Canada Health Infoway

Shared Pan-Canadian Interoperability Roadmap

Projectathon 2023

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Context: Working together to improve health care for Canadians

- The Government of Canada will also commit to dedicated action to advance and integrate our shared health priorities, and support collaboration, in areas such as immigration, credential recognition, official language minority communities and **data infrastructure and standards**. This includes the following additional funding:
  - $505 million over 5 years to CIHI, **Canada Health Infoway** and federal data partners to work with provinces and territories on developing new health data indicators, to support the creation of a Centre of Excellence on health worker data, to **advance digital health tools and an interoperability roadmap**, and to underpin efforts to use data to improve safety and quality of care.

Shared Health Indicators and Results

- The federal government is prepared to measure and report annual progress on the following common indicators with disaggregated data and is asking the provincial and territorial governments to do the same as part of their data commitment.
  - Percentage of Canadians who can access their own comprehensive health record electronically; and
  - Percentage of family health service providers and other health professionals (e.g., pharmacists, specialists, etc.) who can share patient health information electronically.

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What is an Interoperability Roadmap?
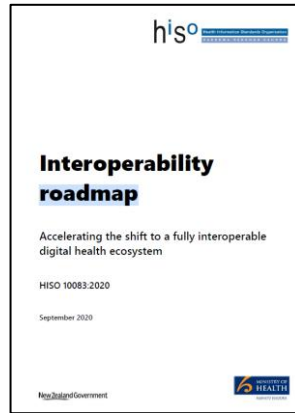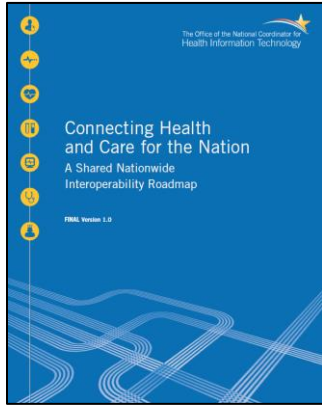
- Many countries have been publishing national digital health interoperability roadmaps as a means to **signal to the market the strategic direction towards which their digital health ecosystems are evolving**

- **Roadmap usually have a timeframe of 5-10 years with a long term vision with focus on near-term wins; they defines stages** as digital transformation is not a big-bang process, public and private sector players can only move in a multistage fashion to achieve progressive levels of maturity.

- These roadmaps include:

  - **core interoperability building blocks that are necessary to advance interoperability** (e.g. reference architectures, data standards, trusted exchange frameworks, digital identity, patient/provider access), and;

  - **common targeted initiatives** that help to advance health system interoperability and achieve outcomes.

  - the **health system, business and clinical benefits and outcomes** that will be derived
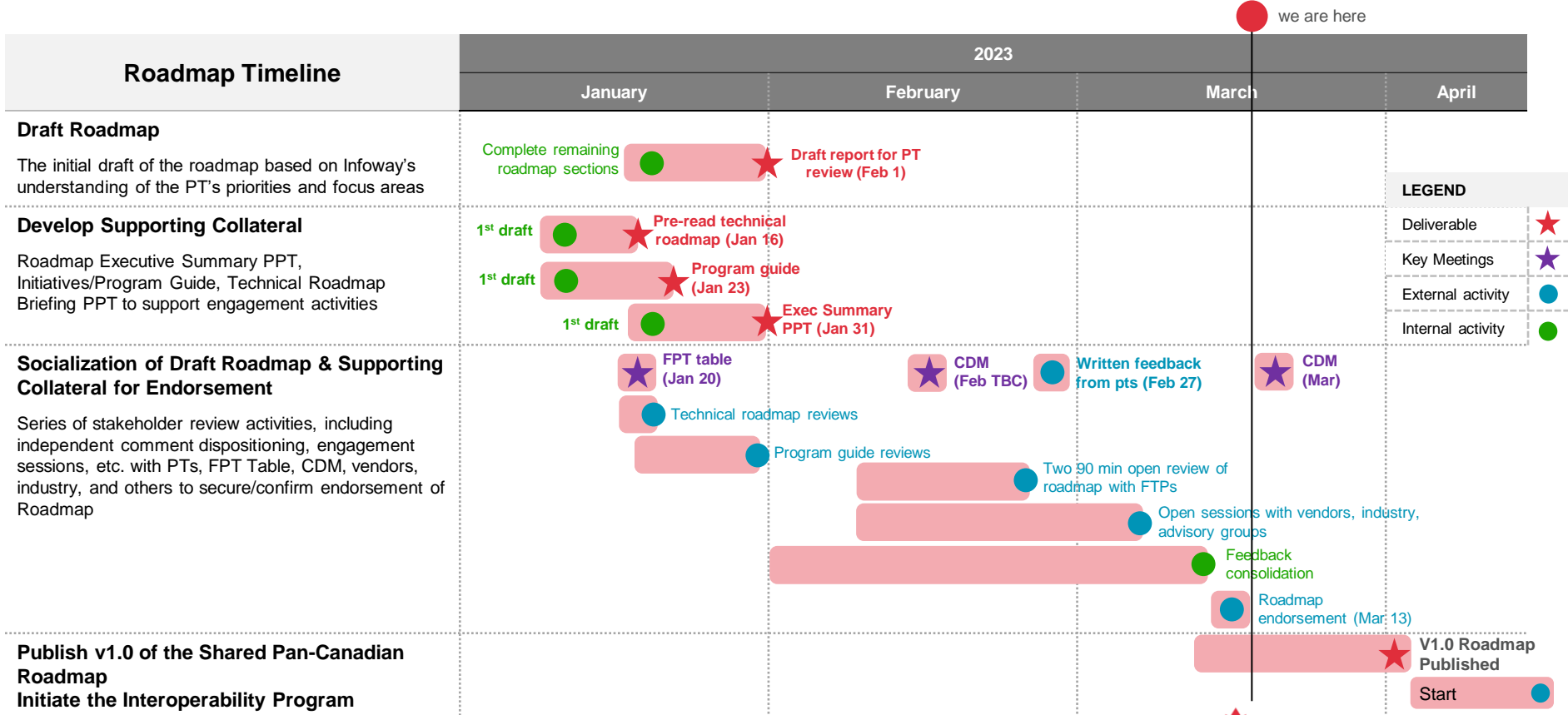
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A Common, Multi-Year Vision
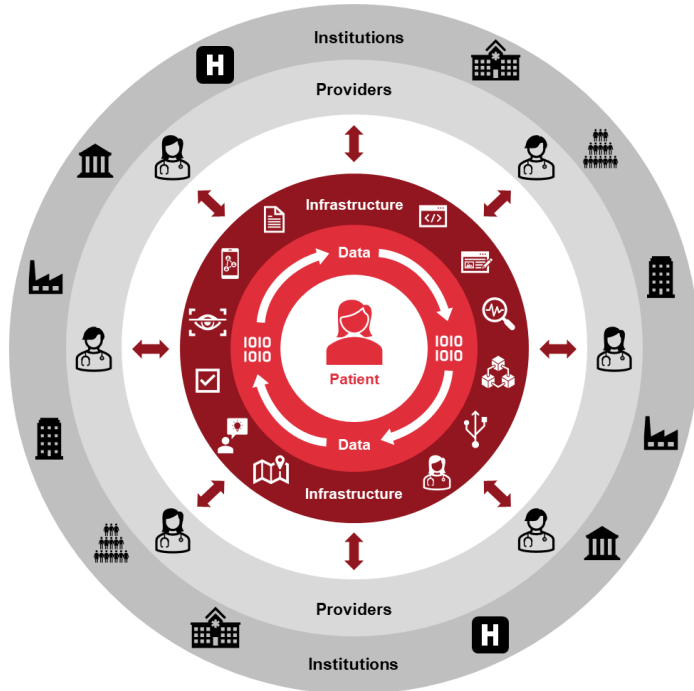
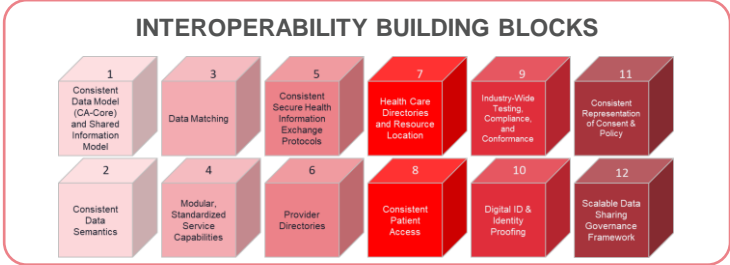Over the next five years, Infoway will be committed to driving value for all Canadians through:
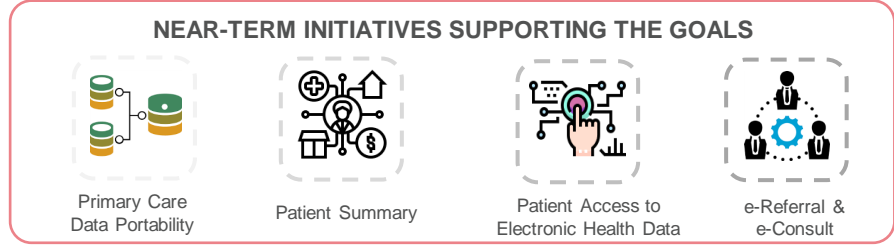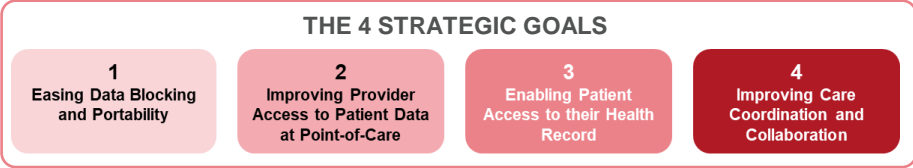
1. Access to health information for all Canadians

2. A modernized health system built on connected care

3. Digital health innovation by and for all Canadians.

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Pan-Canadian Interoperability Roadmap: *Q4 Activities & Milestones*

we are here

Roadmap Timeline	2023			
	January	**February**	**March**	**April**
Draft Roadmap The initial draft of the roadmap based on Infoway's understanding of the PT's priorities and focus areas	Complete remaining roadmap sections ● / Draft report for PT review (Feb 1) ★			
Develop Supporting Collateral Roadmap Executive Summary PPT, Initiatives/Program Guide, Technical Roadmap Briefing PPT to support engagement activities	1st draft ● / Pre-read technical roadmap (Jan 16) ★ 1st draft ● / Program guide (Jan 23) ★ 1st draft ● / Exec Summary PPT (Jan 31) ★			
Socialization of Draft Roadmap & Supporting Collateral for Endorsement Series of stakeholder review activities, including independent comment dispositioning, engagement sessions, etc. with PTs, FPT Table, CDM, vendors, industry, and others to secure/confirm endorsement of Roadmap	FPT table (Jan 20) ★ Technical roadmap reviews ● Program guide reviews ●	CDM (Feb TBC) ★ / Written feedback from pts (Feb 27) ● Two 90 min open review of roadmap with FTPs ● Open sessions with vendors, industry, advisory groups ● Feedback consolidation ●	CDM (Mar) ★ Roadmap endorsement (Mar 13) ●	
Publish v1.0 of the Shared Pan-Canadian Roadmap **Initiate the Interoperability Program**				V1.0 Roadmap Published ★ Start ●

LEGEND

Deliverable	★
Key Meetings	★
External activity	●
Internal activity	●

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A Comprehensive Approach To Advance Pan-Canadian Interoperability

THE 4 STRATEGIC GOALS

1 Easing Data Blocking and Portability

2 Improving Provider Access to Patient Data at Point-of-Care

3 Enabling Patient Access to their Health Record

4 Improving Care Coordination and Collaboration

NEAR-TERM INITIATIVES SUPPORTING THE GOALS

- Primary Care Data Portability
- Patient Summary
- Patient Access to Electronic Health Data
- e-Referral & e-Consult

TOP DOWN

BOTTOM UP

INTEROPERABILITY BUILDING BLOCKS

1. Consistent Data Model (CA-Core) and Shared Information Model
2. Consistent Data Semantics
3. Data Matching
4. Modular, Standardized Service Capabilities
5. Consistent Secure Health Information Exchange Protocols
6. Provider Directories
7. Health Care Directories and Resource Location
8. Consistent Patient Access
9. Industry-Wide Testing, Compliance, and Conformance
10. Digital ID & Identity Proofing
11. Consistent Representation of Consent & Policy
12. Scalable Data Sharing Governance Framework

Top-Down, Bottom-Up Approach

STRATEGIC GOALS

INITIATIVES SUPPORTING THE GOALS

TOP DOWN

BOTTOM UP

INTEROPERABILITY BUILDING BLOCKS

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Pan-Canadian Interoperability Strategic Goals

1	2	3	4
Reducing Data Blocking and Easing Portability	**Improving Provider Access to Patient Data at Point-of-Care**	**Enabling Patient Access to their Health Record**	**Improving Care Coordination and Collaboration**

Objectives:

1. Advocate for legislative and/or policy changes to support the elimination of data blocking in Canada.

2. Establish a standardized Pan-Canadian healthcare data set and new specifications to enable data portability.

Objectives:

1. Enable providers, via their point of care solutions, to access relevant patient data

2. Allow point of care solutions to contribute relevant data about a patient into clinical repositories.

Objectives:

1. Enable patients to access their longitudinal health record in a seamless manner.

2. Empower patients with the literacy to be able to understand and interpret their health information through better data standardization.
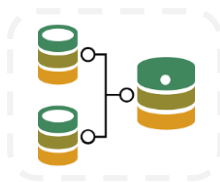
Objectives:

1. Foster efficient and secure exchange of health information across the entire care continuum.

2. Facilitate ubiquitous inter-professional collaboration through secure electronic communications across vendor solutions.

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# Initial Set of Initiatives Supporting the Strategic Goals

1. Primary Care Data Portability

Initiative will initially focus on developing a primary care data set (part of the broader pan-Canadian healthcare data set (CA-Core)) that represents the standardized set of health data classes and constituent data elements for interoperable health information exchange

2. Patient Summary

Pan-Canadian Patient Summary (PS-CA) will allow care solutions to contribute pertinent health information into clinical repositories (e.g., provincial/regional EHR, CDR, PHR, etc.) to improve health outcomes and reduce administrative burden for clinicians
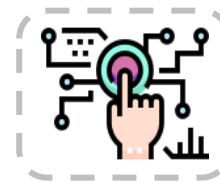
3. Patient Access to Electronic Health Data

Many Jurisdictions are already enabling patient access to their patient record, mostly through provincial, hospital and private care portals.
Through this Patient Access initiative, we will work towards enriching the information available to patients, aspiring to enable access to full longitudinal health record
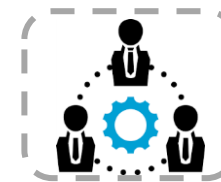
4. e-Referral & e-Consult

Establishing pan-Canadian specification will streamline referrals (patients being referred to specialists) and consults (physicians consulting specialists for their expertise) between interoperable systems

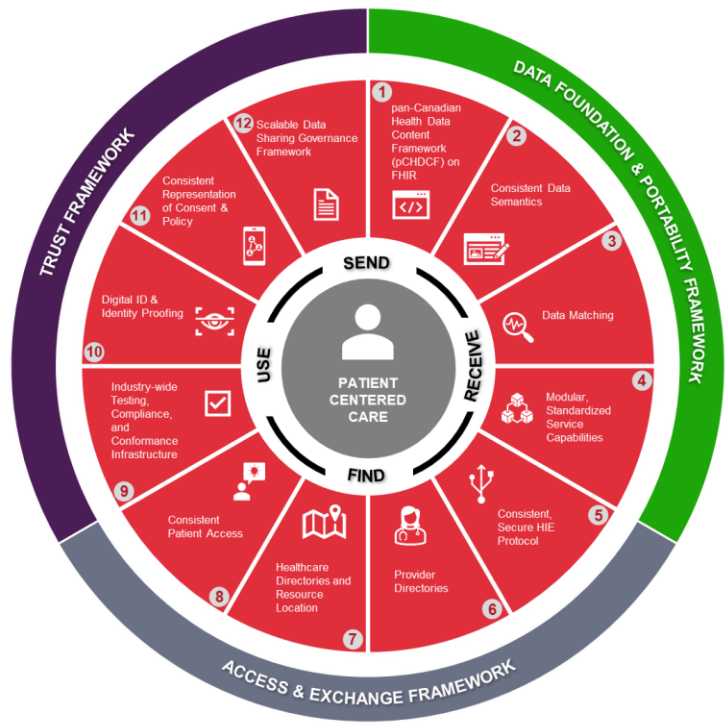Canada Health Infoway

The Building Blocks Of Interoperability

The initial set of building blocks will be continually developed over the next 5 years based on:

i. A series of initiatives and programs that are meaningful and aligned to jurisdictional priorities

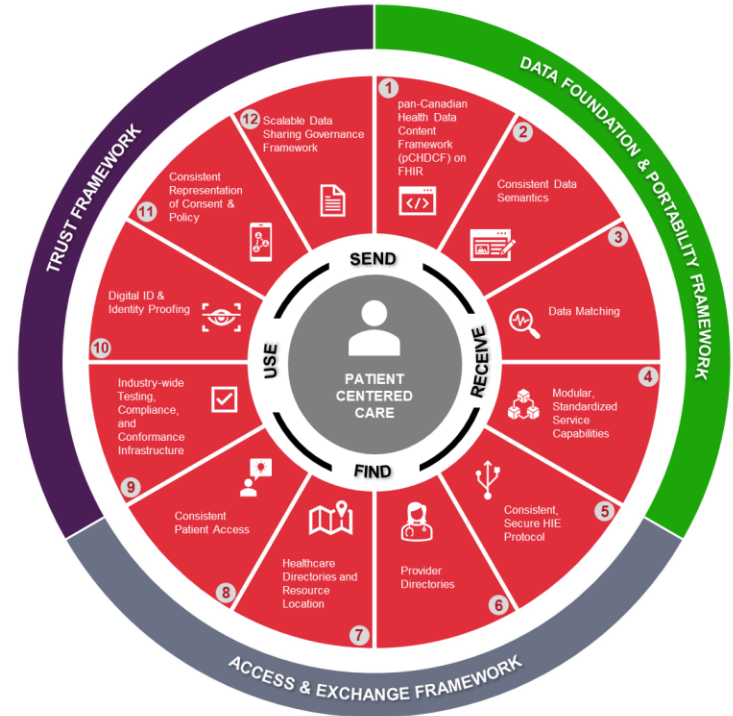ii. The foundational investments that must be made to satisfy programmatic needs and dependencies in the future

The building blocks were identified and grounded in 3 core frameworks that support the entire array of top-down functionalities desired:

1. **Data Foundation and Portability Framework:** Will create a shared data foundation that is both patient-focused and internationally aligned, driving towards a single, extensible approach, encompassing a referenceable data model, appropriate guidance around semantic data components, minimal mandatory data assets, and the appropriate clinical guidance

2. **Access and Exchange Framework (Data and Service):** This reference architecture driven, conformance assessed, technical framework will define the standard components of the health technology ecosystem. At minimum, this framework will cover access, services, and information exchange as core functionalities

3. **Trust Framework:** Will establish and build consensus on auditable business, technical, and legal rules that create the go-to guide for what participants in shared digital health systems need for electronic health systems to be able to connect and share with each other in the way that meets the needs and expectations of Canadians

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Achieving a World-Class Interoperable System

Interoperability Roadmap Building Blocks

4	**MODULAR, STANDARDIZED SERVICE CAPABILITIES**	

+

9	**INDUSTRY-WIDE TESTING, COMPLIANCE, AND CONFORMANCE**	

TRUST FRAMEWORK

DATA FOUNDATION & PORTABILITY FRAMEWORK

ACCESS & EXCHANGE FRAMEWORK

SEND
RECEIVE
FIND
USE

PATIENT CENTERED CARE

1 pan-Canadian Health Data Content Framework (pCHDCF) on FHIR
2 Consistent Data Semantics
3 Data Matching
4 Modular, Standardized Service Capabilities
5 Consistent, Secure HIE Protocol
6 Provider Directories
7 Healthcare Directories and Resource Location
8 Consistent Patient Access
9 Industry-wide Testing, Compliance, and Conformance Infrastructure
10 Digital ID & Identity Proofing
11 Consistent Representation of Consent & Policy
12 Scalable Data Sharing Governance Framework

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Critical Success Factors
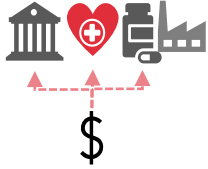
1. Adequate Funding

2. Legislative assessment & change
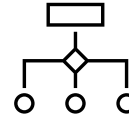
3. Governance

4. Vendor Mobilization

5. Change Management

6. Policy, Privacy & Security

7. National Procurement

8. Standards: National Release Centre

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5-Year Shared Pan-Canadian IO Roadmap *(Proposed)*

| FY 23 | FY 24 | FY 25 | FY 26 | FY 27 |

Initiatives
- Patient Summary
- Data Portability
- Patient Access
- eReferral and eConsult

Enablers
- Governance
- Change Management
- Vendor Mobilization

Data
- Consistent Data Model and Semantics
- Data Matching

Access & Exchange
- Consistent, Secure, HIE Exchange
- Provider Directories
- Digital Identities & Identity Proofing
- Consistent Patient Access
- Healthcare Directories and Resource Locations

Trusted Framework
- Jurisdictional Needs Assessment ◆
- TEF development (contingent on PT support)
- Consistent Representation of Policy & Consent
- Scalable Data Sharing Governance Framework
- Industry-wide, Testing and Conformance

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5-Year Shared Pan-Canadian IO Roadmap *(Proposed)*

	FY 23	FY 24	FY 25	FY 26	FY 27
Patient Summary	AB & ON Trial Implementation & onboard 2-3 Jurisdictions	Update specification to fully align to IPS/CA-Core and reflect implementation feedback.	Advance implementation and adoption		
	Update based on Trial Implementations	Onboard remaining Jurisdictions		Conduct performance evaluation	
	Update and publish the Canadian Health Data Exchange (CA:FeX) Specs	Publish vendor conformance requirements and represent in national procurements.	Pan-Canadian vendor compliance service*	Update specification to reflect updated Data Model 🟢	

* Pan-Canadian interoperability compliance testing service in place, vendors conform to pan-Canadian standards in stages.

	FY 23	FY 24	FY 25	FY 26	FY 27
Data Portability	Develop Primary Care Data-Set V1 & EMR Extract Specs V1 🟢	Trial Implementation of specs	Expand adoption and refinement to include LTC, Community Care and implementation feedback	Expand adoption of specifications	
	Represent Data Portability components in the Canadian Health Data Exchange (CA:FeX) Specs	Extend CA-Core to include other settings (e.g. Acute Care, MH)	Include requirements in national procurements (e.g. Acute Care, LTC, MH, Community Care)	Complete specifications 🟢	
				Publish vendor scorecard	
				Conduct performance evaluation	
Patient Access	Assess patient data and access needs across jurisdictions	Co-design patient data access design/Blueprint to represent policy and consent in alignment with IPA	Update data exchange specification to support patient Digital Identities	Develop advanced guidance documentation to integrate policy and consent into data access	Develop advanced guidance document to integrate policy and consent into data access
	Assess the feasibility of IPA standard and decide on Canadian adoption of same	Implementation and refinement of the Canadian Health Data Exchange Specification to include Patient Access components 🟢	Expand adoption of Canadian Health Data Exchange Specification		
				Conduct performance evaluation	
eReferral & eConsult	Consolidate existing specifications and publish pan-Canadian specification with procurement requirements 🟢	Publish conformance requirements for vendors	Evolve specification to integrate other services (e.g. PS-CA. Provider Directories and Digital Identities)	Complete Specification 🟢	
		Implementation of pan-Canadian specifications	Pan-Canadian vendor compliance service*	Conduct performance evaluation	

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Primary Care Portability

The primary care data portability initiative will initially focus on developing a primary care data set (part of the broader pan-Canadian health care data set) that represents the standardized set of health data classes and constituent data elements for interoperable health information exchange. These concepts will be reflected in a set of FHIR R4 profiles (CA-Core) that will continue to expand into new clinical care settings and workflows to support data portability across the continuum of care. Concurrently, an open specification will be developed to enable migration/export of EMR data to support clinicians when they need to migrate EMR system data.

Specifications

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eReferral / eConsult

eReferral and eConsult have been an ongoing priority for Jurisdictions with multiple solutions being established in localized instances. Establishing pan-Canadian specifications will streamline referrals and consults between interoperable systems.

eReferral

Clinician and patient has a virtual visit

Clinician sends an e-referral to a specialist
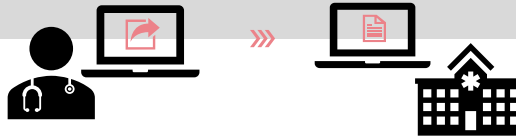
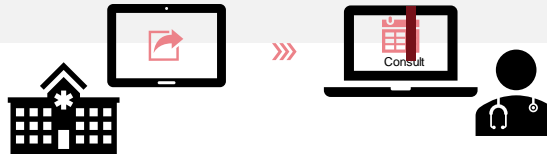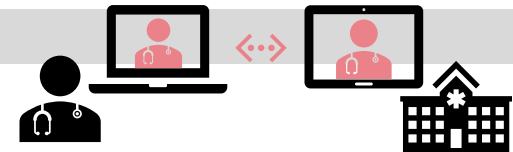Patient receives specialist consultation appointment date and time
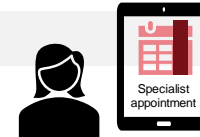
eConsult

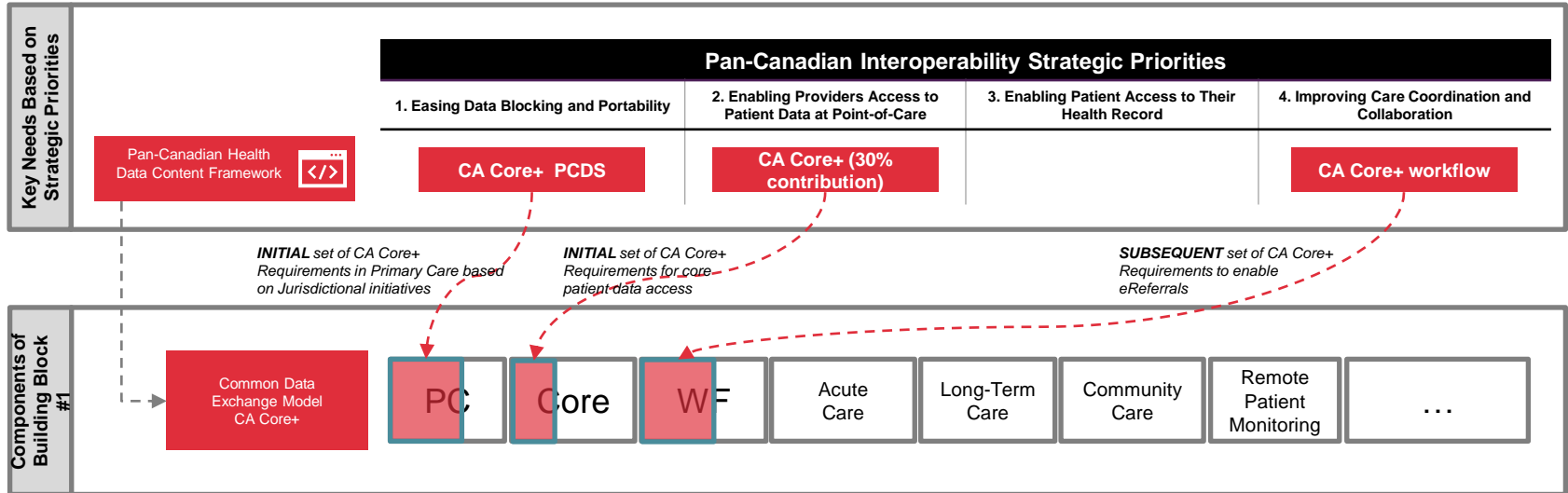Family physician sends consult request and notes to a specialist

Specialist accepts and schedules a virtual meeting

Family physician has e-consult with specialist

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Gradual Capability Growth (example)

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Next Steps

1. **Seek jurisdictional endorsement of roadmap**

2. **Alignment with PTs local implementation plans**

3. **Develop market guidance**

   - In collaboration with our vendor partners/stakeholders, we will work towards generating a market guidance document that will detail the expected trends to be observed in each of the three interoperability frameworks (within the first two quarters of FY23)

   - While final and detailed conformance specifications will only be available when those priority areas are addressed, general market guidance will be given for areas of health data definition and use, information access and exchange, as well as privacy, consent and security, and others.

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Call to Action

COLLABORATION
PREPARATION
ADOPTION

Please Join Us!

Collaborate, Participate, and **Adopt**

Modular-Standardized Service Capabilities,

leading to readiness for certification programs

conducted through

Industry-wide Testing, Compliance, and

Conformance.

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Thank you!

Contact Information

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