m1 DEPARTMENT OF HEALTH

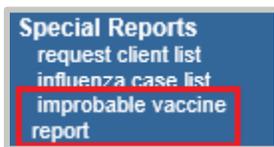# Running and Interpreting the Improbable Shot Report

MIIC USER GUIDANCE TRAINING RESOURCE

The Minnesota Immunization Information Connection (MIIC) users with the administrator role can run reports on "improbable shots" in MIIC. An "improbable shot" is a shot given outside the recommended age indications for a particular vaccine, allowing for a four-day grace period. This guide describes how to produce and interpret the improbable shot report in MIIC

Getting Started

1. Log into MIIC using your organization code, username, and password.

2. In the left-hand navigation of the registry under "Special Reports," choose "improbable vaccine report."

Creating an Improbable Shot Report

The improbable shot report screen allows users to select the report criteria, including: a date range for shots administered or shots entered into MIIC, improbable shot scenarios of interest, and a report name.

Improbable Shot Report

Date Criteria

Immunization Administered Date From: 12/07/2020   To: 12/31/2020

- OR -

Immunization Date Entered From: To:

Improbable Scenarios

[Select All] [De-Select All]

☑ DTaP ≥ age 7 years   ☑ MMR < age 1 year

☑ HepA < age 1 year   ☑ Pneumo-conj ≥ age 19 years

☑ Hib ≥ age 5 years   ☑ Pneumo-poly < age 2 years

☑ HPV < age 9 years or age ≥ 27 years   ☑ Rotavirus < age 6 weeks or age ≥ 8 months

☑ Menactra < age 2 years or age ≥ 56 years   ☑ Td/Tdap < age 7 years

☑ Meninge-poly < age 2 years   ☑ Vaccination date = birth date (excluding HepB)

☑ Menveo < age 11 years or age ≥ 56 years   ☑ Varicella < age 1 year

     ☑ Zoster < age 50 years

Report Name: Example Clinic Report 12/7 (optional)   [Generate Report]

Report Status

Submitted Reports   [Refresh]

No reports found.

1. Select your date criteria option and enter your date range. You are given two options for date criteria:

   ▪ "Immunization Administered Date From": This option will select improbable shots that were administered at a location within the date range. In the example above, the report will show improbable shots in MIIC for immunizations that were administered from December 7, 2020 to December 31, 2020.

   ▪ "Immunization Date Entered From": This option will select improbable shots that were entered by an organization into MIIC within the date range. For example, it is possible to produce the report for all of an organization's shots that were entered into MIIC from December 7, 2020 to December 31, 2020, regardless of when those shots were administered. Selecting a date entered rather than date administered time period will not only pick up current shots given by the clinic but also historical shots entered into MIIC.

Note: Selecting an appropriate date range is up to the clinic and may depend on clinic size. Monthly, quarterly, or semi-annual reviews of the data may be warranted.

2. Select the improbable scenarios that you would like to include in your report. You have the option to run the report for all improbable shot scenarios (as shown in the example above) or to select specific scenarios by clicking on individual checkboxes.

3. Optionally, enter a name for the report in the "Report Name" text box. In the example, the report is titled, "Example Clinic Report 12/7".

4. Click the "Generate Report" button.

Generating and Viewing the Reports

MIIC will indicate that the request is processing in the "Report Status" section of the screen. Processing of the report may take several minutes.

1. Click "Refresh" periodically until the report status changes from "Processing" to "Complete". While the report is processing, the user may work in other areas of MIIC or log back on to the registry later to access the completed reports.

2. Once the request is complete, click on "Data Ready: Generate reports" and click "Refresh" periodically until the reports are generated.

3. Once the request is complete, there will be two clickable options available: "Detail Report" and "Summary Report".

Note: If MIIC does not find any improbable shots for the selected report criteria, a "No Data for Criteria Selected" message will be displayed instead of "Complete". You can try running the report again using a broader date range or including additional improbable shot scenarios.

4. Click on the "Summary Report" link to view summary results. The report will open as a PDF document to save or print. Use your browser's back button to navigate back to MIIC.

- The report criteria are displayed at the top, including organization name, date range selected, and report run date.

- The "Summary Report" shows the total number of immunization either administered or entered by the clinic during the time period selected, the total number of improbable shots for the clinic in the selected scenarios, and the percent of the clinic's shots administered or entered that were improbable.

- The table shows the number of improbable shots by scenario and by data entry source. It is sorted in descending order by improbable shot scenario, and shows the percentage of improbable shots attributable to each scenario. The table also shows the data entry source of the improbable shots, which can help identify the source of potential errors. The possible data entry sources include:

- ▪ "Batch", which is the periodic extraction of data from provider system and upload of data into MIIC.

- ▪ "Real time", which is the real-time transfer of data from provider system to MIIC.

- ▪ "Direct entry", which is the entry of shots directly within MIIC through the user interface.

5. Click on the "Detail Report" link to view patient-level data on each improbable shot identified. The report is a zipped file in comma-separated value (CSV) format. To open with Microsoft Excel, extract the zipped file and right click to select "Open with" Microsoft Excel.

  - ▪ The "Detail Report" allows the provider to review and potentially correct each improbable shot.

  - ▪ The report includes the following patient-specific information for each improbable shot:

    - ▪ Provider chart number (if provided)

    - ▪ MIIC client ID

    - ▪ Name

    - ▪ Birth date

    - ▪ Age at vaccination

    - ▪ Vaccination date

    - ▪ Date entered

    - ▪ Vaccine name

    - ▪ Vaccine trade name

    - ▪ Data entry source

Interpreting and Using Report Findings

Monitoring and correcting improbable shot vaccine administration and documentation errors can help ensure patients are fully protected from vaccine preventable diseases. Providers are encouraged to monitor improbable shots on an ongoing, consistent basis. Schedule a routine time and staff to run the report, review findings, and make corrections as needed.

1. Use the "Detail Report" to correct documentation errors on individual patient records.

2. Contact MIIC staff for assistance with large-scale corrections of miscodings over a period of time.

3. Review batch extract processes to ensure extracts from provider systems and uploads to MIIC accurately capture vaccine administration.

4. Provide education for staff on vaccine administration and documentation.

Scenarios in MIIC

Scenario	Why Improbable?	Notes
DTaP ≥ 7 years	DTaP is licensed for use in children age 6 weeks through age 6 years. DT-Peds is licensed for children 6 weeks through age 6 years who cannot receive DTaP vaccine. A large number of DT-Peds may indicate an administration and/or coding problem	For people age 7 years and older: • Td is licensed for people age 7 years and older. • Boostrix (Tdap) is licensed for people age 10 through 65 years. • Adacel (Tdap) is licensed for people age 11 through 65 years.
Td < 7 years	Td is licensed for people age 7 years and older.	For people age 6 years and younger: • DTaP is licensed for use in children age 6 weeks through age 6 years. • DT-Peds is licensed for children through age 6 years who cannot receive DTP or DTaP.
Hib ≥ 5 years	Hib is licensed and recommended for children 6 weeks through age 4 years.	May be okay in limited circumstances. Hib is not generally recommended for people age 5 and older; however, 1 dose for unvaccinated high-risk people with certain risk factors is not contraindicated.
HPV < 9 or ≥ 27 years	HPV4 (Gardasil) is licensed for people age 9 through 26 years. HPV2 (Cervarix) is licensed for people age 10 through 25 years but may be given as early as age 9 years and through age 26 years.	Currently HPV vaccine is not licensed for use in people older than age 26 years. However, if a female reaches age 26 years before the vaccination series is complete, remaining doses can be administered after age 26. HPV4 may be given to females and males and HPV2 should only be given to females.
Menactra < 2 or ≥ 56 years	Menactra is licensed for people age 2 through 55 years.	
Menveo < 11 or ≥ 56 years	Menveo is licensed for people age 11 through 55 years.	

Scenario	Why Improbable?	Notes
Meninge-poly < 2 years	MPSV is licensed for people age 2 years and older	
Pneumo-conj ≥ 19 years	PCV is licensed for use in children age 6 weeks through 5 years. Children age 5 through 18 years with certain underlying medical conditions may also receive PCV.	The pneumococcal polysaccharide vaccine (PPSV) license includes use in adults age 19 years and older.
Pneumo-poly < 2 years	PPSV is licensed for people age 2 years and older.	The pneumococcal conjugate (PCV) vaccine license includes use in children less than 2 years of age.
Rotavirus < 6 weeks or ≥ 8 months	Rotavirus is licensed for children age 6 weeks up to but not including 32 weeks.	At this time the rotavirus improbable shot scenario does not take into account the first dose recommended maximum age.
Hepatitis A < 1 year	Hepatitis A is licensed for people age 12 months and older.	Hepatitis A given before age 1 year is not counted as a valid dose. Revaccination is recommended.
MMR < 1 year	MMR is licensed for people age 12 months and older	MMR given before age 1 year is not counted as a valid dose. Revaccination is recommended.
Varicella < 1 year	Varicella is licensed for people age 12 months and older.	Varicella given before age 1 year is not counted as a valid dose. Revaccination is recommended.
Zoster < 50 years	Zoster is licensed for people age 50 years and older.	Sometimes Zoster is entered into MIIC instead of varicella.
Vaccination date = birth date (excluding HepB)	Hepatitis B vaccine is the only vaccine licensed and indicated for the day of birth. Other routine childhood immunizations are not licensed nor indicated for use before 6 weeks of age.	This scenario also excludes HBIG given on the date of birth.

MIIC Help

For assistance with running and interpreting the improbable shot report in MIIC, contact your MIIC regional coordinator. View their contact information at [MIIC Regions and Regional Coordinators (https://www.health.state.mn.us/people/immunize/miic/participate/regions.html)](https://www.health.state.mn.us/people/immunize/miic/participate/regions.html).

You can also send an email to the MIIC help desk using the "help desk" button on MIIC for any additional questions or use the light bulb icon to access additional user guidance resources.

Minnesota Department of Health
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651-201-5207
health.miichelp@state.mn.us
www.health.state.mn.us/people/immunize/miic

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To obtain this information in a different format, call: 651-201-5207.