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Panorama Immunization Forecaster

A Tool to Keep Manitoba Up to Date!

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Presentation Objectives

This presentation will provide:

- An overview of the Panorama project in Manitoba
- A description of the immunization forecaster functionality
- An opportunity to view a demonstration of the forecaster functionality.
- An opportunity to engage community nurses in a discussion about technology supports to improve immunization

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What is Panorama?

- Public Health Electronic Clinical Record & Information Management System

  - Manitoba's Immunization Registry
  - Clinical Delivery of Immunizations
  - Manage Vaccine Inventory & Distribution
  - Communicable Disease Investigations
  - Management of Outbreaks

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Panorama Implementation Across Canada

British Columbia/Yukon
- Inventory
- Immunization
- Investigations/Outbreaks

Quebec
- Inventory
- Immunization

Saskatchewan
- Inventory
- Immunization

Manitoba
- Inventory
- Immunization

Ontario
- Inventory
- Immunization

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Value in Context

10,000,000+ Number of immunization records to be loaded on startup

600,000+ Number of new immunization records added every year

20,000+ Number of communicable disease investigations carried out every year

1600+ Number of public health professionals that will be using Panorama

Panorama will support public health professionals in making decisions that positively impact the health of the Manitoba population.

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What is the Immunization Forecaster?

- The Forecaster is a **decision support tool** that validates recorded immunizations and recommends when future immunizations should be administered to clients of all ages.

  - **The forecaster does not consider all risk factors, other eligibility criteria, or contraindications that are not documented.**

- Therefore, the Forecaster **is not** a replacement for clinical judgment, but a useful tool to quickly identify routine immunizations that a client may be missing.

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What Rules were Used to Create the Forecaster?

- Two types of immunization rules were created:
  - **Schedule Dose Rules** address the timing of immunizations according to age specific programs.
  - **Interaction Rules** address the interactions between vaccines.

- The rules are based on:
  - the current Manitoba Routine Immunization Schedule
  - the Canadian Immunization Guide
  - previous rules for MIMS reminder letters.

- Best practices were also considered, as well as recommendations from other international agencies.

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How Does the Forecaster Validate Immunizations?

- Doses are marked as "invalid" when the antigen dose breaks an immunization rule and may not be protective.

For example when:

- **A minimum interval is not met.**
- **A minimum age is not met.**
- **A client should not have received the product** based on their age and/or dose history.
- **An interaction rule is broken (e.g. live vaccines).**

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Sample Business Rules for Measles

Antigen Name:	MEASLES	Summary of business rules:				
Version Date:	4-Jun-14					

*The business rules have been divided into three schedules according to the age of the client when they received the first dose.
**Measles is a live vaccine. Intervals between both valid and invalid doses must be at least 4 weeks apart. (Previous dose (PD)= valid or invalid dose).
***7 days grace is used to validate doses with minimum interval >= 26 weeks (6 months).
****Measles univalent vaccine was first used in 1963; therefore 1963-01-01 will be used as the start date for all schedules.

Mea-1

Schedule ID:	Mea-1
Schedule Name:	Routine infant schedule: first dose administered < 18 years of age and DOB >=1970
Eligibility:	first dose administered < 18 years of age and DOB >=1970

		Dose 1				
Forecast / Validation Criteria	Min Age	Due	Overdue	Max Age	Series Complete	Comments
FORECAST	1 year of age and 4 weeks after PD (valid or invalid)	1 year of age and 4 weeks after PD (valid or invalid)	due +1 month	no max	no	

		Dose 2				
Forecast / Validation Criteria	Min Age	Due	Overdue	Max Age	Series Complete	Comments
FORECAST	4 weeks after PD	4 weeks after PD	6 years of age and 4 weeks after PD or due date + 1 month if > 6 years old	no max	yes	

		Dose 3+				
Forecast / Validation Criteria	Min Age	Due	Overdue	Max Age	Series Complete	Comments
Validation	4 weeks after PD			no max	yes	Extra doses, although not recommended, will be validated if given 4 weeks apart.

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MIMS

View shows immunization history for a test client

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eChart

View shows immunization history for a test client

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Panorama

Client view shows immunization history

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Panorama Forecast

Client details

Refresh forecast on click of a button

Status of individual agents

Minimum interval (eligible)

Due date

Examples

Training environment - Demonstration

https://panorama-train.manitoba-ehealth.ca

Potential Benefits of the Forecaster

- Quickly identifies overdue routine immunizations.
- Assists schedule interpretation and improves consistency.
  - Rules incorporate catch-up schedules.
- Identifies invalid immunizations.
- Can be used to identify groups who are eligible or due for vaccines:
  - In schools, creates efficiencies in determining immunization status through upload of class lists.
  - Identifies susceptible individuals who require immunization in outbreaks.

Thanks to…

- Dr. Carol Kurbis
- Joan Wheatley-Bissoon
- The Panorama Project Team

Questions?