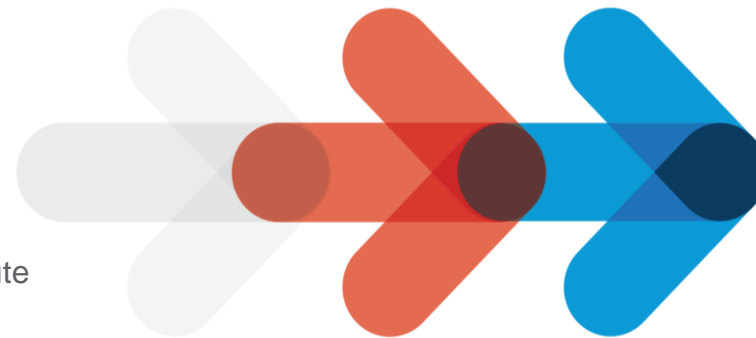


Powering Canada's National Immunization App with SNOMED CT®

SNOMED CT Expo 2017
Bratislava, Slovak Republic
October 19, 2017

Linda Parisien, Standards SME, Canada Health Inforoute
Cameron Bell, Lead, Design and Development, Ottawa Hospital Research Institute
(CANImmunize)





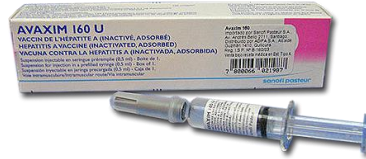
Agenda

- Infoway Immunization Project Scope
 - Using SNOMED CT as a common terminology
 - Outcome
- Lessons learned & challenges
- Examples
- Publication - Infoway's Terminology Gateway
- CANImmunize App
- Mapping the Subsets to GTIN - Canadian Vaccine Catalogue
- CANImmunize Challenges



Using SNOMED CT as a Common Terminology

Recording of product administered



Historic recording

IMMUNIZATION RECORD

Administered at
EDITH A. BOGERT SCHOOL
Upper Saddle River, N. J.

NAME _____
ADDRESS 2 Briar Road

VACCINE ADMINISTRATION	TYPE I	TYPE II	TYPE III
DATE	9/8/63	4/7/64	4/15/64

Immunization forecasting

HPV Vaccine Reminder!
Protect yourself! Get all 3 doses.

1st _____ Date of 1st dose

2nd _____ 1-2 months after 1st dose

3rd _____ 6 months after 1st dose

Call your doctor! Your school health center can give HPV vaccine too!

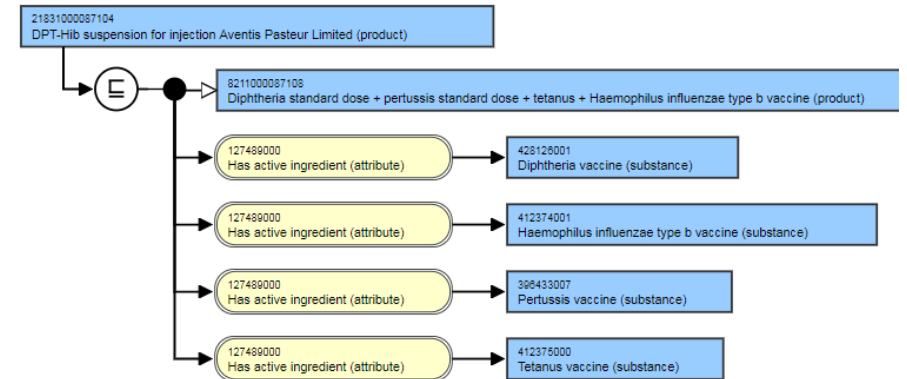
Clinic Phone # _____

Analytics (various levels) to support management of information

Clinician-Friendly Pick-List

Hepatitis A+B vaccine (product)

- HAHB Twinrix GSK
- HAHB Twinrix Junior GSK





Outcome

7 Immunization Subsets

- Vaccine Administered Name Code
- Vaccine Historical Name Code
- Passive Administered Immunizing Agent Code
- Passive Historical Immunizing Agent Code
- Antigens Code
- Immunoglobulins Code
- Vaccine Preventable Diseases

- Immunization Editorial Guideline
- French terms to all Immunization concepts

Now in use by:

- ✓ Public Health Agencies across the country
- ✓ First Nations
- ✓ Canadian Forces





Lessons learned while developing the subsets



Stakeholder engagement

- ✓ *Real* implementation focus
- ✓ Engage key stakeholders early in the process
 - Domain experts
 - Ministry of Health Ontario
 - Public Health Agency of Canada (PHAC)
 - Panorama work groups
 - Health Canada





Lessons learned while developing the subsets



Clear scope with tangible results

- ✓ Iterative process
- ✓ Key business requirements
 - Record Administration of Vaccines (current and past)
 - Support Inventory Management
 - Support Immunization Forecasting



Lessons learned while developing the subsets



Document

- ✓ Authoritative sources
- ✓ Decision rationale
- ✓ Editorial Guidelines

Immunization and Public Health Surveillance

Configuration
PANORAMA

IMMUNIZATION MODULE:

Add Immunization

* Immunizing Agent 1: Men-C-ACYW-135

* Date Administered: 2013 04 26
yyyy mm dd

* Time Administered: : EDT
hh mm

Age at Administration: 11 yrs 0 mos

Historical: YES NO

Holding Point Name: -No Data Available-

* Lot Number: U4368AB Exp. 2014/01/24

Display Expired and Recalled Lots

Trade Name: Men-C-ACYW135 Menactra SP

Manufacturer:

Consent Ignore
Policy dictates that consent must be entered for ignoring product.
* Ignore: --select--

The Vaccine Lot Number associates the SNOMED CT preferredTerm and the Concept referencedCode for the administered vaccine.
The system validates the doses and schedule for each Tradename vaccines.

INVENTORY MODULE:

View Product Lot Details

Lot Type: New-Lot

Lot Number: U4368AB

Original Expiry Date: 2014 Jan 24

Current Expiry Date: 2014 Jan 24

Lot Status: Active

Product Trade Name: Men-C-ACYW135 Menactra SP

Product Alternate ID: 6571-3360-1

Catalogue Item Name: Menactra (5ds-Gr7)

Catalogue Item Code: 28

*** Level 6 - Trade Product**

Catalogue Item Description: Meningococcal (Men-C-AC) * Current Catalogue Item Status: Active

Created By: PERMISSIONS, ALL Created Date: 2012 Oct 11

* Catalogue Item Name: Menactra (5ds-Gr7) Catalogue Code: 28

CCI Code: Product Budget Code:

* Product Trade Name: C-ACYW135 Menactra SP

CHI REFERENCE SET:

referencedCode	conceptName	enpreferredTerm
7511000087107	Menactra solution for injection Sanofi Pasteur Inc. (product)	Men-C-ACYW135 Menactra SP

Source: Ontario Public Health Integrated Solutions Branch



Challenges : Maintenance

- Domain expertise to maintain the subsets
 - No integrated process between the Public Health Agency and Infoway for updates
 - Translation of Antigens
 - Discrepancies between different authoritative sources
-
- Solution: Workgroup created with Public Health and Immunization expertise
 - Mandate:
 - Provide guidance for request for change
 - Provide guidance pertaining authoritative documentation



Publication

Welcome to Terminology Gateway

Browse, download and leverage the terminology used in Canada

[Quick Demo](#)

Get Started

 [Subsets](#)

Access to the human readable subsets

 [pCLOCD](#)

 [SNOMED CT](#)

Access to the SNOMED CT Canadian Edition

 [PrescribelT™](#)

 [Canadian Clinical Drug Data Set](#)

Access to Jurisdiction's artefacts

 [Additional Terminology Content](#)

Access to the Terminology REST API

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Terminology Services REST API / FHIR Terminology Services API



CANImmunize

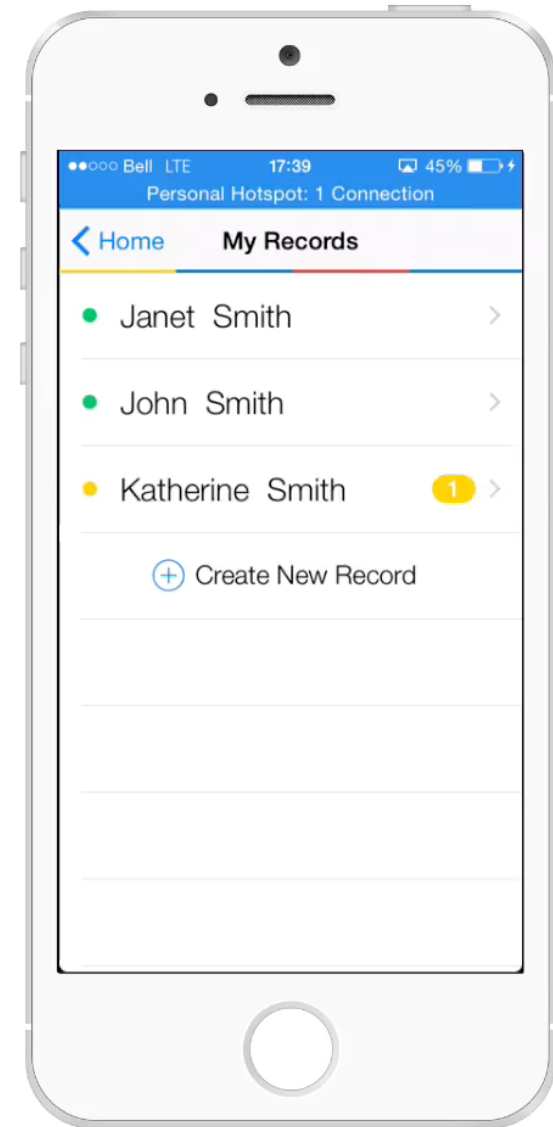
- Personal immunization record app
- Sends reminders when it's time to get vaccinated
- Downloaded by over 200,000 Canadians





The Need for Standards

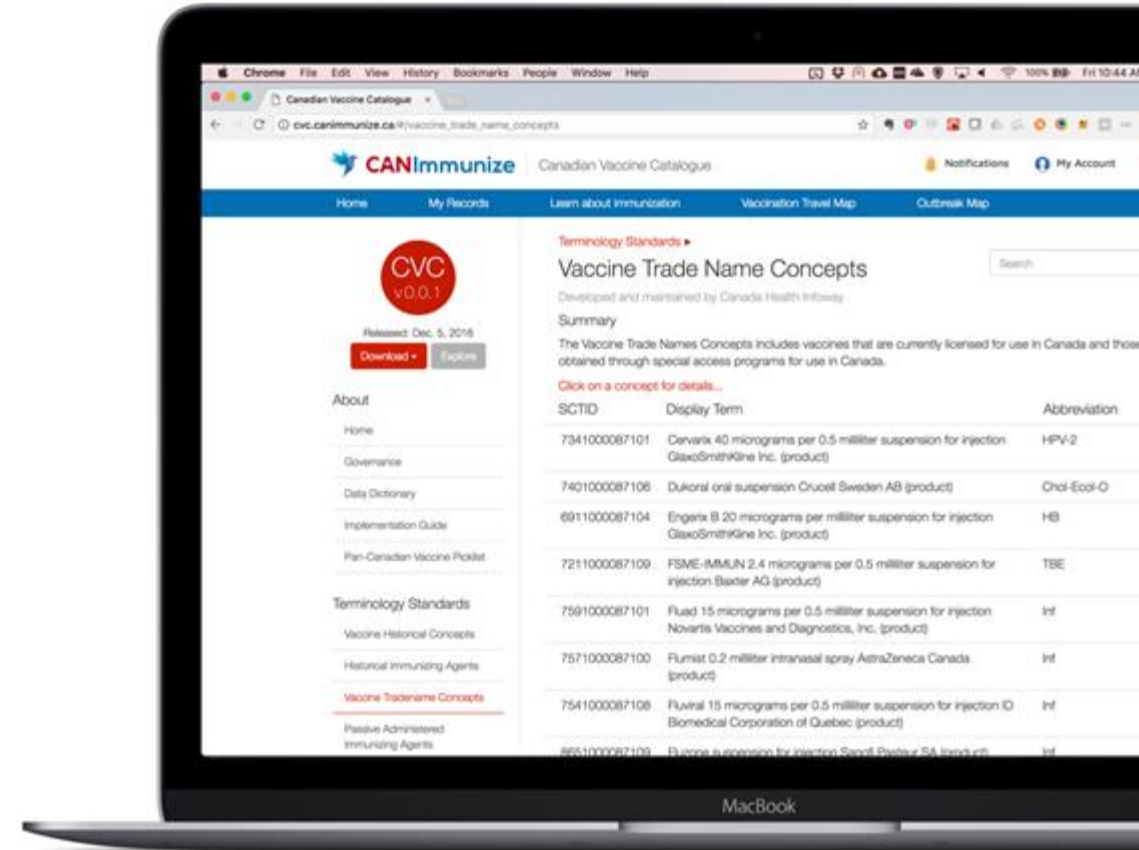
- For app to be most useful, it needs to exchange information with public health immunization information systems
- Adopted the Pan-Canadian Immunization Reference Sets to facilitate interoperability
- On top of the clinical/surveillance benefit, we found that users want to record the tradename of vaccines
- The existence of the Pan-Canadian Tradename Reference Set made this easy to include
- Using vaccine barcodes to speed up data entry requires a link between GTIN and SNOMED CT





The Canadian Vaccine Catalogue

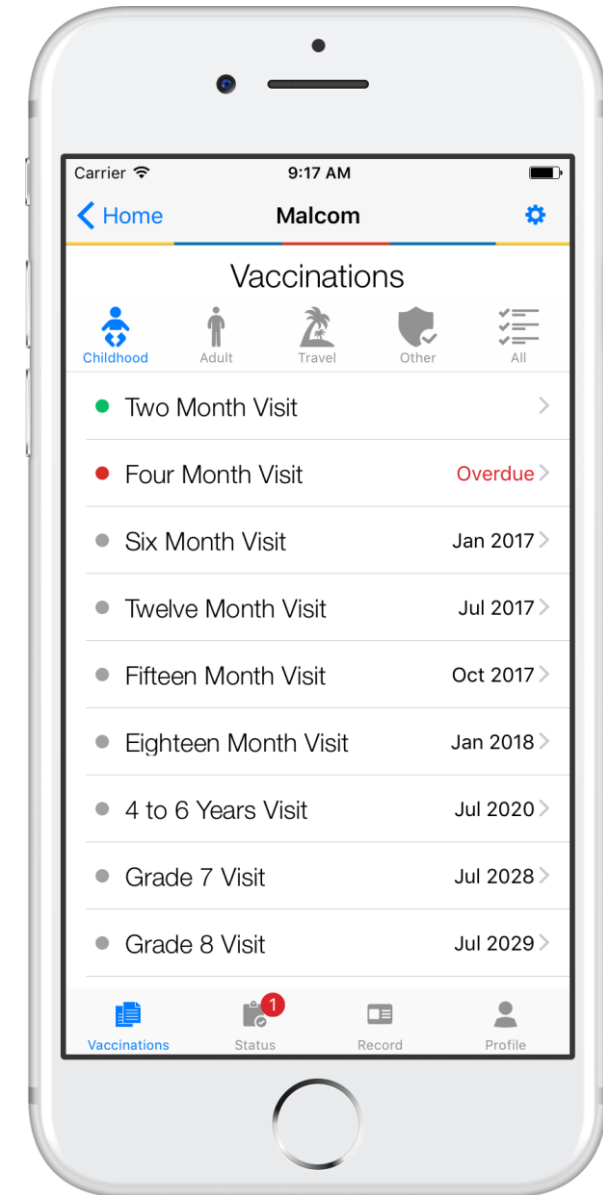
- Vaccine barcoding is important to improving data quality and reducing data entry time; both in clinical and supply chain settings
- The catalogue links variable product data (GTIN, Lot Number, Expiry Dates) to SNOMED CT identifiers
- Data is made available through an HL7 FHIR API
- This allows digital applications (electronic medical records, immunization information systems, apps) to improve data quality using standardized picklists – replacing free text entry of GTINs and lot numbers





Challenges Developing the Catalogue

- GTINs, lot numbers, and expiry dates are issued by manufacturers, and so strong incentives need to be in place for those GTINs to be reported
- Establishing governance model for maintenance and quality assurance of GTIN/SNOMED CT linkage
- The SNOMED CT GTINs Linkage Principles published by the SNOMED CT community have been a helpful resource in conceptualizing this system





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Health Santé
Infoway du Canada

Questions

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Thank You!