Friendly Reminder:
Please remain muted
Questions can be typed in chat box

New York City
Citywide Immunization Registry (CIR),
Online Registry:
Dashboard Overview

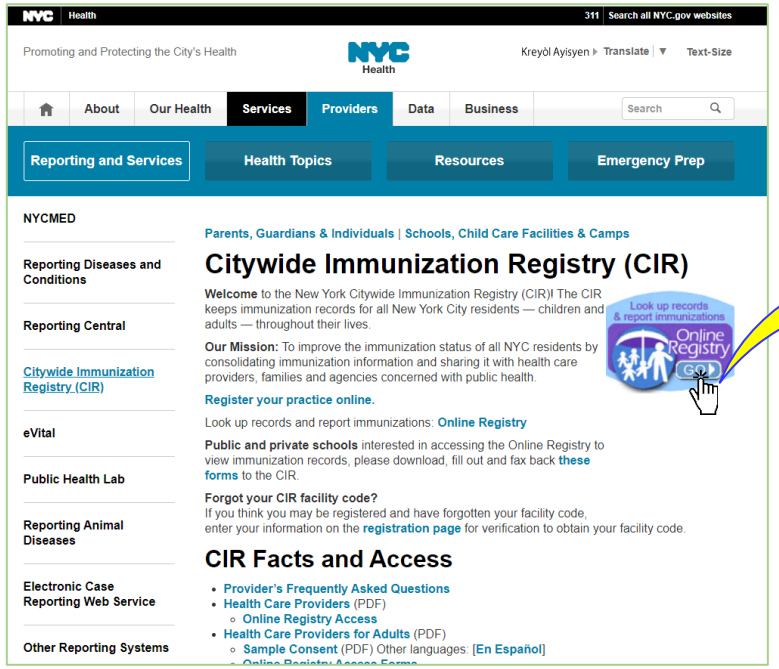
NYC Department of Health & Mental Hygiene
Bureau of Immunization
May 23, 2024

CIR Background

- Citywide Immunization Registry (CIR) is the Immunization Information System (IIS) for New York City (NYC)
- Began citywide in 1997
- Contains > 14.8 million patients
- > 170 million immunizations
- Mandatory reporting of immunizations for children < 19 years
- Reporting for adults ≥ 19 years requires consent
- Population based
  - Load birth certificate data twice weekly

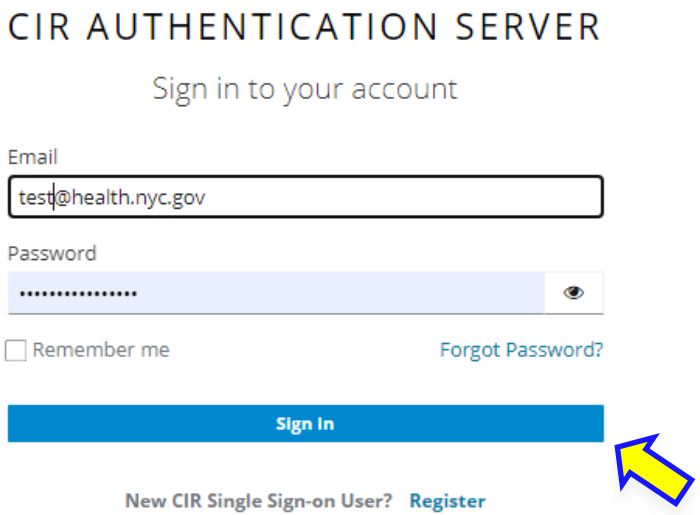
CIR homepage: nyc.gov/health/cir

- Check for updates on this page.
- Click the "Online Registry GO" icon for the log in screen:



Log in screen

After account set up is completed,
this is the **Log in** screen to use going forward:



Check Notice boxes for updates.

- Contact CIR at (347) 396-2400 for Online Registry access, or
- Visit: https://www1.nyc.gov/site/doh/providers/reporting-and-services/cir-security-admin-info.page

Reporting Administration Requirements

Reporting Immunizations Requirements

NYC health care providers report immunizations to the CIR as mandated by New York State Public Health Law and the NYC Health Code. Pediatric providers are required to report all immunizations administered to children aged 0 to 18 years. Vaccines administered to adults 19 years and older should be reported to the CIR with documented verbal or written patient consent.

To enable monitoring of equitable vaccine distribution, it is essential that vaccination providers gather and report accurate data on vaccine recipients' characteristics, including race and ethnicity. Vaccine providers are encouraged to consult best practices for collecting and reporting race and ethnicity to the CIR.

The use of the CIR to verify the vaccination status of employees is not authorized under New York State law or the New York City Health Code. Employers with vaccination requirements must ask employees to provide documentation of vaccination.

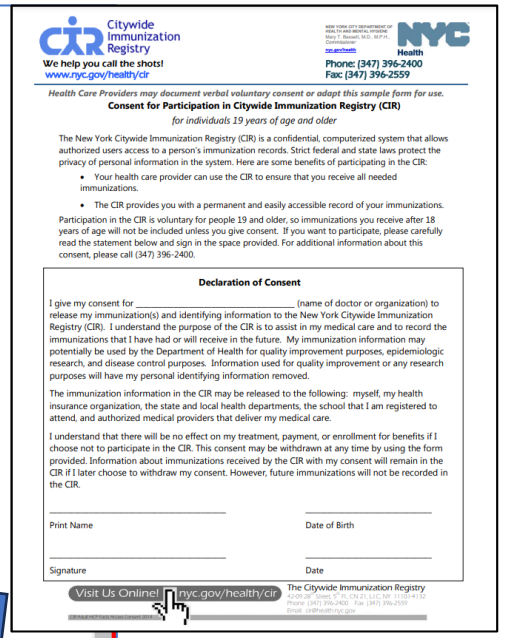
New Yorkers may obtain their vaccination records from the CIR online or from their vaccination provider.

Expand All | Collapse All

- Benefits and Uses for CIR

Forms and Guides

- Access Forms
- Confidentiality and Consent Forms
- Online Registry Guides
- CIR Electronic Reporting Documents



Citywide Immunization Registry
We help you call the shots!
www.nyc.gov/health/cir

NYC Health
Phone: (347) 396-2400
Fax: (347) 396-2559

Health Care Providers may document verbal voluntary consent or adopt this sample form for use.

Consent for Participation in Citywide Immunization Registry (CIR)

for individuals 19 years of age and older

The New York Citywide Immunization Registry (CIR) is a confidential, computerized system that allows authorized users access to a person's immunization records. Strict federal and state laws protect the privacy of personal information in the system. Here are some benefits of participating in the CIR:

- Your health care provider can use the CIR to ensure that you receive all needed immunizations.
- The CIR provides you with a permanent and easily accessible record of your immunizations.

Participation in the CIR is voluntary for people 19 and older, so immunizations you receive after 18 years of age will not be included unless you give consent. If you want to participate, please carefully read the statement below and sign in the space provided. For additional information about this consent, please call (347) 396-2400.

Declaration of Consent

I give my consent for _____ (name of doctor or organization) to release my immunization(s) and identifying information to the New York Citywide Immunization Registry (CIR). I understand the purpose of the CIR is to assist in my medical care and to record the immunizations that I have had or will receive in the future. My immunization information may potentially be used by the Department of Health for quality improvement purposes, epidemiologic research, and disease control purposes. Information used for quality improvement or any research purposes will have my personal identifying information removed.

The immunization information in the CIR may be released to the following: myself, my health insurance organization, the state and local health departments, the school that I am registered to attend, and authorized medical providers that deliver my medical care.

I understand that there will be no effect on my treatment, payment, or enrollment for benefits if I choose not to participate in the CIR. This consent may be withdrawn at any time by using the form provided. Information about immunizations received by the CIR with my consent will remain in the CIR if I later choose to withdraw my consent. However, future immunizations will not be recorded in the CIR.

Print Name _____ Date of Birth _____

Signature _____ Date _____

Visit Us Online! nyc.gov/health/cir

The Citywide Immunization Registry

Please ensure all staff are aware on:

1. How to obtain consent
2. Where to set the option in your EHR to share the vaccination data on each adult patient to the CIR.

CIR Electronic Reporting Documents

Reporting Immunizations Requirements

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Expand All | Collapse All

- Benefits and Uses for CIR

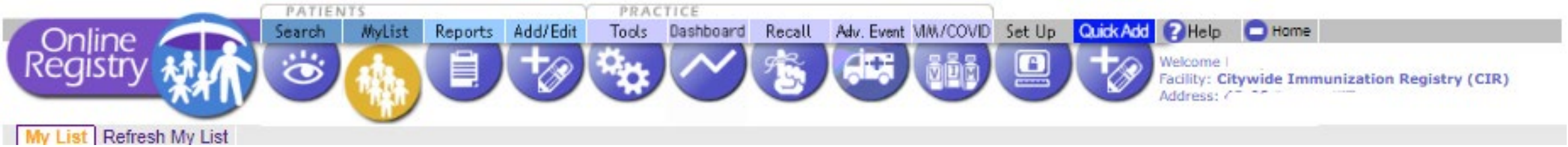
Forms and Guides

- Access Forms
- Confidentiality and Consent Forms
- Online Registry Guides
- CIR Electronic Reporting Documents

CIR Electronic Reporting Documents

- Meaningful Use of Electronic Health Records (EHRs) and the CIR
- Guides for reference:
  - CIR HL7 Web Service 2.5.1 Integration Guide (PDF)
  - CIR HL7 Onboarding Interface Summary (PDF)
  - CIR HL7 QBP Full Guide (PDF)
  - CIR HL7 VXU Test Cases Checklist (PDF)
  - UPIF Specifications (PDF) updated April 1
  - Vendor confidentiality agreement (PDF)
  - Health care provider confidentiality agreement (PDF)
  - Web File Repository Guide (WFR) (PDF)
- Update your vaccine codes list used to report to the CIR:
  - CIR HL7 COVID-19 Reporting Requirements (PDF)
  - CDC Maintained Vaccine Code List Contains updates and additional codes.
  - IIS: NDC Lookup Crosswalk from CDC
  - Note: Use CDC NDC sale codes in the previous link above for HL7 reporting, not NDC Use codes displayed in this crosswalk.

Online Registry Toolbar

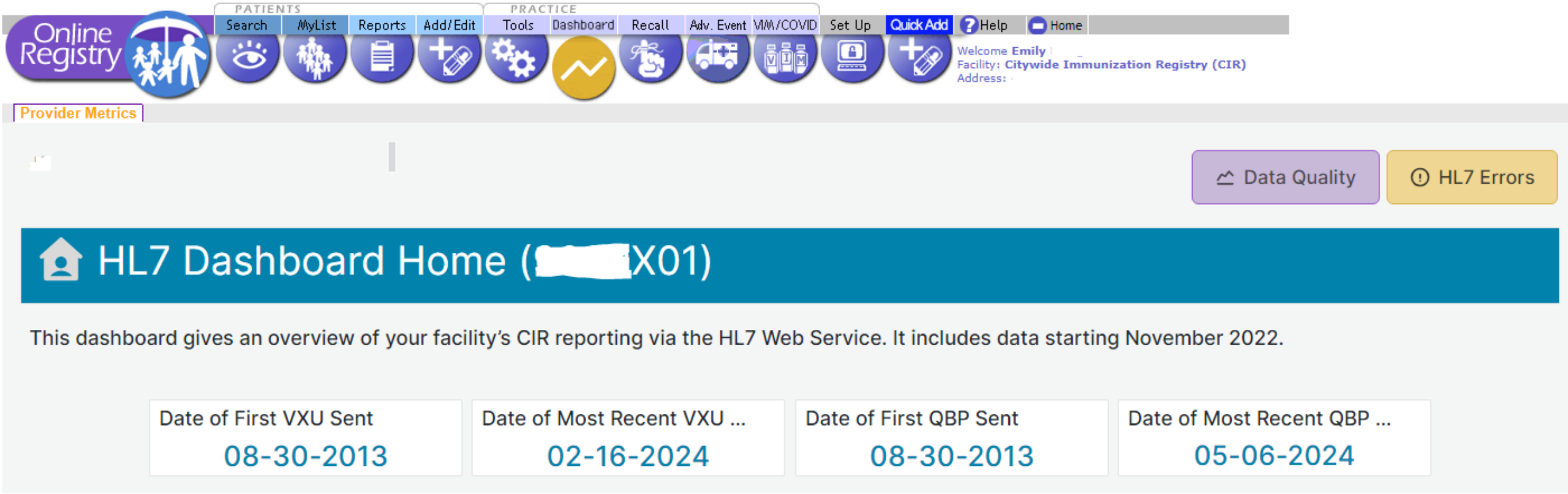


- **Search**: Search and look up patients by entering name and date of birth. Can also add new patient to the registry.
- **MyList**: Your list of patients who have been looked up or added by your staff within the Online Registry, either manually one-by-one, or retrieved as a group by using Refresh MyList. Practices using EMRs need to regularly Refresh MyList.
- **Reports**: View patient reports
- **Add/Edit**: Add/edit a patient's record

- **Tools**: Create and run coverage reports
- **Dashboard**: View provider metrics and statistics of reporting
- **Recall**: Create and run coverage reports on past due immunizations
- **Adv. Event**: Provides link to report an adverse event
- **VIM/COVID**: Vaccine Inventory Management
- **Set Up**: Manage account settings
- **Quick Add**: Allows providers/ pharmacists to quick add an immunization

Dashboard

- Three tabs: Home, Data Quality and HL7 Errors
- First launched March 2024, with data going back to November 2022.
- Blue buttons to adjust time range of data are available for each tab.



Dashboard Home Tab

- Overview of the facility's CIR reporting.

- Message Status Definitions
  - Success: Message successfully processed by CIR with no errors
  - Success_Nonfatal: message processed by CIR, but with errors (i.e. missing data, incorrectly formatted data). Immunization and patient information were still able to be processed by the CIR.
  - Success-Partial: Message was partially processed. Part of the immunizations had information to be processed by CIR, but part of the message was did not have enough information to be processed correctly.
  - Failure: Message was not processed by CIR. Critical information about the patient or immunization was either missing or incorrectly formatted (i.e. patient name missing, invalid CIR facility code)

- Message Definitions
  - VXU: Message containing immunization information
  - QBP: Message sent to query the database

- Adult Consent Field and Protection Indicator
  - Patients with errors in protection indicator or patients that do not consent to add to the registry are NOT added to the CIR.

HL7 Dashboard Home ([redacted]P01)

This dashboard gives an overview of your facility's CIR reporting via the HL7 Web Service. It includes data starting November 2022.

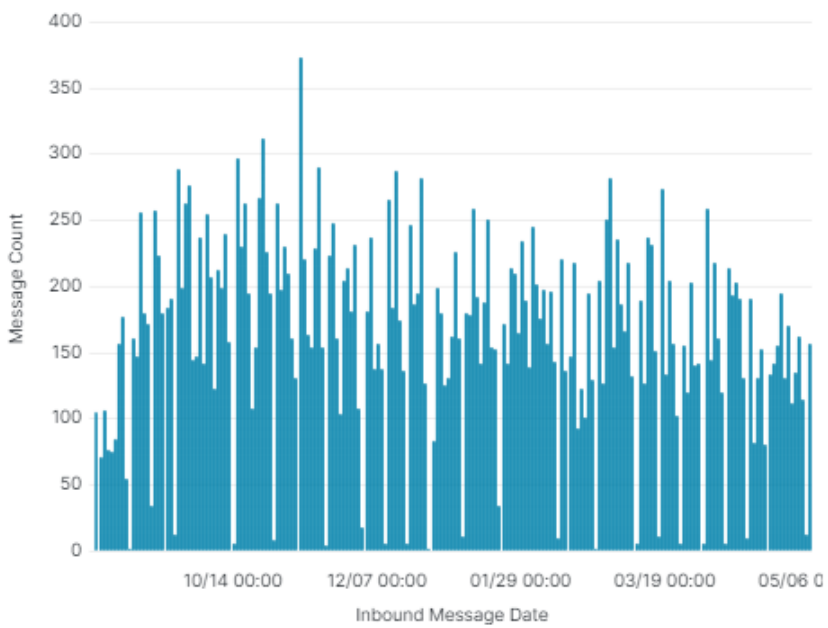
Date of First VXU Sent	Date of Most Recent VXU Sent	Date of First QBP Sent	Date of Most Recent QBP Sent
10-03-2011	05-06-2024	11-01-2022	05-06-2024

Select the blue buttons below to adjust date ranges of message summaries and review your reporting history.

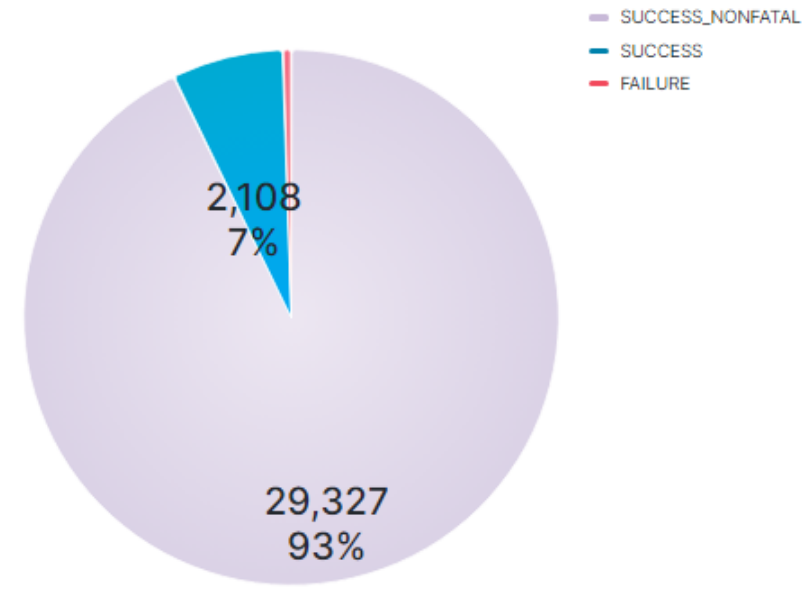
Previous Week | Previous Month | Previous Year | Current Week | Current Month | Current Year | Last 2 Days | Last 7 Days | Last 30 Days

Summary Counts for 1172P01

HL7 Message Count



HL7 VXU Messages Submitted



Message Status Definitions

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Message Definitions

- VXU: Message containing immunization information
- QBP: Message sent to query the database

Average # of VXU Messages Per Month

Immunization Messages (VXU) **3376** Messages

Average # of QBP Messages Per Month

Query Messages (QBP) **7573** Messages

VXU Messages Per Week

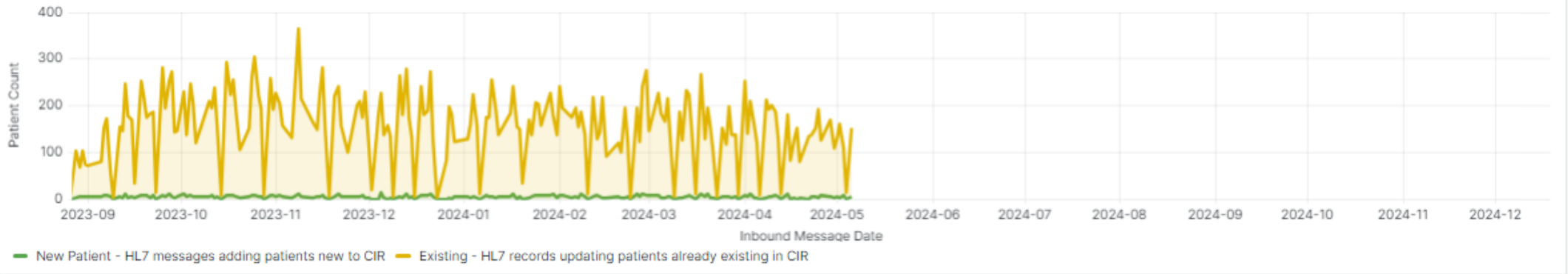
QBP Messages Per Week

No data

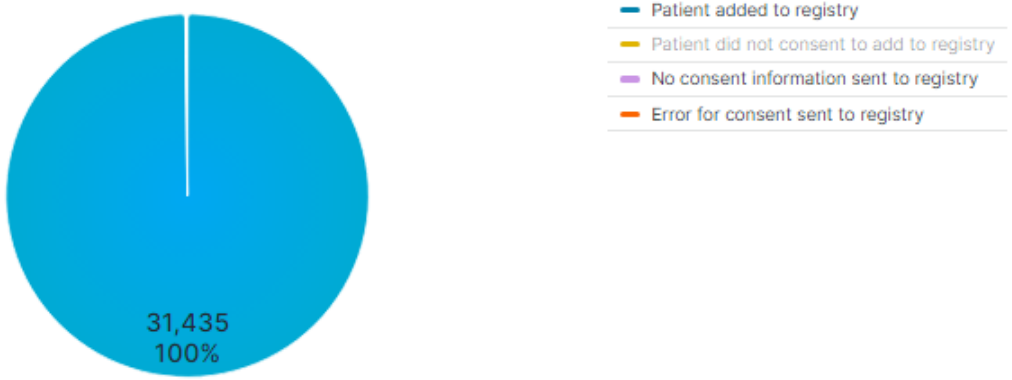
Facility Level - Historical Patient & Message Counts

Patient Counts for [redacted]

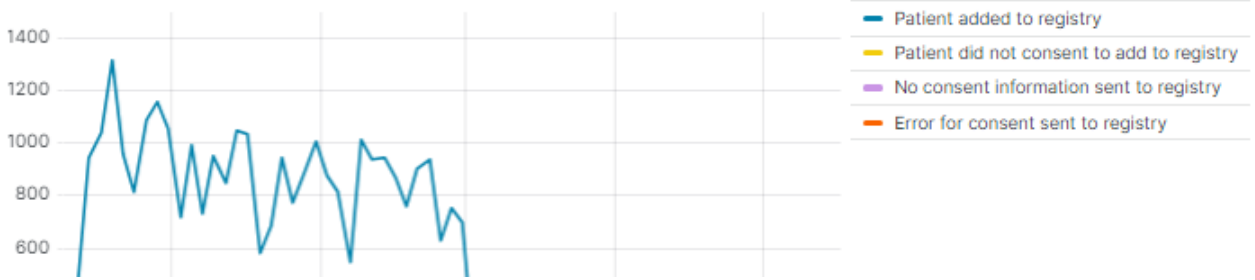
Counts of Patients Submitted: Existing vs. New



Adult Protection Indicator



Adult Protection Indicator Over Time



Adult Consent Field and Protection Indicator

Patients with errors in protection indicator or patients that do not consent to add to the registry are NOT added to the CIR.

Patients that do not consent to add to the registry are NOT added to the CIR. Missing or incorrect values in protection indicator are not added to CIR. CIR will only validate PD1-12 for patients 19 years of age and older pursuant to the New York State immunization reporting requirement for those 18 years and under. For patients 19 years of age and older, the PD1-12 field will be validated by the CIR HL7 Web Service at each VXU message submission, except for vaccines with public health emergency order.

Data exchange partners should document the patient's consent related to sharing their information for patients 19 years of age and older, and only send VXUs where the patient has consented to share their information.

For patients 19 years of age and older, PD1-12 should always be valued.

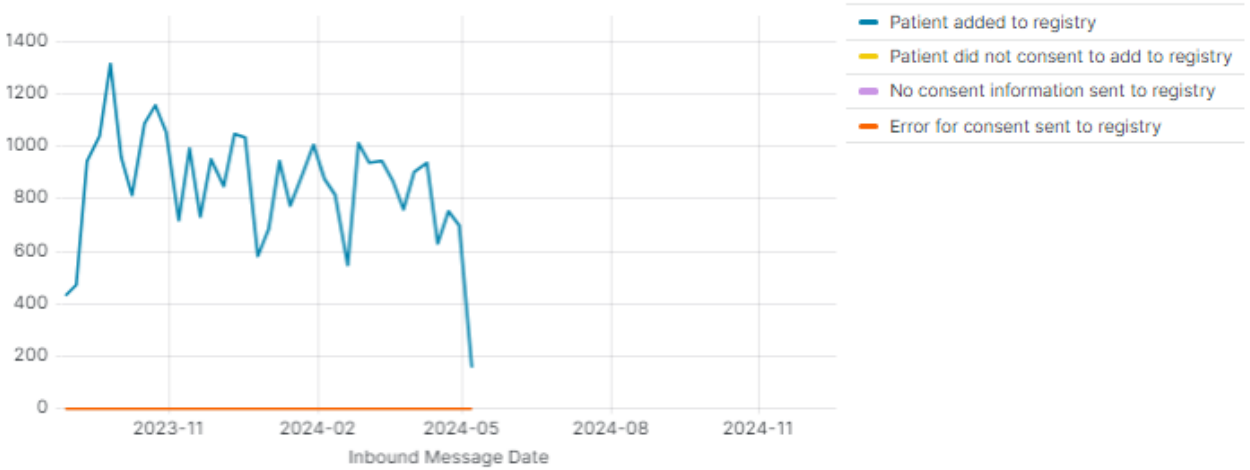
PD1 Field Usage Notes

PD1-12 Protection Indicator (ID)

This field identifies whether a person's information may be shared with others. This field conveys the current state (opt in or opt out) in the sending system. The protection state must be actively determined by the clinician. This is a required field.

Protection State	Code	CIR Actions
Yes, protect the data. Client has indicated that the information shall be protected. (Do not share data.)	Y	Reads HL7 message, if provided; Does not store data; Does not share with others.
No, it is not necessary to protect data from other clinicians. Client has indicated that the information does not	N	Reads HL7 message; Stores data; Shares with others.

Adult Protection Indicator Over Time



PD1 Field Usage Notes

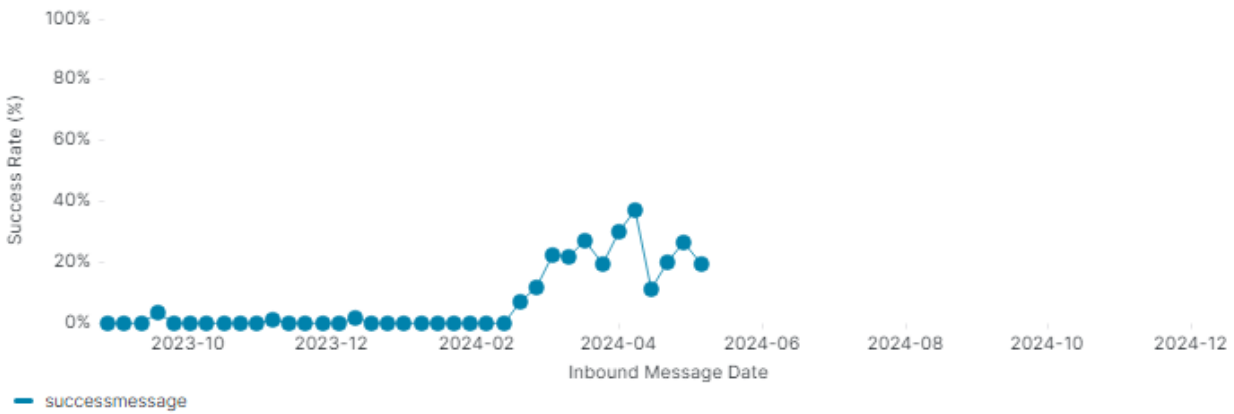
PD1-12 Protection Indicator (ID)

This field identifies whether a person's information may be shared with others. This field conveys the current state (opt in or opt out) in the sending system. The protection state must be actively determined by the clinician. This is a required field.

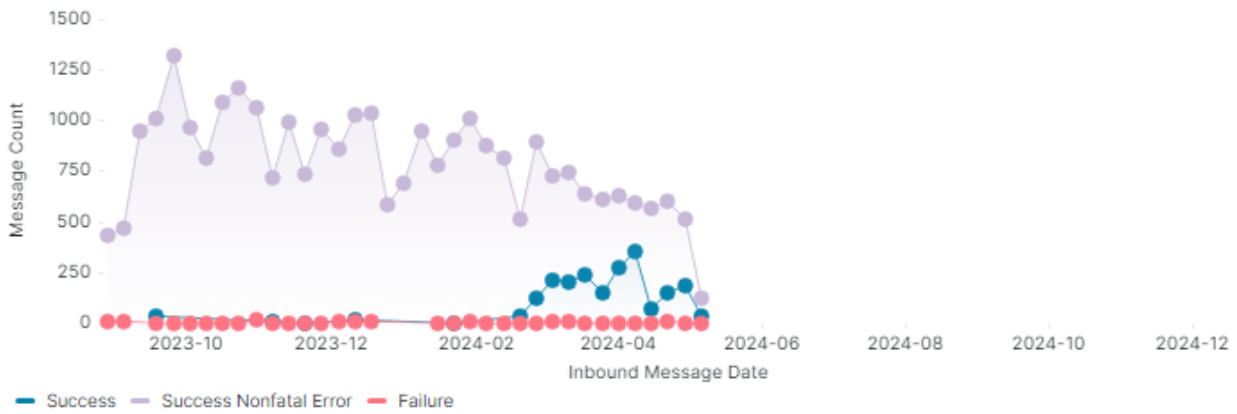
Protection State	Code	CIR Actions
Yes, protect the data. Client has indicated that the information shall be protected. (Do not share data.)	Y	Reads HL7 message, if provided; Does not store data; Does not share with others.
No, it is not necessary to protect data from other clinicians. Client has indicated that the information does not need to be protected. (Data may be shared.)	N	Reads HL7 message; Stores data; Shares with others.
Clinician does not collect required patient's wishes regarding information sharing	PD1-12 is empty or Unknown (UNK)	Reads HL7 message; Rejects HL7 message; Does not store data; Does not share with others.

Message Status Count for [redacted]

Success (No Errors) Rate Trend:

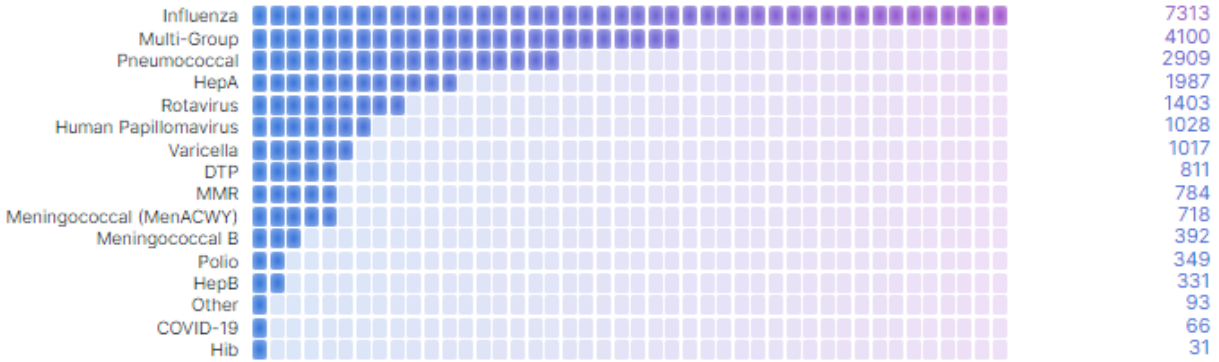


Message Status Trend



Vaccine Doses Successfully Reported to CIR for

Vaccine Groups Administered



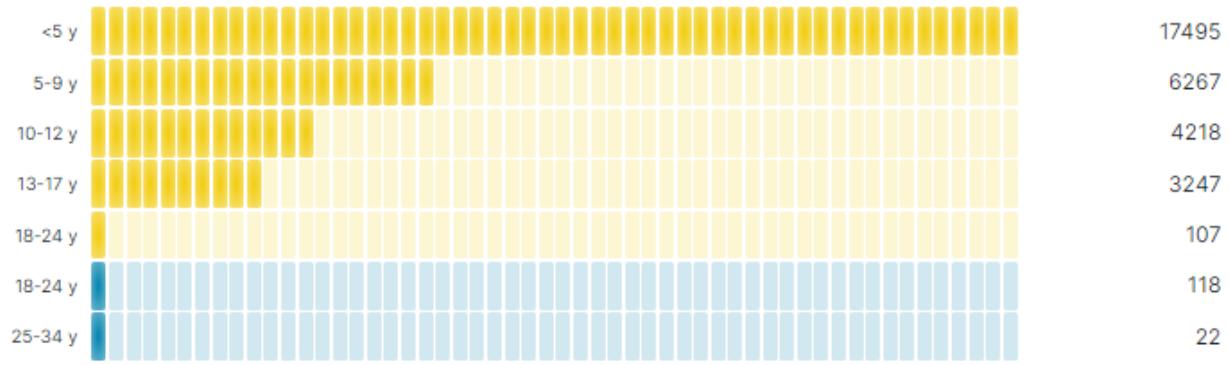
Count of Vaccines Administered

Vaccine	Vaccine Group	Count
COVID, Pfizer, XBB.1.5, 5-11y (310)	COVID-19	25
COVID, Pfizer, XBB1.5, 6m-4y (308)	COVID-19	21
COVID, COMIRNATY, XBB1.5, 12y+ (309)	COVID-19	17
COVID, Pfizer, Bivalent, 6m-4y (302)	COVID-19	1

‹ 1 2 3 4 5 6 7 ··· 10 › 1 - 4 of 38 rows

Age Distribution of Patients with Doses Successfully Reported to the CIR for

Pediatric vs Adult Patients with Reported Doses



Dashboard Data Quality Tab

- Reviews the quality and completeness of data submitted to CIR via the HL7 Web Service.
- Data shown does not include historical immunizations (i.e. from unspecified sources, documents, etc.), only newly administered immunizations from the facility
- Vaccine Completeness Data shows the quality and completeness is shown for lot number, manufacturer, NDC, VFC/VFA Eligibility.
- Demographic Data completeness include contact information and race/ethnicity
- Timeliness Data include time shown from the time vaccination was administrated and reported.
  - Best practice is to submit immunizations administrations in real time.
  - Routine pediatric doses must be reported within 14 days of administration.

HL7 Data Quality ([redacted])

This dashboard reviews the quality and completeness of the data submitted to CIR via the HL7 Web Service.

Select the blue buttons below to adjust time frame for your facilities submitted data.

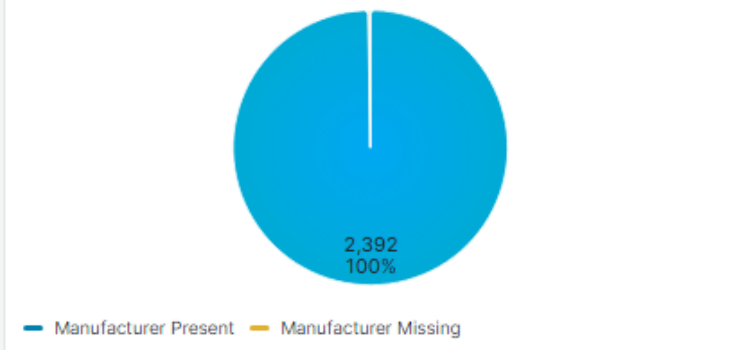
Previous Week	Previous Month	Previous Year	Current Week	Current Month	Current Year	Last 2 Days	Last 7 Days	Last 30 Days

Vaccination Data Completeness

Note: Data shown below do not include historical immunizations (i.e., from unspecified sources, documents, etc.), only newly administered immunizations.

Lot Number

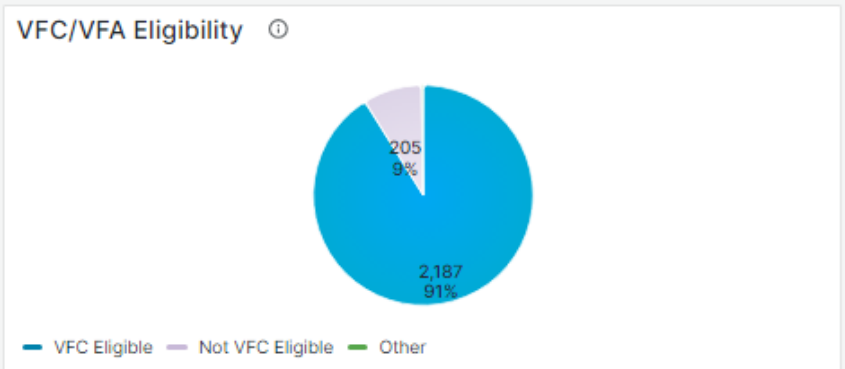
Manufacturer



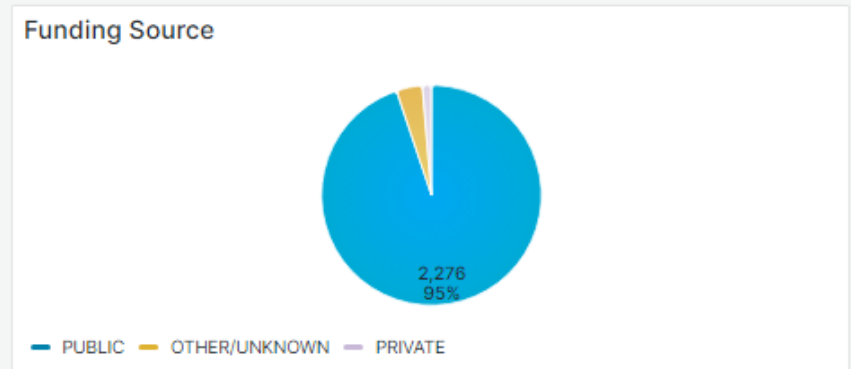
NDC (National Drug Code)

Vaccine For Children (VFC)/Vaccine for Adults (VFA) Eligibility and Funding Source Completeness

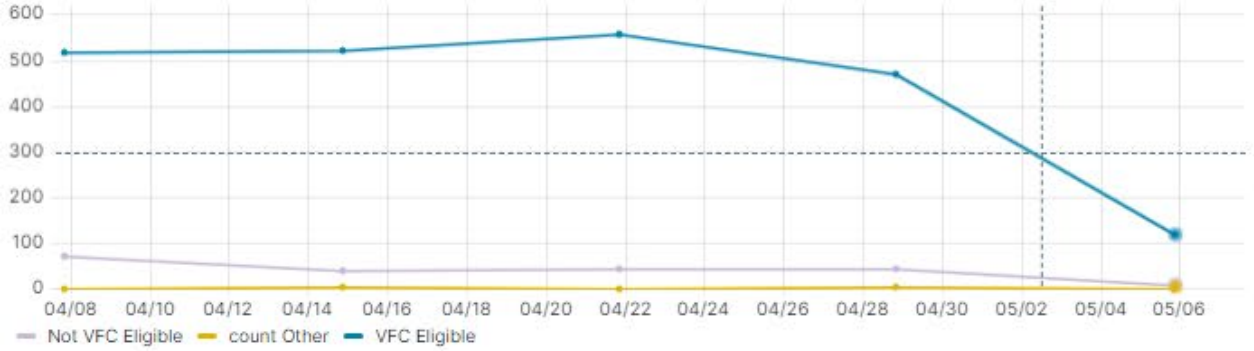
VFC/VFA Eligibility



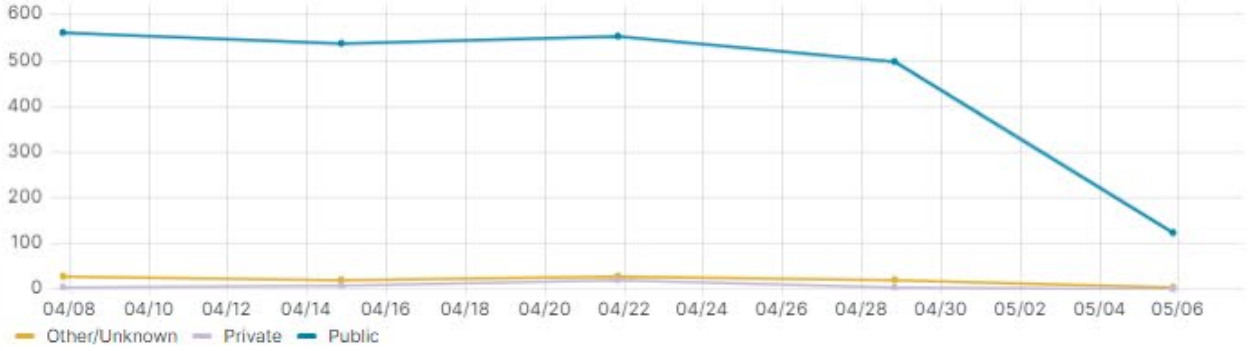
Funding Source



VFC/VFA Eligibility

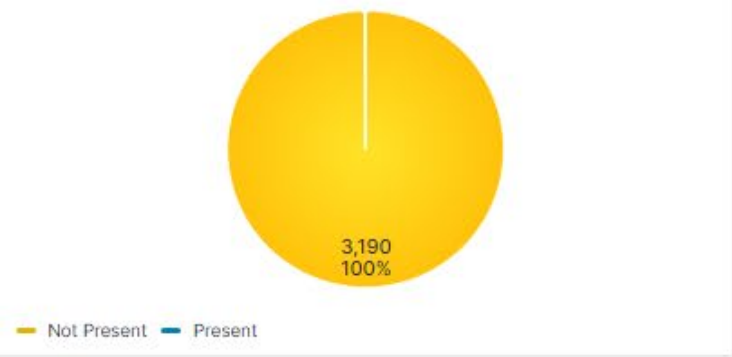


Funding Source

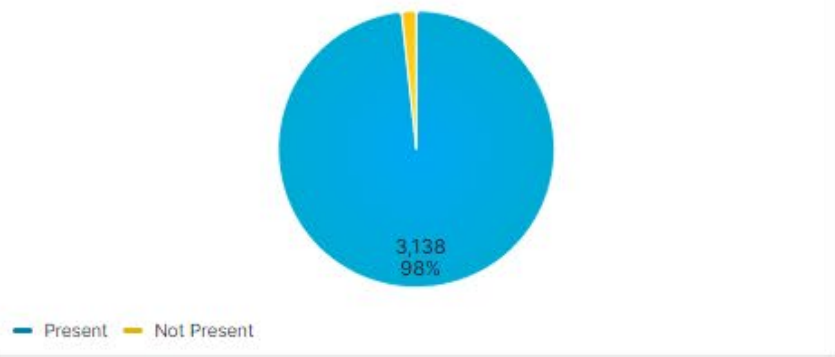


Demographic Data Completeness

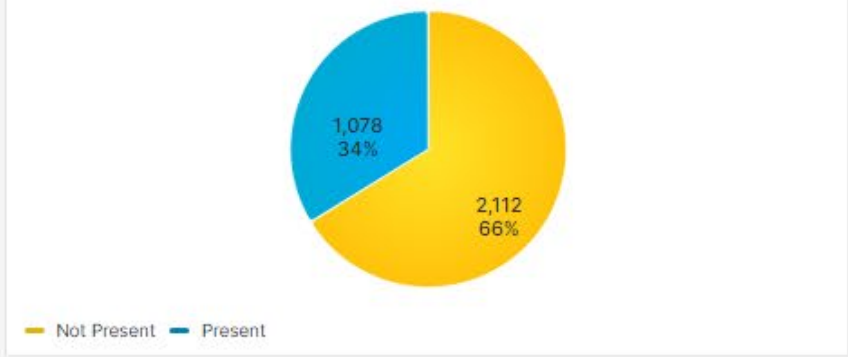
Cell Phone



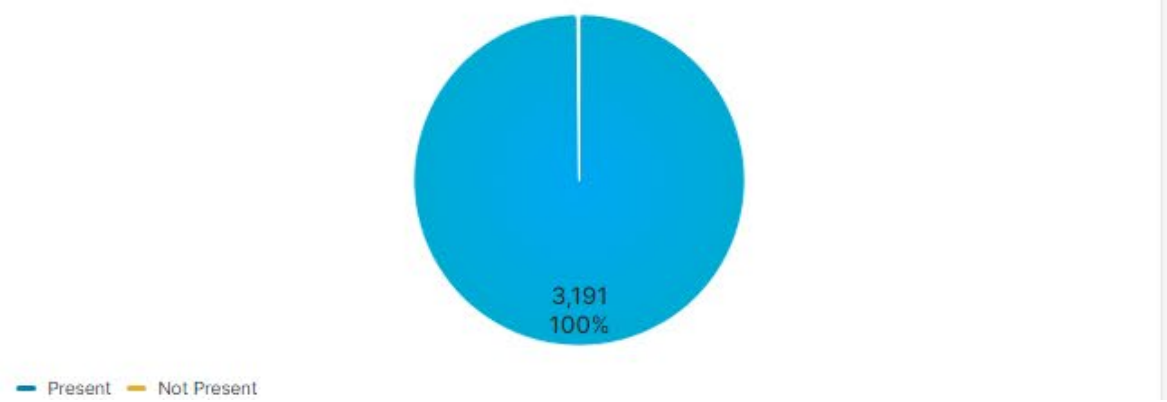
Home Phone



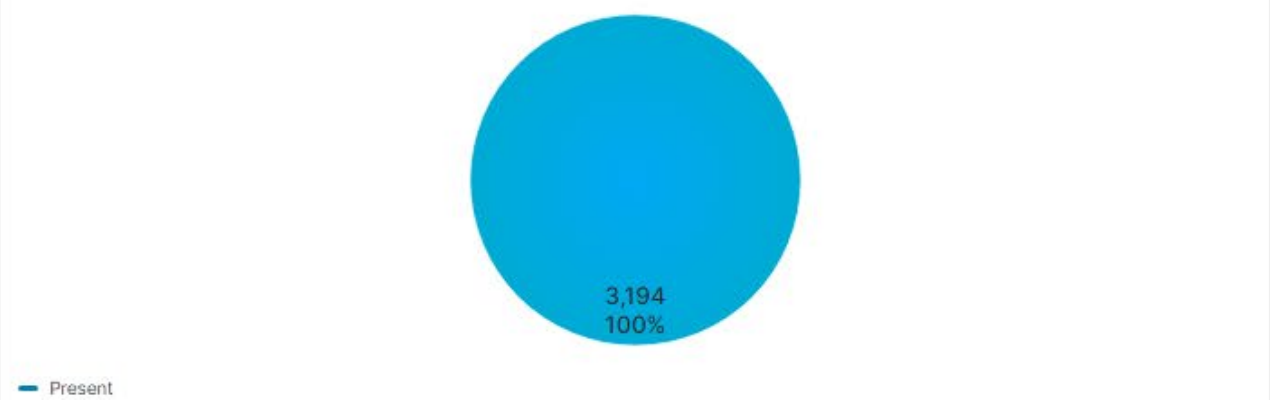
Email



Race



Ethnicity



HL7 Data Timeliness

Days Elapsed between Administered Date and HL7 Message Sent Date

Administration Report Timeliness

Best practice is to submit immunizations administrations in realtime.

Routine pediatric doses must be reported within 14 days of administration.

HL7 Data Accuracy

Count of messages with CVX that are no longer licensed

1

Total count of immunizations with CVX-NDC mismatch

0

Immunizations reported with CVX codes that are no longer licensed

vaccine	Count
COVID, Pfizer, 6m-4y (219)	1
Total	1

Immunizations where CVX does not match NDC sent

No data

CVX codes no longer licensed behavior in CIR

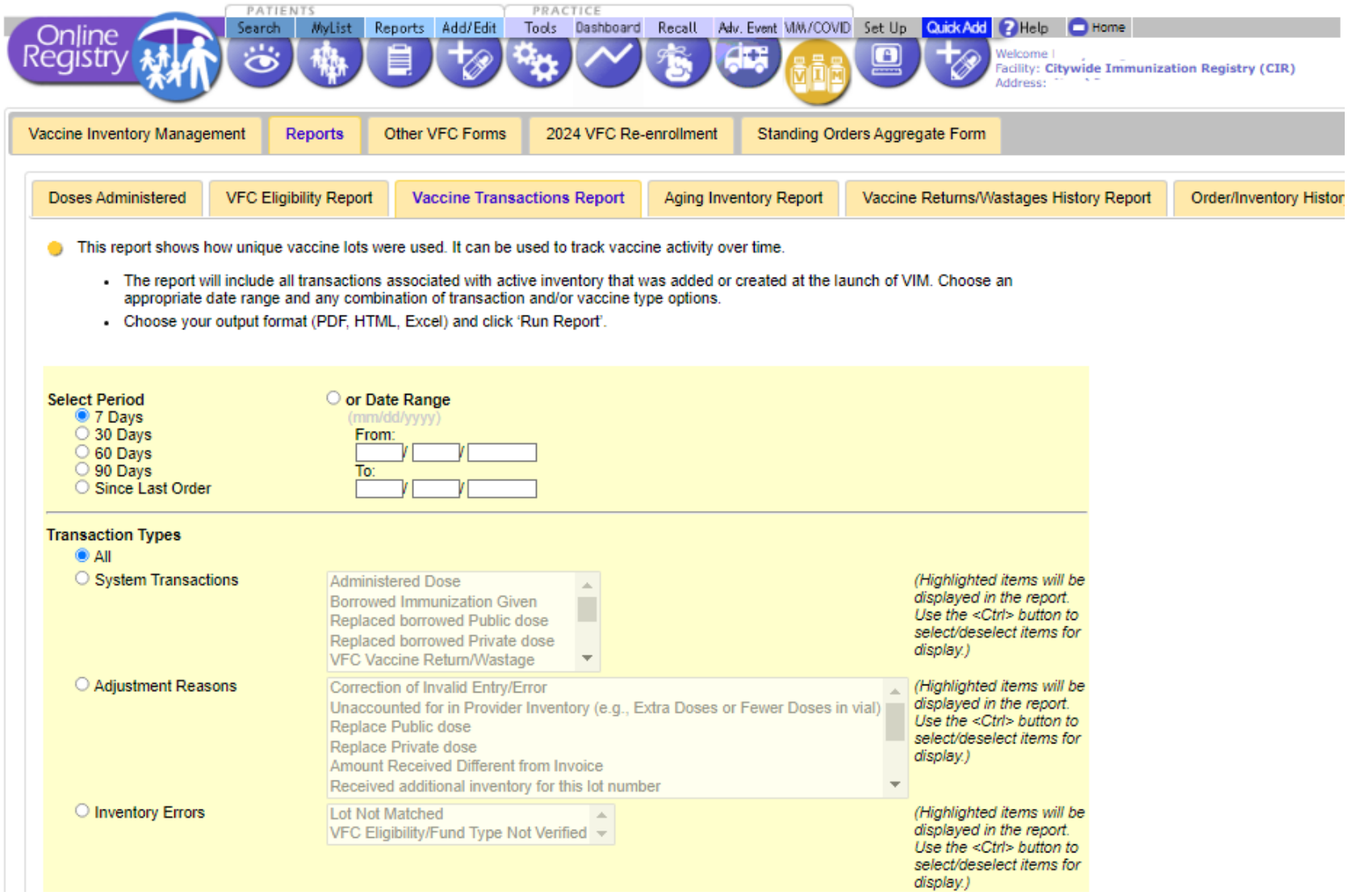
Although a CVX may not be licensed any further, the immunization CVX will still be processed through the CIR.

NDC Mismatch

If an NDC code is submitted with a CVX code, the CIR HL7 web service will check that they are properly mapped to one another. If the mapping is incorrect, the CIR will store the CVX code and return a warning about the mismatch

More details in CIR Implementation Guide (page 52)

Vaccine Inventory Management (VIM)



- Can run reports by clicking on Reports -> Vaccine Transaction Report
- Select criteria such as date range and transaction types and then run report.
- Recommended to choose Excel as report method

Dashboard HL7 Errors Tab

- This dashboard reviews HL7 Web Service submission errors.

- Error Types
  - Fatal Errors: Message unable to be processed by CIR due to critical errors
  - Non-Fatal Errors: message processed by CIR, but with errors (i.e. missing data, incorrectly formatted data) but immunization and patient information were still able to be processed by the CIR.
- HL7 Message Segment Types
  - Patient Level Errors(PID): The PID segment is used 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.
  - Provider Information (ORC): The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested). When sending a VXU message, each RXA must be associated with one ORC, based on HL7 2.5.1 standard.
  - RXA: The RXA carries the immunization administration data.
  - All Other Segments: Includes errors on the following segments PD1,NK1,QRF,OBX,MSH,QPD,RXR,UNK
- Can contact CIR for additional details on reporting errors at cir_interop@health.nyc.gov

HL7 Errors ([redacted])

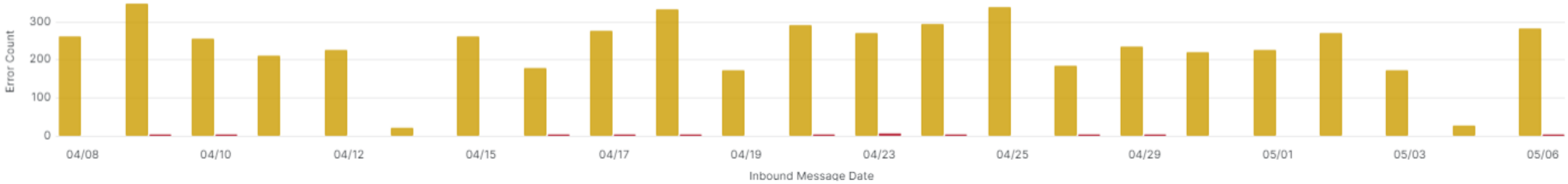
This dashboard reviews HL7 Web Service submission errors.

Select the blue buttons below to adjust time frame for your facilities submitted data.

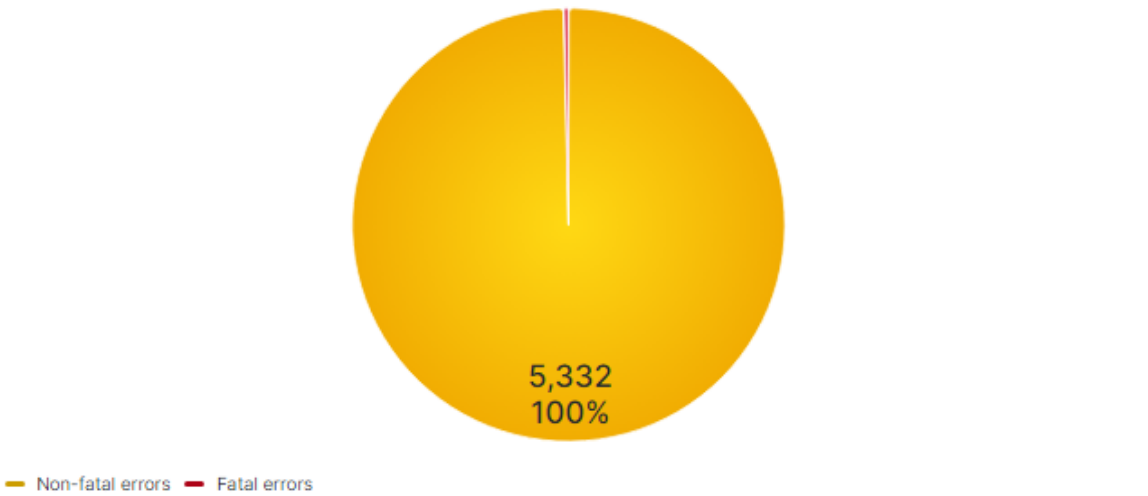
Previous Week | Previous Month | Previous Year | Current Week | Current Month | Current Year | Last 2 Days | Last 7 Days | Last 30 Days

Error Trends

Errors By Severity: Fatal vs. Non-Fatal



Error Counts



Definitions

Error Types

- **Fatal Errors:** Message *unable* to be processed by CIR due to critical errors
- **Non-Fatal Errors:** message processed by CIR, but with errors (i.e. missing data, incorrectly formatted data) but immunization and patient information were still able to be processed by the CIR.

HL7 Message Segment Types

- **Patient Level Errors(PID):** The PID segment is used 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.
- **Provider Information (ORC):** The Common Order segment (ORC) is used to transmit fields that are common to all orders (all types of services that are requested). When sending a VXU message, each RXA must be associated with one ORC, based on HL7 2.5.1 standard.
- **RXA:** The RXA carries the immunization administration data.
- **All Other Segments:** Includes errors on the following segments PD1,NK1,QRF,OBX,MSH,QPD,RXR,UNK

HL7 Error Detailed Counts

Fatal Errors

Error Reason	Field Name	Count
RequiredField	Vaccine_Code	11
GenericPatientFirstName	Patient_First_Name	4
Total		15

Non-Fatal errors

Error Reason	Field Name	Count
ValueMissing	Imm_Route_of_Admin_C	2408
ValueMissing	Imm_Admin_Site_Codin	2407
TableValueNotFound	Imm_Ndc_Code_1	197
BadFormat	Patient_Bus_Phone	72
BadFormat	Patient_Bus_AreaCode	70
ValueExceedMaxLen	Patient_Address_AptNc	30
BadFormat	Guardian_Home_Phone	28
Total		5332

Fatal Errors

Messages/patients that have fatal errors will **NOT** have any data added to the CIR.

Non-Fatal Errors

Additional detail is below for error types for non-fatal errors

Non-Fatal Error Details

Non-Fatal Errors Grouped by Segment (Patient vs Provider vs. Immunization)

For details refer to CIR HL7 Implementation Guide

Patient Level Reporting Errors (PID)

Error Reason	Field Name	Count
BadFormat	Patient_Bus_Phone	72
BadFormat	Patient_Bus_AreaCode	70
ValueExceedMaxLen	Patient_Address_AptNo	30
BadFormat	Patient_Cell_AreaCode	4
Total		186

Provider Level Reporting Errors (ORC)

No data

Immunization Level Reporting Errors (RXA)

Error Reason	Field Name	Count
TableValueNotFound	Imm_Ndc_Code_1	197
TableValueNotFound	Vaccine_Code	11
TableValueNotFound	Vaccine_Lot_Manufacturer	10
ValueMissing	Vaccine_Lot_Expiration_Date	5
ValueMissing	Vaccine_Lot	5
Total		232

All Other Reporting Segment Errors

Error Reason	Field Name	Segment Name	Count
ValueMissing	Imm_Admin_Site_Coding_Sys	RXR	2407
ValueMissing	Imm_Route_of_Admin_Coding	RXR	2408
BadFormat	Guardian_Home_Phone	NK1	28
BadFormat	Guardian_Home_AreaCode	NK1	22
BadFormat	Guardian_Bus_AreaCode	NK1	14
Total			4914

Please contact CIR for additional details on reporting errors at cir_interop@health.nyc.gov

Correcting Missing Data

- Step 1: Identify the missing HL7 data elements from the “HL7 Error” tab in dashboard
- Step 2: Check which data elements are missing from the tab. Mainly look for missing required data elements/RequiredField or any fatal errors.
- Step 3: Open a ticket/check with your EMR vendor for missing data elements found in the error tab or email to cir_interop@health.nyc.gov to inquire about HL7 message with missing data
- Step 4: Update the missing data in your source system (e.g., EHR).
- Step 5: Resend the corrected HL7 message.

Importance of Data Completeness

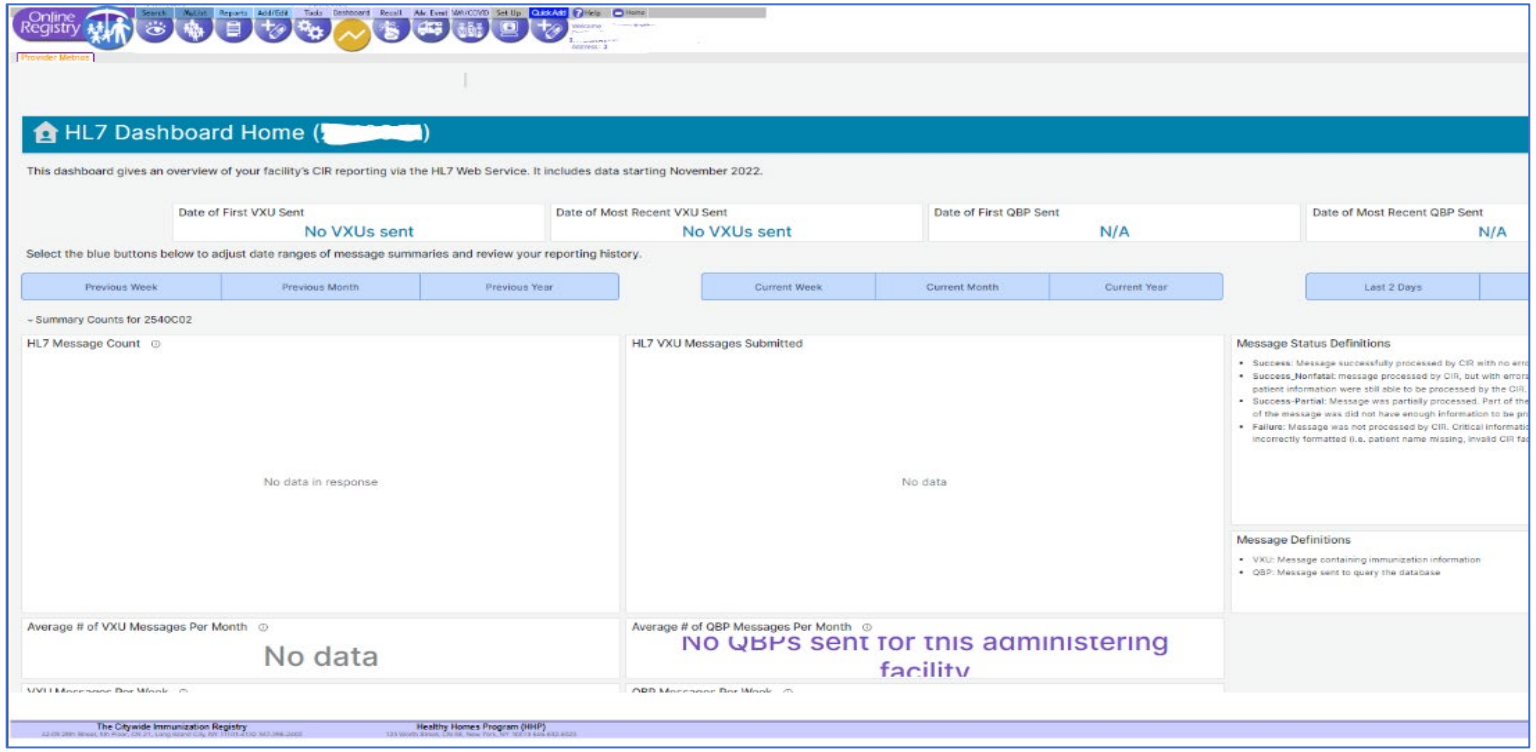
- Comprehensive HL7 data supports informed clinical decisions, improving the quality of care provided to patients.
- Facilitates seamless information exchange across various platforms, improving coordination and continuity of care.
- Complete HL7 data is essential for accurate quality reporting and performance measurement.
- Complete HL7 data reduces the need for manual data entry and correction, streamlining administrative processes.
- Enables more accurate predictions about patient outcomes, resource utilization, and population health trends

Importance of Data Completeness Continued

- Incomplete data can lead to inaccurate results and unreliable analyses, undermining decision-making processes.
- Ensuring data completeness helps patients to have a full and accurate view of their health records, promoting transparency and trust. The CIR consolidates patient’s vaccination records when seen by more than one provider.
- Improves the efficiency of healthcare operations, allowing more time to be spent on patient care rather than data management.

Troubleshooting

- If your dashboard appears empty, try clearing your cookies on your browser and try again
- If any errors occur, there is currently not printer friendly format to print the dashboard, please take screenshot of the error



Questions or comments?

Thanks for joining!

Contact information:

- Emily Liang: eliang1@health.nyc.gov
- CIR Interop: cir_interop@health.nyc.gov