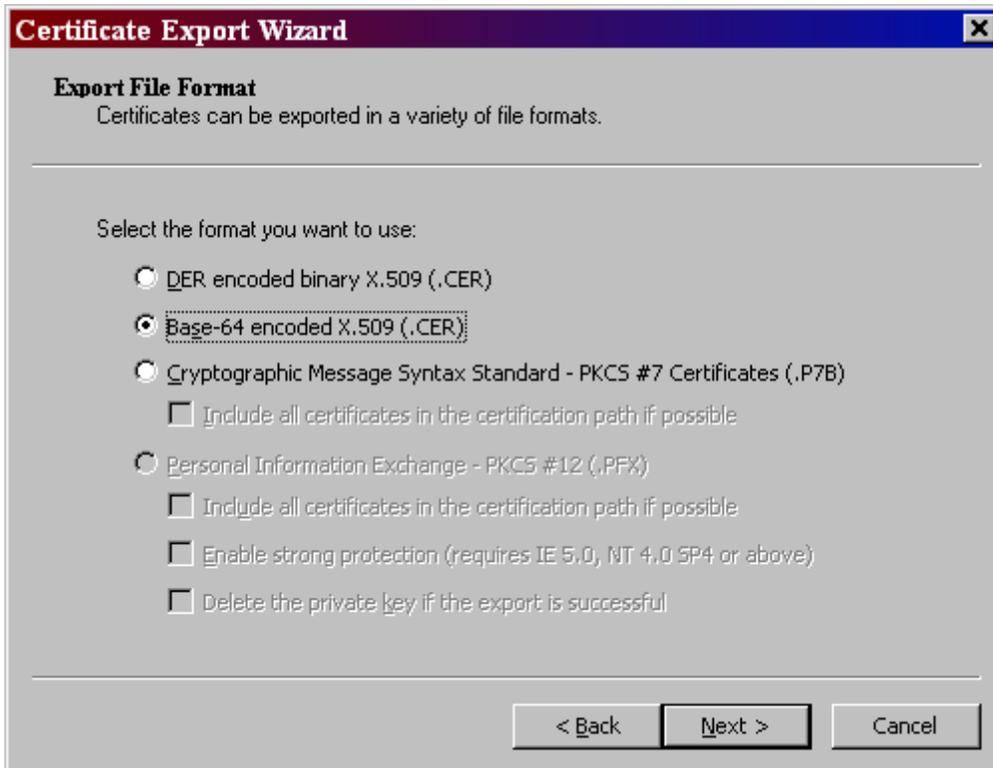
Click on the **Details** tab at the top



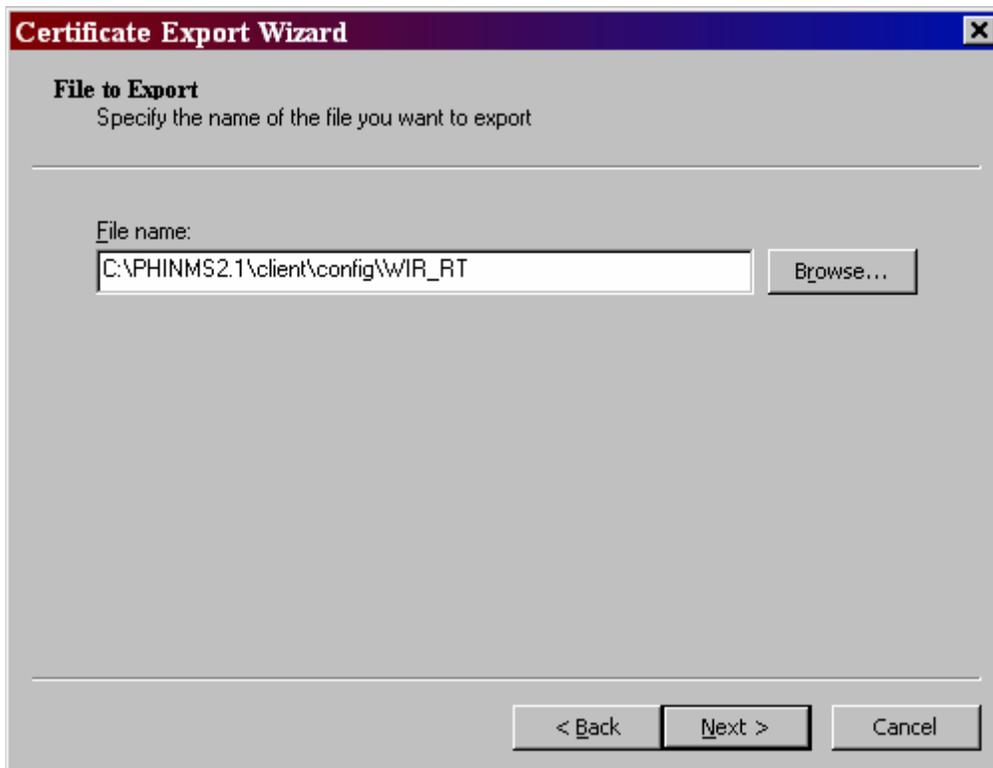
Click on the **C**opy to File... button in the lower-right



Click **N**ext >



Click the **Base-64 encoded X.509 (.CER)** radio button, then click **Next >**



Type a file name to contain the exported certificate.

In example above, we have **Browsed** to the PHINMS21 client config directory and named the file **NYSIIS_RT**

Note: You will need to specify the path and file name when importing the certificate in a later step so take

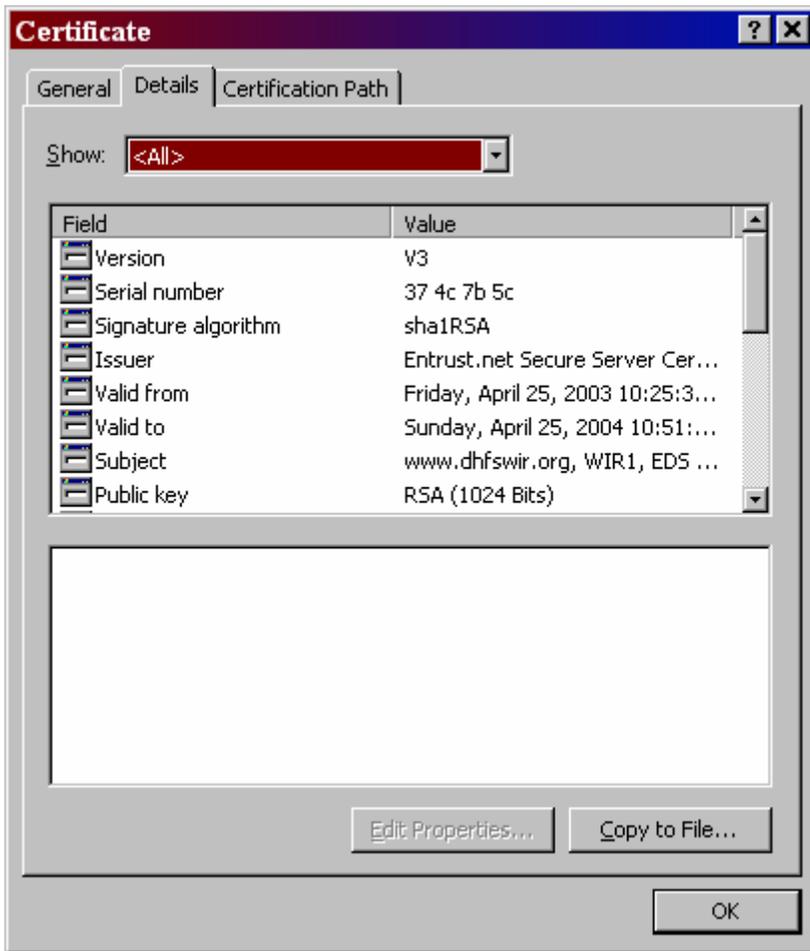
note of where you place it and what you name it.



Click **Finish**



Click **OK**

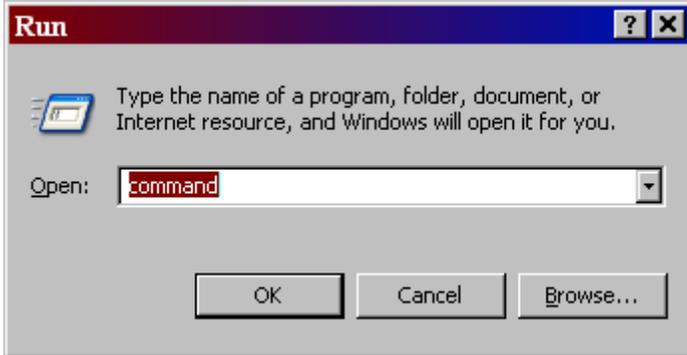


Click **OK**

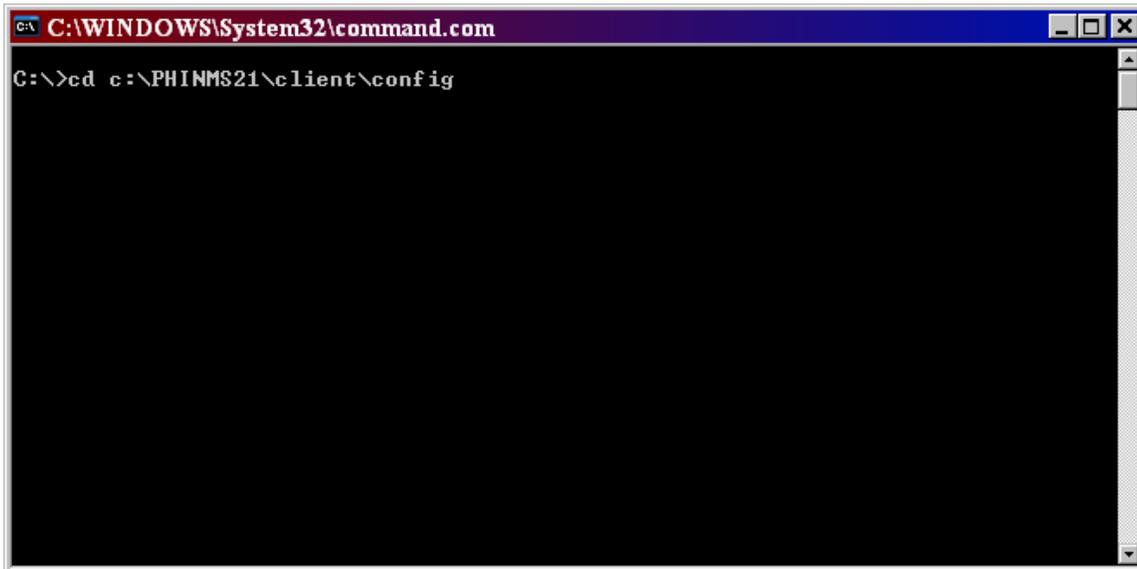
25.2 IMPORTING THE NYSIIS SSL CERTIFICATE

The remaining steps assume PHINMS client usage.

Open a command prompt (on a windows machine, click **Start**, **Run**, and type **Command**)



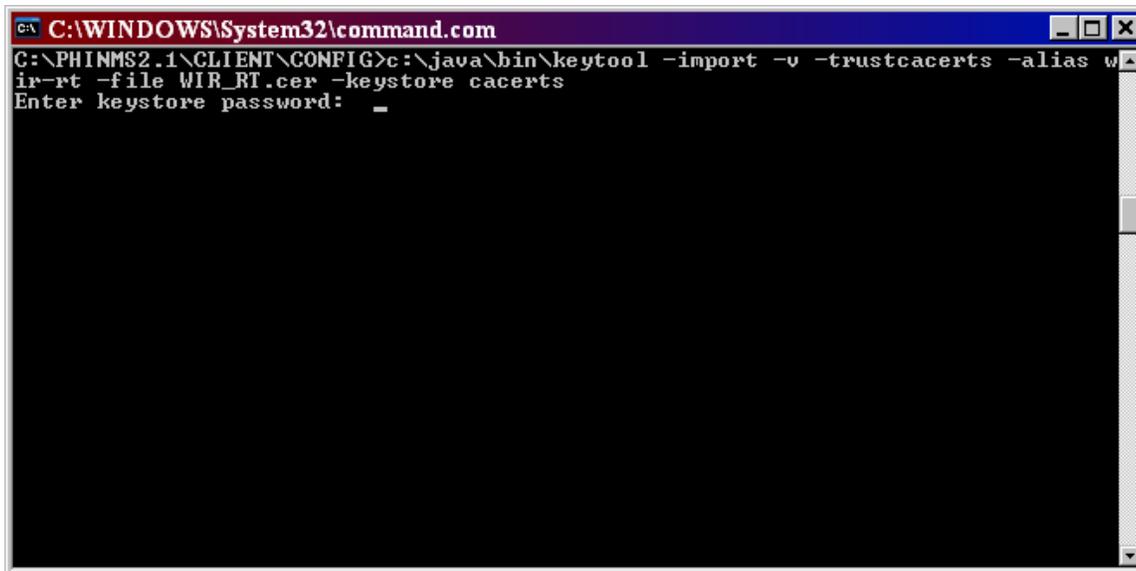
Click **OK**



Change directory to the location where the newly created certificate was stored.

Enter the following command:

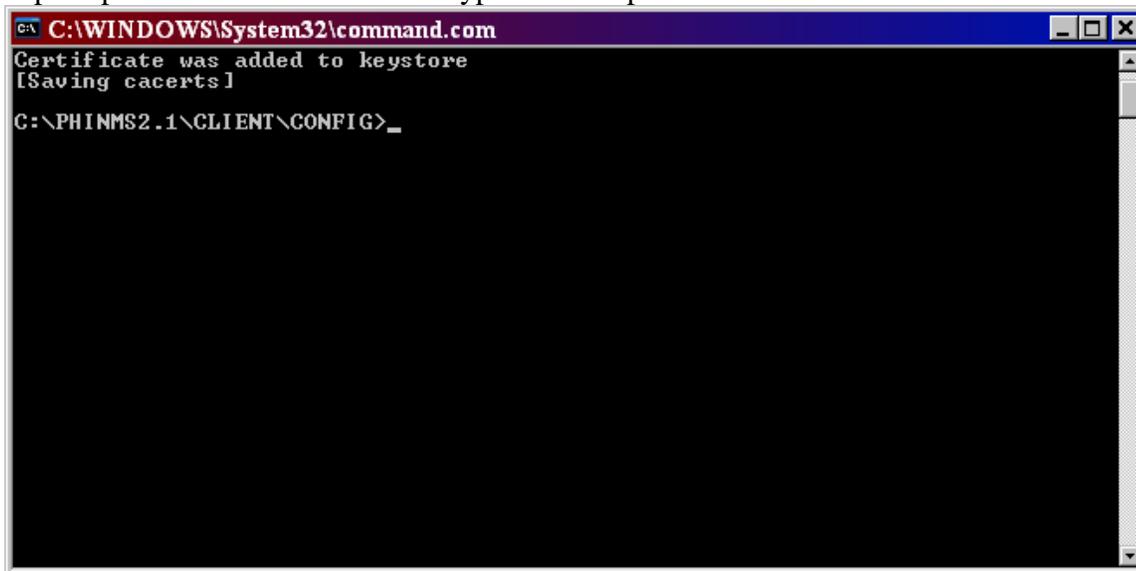
keytool -import -v -trustcacerts -alias NYSIIS-rt -file NYSIIS_RT.cer -keystore cacerts
where, “NYSIIS-rt” can be anything unique and not already in the cacerts file. The cacerts is the keystore. Note: keytool is a java tool, ensure that your java/bin directory is in your path or type the full location (e.g., c:\java\bin\keytool as shown in the screenshot.)



```
C:\WINDOWS\System32\command.com
C:\PHINMS2.1\CLIENT\CONFIG>c:\java\bin\keytool -import -v -trustcacerts -alias w
ir-rt -file WIR_RT.cer -keystore cacerts
Enter keystore password: _
```

Enter the keystore password and press enter

If prompted to trust this certificate type “Y” and press enter



```
C:\WINDOWS\System32\command.com
Certificate was added to keystore
[Saving cacerts]
C:\PHINMS2.1\CLIENT\CONFIG>_
```

type **exit** to close the command prompt window

Appendix IV

NYC CIR batch reporting file (UPIF) specification

UPIF Provider's Guide



**Citywide
Immunization
Registry**



**We help
you call
the shots!**



Michael R. Bloomberg, Mayor,
City of New York
Thomas R. Frieden, M.D., M.P.H., Commissioner,
Department of Health and Mental Hygiene

THE NEW YORK CITY DEPARTMENT OF HEALTH AND MENTAL HYGIENE

visit us online: nyc.gov/health/cir

125 Worth St. CN #64R, New York, NY 10013 - (212) 676-2323 - fax (212) 676-2314

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Introduction

Overview

The Department of Health and Mental Hygiene's Citywide Immunization Registry (CIR) is designed to serve as a repository of immunization information for individuals residing in New York City. The repository will function as an information source for staff members of the DOHMH Bureau of Immunization and for NYC health care providers and agencies concerned with health who have regular contact with individuals requiring immunizations.

CIR patient data will come from a variety of existing information systems, most of which will provide ongoing data feeds. These existing systems include large hospitals in New York City, both those that are part of the NYC Health and Hospitals Corporation, as well as private hospitals, clinics, and medical offices. In addition, plans are currently in place to link immunization registries throughout New York state to simplify tracking of individuals who move within the state, or who cross jurisdictional boundaries to obtain medical care.

The integrity and security of CIR patient data is critical. Input data quality will be reviewed, and data may be edited before it is inserted into the database. Access to the data will be restricted, so that immunization providers and agencies concerned with health can get the information that they need to correctly vaccinate an individual, while limiting their ability to get residential and demographic information. The system will also restrict the ability for unauthorized personnel to randomly access patient information.

UPIF

The CIR Universal Provider Interface Format (UPIF) has been defined to provide a standard mechanism for the batch transfer of information between immunization providers and the CIR. UPIF batch files can be submitted electronically or on a magnetic medium. Each facility using UPIF to submit patient immunization data may submit their files on a different schedule, although the Health Code requires that immunizations be reported within 14 days of administration.

Immunization providers will be able to perform the following CIR transactions through the submission of UPIF files:

- Add a new patient to CIR.
- Update a patient's residence and demographic information.
- Add a new immunization event for a patient.

The UPIF contains four basic record types, which are used to identify the source of the file, perform add and update patient transactions, insert immunization events, and check file consistency.

The two principal record types have a similar structure, with an identical patient identification block followed by the appropriate data. The identification block includes universal patient ID numbers (e.g., Medicaid), facility patient identification numbers, and primary and auxiliary key data. There are several advantages to this approach:

- Patient transactions and immunization event transactions are completely independent.

- If an immunization event arrives for a patient who does not yet exist in the CIR, sufficient information is available to create a new patient record.
- Support of a single patient identification mechanism.

UPIF Record Structure

Source Record

| | |
|--------|-----------------------|
| Header | Sender Identification |
|--------|-----------------------|

Patient Record

| | | |
|--------|------------------------|---|
| Header | Patient Identification | Residential and Demographic Information |
|--------|------------------------|---|

Immunization Event Record

| | | |
|--------|------------------------|-------------------------|
| Header | Patient Identification | Immunization Event Data |
|--------|------------------------|-------------------------|

Trailer Record

| | |
|--------|-----------------|
| Header | File Statistics |
|--------|-----------------|

A facility can use the UPIF to *register* a patient with the facility's own medical record number. Once a patient has been registered by a facility, the medical record number can be used as an identification key.

Reporting Requirements — NYC Health Code Mandate

The New York City Health Code mandates the following:

- Information for new patients and immunization events shall be reported within 14 days of administration of the immunizations (i.e., report at least bi-weekly, or more frequently).
- Reporting of all immunizations administered to all patients under the age of nineteen years is required (effective August 18, 2005).
- Reporting of immunizations administered to patients age nineteen years and over, with the patient's consent documented in the medical record, is voluntary (effective August 18, 2005).
- If an immunization history is maintained for a patient, it should be reported at the same time the patient is initially reported to CIR.

Reporting Requirements — UPIF Processing

- Each UPIF batch file must contain a Sender Record to identify the source of the batch submission. The Sender Record must be the first record in the file.
- Each UPIF batch file must contain a Trailer Record to indicate the end of file, and the number of records that the file contains. The Trailer Record must be the last record in the file.
- If a facility wishes to use its own patient number for patient identification, it must submit a Patient Record that provides all available primary and auxiliary key information for the patient, *prior* to the use of that patient identification number in reporting immunization events.
- A facility using their own patient number to identify a patient must still provide the First Name, Last Name, Date of Birth, and Gender as corroborating patient identification information.
- A facility using a NYS Medicaid number to identify a patient must still provide the First Name, Last Name, Date of Birth, and Gender as corroborating patient identification information.

Reporting Process

Each facility will need to review their options for reporting immunization information. Facilities that wish to use the UPIF for batch file transfer may choose between electronic submission and the use of magnetic media.

Certification

Before the UPIF can be used to submit patient information to the CIR, a facility must undergo a DOHMH certification process. The purpose of certification is to qualify the facility's own processes for generating the UPIF from their medical record systems.

Test Runs

The certification process is focused on the submission of test batches of UPIF data to the CIR. Each test batch will be validated at the field and record level to insure conformance to the UPIF specification. Problems in the test batch will be logged in a test report, and returned to the facility.

It is strongly recommended that a facility reapply for certification if they make changes to their medical records system that could affect the generation of UPIF files.

Regular Reporting

At the end of each reporting period, a facility will go through the following process:

1. Prepare the file. Provide information for all patients who have been added to the system (or whose records have been modified)¹, and all immunization events that have taken place during the reporting period.
2. Transfer file. Send the UPIF batch file to the CIR for processing.
3. Review batch processing report. Determine whether errors occurred during batch file processing, and whether resubmission of information is necessary.

Online Submission

The CIR will support the online submission of UPIF batch files via the Web File Repository (WFR). This is a secure and simple tool used for transferring (uploading) files from your computer to the CIR via the Internet. WFR encrypts patient data for electronic transfer to the CIR, in accordance with the HIPAA Security Rule. This method for sending files is recommended, since you will no

¹ Facilities that have medical record systems that make it difficult to extract patient records that have changed during a reporting period can submit all appropriate patient records on a quarterly or semi-annual basis, in addition to regular reporting of immunization data.

longer need to use magnetic media, and the files will be traceable. For more information on submitting UPIF files through the WFR, please call the CIR at 212-676-2323.

Magnetic Media Submission

The CIR will also support the submission of UPIF batch files on magnetic media and CD-ROM.

Each floppy disk, CD or zip disk should contain a single UPIF batch file.

The following media formats are supported by the CIR:

- 3-1/2" floppy disks (PC-formatted)
- CD-ROM (High-Sierra format)
- Zip disk

UPIF Processing Flow

Patient Identification

The CIR uses several different identification strategies to correlate each input record with the appropriate patient in the system. Among the strategies used are:

- **Medicaid Number** - NYS Medicaid identification numbers can be used to identify patients in CIR. For security purposes, the primary identification elements (i.e., First Name, Last Name, Date of Birth, and Gender) must also be provided to corroborate the use of the Medicaid number.
- **Patient Medical Record System Number** - A facility's own patient identification number (e.g., medical record number, chart number) can be used to identify patients in the Registry. For security purposes, the primary identification elements (i.e., First Name, Last Name, Date of Birth, and Gender) must also be provided to corroborate the use of the Medical Record System number.
- **Primary Identification Elements** - Many patients can be identified through the use of a small set of data elements (i.e., First Name, Last Name, Date of Birth, and Gender).
- **Primary and Auxiliary Identification Elements** - In addition to the primary data elements listed above, the CIR will use a number of additional data elements (e.g., telephone number, mother's maiden name) to identify unique record matches.
- **Partial Matching** - If the CIR fails to identify an exact match, a partial matching scheme between subsets of specified fields will be used.

It is strongly recommended that each UPIF record contain as many of the primary and auxiliary identification elements as are known to the facility. This increases the likelihood of a match, as well as helping to maintain the accuracy and completeness of CIR patient data.

UPIF Record Formats

This section specifies the details of the UPIF record structure. It describes both the structure of the record and the specific data elements.

File Name

A single UPIF file will contain sender, patient, and immunization data.

| NAME | DESCRIPTION |
|--------------|--|
| Uxxxxxxx.nnn | <p>xxxxxxx is the seven-character institution code (provided by the DOHMH during registration).</p> <p>nnn is the sequence number. Initially 0, incremented (by one) as each UPIF file is submitted.</p> |

Record Format

There are four record types used in the UPIF format. Two of the record types contain patient information, the other two identify the source of the data and provide essential consistency checking. The four record types use a common structure to simplify generation and loading.

Data Types

| DATA TYPE | DESCRIPTION |
|-------------|--|
| (x) | Maximum length is x. |
| Char (x) | Text value is blank padded to fixed length x. |
| Varchar (x) | Text value is variable length. |
| Date | Date value must be in the format <i>MM/DD/YYYY</i> . |
| Number (x) | Numeric value must be a whole number. |

Separators and Delimiters

The UPIF specifies a small number of characters to be used as separators between fields and records.

| TYPE | SYMBOL | HEX VALUE | WHERE USED |
|-------------|---------------------|---------------|---------------------------------------|
| Field | | 7C | Between two fields in the same record |
| Record | <carriage return> | 0D | At the end of each record |
| End of file | (platform specific) | <end of file> | At the end of the file |

A null field in a record should be represented by placing nothing at all (i.e., neither text nor blanks) between the field separators.

Sender Record

The sender record is always the first record in the file.

| FIELD NUMBER | DATA ELEMENT | DATA TYPE | REQUIRED? | DESCRIPTION |
|--------------|----------------------------|--------------|--|--|
| 1 | Sequence Number | Number (7) | Yes. First record in file, so the value must be 1. | Identifies the position of the record in the file. Used in error reporting to indicate where a problem occurred. |
| 2 | Record Type | Char (1) | Yes. Always S. | Sender record. |
| 3 | Record Action | Char (1) | Yes. Either T or N. | T identifies a Test Run (for use during certification); N identifies a normal batch. |
| 4 | Facility Code | Varchar (7) | Yes | Your facility ID as registered with the CIR system. Recorded during registration by the DOHMH. |
| 5 | Facility/Unit Name | Varchar (40) | Yes | Your facility name as registered with the CIR system. Provided during registration by the DOHMH. |
| 6 | Batch Date | Date | Yes. Please use MM/DD/YYYY date format. | Date the UPIF file was produced. |
| 7 | Contact Information | Varchar (40) | No | Name and/or phone number for contact if a problem occurs during processing. |

Patient Information Record

| FIELD NUMBER | DATA ELEMENT | DATA TYPE | REQUIRED? | DESCRIPTION |
|-------------------------------|----------------------------|--------------|--|--|
| <i>Record Header</i> | | | | |
| 1 | Sequence Number | Number (7) | Yes | Identifies the position of the record in the file. Used in error reporting to indicate where a problem occurred. |
| 2 | Record Type | Char (1) | Yes. Must be P. | Patient Record |
| 3 | Reserved | Char (1) | Yes. Must be S. | Reserved for future use. |
| <i>Identification Numbers</i> | | | | |
| 4 | Patient Number | Varchar (15) | No | Patient identification number (e.g., medical record number, chart number) the sending facility uses to identify the patient. Used as a key value for patient search. If provided, the primary key values (first and last name, gender, DOB) must also be provided for corroboration. |
| 5 | NYS Medicaid Number | Char (8) | No | Used as a key value for patient search. If provided, the primary key values (first and last name, gender, DOB) must also be provided for corroboration. |
| <i>Primary Key Fields</i> | | | | |
| 6 | Date of Birth | Date | Yes. Please use MM/DD/YYYY date format | Patient's date of birth. Primary search key. |
| 7 | Gender | Char (1) | Yes | Patient's gender. Must be M for male or F for female. Primary search key. |

| | | | | |
|-----------------------------|---------------------------------------|--------------|---------------------------------------|--|
| 8 | First Name | Varchar (25) | Yes | Patient's first name. Primary search key. |
| 9 | Last Name | Varchar (25) | Yes | Patient's last name. Primary search key. |
| Auxiliary Key Fields | | | | |
| 10 | Multiple Birth Indicator | Char (1) | No | Was patient part of a multiple birth event (e.g., twins). Y if true, N otherwise. |
| 11 | Mother's Maiden Name | Varchar (25) | No | |
| 12 | Mother's Date of Birth | Date | No. Please use MM/DD/YYYY date format | |
| 13 | Patient's Middle Name | Varchar (25) | No | |
| 14 | Patient's Alternate First Name | Varchar (25) | No | Patient's other first name (e.g., Nickname) |
| 15 | Patient's Alternate Last Name | Varchar (25) | No | Patient's other last name (e.g., Stepparent's name) |
| 16 | Birth Facility Code | Varchar (5) | No | The facility within NYC where the patient was born. Refer to the Birth Facility reference table. |
| 17 | House Number | Varchar (10) | No | |
| 18 | Street Name | Varchar (40) | No | |
| 19 | Apt. Number | Varchar (5) | No | The numbers and/or letters designating the apartment. |
| 20 | City | Varchar (40) | No | The city/town/community in which the patient resides. |
| 21 | State | Char (2) | No | Refer to State Code reference table |

| | | | | |
|--|-------------------------|--------------|----|--|
| 22 | Zip Code | Char (5) | No | |
| 23 | Zip4 | Char (4) | No | |
| 24 | Telephone Number | Char (10) | No | Full telephone number (including area code) |
| <i>Residential and Demographic Information</i> | | | | |
| 25 | Mother's First Name | Varchar (25) | No | |
| 26 | Mother's Last Name | Varchar (25) | No | |
| 27 | Father's First Name | Varchar (25) | No | |
| 28 | Father's Last Name | Varchar (25) | No | |
| 29 | Guardian's First Name | Varchar (25) | No | |
| 30 | Guardian's Last Name | Varchar (25) | No | |
| 31 | Hispanic | Char (1) | No | Must be Y (yes), N (no), or U (unknown). |
| 32 | Race Code | Number (2) | No | Refer to Race Code reference table. |
| 33 | Language Spoken at Home | Char (2) | No | Refer to Language code reference table. |
| 34 | Birth Country Code | Char (3) | No | The country code where the patient was born. Refer to the Country reference table. |
| 35 | Birth State Code | Char (2) | No | The state code where the patient was born. Refer to the State reference table. |
| 36 | VFC Eligibility | Number (1) | No | Refer to the VFC Eligibility reference table. |

Immunization Event Record

| FIELD NUMBER | DATA ELEMENT | DATA TYPE | REQUIRED? | DESCRIPTION |
|-------------------------------|------------------------|--------------|--|--|
| <i>Record Header</i> | | | | |
| 1 | Sequence Number | Number (7) | Yes | A sequence number for the record within the file. |
| 2 | Record Type | Char (1) | Yes. Must be M . | Immunization Record. |
| 3 | Reserved | Char (1) | Yes. Must be S . | Reserved for future use. |
| <i>Identification Numbers</i> | | | | |
| 4 | Patient Number | Varchar (15) | No | Patient identification number (e.g., medical record number, chart number) the sending facility uses to identify the patient. Used as a key value for patient search. If provided, the primary key values (first and last name, gender, DOB) must also be provided for corroboration. |
| 5 | Medicaid Number | Char (8) | No | Used as a key value for patient search. If provided, the primary key values (first and last name, gender, DOB) must also be provided for corroboration. |
| <i>Primary Key Fields</i> | | | | |
| 6 | Date of Birth | Date | Yes. Please use MM/DD/YYYY date format | Patient's date of birth. Primary search key. |
| 7 | Gender | Char (1) | Yes | Patient's gender. Must be M -male or F -female. Primary search key. |

| | | | | |
|-----------------------------|---------------------------------------|-----------------|---------------------------------------|--|
| 8 | First Name | Varchar (25) | Yes | Patient's first name. Primary search key. |
| 9 | Last Name | Varchar (25) | Yes | Patient's last name. Primary search key. |
| <i>Auxiliary Key Fields</i> | | | | |
| 10 | Multiple Birth Indicator | Char(1) | No | Was patient part of a multiple birth event (e.g., twins). Y if true, N otherwise. |
| 11 | Mother's Maiden Name | Varchar (25) | No | |
| 12 | Mother's Date of Birth | Date | No. Please use MM/DD/YYYY date format | |
| 13 | Patient's Middle Name | Varchar (25) | No | |
| 14 | Patient's Alternate First Name | Varchar (25) | No | Patient's other first name (e.g., Nickname) |
| 15 | Patient's Alternate Last Name | Varchar (25) | No | Patient's other last name (e.g., Stepparent's name) |
| 16 | Birth Facility Code | Varchar (5) | No | The facility within NYC where the patient was born. Refer to the Birth Facility reference table. |
| 17 | House Number | Varchar (10) | No | |
| 18 | Street Name | Varchar (40) | No | |
| 19 | Apt. Number | Varchar(5) | No | |
| 20 | City | Varchar (40) | No | The city/town/community in which the patient resides. |
| 21 | State | Char(2) | No | Refer to State Code reference table |
| 22 | Zip Code | Char(5) | No | |

| | | | | |
|--|---------------------------------|--------------|--|--|
| 23 | Zip4 | Char(4) | No | |
| 24 | Telephone Number | Char(10) | No | Full telephone number (including area code) |
| <i>Mandatory Reporting Information</i> | | | | |
| 25 | Vaccination Date | Date | Yes. Please use MM/DD/YYYY date format | Date vaccination was administered. |
| 26 | Vaccine Code | Char (4) | Yes | Refer to Vaccine reference table. |
| 27 | Immunization Information Source | Char (1) | Yes | The original source of information about the event. Refer to Immunization Information Source reference table for additional information. |
| 28 | Provider First Name | Varchar (25) | Yes | |
| 29 | Provider Last Name | Varchar (25) | Yes | |
| 30 | Provider License Number | Char (6) | Yes | Provider's six-character license number. |
| <i>Additional Information</i> | | | | |
| 31 | Dose Number | Number (2) | No | Dose number is used for reference purposes only. |
| 32 | Vaccine Lot Number | Varchar (16) | No | Lot number of vaccine. |
| 33 | Manufacturer Code | Varchar (6) | No | Refer to Manufacturer reference table. |
| 34 | VFC Eligibility | Number (1) | No | Refer to VFC Eligibility reference table. |
| 35 | Health Plan Code | Varchar (2) | No | Refer to Health Plan reference table. |

Trailer Record

| FIELD NUMBER | DATA ELEMENT | DATA TYPE | REQUIRED? | DESCRIPTION |
|--------------|------------------------|------------|----------------|---|
| 1 | Sequence Number | Number (7) | Yes | Record count number. Represents total number of records in this file. |
| 2 | Record Type | Char (1) | Yes. Must be U | UPIF Trailer Record |

Questions and Answers

What is UPIF?

UPIF stands for the Universal Provider Interface Format. The purpose of the UPIF is to permit providers with existing medical record systems to submit information to the Citywide Immunization Registry in a batch file format.

What is the CIR?

The Citywide Immunization Registry is a computer system operated by the Bureau of Immunization of the NYC Department of Health and Mental Hygiene. The purpose of the CIR is to track immunizations received by individuals in NYC. The information will be used to identify under-immunized individuals, as well as to serve as a source of data for authorized immunization providers and agencies concerned with health.

Why should I tell the CIR about my patients?

The New York City Health Code, effective August 18, 2005, mandates reporting of immunizations administered to all people age eighteen years and younger, and allows for voluntary reporting of immunizations administered to people age nineteen years and older, with consent. Health care providers authorized to administer immunizations report the immunizations to the CIR.

Do I have to use the UPIF to inform the CIR about my patients?

No. The CIR allows providers to use a variety of different mechanisms to report immunizations.

- If you deliver all of your immunizations under the auspices of a clinic or hospital, you should determine whether the immunizations are being reported to the CIR for you through the facility's own information system.
- If you have a computer with Internet access available, you may report immunizations to the CIR through the Online Registry. You may also look up, and print out, the immunization records of your patients through the Online Registry and see recommendations of immunizations due.
- If you don't have a computer system available, immunizations can be reported to the CIR on paper forms.

Do I have to tell you about all my patients?

You are required to report all immunizations administered to all individuals age 18 years and under. You may choose to report immunizations administered to individuals age 19 years and over, with the patient's consent documented in the medical record.

Do I have to have a Sender Record in each file?

Yes. The Sender Record is necessary for the CIR to determine the source of patient immunization information.

Do I have to send a Patient Record for each patient?

No. You can fulfill the requirements of the mandate just by sending immunization records.

Do I have to send an Immunization Record for each immunization I deliver?

You must send an Immunization Record for each immunization you provide to an individual who is under nineteen years of age.

Do I have to send a Trailer Record?

Yes. The Trailer Record is used to indicate that there are no more records to be processed. The Trailer Record is also used for consistency checking.

Do I have to send information for all of the fields that are required?

Yes.

Does the order in which I send you the records matter?

Yes. The Sender Record must be the first record in the file, and the Trailer Record must be the last record in the file. The Patient and Immunization Records may be sent in any order, and even intermixed.

How frequently do I need to send information to the CIR?

The NYC Department of Health and Mental Hygiene mandates that the CIR be informed within 14 days for all patient immunizations. We strongly encourage you to send information more frequently, as it will help to keep the CIR current.

Do I need to send the CIR historical information about my patients?

If your medical record system contains immunization histories for individuals under nineteen years of age, then you should report this information to the CIR. If your medical record system contains immunization histories for patients nineteen years of age and over, then you must get consent from the patient before reporting this information to the CIR.

Do I need to report VFC eligibility and Child Health Plus B status?

For providers who participate in the Vaccines for Children Program (VFC), The VFC Eligibility status (field 34 in the Immunization Event Record) must be reported. Please refer to page 41 for a list of VFC Eligibility and Child Health Plus B status codes.

When would the Immunization Source be anyone other than myself?

If you did not give the immunizations yourself and are reporting the patient's immunization history, then the Immunization Source field should indicate where the information about the event came from. The fields should be used as follows:

| Code | Description |
|------|--|
| V | Vaccinator. Used if the physician identified in the immunization event was responsible for giving the immunization. The Provider First Name, Provider Last Name, and Provider License Number fields refer to the physician who gave the immunization and is reporting it. |
| D | Document. Used if the information in the immunization event was taken from the yellow card or Lifetime Health |

Record.

The Provider First Name, Provider Last Name, and Provider License Number fields refer to the reporting physician, and not the physician who gave the immunization.

- O Other Provider. Used if the information about the event came from another provider.

The Provider First Name, Provider Last Name and Provider License number fields refer to the reporting physician, and not the physician who gave the immunization.

- S System. Used if the information came from another immunization registry system.
It is expected that this code will generally be used for transfer of information between registries, and not by reporting providers.

If you have additional questions about this, contact the CIR.

What will happen if I send duplicate records to the CIR?

Duplicate records will be processed, and discarded if no new information is found.

We realize that it will be difficult for some medical record systems to keep track of whether they have already sent information about a particular patient to the CIR. To address these problems, the following is suggested:

- When you are ready to begin sending information to the CIR, send Patient and Immunization records for all current patients who are less than nineteen years of age.
- Send a Patient record to the CIR for each new patient who is added to the CIR during a reporting period.
- Send an Immunization record to the CIR for each immunization that you deliver during a reporting period.
- To ensure that the CIR is aware of all patient updates, send a new Patient record for each current patient in your system once every six months.

What if my medical records system does not contain all of the required UPIF information?

You should contact the Bureau of Immunization to discuss the situation. They will determine if an exception is warranted, or if you should use one of the alternate mechanisms (described above) to submit patient immunization data.

How do I get started providing information to the CIR with UPIF?

Assuming that you have already created a UPIF file, contact the CIR at (212) 676-2323 to arrange for certification testing. We will set up a time for you to submit your data, and you will

receive timely feedback on whether it conforms to the UPIF guidelines. UPIF certification can often involve several iterations as errors in the records are corrected and the file is resubmitted. Once all of the problems have been resolved, you can begin submitting information to the CIR.

How will I find out if there are problems with the data I have submitted?

Immunization providers who upload their UPIF files using WFR will be able to view and print a feedback report through WFR after the file is processed.

Immunization providers who submit their UPIF files on magnetic media will be contacted by the CIR if problems occur during processing.

Where do I send the UPIF file?

To send the file using WFR:

Please call (212) 676-2323 and ask to speak to Shirley Huie.

To mail the magnetic media to the CIR:

By Mail:

Citywide Immunization Registry
NYC DOHMH
125 Worth Street, CN-64R
New York, NY 10013
Attn: Fritzner Paul

By Courier Service:

Citywide Immunization Registry
NYC DOHMH
2 Lafayette Street, 19th Floor
New York, NY 10007
Attn: Fritzner Paul

Who should I contact for additional information?

Citywide Immunization Registry
NYC Department of Health and Mental Hygiene
125 Worth Street, CN-64R
New York, NY 10013

Voice: (212) 676-2323
Fax: (212) 676-2314

Examples

This section provides several fictitious examples of how the record format is populated.

The | symbol is used in these examples as a field separator. The ↵ symbol is used to indicate where a carriage return (normally an invisible character) is placed. The record length in several of the records exceeds the line length of this document, so the records have been split across multiple lines.

Sender Record

The sender record is expected as the first element in a UPIF file, so the record number should always be 1. The last field, which contains contact information, is for human use should a problem occur during file processing.

```
1|S|N|1020021|Bronx General|07/19/1996|C.P. Wong (212)555-1212↵
```

Patient Information Record

The first example offers a fairly complete patient record. Patient information records will seldom be completely populated, since some elements may not apply or may not be tracked by the sending facility.

```
5|P|S|||02/01/1996|M|Harry|Riff|||L|Lee||13103|45|Broadway|15  
C|New  
York|NY|10006||2128096600|Judy|Riff|Ralph|Riff||U|2|01|USA|NY  
|2↵
```

The second example of a patient information record demonstrates how a facility's patient identification number can be provided to the CIR. When the number is provided for the first time by a facility (along with all known identification elements), it will be recorded within the CIR. Subsequent uses of the patient identification number (such as that shown in the immunization event record section below), can be provided with a minimum of identification information and still have a very high probability of getting a unique match with a patient record.

```
9|P|S|YOU2917B||6/14/95|M|Woody|You|Y||||41609|158-  
01|Sanford  
Avenue|2B|Flushing|NY|11358||7184451111||||N|4|03|NY|1↵
```

Note that the null fields in each record are represented through adjacent field separators with no intervening text of blank spaces.

Immunization Event Record

This immunization event record uses the same patient identification block as the first patient information record shown above.

```
13|M|S||02/01/1996|M|Harry|Riff||||L|Lee|13103|45|Broadway|1  
5C|New  
York|NY|10006||2128096600|04/30/1996|01|V|Connie|Cristantiello  
|000084|1||5|OX
```

This second immunization record example demonstrates how the use of the patient identification number field reduces the amount of information that needs to be transmitted.

```
15|M|S|YOU2917B||6/14/95|M|Woody|You|||||||6/14/1996|  
03|V|Ashrafuz|Zaman|023684|1|CON|3|HF
```

Trailer Record

The trailer record is straightforward and requires little explanation. The record number field is checked against the total number of records read from the file in an attempt to determine if a transmission error occurred.

```
21|U
```

*An example of a complete UPIF document can be found on page 43.

Tables

| | |
|--------------------------------------|----|
| Birth Facility..... | 27 |
| Borough..... | 29 |
| Country..... | 29 |
| County..... | 35 |
| Health Plan..... | 35 |
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| Language..... | 37 |
| Manufacturer..... | 37 |
| Race..... | 39 |
| State..... | 39 |
| Vaccine..... | 40 |
| VFC Eligibility..... | 46 |

Birth Facility

| <u>Code</u> | <u>Name</u> |
|-------------|---|
| 11215 | ALLEN PAVILION |
| 42601 | ASTORIA GENERAL HOSPITAL* |
| 31350 | BAPTIST HOSPITAL* |
| 51719 | BAYLEY SETON HOSPITAL* |
| 11102 | BEEKMAN DOWNTOWN HOSPITAL / NY DOWNTOWN |
| 13103 | BELLEVUE HOSPITAL |
| 11107 | BETH ISRAEL HOSPITAL |
| 42604 | BOULEVARD HOSPITAL* |
| 21427 | BRONX LEBANON |
| 23463 | BRONX MUNICIPAL HOSPITAL / JACOBI |
| 24403 | BRONX STATE HOSPITAL* |
| 31507 | BROOKDALE HOSPITAL |
| 30005 | BROOKLYN BIRTHING CENTER |
| 31510 | BROOKLYN HOSPITAL |
| 34516 | BROOKLYN STATE HOSPITAL* |
| 31520 | CALEDONIAN HOSPITAL* |
| 17126 | CARDINAL COOKE HEALTH CARE CNTR* |
| 43634 | CITY HOSPITAL AT ELMHURST |
| 11191 | COLUMBIA PRESBYTERIAN HOSPITAL |
| 11116 | COLUMBUS HOSPITAL* |
| 31545 | COMMUNITY HOSPITAL* |
| 33522 | CONEY ISLAND HOSPITAL |
| 44607 | CREEDMOOR STATE HOSPITAL* |
| 33524 | CUMBERLAND HOSPITAL* |
| 42660 | DEEPDALE HOSPITAL* |
| 11121 | DOCTORS HOSPITAL - MANHATTAN* |
| 52709 | DOCTORS HOSPITAL - STATEN ISLAND* |
| 32349 | FLATBUSH HOSPITAL |
| 41609 | FLUSHING HOSPITAL* |
| 41618 | FLUSHING HOSPITAL (NORTH DIV)* |
| 28000 | FOUNDLING - BRONX* |
| 38000 | FOUNDLING - BROOKLYN* |
| 18000 | FOUNDLING - MANHATTAN* |
| 48000 | FOUNDLING - QUEENS* |
| 58000 | FOUNDLING - STATEN ISLAND* |
| 33529 | GREENPOINT HOSPITAL* |
| 13134 | HARLEM HOSPITAL |
| 26000 | HOME - BRONX |
| 36000 | HOME - BROOKLYN |
| 16000 | HOME - MANHATTAN |
| 46000 | HOME - QUEENS |
| 56000 | HOME - STATEN ISLAND |
| 31540 | INTERFAITH HOSPITAL |
| 41612 | JAMAICA HOSPITAL |

Birth Facility continued

| <u>Code</u> | <u>Name</u> |
|-------------|-------------|
|-------------|-------------|

| | |
|-------|---|
| 11154 | JEWISH MEMORIAL HOSPITAL* |
| 42656 | KEW GARDENS GENERAL HOSPITAL* |
| 33538 | KINGS COUNTY HOSPITAL |
| 32503 | KINGS HIGHWAY HOSPITAL* |
| 41619 | LAGUARDIA HOSPITAL / N. SHORE UNIV HOSP |
| 11157 | LE ROY HOSPITAL* |
| 11156 | LENOX HILL HOSPITAL |
| 23428 | LINCOLN HOSPITAL |
| 31542 | LONG ISLAND COLLEGE HOSPITAL |
| 41626 | LONG ISLAND JEWISH HOSPITAL |
| 31550 | LUTHERAN MED CNTR (SIS ELIZ DIV) |
| 31535 | MAIMONIDES HOSPITAL |
| 14163 | MANHATTAN STATE HOSPITAL* |
| 41615 | MARY IMMACULATE HOSPITAL* |
| 10002 | MATERNITY CENTER ASSOCIATION* |
| 31547 | METHODIST HOSPITAL |
| 13165 | METROPOLITAN HOSPITAL |
| 21483 | MISERICORDIA HOSP. / OUR LADY OF MERCY |
| 21429 | MONTEFIORE HOSPITAL* |
| 11171 | MOUNT SINAI HOSPITAL |
| 13231 | NEW GOUVERNIER HOSPITAL* |
| 23475 | NORTH BRONX CENTER HOSPITAL |
| 11147 | NORTH GENERAL* |
| 41647 | NY HOSPITAL MED CNTR OF QUEENS |
| 11178 | NYPH/WELL CORNELL MED CENTER |
| 41658 | OSTEOPATHIC HOSPITAL |
| 27000 | OTHER PLACE - BRONX* |
| 37000 | OTHER PLACE - BROOKLYN* |
| 17000 | OTHER PLACE - MANHATTAN* |
| 47000 | OTHER PLACE - QUEENS* |
| 57000 | OTHER PLACE - STATEN ISLAND* |
| 22402 | PARKCHESTER GENERAL HOSPITAL* |
| 42659 | PARKWAY HOSPITAL* |
| 22459 | PELHAM BAY GENERAL HOSPITAL* |
| 41625 | PENINSULAR HOSPITAL* |
| 42635 | PHYSICANS HOSPITAL* |
| 22432 | PROSPECT HOSPITAL* |
| 43620 | QUEENS GENERAL HOSPITAL |
| 11196 | ROOSEVELT HOSPITAL |
| 51714 | SI UNIV HOSPITAL, NORTH |
| 51707 | SI UNIV HOSPITAL, SOUTH* |
| 21422 | ST. BARNABAS |
| 11199 | ST. CLARES HOSPITAL* |
| 41610 | ST. JOHNS EPIS (SOUTH SHORE DIV) |

Birth Facility continued

| <u>Code</u> | <u>Name</u> |
|-------------|----------------------|
| 41629 | ST. JOHNS HOSPITAL |
| 11203 | ST. LUKE'S HOSPITAL* |

| | |
|-------|------------------------------------|
| 11223 | ST. LUKE'S/WOMANS HOSPITAL |
| 31559 | ST. MARYS HOSPITAL |
| 11207 | ST. VINCENTS - MANHATTAN |
| 51711 | ST. VINCENTS - STATEN ISLAND |
| 42675 | TERRACE HGTS HOSPITAL* |
| 11189 | TISCH HOSPITAL / RUSK / UNIV. HOSP |
| 55716 | U.S. PUBLIC HEALTH* |
| 21439 | UNION HOSPITAL* |
| 31514 | UNIV HOSPITAL OF BROOKLYN |
| 90000 | UNKNOWN |
| 29000 | UNKNOWN - BRONX* |
| 39000 | UNKNOWN - BROOKLYN* |
| 19000 | UNKNOWN - MANHATTAN* |
| 49000 | UNKNOWN - QUEENS* |
| 59000 | UNKNOWN - STATEN ISLAND* |
| 31569 | VICTORY MEMORIAL HOSPITAL |
| 21413 | WEILER HOSPITAL |
| 22443 | WESTCHESTER SQUARE HOSPITAL* |
| 54722 | WILLOW BROOK SCHOOL* |
| 20003 | WOMEN'S HEALTH & BIRTHING CENTER |
| 33539 | WOODHULL CARE CENTER |
| 31573 | WYCKOFF HEIGHTS HOSPITAL |

Borough

| <u>Code</u> | <u>Name</u> |
|-------------|------------------------------|
| 3 | BROOKLYN |
| 1 | MANHATTAN |
| 6 | NEW YORK STATE (OUTSIDE NYC) |
| 8 | OUTSIDE NEW YORK STATE |
| 4 | QUEENS |
| 5 | STATEN ISLAND |
| 2 | THE BRONX |
| 9 | UNKNOWN OR NOT STATED |

Country

| <u>Code</u> | <u>Name</u> |
|-------------|-------------|
| AFG | AFGHANISTAN |
| ALB | ALBANIA |
| ALG | ALGERIA |
| AND | ANDORRA |
| ANG | ANGOLA |

| | |
|-----|----------------------|
| ANT | ANTIGUA & BARBUDA |
| ARG | ARGENTINA |
| ARM | ARMENIA |
| ARU | ARUBA |
| AUL | AUSTRALIA |
| AUS | AUSTRIA |
| AZE | AZERBAIJAN |
| AZO | AZORES ISLANDS |
| BAH | BAHAMAS |
| BHR | BAHRAIN |
| BAL | BALEARIC ISLANDS |
| BAN | BANGLADESH |
| BAR | BARBADOS |
| BAS | BASQUE |
| BLA | BELARUS |
| BEL | BELGIUM |
| BEZ | BELIZE |
| BEN | BENIN |
| BER | BERBER |
| BEM | BERMUDA |
| BHU | BHUTAN |
| BOL | BOLIVIA |
| BON | BONAIRE |
| BOS | BOSNIA (HERCEGOVINA) |
| BOT | BOTSWANA |
| BRA | BRAZIL |
| BRE | BRETON |
| BRU | BRUNEI |
| BUL | BULGARIA |
| BUK | BURKINA FASO |
| BUR | BURMA |
| BUI | BURUNDI |
| CAM | CAMBODIA |
| CAO | CAMEROON |
| CAN | CANADA |
| CAZ | CANAL ZONE |
| CAY | CANARY ISLANDS |
| CAP | CAPE VERDES ISLANDS |

Country continued

| <u>Code</u> | <u>Name</u> |
|-------------|--------------------------|
| CAR | CAROLINA ISLANDS |
| CAI | CAYMON ISLANDS |
| CEN | CENTRAL AFRICAN REPUBLIC |
| CEY | CEYLON |
| CHA | CHAD |
| CHL | CHILE |
| CHI | CHINA |
| COL | COLOMBIA |

| | |
|-----|-----------------------------|
| COM | COMORO ISLANDS |
| CON | CONGO |
| COS | COSTA RICA |
| CRO | CROATIA |
| CUB | CUBA |
| CUR | CURACAO |
| CYP | CYPRUS |
| CZE | CZECH REPUBLIC |
| DEN | DENMARK |
| DJI | DJIBOUTI |
| DOC | DOMINICA |
| DOM | DOMINICAN REPUBLIC |
| EAS | EAST INDIES (NOT SPECIFIED) |
| ECU | ECUADOR |
| EGY | EGYPT |
| ELS | EL SALVADOR |
| EQU | EQUATORIAL GUINEA |
| EST | ESTONIA |
| ETH | ETHIOPIA |
| FAL | FALKLAND ISLANDS |
| FIJ | FIJI |
| FIN | FINLAND |
| FRA | FRANCE |
| FRE | FRENCH GUIANA |
| GAB | GABON |
| GAL | GALAPAGOS ISLANDS |
| GAM | GAMBIA |
| GEO | GEORGIA |
| GER | GERMANY |
| GHA | GHANA |
| GIB | GIBRALTAR |
| GRE | GREECE |
| GRL | GREENLAND |
| GRD | GRENADA |
| GUP | GUADELOUPE |
| GUM | GUAM |

Country continued

| <u>Code</u> | <u>Name</u> |
|-------------|---------------|
| GUA | GUATEMALA |
| GUI | GUINEA |
| GUB | GUINEA BISSAU |
| GUY | GUYANA |
| HAI | HAITI |
| HON | HONDURAS |
| HOK | HONG KONG |
| HUN | HUNGARY |
| IBE | IBERIA |
| ICE | ICELAND |

| | |
|-----|--------------------|
| IND | INDIA |
| INO | INDONESIA |
| IRN | IRAN |
| IRQ | IRAQ |
| IRE | IRELAND |
| ISR | ISRAEL |
| ITA | ITALY |
| IVO | IVORY COAST |
| JAM | JAMAICA |
| JAP | JAPAN |
| JOR | JORDAN |
| KAS | KASHMIR |
| KAZ | KAZAKHSTAN |
| KEN | KENYA KIR KIRIBATI |
| KOR | KOREA |
| KUW | KUWAIT |
| KYR | KYRGYZSTAN |
| LAO | LAOS |
| LAT | LATVIA |
| LEB | LEBANON |
| LES | LESOTHO |
| LIB | LIBERIA |
| LBY | LIBYA |
| LIE | LIECHTENSTEIN |
| LIT | LITHUANIA |
| LUX | LUXEMBOURG |
| MAC | MACAO |
| MAE | MACEDONIA |
| MAD | MADAGASCAR |
| MAW | MALAWI |
| MAY | MALAYSIA |
| MAV | MALDIVES |
| MAL | MALI |
| MAT | MALTA |

Country continued

| <u>Code</u> | <u>Name</u> |
|-------------|------------------|
| MAN | MARIANA ISLANDS |
| MAS | MARSHALL ISLANDS |
| MAQ | MARTINIQUE |
| MAU | MAURITANIA |
| MAR | MAURITIUS |
| MEL | MELNESIA |
| MEX | MEXICO |
| MIC | MICRONESIA |
| MID | MIDWAY ISLAND |
| MOD | MOLDOVA |
| MOC | MONACO |
| MON | MONGOLIA |

| | |
|-----|-------------------------------------|
| MOT | MONTSERRAT |
| MOR | MOROCCO |
| MOZ | MOZAMBIQUE |
| MYA | MYANMAR (FORMERLY BURMA) |
| NAM | NAMIBIA (SOUTH WEST AFRICA) |
| NAU | NAURU |
| NEP | NEPAL |
| NET | NETHERLANDS |
| NEV | NEVIS & ST. CHRISTOPHER (ST. KITTS) |
| NWC | NEW CALEDONIA |
| NWG | NEW GUINEA |
| NWZ | NEW ZEALAND |
| NIC | NICARAGUA |
| NIG | NIGER |
| NGA | NIGERIA |
| NOR | NORWAY |
| OKI | OKINAWA |
| OMA | OMAN |
| XAF | OTHER AFRICAN |
| XAS | OTHER ASIAN |
| XCA | OTHER CENT. AMERICAN (CARIBBEAN) |
| XEU | OTHER EUROPEAN |
| XNA | OTHER NORTH AMERICAN |
| XPI | OTHER PACIFIC ISLANDER |
| XSA | OTHER SOUTH AMERICAN |
| XSP | OTHER SPANISH |
| PAK | PAKISTAN |
| PAL | PALESTINE |
| PAN | PANAMA |
| PAP | PAPUA NEW GUINEA |
| PAR | PARAGUAY |
| PER | PERU |

Country continued

| <u>Code</u> | <u>Name</u> |
|-------------|---------------------|
| PHI | PHILIPPINES |
| POL | POLAND |
| POR | PORTUGAL |
| PUE | PUERTO RICO |
| QAT | QATAR |
| RHO | RHODESIA |
| RUM | ROMANIA |
| RUS | RUSSIA |
| RWA | RWANDA |
| SMA | SAMOA (AMERICAN) |
| SMW | SAMOA (WESTERN) |
| SAN | SAN MARINO |
| SAO | SAO TOME & PRINCIPE |
| SAU | SAUDI ARABIA |

| | |
|-----|--------------------------|
| SCA | SCANDINAVIA |
| SEN | SENEGAL |
| SER | SERBIA |
| SEY | SEYCHELLES |
| SIE | SIERRA LEONE |
| SIN | SINGAPORE |
| SLV | SLOVAK REPUBLIC |
| SOL | SOLOMON ISLANDS |
| SLO | SOLVENIA |
| SOM | SOMALL REPUBLIC |
| SOU | SOUTH AFRICA |
| SPA | SPAIN |
| SRI | SRI LANKA |
| STB | ST. BARTHOLEMY |
| STL | ST. LUCIA |
| STM | ST. MAARTIN (DUTCH) |
| STN | ST. MAARTIN (FRENCH) |
| STV | ST. VINCENT & GRENADINES |
| STA | STATELESS PERSON |
| SUD | SUDAN |
| SUR | SURINAM |
| SWA | SWAZILAND |
| SWE | SWEDEN |
| SWI | SWITZERLAND |
| SYR | SYRIA |
| TAH | TAHITI |
| TAI | TAIWAN |
| TAJ | TAJKISTAN |
| TAN | TANZANIA |
| TAT | TATAR |

Country continued

| <u>Code</u> | <u>Name</u> |
|-------------|----------------------|
| THA | THAILAND |
| TIB | TIBET |
| TOG | TOGO |
| TON | TONGO |
| TOR | TRTOLA |
| TRI | TRINIDAD & TOBAGO |
| TRU | TRUK ISLANDS |
| TUN | TUNISIA |
| TUR | TURKEY |
| TRK | TURKMENISTAN |
| TUK | TURKS & CALCOS |
| UGA | UGANDA |
| UKR | UKRAINE |
| UAE | UNITED ARAB EMIRATES |
| UKG | UNITED KINGDOM |

| | |
|-----|-----------------------------|
| USA | UNITED STATES |
| XXX | UNKNOWN OR NOT STATED |
| URU | URUGUAY |
| USR | USSR |
| UZB | UZBEKISTAN |
| VAN | VANUATU |
| VAT | VATICAN CITY |
| VEN | VENEZUELA |
| VIE | VIETNAM |
| VIR | VIRGIN ISLANDS |
| WAL | WALLOON |
| WES | WEST INDIES (NOT SPECIFIED) |
| YAP | YAP ISLANDS |
| YEM | YEMEN (ARAB REPUBLIC) |
| YMA | YEMEN (PEOPLES DEM. REP) |
| YUG | YUGOSLAVIA |
| ZAI | ZAIRE |
| ZAM | ZAMBIA |
| ZIM | ZIMBABWE |

County

| <u>Code</u> | <u>Name</u> |
|-------------|------------------------------|
| 02 | BRONX |
| 03 | KINGS |
| 01 | NEW YORK |
| 06 | NEW YORK STATE (OUTSIDE NYC) |
| 08 | OUTSIDE NEW YORK STATE |
| 04 | QUEENS |
| 05 | RICHMOND |
| 99 | UNKNOWN |

Health Plan

| <u>Code</u> | <u>Name</u> |
|-------------|---|
| AB | ABC HEALTH PLAN |
| AE | AETNA U.S. HEALTHCARE |
| BH | BETTER HEALTH PLAN |
| CP | CAREPLUS |
| CC | CENTERCARE |
| CI | CIGNA HEALTH CARE OF NEW YORK |
| CH | COMMUNITY CHOICE HEALTH PLAN |
| CW | COMMUNITY CHOICE HEALTH PLAN OF WESTCHESTER |
| CO | COMMUNITY PREMIER PLUS |
| BC | EMPIRE BLUE CROSS BLUE SHIELD |
| FI | FIDELIS |
| GE | GENESIS |
| GH | GHI/PARTNERS IN HEALTH |
| HF | HEALTHFIRST |

| | |
|----|--|
| HE | HEALTHPLUS |
| HP | HIP |
| MA | MAGNAHEALTH |
| MP | METROPLUS |
| MH | MHSNY (MANAGED HEALTH SYSTEMS OF NEW YORK) |
| NH | NEIGHBORHOOD HEALTH PROVIDERS |
| NY | NEW YORK HOSPITAL |
| NL | NYL CARE HEALTH PLANS OF NEW YORK |
| XX | OTHER PLAN |
| OX | OXFORD |
| PA | PARTNERS IN HEALTH |
| PH | PHS (PHYSICIANS HEALTH SERVICES OF NEW YORK) |
| PR | PRUDENTIAL HEALTH CARE PLAN OF NEW YORK |
| QE | QUESTMORE (EMPIRE) |
| BX | THE BRONX HEALTH PLAN |
| UH | UNITED HEALTHCARE OF NEW YORK |
| UP | UNIVERSAL HEALTH PLAN |
| US | US HEALTH CARE |
| VY | VYTRA HEALTHCARE |
| WE | WELLCARE |
| WT | WESTCHESTER PHSP |
| 99 | UNKNOWN |
| -1 | NO HEALTH PLAN |

Immunization Information Source

| <u>Code</u> | <u>Name</u> |
|-------------|----------------|
| D | DOCUMENT |
| O | OTHER PROVIDER |
| S | OTHER SYSTEM |
| V | VACCINATOR |

Note: See pages 21-22.

Language

| <u>Code</u> | <u>Name</u> |
|-------------|----------------|
| 07 | ARABIC |
| 03 | CHINESE |
| 01 | ENGLISH |
| 06 | HAITIAN-CREOLE |
| 04 | KOREAN |
| 09 | OTHER |
| 05 | RUSSIAN |
| 02 | SPANISH |

Manufacturer

| <u>Code</u> | <u>Name</u> |
|-------------|---|
| AB | ABBOTT |
| AD | ADAMS |
| ALP | ALPHA THERAPEUTIC CORPORATION |
| AR | ARMOUR [Inactive –use AVB] |
| AVB | AVENTIS BEHRING, L.L.C [Inactive –use ZLB] |
| AVI | AVIRON |
| BA | BAXTER [Inactive –use BAH] |
| BAH | BAXTER HEALTHCARE CORPORATION |
| BAY | BAYER CORPORATION |
| BP | BERNA [Inactive –use BPC] |
| BPC | BERNA PRODUCTS CORPORATION |
| CEN | CENTEON L.L.C. [Inactive –use AVB] |
| CHI | CHIRON CORPORATION [Inactive- use NOV] |
| CMP | CELLTECH MEDEVA PHARMACEUTICALS [Inactive –use NOV] |
| CNJ | CANGENE CORPORATION |
| CON | CONNAUGHT (Inactive-use PMC) |
| DVC | DYNPORT VACCINE COMPANY |
| EVN | EVANS MEDICAL LIMITED (Inactive-use CHI) |
| GEO | GEOVAX LABS, INC. |
| GRE | GREER LABORATORIES, INC. |

Manufacturer continued

| <u>Code</u> | <u>Name</u> |
|-------------|---|
| IAG | IMMUNO INTERNATIONAL AG [Inactive—use BAH] |
| IM | MERIEUX [inactive –Use PMC] |
| IUS | IMMUNO -US , INC. |
| JPN | THE RESEARCH FOUNDATION FOR MICROBIAL DISEASES /OSAKA UNIV (BIKEN) |
| KGC | KOREA GREEN CROSS CORPORATION |
| LED | LEDERLE [Inactive –Use WAL] |
| MA | MASSACHUSETTS PH [Inactive –Use MBL] |
| MBL | MASSACHUSETTS BIOLOGIC LABORATORIES |
| MED | MEDIMMUNE, INC. |
| MIL | MILES [Inactive—use BAY] |
| MIP | BIOPORT CORPORATION |
| MSD | MERCK |
| NAB | NABI |
| NAV | NORTH AMERICAN VACCINE, INC. [Inactive--use BAH] |
| NOV | NOVARTIS PHARMACEUTICAL CORPORATION |
| NVX | NOVAVAX, INC. |
| NYB | NEW YORK BLOOD CENTER |
| ORT | ORTO-CLINICAL DIAGNOSTICS |
| OTC | ORGANON TEKNIKA CORPORATION |
| OTH | OTHER MANUFACTURER |
| PD | PARKEDALE PHARMACEUTICALS |
| PMC | SANOFI PASTEUR |
| PRX | PRAXIS BIOLOGICS [Inactive –Use WAL] |
| PWJ | POWDERJECT PHARMACEUTICALS [Inactive—useNOV] |
| SCL | SCLAVO |
| SI | SWISS SERUM AND VACCINE INST. [Inactive –Use BPC] |
| SKB | GLAXOSMITHKLINE |
| SOL | SOLVAY PHARMACEUTICALS |
| TAL | TALECRIS BIOTHERAPEUTICS |
| USA | UNITED STATES ARMY MEDICAL RESEARCH AND MATERIAL COMMAND |
| UNK | UNKNOWN |
| VXG | VAXGENE |
| WA | WYETH-AYERST [Inactive –Use WAL] |
| WAL | WYETH-AYERST |
| ZLB | ZLB BEHRING |

For an updated list, please go to: <http://www.cdc.gov/nip/registry/h17/h17-mvx.htm>

Race

| <u>Code</u> | <u>Name</u> |
|-------------|--------------------------|
| 4 | ASIAN |
| 1 | BLACK |
| 3 | NATIVE AM/ALASKAN ESKIMO |
| 9 | OTHER OR UNKNOWN |
| 5 | PACIFIC ISLANDER |
| 2 | WHITE |

State

| <u>Code</u> | <u>Name</u> |
|-------------|----------------------|
| AL | ALABAMA |
| AK | ALASKA |
| AZ | ARIZONA |
| AR | ARKANSAS |
| CA | CALIFORNIA |
| CO | COLORADO |
| CT | CONNECTICUT |
| DE | DELAWARE |
| DC | DISTRICT OF COLUMBIA |
| FL | FLORIDA |
| FN | FOREIGN |
| GA | GEORGIA |
| HI | HAWAII |
| ID | IDAHO |
| IL | ILLINOIS |
| IN | INDIANA |
| IA | IOWA |
| KS | KANSAS |
| KY | KENTUCKY |
| LA | LOUISIANA |
| ME | MAINE |
| MD | MARYLAND |
| MA | MASSACHUSETTS |
| MI | MICHIGAN |
| MN | MINNESOTA |
| MS | MISSISSIPPI |
| MO | MISSOURI |
| MT | MONTANA |
| NE | NEBRASKA |
| NV | NEVADA |
| NH | NEW HAMPSHIRE |

State Continued

New York City Department
of Health and Mental Hygiene

Citywide Immunization Registry
UPIF Specification

Release 4.0
05/08/07

| | |
|----|---------------------------------------|
| NJ | NEW JERSEY |
| NM | NEW MEXICO |
| NY | NEW YORK |
| NC | NORTH CAROLINA |
| ND | NORTH DAKOTA |
| OK | OKLAHOMA |
| OR | OREGON |
| PA | PENNSYLVANIA |
| PR | PUERTO RICO |
| RI | RHODE ISLAND |
| SC | SOUTH CAROLINA |
| SD | SOUTH DAKOTA |
| TN | TENNESSEE |
| TX | TEXAS |
| XX | UNKNOWN, NOT STATED OR OUT OF COUNTRY |
| UT | UTAH |
| VT | VERMONT |
| VI | VIRGIN ISLANDS |
| VA | VIRGINIA |
| WA | WASHINGTON |
| WV | WEST VIRGINIA |
| WI | WISCONSIN |
| WY | WYOMING |

Vaccine

| VACCINE GROUPS | NAME | BRAND NAME | CIR CODE | CPT CODE | DESCRIPTION |
|----------------|------|------------|----------|----------|-------------|
|----------------|------|------------|----------|----------|-------------|

| VACCINE GROUPS | NAME | BRAND NAME | CIR CODE | CPT CODE | DESCRIPTION |
|------------------------|---|----------------------------|----------|----------|--|
| DTaP/DT/Td/Tdap | Diphtheria Antitoxin | | 12 | 90296 | diphtheria antitoxin |
| | DT | generic | 28 | 90702 | diphtheria and tetanus toxoids, adsorbed for pediatric use, < 7 yrs. |
| | DTaP | Tripedia®; Infanrix® | 20 | 90700 | diphtheria, tetanus toxoids and acellular pertussis vaccine (DTaP), for use in individuals younger than seven years, for intramuscular use |
| | DTaP, 5 pertussis antigens ⁵ | DAPTACEL® | 106 | 90700 | diphtheria, tetanus toxoids and acellular pertussis vaccine (DTaP), 5 pertussis antigens |
| | DTP ⁶ | Tri-Immunol® | 01 | 90701 | diphtheria, tetanus toxoids and pertussis vaccine |
| | DTaP, NOS ¹ | | 107 | | diphtheria, tetanus toxoids and acellular pertussis vaccine, NOS |
| | Td | DECAVAC® | 113 | 90714 | Tetanus, diphtheria, adsorbed, preservative-free, (Td;≥7yrs) |
| | Td | generic | 09 | 90718 | Tetanus and diphtheria toxoids (Td) adsorbed for use in individuals ≥ 7 yrs, for intramuscular use |
| | Tdap | ADACEL™ Boostrix™ | 115 | 90715 | Tetanus, diphtheria toxoids and acellular pertussis vaccine (Tdap), 11-64 yrs, for intramuscular use Tetanus, diphtheria toxoids and acellular pertussis vaccine (Tdap), 10-18 yrs, for intramuscular use |
| | TIG | Baytet® | 13 | 90389 | tetanus immune globulin |
| | Tetanus Toxoid | generic | 35 | 90703 | tetanus toxoid, for intramuscular use |
| DTaP-Hib | DTaP-Hib | TriHIBit® | 50 | 90721 | DTaP-Haemophilus influenzae type b conjugate vaccine |
| DTP-Hib | DTP-Hib ⁶ | Tetramune®; ACTHib/DTP® | 22 | 90720 | DTP-Haemophilus influenzae type b conjugate vaccine |
| DTaP-HepB-IPV | DTaP-HepB-IPV | Pediarix® | 110 | 90723 | DTaP-hepatitis B and poliovirus vaccine |

| VACCINE GROUPS | NAME | BRAND NAME | CIR CODE | CPT CODE | DESCRIPTION |
|-------------------------|--------------------------------------|----------------------------|----------|--------------------------|--|
| Hep B | HBIG | BayHepB®; Nabi-HB | 30 | 90371 | hepatitis B immune globulin |
| | Hep B | ENGERIX-B®; RECOMBIVAX HB® | 08 | 90744 | hepatitis B vaccine, pediatric or pediatric/adolescent dosage |
| | Hep B ^{2, 6} | ENGERIX-B®; RECOMBIVAX HB® | 42 | 90745 | hepatitis B vaccine, adolescent/high-risk infant dosage |
| | Hep B- adult ⁴ | ENGERIX-B®; RECOMBIVAX HB® | 43 | 90743 | hepatitis B vaccine, 11-15 years, 2 dose schedule; |
| | | | | 90746 | hepatitis B vaccine, adult >20 years, 3 dose schedule |
| | Hep B-dialysis | ENGERIX-B®; RECOMBIVAX HB® | 44 | 90747 | hepatitis B vaccine, dialysis patient dosage, 4 dose schedule |
| Hep B, NOS ¹ | | 45 | | hepatitis B vaccine, NOS | |
| Hep A | Hep A, adult | Havrix®; VAQTA® | 52 | 90632 | hepatitis A vaccine, adult dosage >=18 years, 2 dose series |
| | Hep A, ped/adol, 2 dose | Havrix®; VAQTA® | 83 | 90633 | hepatitis A vaccine, pediatric/adolescent dosage, 2 dose schedule |
| | Hep A, ped/adol, 3 dose ⁶ | Havrix®; VAQTA® | 84 | 90634 | hepatitis A vaccine, pediatric/adolescent dosage, 3 dose schedule |
| | Hep A, pediatric, NOS ¹ | | 31 | | hepatitis A vaccine, pediatric dosage, NOS |
| HepA HepB | Hep A Hep B | Twinrix® | 104 | 90636 | Hepatitis A and Hepatitis B (Hep A-HepB), adult dosage >=18 years, intramuscular |
| HepB-Hib | HepB-Hib | COMVAX® | 51 | 90748 | <i>Haemophilus influenzae</i> type b conjugate and Hepatitis B vaccine |
| Hib | Hib-HbOC | HibTiter® | 47 | 90645 | <i>Haemophilus influenzae</i> type b vaccine, HbOC conjugate |

| VACCINE GROUPS | NAME | BRAND NAME | CIR CODE | CPT CODE | DESCRIPTION |
|---------------------------------|---|------------------------------|----------|--------------------------------------|--|
| | Hib-PRP-D ⁶ | ProHIBit® | 46 | 90646 | <i>Haemophilus influenzae</i> type b vaccine, PRP-D conjugate |
| | Hib-PRP-OMP | PedvaxHIB® | 49 | 90647 | <i>Haemophilus influenzae</i> type b vaccine, PRP-OMP conjugate |
| | Hib-PRP-T | ActHIB® | 48 | 90648 | <i>Haemophilus influenzae</i> type b vaccine, PRP-T conjugate |
| | Hib, NOS ¹ | | 17 | | <i>Haemophilus influenzae</i> type b vaccine, conjugate NOS |
| Influenza | Influenza, intranasal | FluMist® | 111 | 90660 | influenza virus vaccine, live, attenuated, for intranasal use |
| | Influenza-split | Fluzone-split®; Fluvirin® | 15 | 90655 | influenza virus vaccine, split virus, preservative free , 6-35 months old, 0.25mL dosage, single-dose syringe |
| | | | | 90657 | influenza virus vaccine, split virus, for children 6-35 months of age, for intramuscular use |
| | | | | 90656 | influenza virus vaccine, split virus, preservative free, >=3 years old, 0.5mL dosage, single dose |
| 90658 | influenza virus vaccine, split virus, for use in individuals >=3 years old, for intramuscular use | | | | |
| Influenza-whole ⁶ | Fluzone-split®; Fluvirin® | 16 | 90659 | influenza virus vaccine, whole virus | |
| MMR/ Measles/Rubella | MMR | MMR II® | 03 | 90707 | measles, mumps and rubella virus vaccine (MMR), live, for subcutaneous use |
| | MMRV | ProQuad® | 94 | 90710 | measles, mumps, rubella, and varicella vaccine (MMRV), live, for subcutaneous use |
| | Measles | ATTENUVAX® | 05 | 90705 | measles virus vaccine, live, for subcutaneous use |

| VACCINE GROUPS | NAME | BRAND NAME | CIR CODE | CPT CODE | DESCRIPTION |
|---------------------|---|--------------------------------|----------|----------|--|
| | Measles and Rubella | M-R VAX II® | 04 | 90708 | measles and rubella virus vaccine, live, for subcutaneous use |
| | Mumps | MUMPSVAX® | 07 | 90704 | mumps virus vaccine, live, for subcutaneous use |
| | Rubella | Meruvax II® | 06 | 90706 | rubella virus vaccine, live, for subcutaneous use |
| | Rubella/Mumps ⁶ | | 38 | | rubella and mumps virus vaccine |
| Pneumococcal | Pneumococcal conjugate | Prevnar® (PCV7) | 100 | 90669 | pneumococcal conjugate vaccine |
| | Pneumococcal polysaccharide | Pneumovax 23® | 33 | 90732 | pneumococcal vaccine, polysaccharide, ≥2 yrs, for subcutaneous or intramuscular use |
| | Pneumococcal, NOS ¹ | | 109 | | pneumococcal vaccine, NOS |
| Polio | IPV (e-IPV) | IPOL® | 10 | 90713 | poliovirus vaccine, inactivated, for subcutaneous or intramuscular use |
| | OPV ⁶ | Orimune® | 02 | 90712 | poliovirus vaccine, live, oral |
| | Polio, NOS ¹ | | 89 | | poliovirus vaccine, NOS |
| Varicella | Varicella | Varivax® | 21 | 90716 | varicella virus vaccine |
| | VZIG | generic | 36 | 90396 | varicella zoster immune globulin |
| Other | BCG ⁶ | Glaxo strain®; Tice strain® | 19 | 90585 | Bacillus Calmette-Guerin vaccine |
| | HPV | Gardasil™ | 62 | 90649 | Human Papilloma Virus (types 6,11,16 and 18), quadrivalent vaccine, women ages 9-26, for intramuscular use |
| | IG, NOS ¹ | | 14 | | immune globulin, NOS |
| | Meningococcal A,C,Y,W-135 diphtheria conjugate | Menactra® | 114 | 90734 | meningococcal conjugate (MCV4; 11-55 yrs.) |
| | Meningococcal polysaccharide | Menomune® | 32 | 90733 | meningococcal polysaccharide vaccine (MPSV4; ≥2 yrs.) |
| | Meningococcal, NOS ¹ | | 108 | | Meningococcal, NOS |
| | Plague Vaccine ⁶ | | 23 | 90727 | plague vaccine, for intramuscular use |

| VACCINE GROUPS | NAME | BRAND NAME | CIR CODE | CPT CODE | DESCRIPTION |
|----------------|--------------------------------|---------------------|----------|----------|---|
| | Rabies-intradermal injection | Imovax Rabies I.D.® | 40 | 90676 | rabies vaccine, for intradermal injection |
| | Rabies-intramuscular injection | RabAvert® | 18 | 90675 | rabies vaccine, for intramuscular injection |
| | RIG | BayRab®; Imogam® | 34 | 90375 | rabies immune globulin |
| | Rotavirus ⁶ | Rotashield® | 74 | 90680 | rotavirus vaccine, tetravalent, live, oral |
| | Rotavirus | RotaTeq™ | 116 | 90680 | rotavirus vaccine, pentavalent, live, oral |
| | Rotavirus, NOS ¹ | | 122 | | rotavirus vaccine, NOS |
| | RSV IGIV | | 71 | 90379 | respiratory syncytial virus immune globulin, intravenous |
| | RSV-MAb | SYNAGIS® | 93 | 90378 | respiratory syncytial virus monoclonal antibody (palivizumab), IM |
| | Typhoid, live oral Ty21 | Vivitif Berna | 25 | 90690 | typhoid, live, oral |
| | Typhoid | Typhim Vi | 101 | 90691 | typhoid vaccine, Vi capsular polysaccharide (ViCPS), for intramuscular use |
| | Zoster (shingles) | Zostavax® | 121 | 90736 | herpes Zoster (shingles) vaccine, > = 60 years of age, for subcutaneous use |
| | Yellow Fever | YF-VAX | 37 | 90717 | yellow fever vaccine, live, for subcutaneous use |

¹ NOS=not otherwise specified; avoid using NOS codes except to record historical records that lack indicated specificity.

² As of August 27, 1998, Merck ceased distribution of their adolescent/high-risk infant hepatitis B vaccine dosage. Code 42 should only be used to record historical records. For current administration of hepatitis B vaccine, pediatric / adolescent dosage, use code 08.

³ Code 99 will not be used in this table to avoid confusion with code 999.

⁴ As of September 1999, a 2-dose hepatitis B schedule for adolescents (11-15 year olds) was FDA approved for Merck's Recombivax HB adult formulation. Use code 43 for both the 2-dose and the 3-dose schedules. Note the CPT codes differ.

⁵ As of May 2002, the FDA approved Aventis Pasteur's DTaP vaccine Daptacel for use in the U.S. Aventis Pasteur also manufactures the DTaP vaccine Tripedia. Daptacel contains 5 pertussis antigens, while Tripedia contains 2 pertussis antigens. To distinguish between the two Aventis Pasteur DTaP vaccines, code 106 was added to represent Daptacel. Use code 106 for Daptacel and code 20 for Tripedia and other DTaP vaccines.

⁶ These vaccines are no longer manufactured in the U.S. but may be used to report historical records of known specificity.

Note: List may not include all brand names. The use of brand names does not imply endorsement of any product by the NYC Department of Health and Mental Hygiene.

Source: CDC. For a complete and updated list: www.cdc.gov/nip/registry/st_tenn/tech/stds/cpt.htm

Appendix V

Web File Repository user's guide for transferring files to NYC CIR



4. Uploading Files:

After successful Log In, you should see a Welcome screen with your User Name, similar to this:



The user may change the password here, by clicking on the Password Button **Password** in the left-hand column, and following the directions.

To upload your files to the UPIF Files folder of the CIR:

- a. First click on the Browse button **Browse...** (near the top of the screen) and browse your directories to select your file(s). Once you have located your file(s), click on the Upload Button **Upload** to upload your file(s) into the UPIF Files folder of the CIR. The UPIF folder is the default. You may upload as many files as you need. If you have large files or many files, you may submit a zipped file. Our system will accept compressed files, such as zip and tar. Each file should be no larger than 1MB.
- b. If your Upload is successful, you will see your file(s) listed, along with the Status and Timestamp. The file will be automatically processed after about 5 minutes, and the Status will change. See example, below.



Obtain Feedback:

After you see the Status change from Pending to a different message, click on the file name to view the file processing results. Please call us if you need any further details about your files.

5. To Log Out:

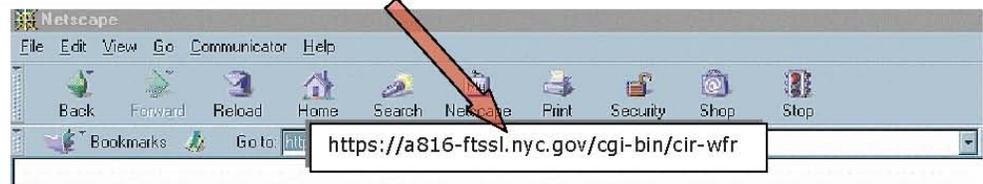
Click on the Logout Button **Logout** in the left-hand column.



Web File Repository Basics Guide

1. Contact the Citywide Immunization Registry (CIR) to obtain a User Name and Password at:
212-676-2323.
2. **Prerequisites:**
 - Internet account set up through an Internet Service Provider, such as Earthlink, MSN, AT&T, Juno, AOL, or an "always-on" internet service provided by your organization.
 - Internet Browser, such as Internet Explorer or Netscape Navigator. The WFR is best viewed in Internet Explorer.
3. **Log In:**
 - a. Log onto the internet.
 - b. Make sure a browser is open or open one by clicking on your Internet Explorer or Netscape Navigator icon.
 - c. Type in the address below in the address window:

<https://a816-ftssl.nyc.gov/cgi-bin/cir-wfr>



- d. A Log In screen will open. Enter your CIR WFR Login Username and then your Password. Click the "Login" button .

CIR Web File Repository

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Release Notes

Please log in.
Please enter your username and password.

Username:

Password:

Login