# Manitoba Public Health Information Management System

## Report User Guide

### MB6042D
### Client Count by Valid Doses  (Seasonal)

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# Definitions for Report User Guides:

a. "Authorized Organization" means an organization (an RHA, a First Nation, or other organization) with whom Manitoba has entered into an agreement in order to facilitate access to PHIMS;

b. "Authorized User" means an employee, agent or contractor of an Authorized Organization (the employer) permitted to access to PHIMS.

c. "Service Delivery Location" (SDL) means a public health office or a Community Health Centre

d. "User Role" means the specific role or roles to which an Authorized User is assigned and which prescribes what Information the Authorized User is permitted to access, use and disclose.

| Data Type | | Explanation |
|---|---|---|
| **Aggregate**, no identifiable data | = | Summary data with no client identifiers |
| **Aggregate**, no identifiable data, but possible small population sensitivity or Provider / Org Sensitivity | = | Summary data with no client identifiers However there are sensitivities in the data where small numbers could identify clients, communities or providers |
| **Line Level**, Single client identifiable data | = | Includes client identifiers of an individual client |
| **Line level**, Multi client identifiable data | = | Includes client identifiers of a list of multiple clients |

# Table of Contents

# 1. Background:

## 1.1. Data Access Scope for Immunization in PHIMS

In Manitoba, Authorized Users ("users") of the immunization module  have access to immunization records for all Manitobans. This was decided as a result of a number of considerations, including:

- Clients can receive immunization services at service delivery locations other than their default public health office, either within or outside their home health region
- School age clients may attend schools outside their home region where immunization services are delivered
- Cases and outbreaks of vaccine preventable diseases also cross regional boundaries and may involve multiple public health provider organizations.

## 1.2. Privacy/Data Sensitivity

This report is set at the Manitoba level. This means that users who have access to this report can "view" data from all regions in Manitoba. The report includes data at the geographic region, the provider organization (RHA/FNIHB) and the service delivery location. Although this is aggregate data and personal health information is **not** displayed, there may be results displayed for very small populations (n<5) when narrow age ranges are selected. As a result, the number of users who have access to this report is limited to a small set of users.

## 1.3. Permitted Disclosures

- Disclosure of the number and percentage of clients by number of valid doses at the client region or client service delivery location level (public health office catchment) is permitted based on regional or organizational need. The number/percentage cannot be disclosed if it is based on a total number less than five (5).
- Canada's authorized users are permitted to disclose the above information to First Nations leadership (Chief, Council, Health Director).
- If reporting by Service Delivery Location (SDL) , Authorized Users  should only include those SDLs for which their Authorized Organization is responsible.

**Note re Permitted Disclosures** - In general, Reports in PHIMS have been designed for internal use for day to day public health and health service delivery, limited to Authorized Users of Authorized Organizations. Authorized Users may only disclose information from the report that relates to their Designated Health Region.  For First Nation Authorized Organizations -  sites that have entered into a Bridging Service ISA, an Authorized User (of the Bridging Organization) generating the reports may provide Reports to a FN Authorized User.

## 1.4. Data Stewardship

Users who have access to this report require background in report generation and basic epidemiology, and are responsible for the following:

- Users only run this report for their designated Health Region, or on a need to know basis.
- The data produced are to be validated and interpreted prior to disseminating any information produced from the report. The output requires contextual interpretation based on the filters used and timing of when the report was generated.
- The data are intended to be used by public health practitioners for program planning and monitoring. Data are not to be used to communicate immunization "coverage", nor are the data to be made available to the public without prior consultation with the Health Region and Manitoba Health.
- Users ensure that all data are managed securely and appropriately according to organizational guidelines especially when the report(s) identifies small populations.

***Users who have access to this report will be subject to PHIMS audits documenting which user generated the report and on what date.***

# 2. Purpose

The **Client Count by Valid Doses (Seasonal) Report** contains information on the number and percentage of valid doses for clients grouped by the region and provider organization of the client's preferred service delivery location (based on client registry address unless manually changed) during a specified timeframe. It supports the assessment and monitoring of immunization "coverage" in the specified timeframe, but since it only includes doses during that timeframe, it does not represent immunization coverage since birth.

The report is based on the antigen selected. However, note that for some vaccine-preventable diseases, there may be more than one antigen if there are different strengths or formulations of the vaccine (E.g. diphtheria (diphtheria toxoid low dose, diphtheria toxoid standard dose). For these types of vaccines, the user should ensure that the time period selected corresponds with the age group for which the specific antigen is recommended. Otherwise, consider generating a report based on the immunization forecast, or another antigen as a proxy indicator if it is a combination vaccine (e.g. use tetanus instead of diphtheria).

The data produced within the **Client Count by Valid Doses (Seasonal) Report** are based on active clients registered with Manitoba Health. However, PHIMS users may also activate inactive clients if they present for immunization (clients may be inactivated if they do not update their address with Manitoba Health, but still access services in Manitoba), and may add clients who are non-residents of Manitoba but present for service. As a result, the number of active clients in Manitoba may be overestimated in PHIMS. Therefore **this report should not be used as an official population coverage report.**

## 2.1. Population Included in the Report

The populations included in this report are:

- all clients in PHIMS's client registry, based on the Manitoba Health insured benefits registry.
- active clients

## 2.2. Recommended uses for this report

The **Client Count by Valid Doses (Seasonal) Report** may be produced for specific time periods (e.g. flu season) to monitor population "coverage" for the vaccine during that timeframe.

This report was created based on the need to monitor annual influenza vaccine uptake, as it can be limited to a specific time period.

This report may also be used to:

- Determine population uptake for catch-up immunization during a specific time frame (e.g. useful in outbreak response),

- For vaccines that require booster doses (e.g. tetanus), can determine population coverage over a selected period of time (e.g. 10 years) for appropriate age groups.
- The information produced may inform needs for immunization outreach clinics, reminder letter initiatives, etc.
- Produce statistics that may be used for program monitoring indicators.

# 3. Selecting the Report Parameters

When running a report you must select specific parameters. Some parameters are required and some are optional.

**Selecting the Correct Parameters to Generate the Required Output**

You can generate this report from the "Reports" section in PHIMS.

This is a statistical report under **Immunization: Surveillance Reports**

- Click on **Reporting and Analysis > Reports** (LHN) or the **Reporting** tile on the dashboard.

- Open the Immunization Report Folder by expanding the collapsible panel

- Scroll to Surveillance Reports and select **MB6042D Client Count by Valid Doses (Seasonal)** *hyperlink*

- Select the **Date Administered Start: Date Administered End**: (required)

- Select the **Antigen** (required)

- Select the **Region** from drop-down (required). Note: *Region* in this report refers to the **geographic region** of a client's registered address, based on the postal code to public health office/region mapping algorithms. **Manitoba is divided into five geographic regions, which correspond to the RHA boundaries.** Postal codes may overlap boundaries in some situations. As a result, there may be some incorrect regional allocations. Postal codes that are not mapped to a region (may be invalid, out of province, or newly created and not yet mapped) will be included in the "unspecified" region.

- Select the **Provider Organization**(s) from the list (optional)

  Note: Provider Organization differs based on the report context.  For this report Provider organization = the parent organization, of the organization associated to the client's preferred SDL, at the level directly below MB Health. This includes all organizations in the level directly below MB Health, although clients should only be associated with RHA's and FNIH SDL's. However, since the client's preferred SDL and region can be manually updated; all parent organizations are included to allow for identification of data errors.

For this report, **provider organization will distinguish catchment areas for services delivered by FNIHB from those delivered by RHA's**. If a user only wishes to view catchment areas delivered by their organization, they would select an RHA org (e.g. Interlake-Eastern Health) or FNIHB. If provider organization is not selected, the report can still display provider organization if it is selected in the "Group by" field (see below), but all catchment areas in the region selected will be included, regardless of who delivers the service.

Examples:

| Region (geography) | Provider Organization | Service Delivery Location |
|---|---|---|
| Winnipeg RHA | Winnipeg Health (including Churchill) | Downtown PHO |
| Prairie Mountain RHA | FNIHB | Ebb and Flow HC |
| Prairie Mountain RHA | Prairie Mountain Health | Baldur PHO |

- Select Filters that are (optional)

    o **Date of Birth Start** – **Date of Birth End** (range)

    o **Gender**

    o **Risk Factor Category**

    Note: This report includes a risk factor category for the purposes of monitoring the neonatal hepatitis B immunization program. Only risk factors that impact the forecast for hepatitis B vaccine are included. For this purpose, you would select "hepatitis risk".

    o **Risk Factor** (required if risk category is selected)

    o Note: Once a risk factor category is chosen, the individual risk factor will display for selection. The two choices under hepatitis risk are:
        - "Low Birth Weight-under 2000 grams"
        - "Neonate-high risk for Hep-B"
        - These risk factors trigger hepatitis B forecasts for infants.

- Select **Enter Group By** (required)

    Note: if you wish to display the organization that is responsible for service delivery in the catchment area (see note under provider organization), you would select "provider organization". If region is selected, it will not display the provider organization.

- Select **SDL Detail** (Yes or No)

    Note: SDL detail will summarize the data for each public health office catchment area in the region. If "No" is selected, the data will be summarized at the region level.

- Select **Enter Age Category** (Yes or No)

    Note: You may wish to summarize the data by age category if you have not selected a date of birth range, or a wide range of ages has been selected.

- Click **Generate Report Now**

## Parameter Definitions

| Parameter Name | Data Type | Description | Validation |
|---|---|---|---|
| Date Administered | Date range | Start date yyyy-mm-dd to End Date yyyy-mm-dd | Required |
| Antigen | Drop List | The name of the antigen that the client was immunized for. Note that for some diseases, there may be more than one antigen if there are different strengths or formulations of the vaccine (e.g. diphtheria, pneumococcal). You can only select one antigen. | Required |
| Region | Multi-select List | The geographic region to which the clients preferred service delivery location (i.e. public health office) is associated. Clients that do not have a valid PC mapping are included under unspecified. | Required |
| Provider Organization | Multi-select List | The parent organization, of the organization associated to the client's preferred SDL, at the level directly below MB Health. Includes all organizations in the level directly below MB Health. Only RHA's and FNIHB should have clients associated. Other parent organizations are included in case there are data errors. Note: Select your region or FNIHB if you are interested only in services delivered by your organization. If not selected, all clients in the geographic region will be included. | Required |
| Date of Birth From | Date | | Optional |
| Date of Birth To | Date | | Optional |
| Gender | Multi-select List | Client's Gender | Optional |
| Risk Factor | Multi-select List | List of risk factors filtered by the selected risk factor category. | Optional |
| Group by | Drop List | Depending on the level of detail needed for the report; would usually select "Provider Organization" defaults to "Client Region" | Required |
| Show SDL Detail | Drop List | No (default) or yes | Required |
| Show Age Category | Drop List | No (default) or yes | Required |

## 4. Report is assigned to the following User Roles:

MB PUBLIC HEALTH MANAGER / MB CDI PUBLIC HEALTH NURSE MANAGER

MB EPI ANALYST / MB CDI EPI ANALYST

MB CDI MEDICAL OFFICER

MB CDI PUBLIC HEALTH COORDINATOR

## 5. Report Description

Report Output: The report will be generated as a Formatted MS Excel Spread sheet

Data Source:  Replicated data from the PHIMS Reporting Database (refreshed every 5 minutes). The valid dose count will ignore duplicate antigens given on the same day even when not invalidated by the forecaster (all doses are valid if there is no forecast for the antigen, e.g. non-publicly funded vaccines and influenza)

### Report Data fields

| # | Field Name | Description |
|---|---|---|
| 1 | Report Title | **Count by Valid Doses (Seasonal)** |
| 2 | Static Text | Number of clients broken down by number of valid doses for the selected antigen during the specified time period.<br>• The region and provider organization is determined from the client's service delivery location marked as preferred. |
| 3 | Date Generated: | The date (and time) the report was generated YYYY-MMM-DD |
| **Report Parameters** | | |
| 4 | Date Administered | Date range the antigen was administer |
| 5 | Immunizing Antigen | Name of the selected antigen that the client was immunized for |
| 6 | Region | The geographic region to which the clients designated service delivery location is associated |
| 7 | Provider Organization | The parent organization, of the organization associated to the client's preferred SDL, at the level directly below MB Health. Includes all organizations in the level directly below MB Health.<br><br>Only RHA's and FNIHB should be displayed in the report. Other organizations may represent errors in the data. |
| 8 | Date of Birth | The client's date of birth.<br>If [Date of Birth From] and [Date of Birth To] parameters are both specified: YYYY-Mmm-DD through YYYY-Mmm-DD<br><br>If [Date of Birth From] parameter is specified, the following will be displayed:<br>On or after YYYY-Mmm-DD<br><br>If [Date of Birth To] parameter is specified, the following will be displayed:<br>On or before YYYY-Mmm-DD |

| 9 | Gender | The client's gender. |
|---|---|---|
| 10 | Risk Factor | List of risk factors selected. |
| 11 | Group by | List the different options to group the report by. |
| 11 | Show SDL Detail | Whether or not to show the Service Delivery Location on the report. |
| 12 | Show Age Category | Whether or not to show the age category on the report. |

**Details**

| 13 | Client Region | The geographic region to which the clients preferred service delivery location is associated<br>If the Region cannot be determined, this field will show Unspecified |
|---|---|---|
| 14 | Provider Organization | The parent organization, of the organization associated to the client's preferred SDL, at the level directly below MB Health.<br><br>Includes all organizations in the level directly below MB Health, although clients should only be associated with RHA's and FNIH SDL's. However, since the client's preferred SDL and region can be manually updated; all parent organizations are included to allow for identification of data errors.<br><br>If the Provider Organization cannot be determined, this field will show Unspecified<br>This column will only show on the extract when [Group by] parameter = Provider Organization |
| 15 | Client SDL | The client's public health office based on their registered address.<br>This column will only show on the extract when [Show SDL Detail] parameter = Yes |
| 16 | Age Category | The age category the clients belong to.<br>If the Client's Date of Birth is blank, this field will show Unspecified<br>All ages are categorized by<br><ul><li>&lt;1 year old</li><li>1 – 2 years old</li><li>3 – 6 years old</li><li>7 – 9 years old</li><li>10 – 17 years old</li><li>18 – 64 years old</li><li>65+ years old</li></ul>This column will only show on the extract when [Show Age Category] parameter = Yes |
| 17 | Client Count | The total number of clients |
| 18 | # Clients with 0 Valid Doses administered within the time frame chosen | The number of Clients with 0 valid doses for the selected antigen. |
| 19 | % Clients with 0 Valid Doses administered within the time frame chosen | The percentage of Clients with 0 valid doses for the selected antigen.<br>[# Clients with 0 Valid Doses] / [Student Count] |
| 20 | # Clients with 1 Valid Dose administered | The number of Clients with 1 valid dose for the selected antigen. |

| | | within the time frame chosen | |
|---|---|---|
| 21 | % Clients with 1 Valid Dose administered within the time frame chosen | The percentage of Clients with 1 valid dose for the selected antigen. [# Clients with 1 Valid Dose] / [Student Count] |
| 22 | # Clients with 2 Valid Doses administered within the time frame chosen | The number of Clients with 2 valid doses for the selected antigen. |
| 23 | % Clients with 2 Valid Doses administered within the time frame chosen | The percentage of Clients with 2 valid doses for the selected antigen. [# Clients with 2 Valid Doses] / [Student Count] |
| 24 | # Clients with 3 Valid Doses administered within the time frame chosen | The number of Clients with 3 valid doses for the selected antigen. |
| 25 | % Clients with 3 Valid Doses administered within the time frame chosen | The percentage of Clients with 3 valid doses for the selected antigen.  [# Clients with 3 Valid Doses] / [Student Count]) |
| 26 | # Clients with 4 Valid Doses administered within the time frame chosen | The number of Clients with 4 valid doses for the selected antigen. |
| 27 | % Clients with 4 Valid Doses administered within the time frame chosen | The percentage of Clients with 4 valid doses for the selected antigen.  [# Clients with 4 Valid Doses] / [Student Count] |
| 28 | # Clients with 5 Valid Doses administered within the time frame chosen | The number of Clients with 5 valid doses for the selected antigen. |
| 29 | % Clients with 5 Valid Doses administered within the time frame chosen | The percentage of Clients with 5 valid doses for the selected antigen.  [# Clients with 5 Valid Doses] / [Student Count] |
| 30 | # Clients with 6 Valid Doses administered within the time frame chosen | The number of Clients with 6 valid doses for the selected antigen. |
| 31 | % Clients with 6 Valid Doses administered within the time frame chosen | The percentage of Clients with 6 valid doses for the selected antigen.  [# Clients with 6 Valid Doses] / [Student Count] |
| 32 | # Clients with 7+ Valid Doses administered within | The number of Clients with 7 or more valid for the selected antigen. |

| | | |
|---|---|---|
| | the time frame chosen | |
| 33 | % Clients with 7+ Valid Doses administered within the time frame chosen | The percentage of Clients with 7 or more valid doses for the selected antigen.<br> [# Clients with 7+ Valid Doses] / [Student Count] |

## 6. Report Data Mapping

Records are filtered by:

1. Client is not marked Inactive
2. Client has a "Manitoba Health Card" health card number
3. Client had the selected antigen administered on or after the [Start date] parameter and administered on or before the [End Date] parameter
4. Region based on client's preferred SDL = [Region] parameter
5. Provider Organization (The parent organization at the level directly below MB Health) = [Provider Organization] parameter
6. Client's date of birth is on or after the [Date of Birth From] parameter and on or before the [Date of Birth To] parameter
7. Gender of client = [Gender] parameter
8. Client has an active risk factor with response of "Yes" that matches at least one of the [Risk Factor] parameter selections

In the event that no data are retrieved, a blank report is generated and returned to the user.