Canada Health Infoway

Standards 101

Health Information Exchange Standards
Virtual Mini-Conference

Day-2 May19

Linda Parisien, SNOMED CT Manager
Canada Health Infoway

About Me

SNOMED CT Manager, National Release Centre, Canada Health Infoway

Background:

- Health Records Administrator

- Certified Terminology Standards Specialists (CTSS)

- Doing a Master of Industrial Engineering - Health Systems Engineering option

- Teaching Terminology standards, tooling and interoperability at University of Sherbrooke

- ICD-10-CA and CCI implementation in Quebec

- Translation coordination of SNOMED CT Canadian Edition

- Local, Regional, Provincial and pan-Canadian implementation experience

- Represent Canada on a number of International Work groups and Committees

Canada Health Infoway

Plan

- Who we are

- What services we offer

- The Health Terminologies Standards

- What it means in practice

- What is on the horizon

- How to get involved

About Infoway and The Health Standards Team

About Infoway

- Established in 2001

- Independent, not-for-profit corporation

- Equally accountable to 14 federal, provincial and territorial governments through the Members of the Corporation (f/p/t Deputy Ministers of Health)

- Independent Board of Directors appointed by the Members

Canada Health Infoway

Infoway's Mandate

- **National leadership** role in accelerating collective digital health efforts

- Ensuring a pan-Canadian **vision, strategy, architecture and plan**

- Ensuring **national standards** and common understandings about **privacy and security**

Canada Health Infoway

Who We Are

WE MOBILIZE CANADA'S HEALTH CARE STAKEHOLDERS TOWARDS A REIMAGINED FUTURE.

Vision

Healthier Canadians through innovative digital health solutions

Mission

Infoway will bring a pan-Canadian focus to: improving the patient experience, improving the health of populations, and unlocking value for the health system

Canada Health Infoway

Infoway Focus

- PrescribeIT excellence and adoption

- Pan-Canadian interoperability across all F/P/T health systems
    - Availability of health data in a common format
    - Secure exchange of data in health care settings
    - Access to Canadians' health data in a digital, movable form

Interoperability Enablement and Standards

Change Management

National Procurement Support

Privacy and Cyber Security

Strategic Investments

Pan-Canadian Coordination

PrescribeIT®

Vendor Management and Certification

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Canada Health Infoway

Our Partners and Collaborators

Governments

Provinces and territories

Health care organizations

Industry

Clinicians

Patients

Canada Health Infoway

Benefits from Infoway's Digital Health Investments

An estimated

$43 billion in benefits since inception from Infoway's investments in:

connected health information (e.g., diagnostic imaging, drug and laboratory information systems), point-of-care systems (e.g., electronic medical records, telehealth) and virtual care (e.g., video and secure messages). An increase of **$7.4 billion** in the past year.

Canada Health Infoway

About the Health Standards Team

A hierarchical organization chart. At the top is "Virtual Care Program" with "Director, Interoperability Standards" branching off. Below are three managers:

- **SNOMED CT Manager**
  - Senior Standards Specialist
  - Translator - Revisor (dashed box)
  - Clinical expert (dashed box)
- **Standards Operations Manager**
  - Senior Standards Specialist
  - Senior Standards Specialist & InfoCentral
- **FHIR and Technical Interoperability Manager**
  - Standards Specialist
  - Standards and technical Interoperability Developer (dashed box)

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The Standards Services We Provide

Standards at Infoway

Canada Health Infoway

Direct Services to Canadians

Standards Content Development

Licensing and Distribution
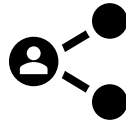
SDO Affiliates, Secretariat Support, Ballots, for HL7 Canada, DICOM, IHE Canada, ISO/TC215

Canada Health Infoway

Standards Content Development

Licensing and Distribution

Canada Health Infoway

Services to the Communities of Practice

Education & Training

Webinars

Collaboration Groups, Community of Practice

Communications, promotion and social media

Canada Health Infoway

InfoCentral: A Collaboration Hub

Working Groups

Communities

SNOMED CT CA/ SNOMED CT

Infoway's <u>Standards Resources for COVID-19</u> **contains regularly updated information on terminology changes in support of the Coronavirus outbreak.**

SNOMED CT is the largest and most comprehensive clinical reference terminology in the world.

The SNOMED CT Canadian Edition* contains content that is specific to Canadian use contexts and is maintained by Canada Health Infoway. It is released in March and September of each year.

The International Release of SNOMED CT contains international content and is maintained by <u>SNOMED International</u> released on January 31 and July 31 of each year.

⊙ **Download Latest Releases**

pCLOCD/ LOINC

COVID-19 Surveillance: Single source for all <u>SARS-CoV-2/COVID-19 LOINC content</u>**, includes both released and pre-release terms. Content is updated as new terms are created and pre-released.**

Infoway's <u>Standards Resources for COVID-19</u> **contains regularly updated information on terminology changes in support of the Coronavirus outbreak.**

LOINC® is the largest reference terminology used for Laboratory and Clinical observations in Canada today. The pan-Canadian LOINC Observation Code Database (pCLOCD) is a Canadian constraint of the larger LOINC terminology and includes example pan-Canadian names for jurisdictional lab viewers and recommended units of measure for use in Canada.

pCLOCD releases contains codes that are specific to use in Canada and is maintained by Canada Health Infoway. It is released on March 31 and September 30 of each year.
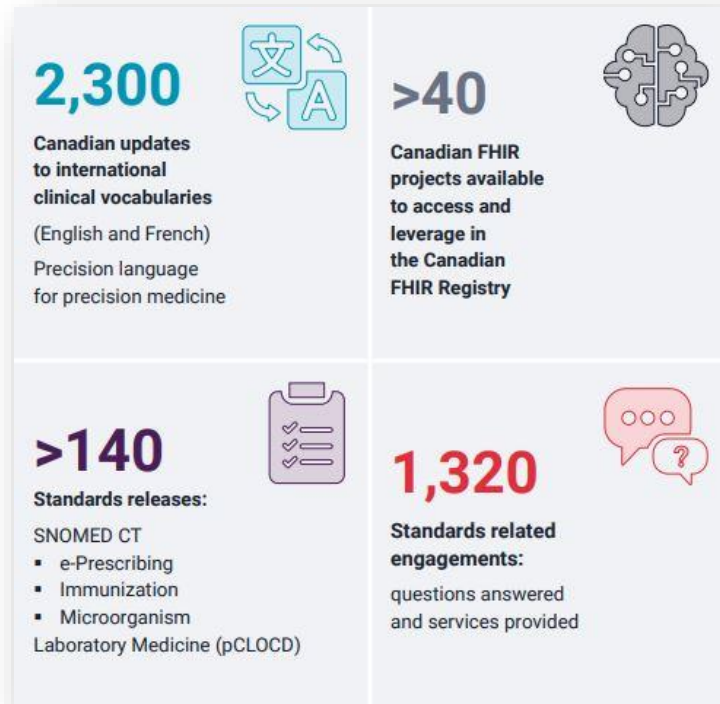
Canada Health Infoway

Education

- SNOMED International, Regenstrief Institute, HL7 International

- Infoway ongoing Webinars

- University of Victoria

- CHIMA and CTSS credential

- Training and refresher on :

  - Tooling and Standards

  - Requests for Change and Implementation questions

Canada Health Infoway

Some 2021-2022 Canadian Interoperability Metrics

2,300

Canadian updates to international clinical vocabularies

(English and French)

Precision language for precision medicine

>40

Canadian FHIR projects available to access and leverage in the Canadian FHIR Registry

>140

Standards releases:

SNOMED CT
- e-Prescribing
- Immunization
- Microorganism

Laboratory Medicine (pCLOCD)

1,320

Standards related engagements:

questions answered and services provided

Canada Health Infoway

Health Terminology Standards

Pan-Canadian constraint of Laboratory LOINC

- Infoway: Canada's National Release Centre for pCLOCD (pan-Canadian LOINC Observation Code Database)

- Largest laboratory terminology in the world

- US English and Canadian French

- Recommended units of measure (UCUM)

- Release dates: January 31 and July 31 each year

Canada Health Infoway

pan-Canadian LOINC Observation Code Database Metrics

Pan-Canadian LOINC Observation Code Database
March 2022 Release

38,708 total records, including:

136 new records added in English and French

184 records modified in English and French
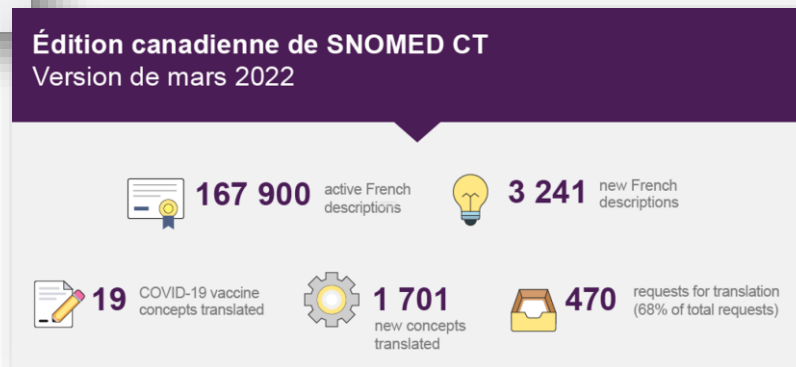
Download on Terminology Gateway!

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pCLOCD
LOINC® in Canada

Canada Health Infoway
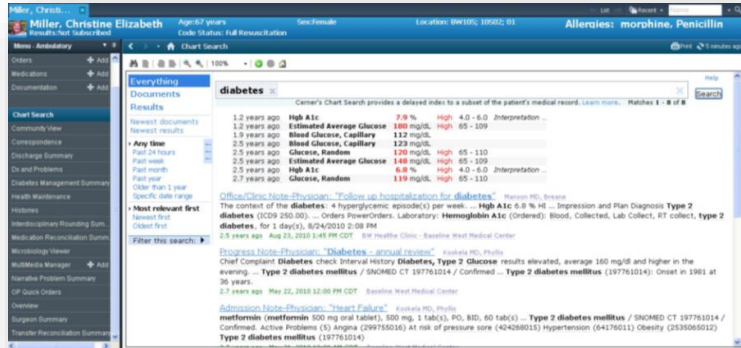
Canadian Edition of SNOMED CT

- Infoway: Canada's National Release Centre for SNOMED CT

- Largest clinical reference terminology in the world

- US English and Canadian French

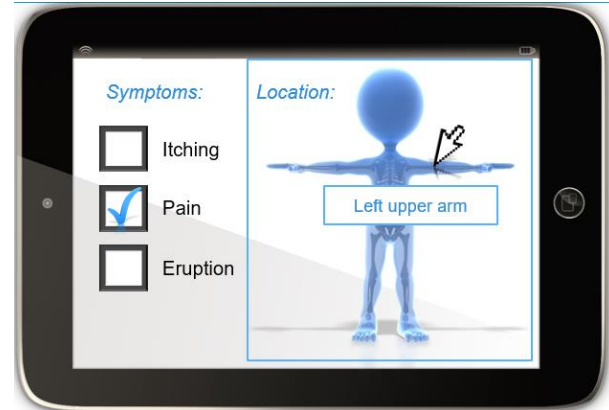- Release dates: Sept 30 and March 31 each year (Canadian and International content)

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Canadian Edition of SNOMED CT Metrics

SNOMED CT Canadian Edition
March 2022 Release

- 41 subsets maintained
- 683 requests for change from Canadian stakeholders
- 135 new concepts
- 16 new COVID-19 vaccine concepts
- 210 concepts promoted to international
- 3 new subsets

Édition canadienne de SNOMED CT
Version de mars 2022

- 167 900 active French descriptions
- 3 241 new French descriptions
- 19 COVID-19 vaccine concepts translated
- 1 701 new concepts translated
- 470 requests for translation (68% of total requests)

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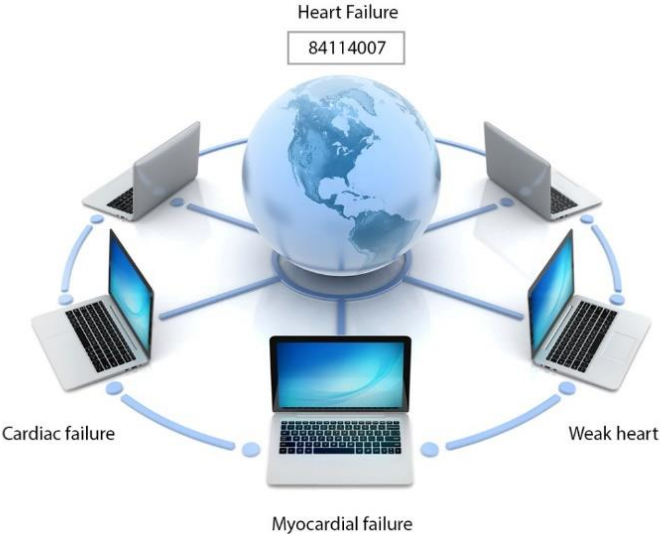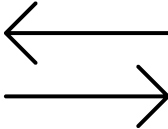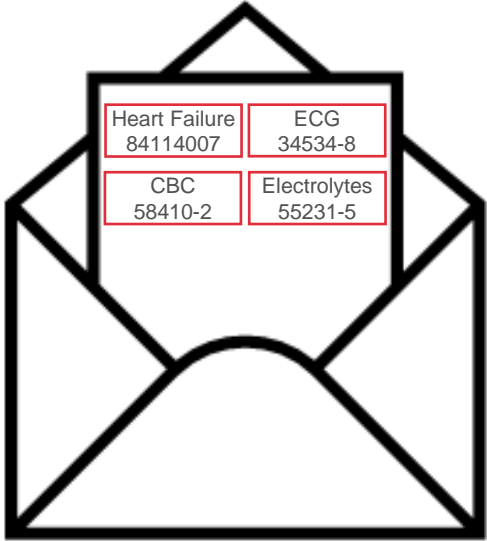
For Data Capture

Codes for individual observations

2349-9 Glucose (Presence) in Urine
61644-1 Are you able to jump up and down
8301-4 Body height
32433-5 Physical findings of Gait

Codes for collections of observations (panel, batteries and documents)

58410-2 Complete blood count (hemogram) panel
62068-2 PROMIS pediatric item bank - asthma
35095-9 Body temperature panel
18842-5 Discharge Summary

CANADA HEALTH INFOWAY, STANDARDS WEBINAR SERIES,
INTRODUCTION TO LOINC & PCLOCD, 2019

SNOMED INTERNATIONAL, SNOMED CT DATA ENTRY, 2016

For Sharing Information

Heart Failure 84114007	ECG 34534-8
CBC 58410-2	Electrolytes 55231-5

Heart Failure
84114007

Cardiac failure

Weak heart

Myocardial failure

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HL7 Standards: Digital Information Exchange

FHIR (Fast Healthcare Interoperability Resources)
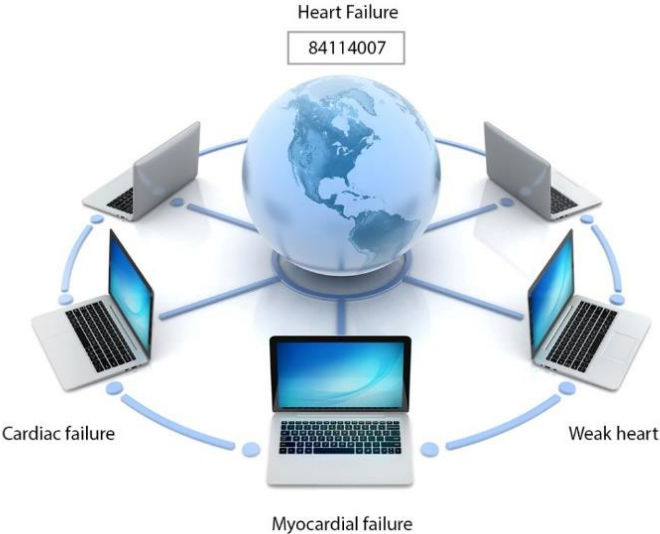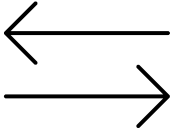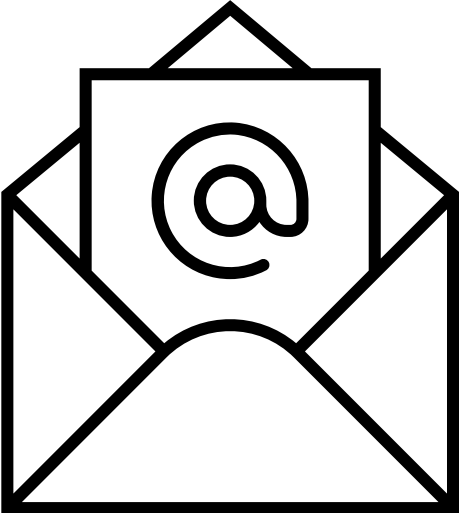
What This Means In Practice

Standards Type In Interoperability

Interoperability

Organizational

Terminology (Data) — Semantic

Exchange (Technical) — Structural

Foundational

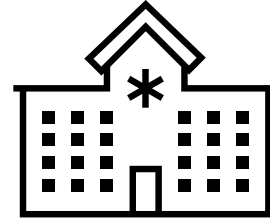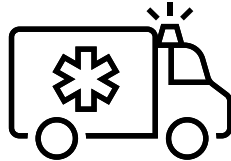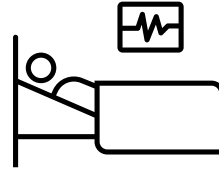REFERENCE: IMPRIVATA.COM

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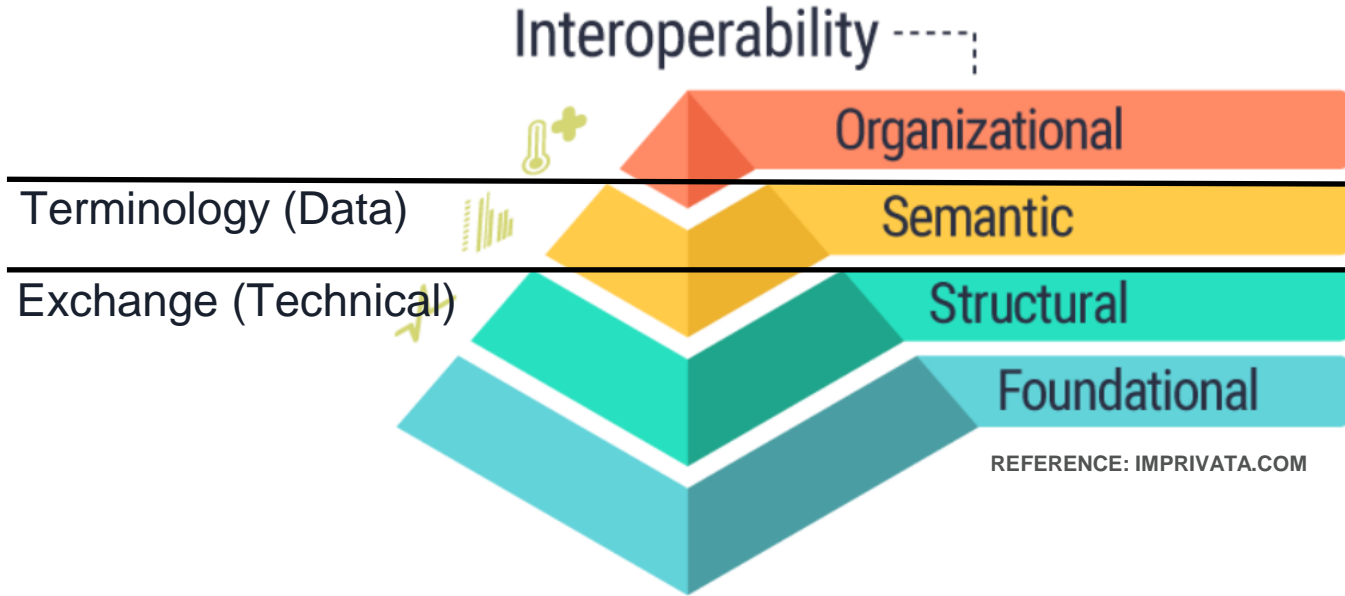
Lack of Interoperability

Poor communication

Inefficiencies

Duplicated efforts

Delays

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Data Driven by Clinical Requirements

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Maturity Level

SNOMED CT Maturity Framework

Implementation Level		
Level 5	**Advanced Use**	
⚙️	SNOMED CT is recorded directly in the health records, and used as an ontology. Support for expressions, expression constraints (ECL) and the Machine Readable Concept Model (MRCM) may be provided.	
Level 4	**Semantic Network**	
⬡	SNOMED CT is recorded directly in the health record, and used as a semantic network of relationships with simple ECL queries. All defining relationships may be traversed to support various system functions.	
Level 3	**Hierarchy**	
⛁	SNOMED CT is recorded directly in the health record, and used as a hierarchy of codes to support various system functions.	
Level 2	**Simple Code System**	
≔	SNOMED CT is recorded directly in the health records, and used as a flat list of codes. Support for translated terms or multiple synonyms may also be provided.	
Level 1	**Mapping to SNOMED CT**	
⇄	SNOMED CT is not recorded directly in the health record. SNOMED CT is used indirectly by mapping to SNOMED CT.	
Level 0	**Plans to Use SNOMED CT**	
☰	SNOMED CT is not yet used within the health record, but there are plans to do so. Clinical information is currently stored as free text or using local or vendor specific code systems.	

Canada Health Infoway

The Journey

Canada Health Infoway

PrescribeIT® Canada's Electronic Prescription Service

PrescribeIT® is Canada's national, not-for-profit e-prescribing service that provides safer and more effective medication management

- Electronic transmission of prescriptions electronically from EMR to the patient's pharmacy of choice
- Create Rx, Renew Rx, Rx Status (dispensed, cancelled etc)
- It is secure: it protects the patients' personal information from being sold or used for commercial activities

Fewer lost/damaged prescriptions

Improved medication safety

Decreased risk of privacy breaches due to fax transmission issues or unsecured email

Increased convenience and saved time and travel

https://www.Prescribeit.ca/

Canada Health Infoway

Canadian Clinical Drug Data Set

- Canada Health Infoway partnered with Health Canada to create a computable and human readable drug data set that is now owned and managed by Health Canada.

- Allows systems to exchange drug data using common drug identifiers

- Supported by knowledge base vendors and clinical systems connected to PrescribeIT®
  - Making prescribing safer for patients
  - Making clinical workflows more efficient

https://infocentral.infoway-inforoute.ca/en/standards/canadian/ccdd

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Patient Summary-CA Specifications

What is it?

- The Pan-Canadian Patient Summary Interoperability Specification is an implementable, testable specification, based on the IHE International Patient Summary specification and HL7 IPS IG

- Defines building blocks (both: data model and interoperability) to create and share condition-independent and specialty-agnostic patient summaries

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Content Data Model

Purpose

- Defines the Patient Summary-CA content data model and provides the required Implementation Guidance

- This section of the specification defines each data element, cardinality, data type, constraints, and code system references - all of the details needed for two systems to be semantically interoperable with each other

Standards

- SNOMED CT – CA Edition
- LOINC – pCLOCD
- panCanadian Valuesets
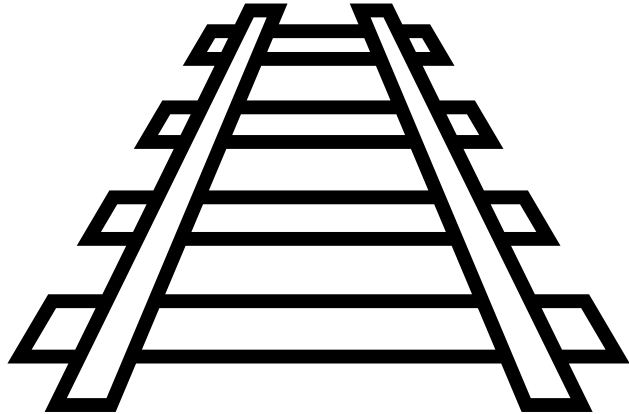- Others

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Canadian Implementations
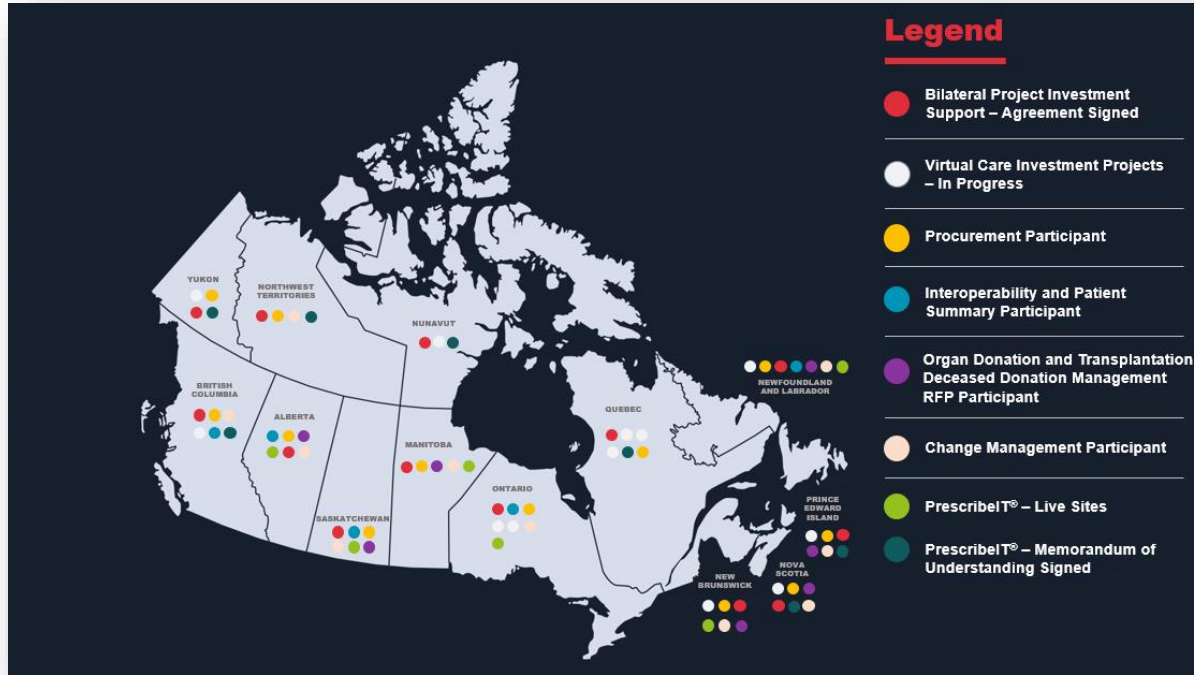
What is on the Horizon

Virtual Care in Canada

- Strengthening Data and Information

- Health Standards Governance

- Partnerships

- Systems Integration and Collaboration

- Improve interoperability

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How to Get Involved

How To Get Engaged And Stay Tuned

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Digital Health Dispatch |
Le Babillard de la santé numérique

STANDARDS NEWS

March 2022 Canadian Edition of SNOMED CT is Now Available

The March 2022 Canadian Edition (CA Edition) is harmonized with the SNOMED International February 2022 monthly release. Content includes COVID-19 vaccine related concepts, updated immunization concepts, new French translations, and new concepts requested by Canadian stakeholders to support diverse implementation projects across the country.

Canada Health Infoway

Quick links

- InfoCentral: https://infocentral.infoway-inforoute.ca/en/

- PrescribeIT: https://www.prescribeit.ca/

- Virtual Care: https://www.infoway-inforoute.ca/en/digital-health-initiatives/virtual-care

- Organ Donation and Transplantation: https://www.infoway-inforoute.ca/en/digital-health-initiatives/organ-donation-transplantation-data-management

- Health Terminologies Community: https://infocentral.infoway-inforoute.ca/en/collaboration/communities/health-terminologies

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Questions?

Thank you!

Standards@Infoway-inforoute.ca

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