

pan-Canadian FHIR Exchange (CA:FeX)

Introduction

Interoperability enables information to flow seamlessly between different solutions and devices. When different parts of the health system are interoperable with each other, they can “speak the same language.” Interoperability improves continuity of care, collaboration between health providers and patient access to their health information. By breaking down data silos, it also reduces inefficiencies and redundancies within the health system.

Connection, collaboration and communication have never been more important for the health system. Increased use of virtual care has highlighted the need for safe and efficient electronic sharing of information across the circle of care. Continuing to improve Canadian health care will necessitate work in interoperability — connected systems are healthier systems.

In support of the provinces and territories, Canada Health Infoway (Infoway) is facilitating a national collaborative effort to advance interoperability. While there are many interoperability-related challenges, this specification addresses standardized sharing of vital patient information for the benefit of health care providers and patients using FHIR based information exchange. This FHIR based information exchange is similar to and accomplishes the same objectives as a Health Information Exchange (HIE).

The [Office of the National Coordinator for Health Information Technology](#) (ONC) defines HIE as:

Electronic health information exchange (HIE) allows doctors, nurses, pharmacists, other health care providers and patients to appropriately access and securely share a patient's vital medical information electronically—improving the speed, quality, safety and cost of patient care.

While electronic health information exchange cannot replace provider-patient communication, it can greatly improve the completeness of patient's records, (which can have a big effect on care), as past history, current medications and other information is jointly reviewed during visits.

Appropriate, timely sharing of vital patient information can better inform decision making at the point of care and allow providers to avoid readmissions, avoid medication errors, improve diagnoses and decrease duplicate testing.

The CA:FeX Interoperability Specifications (Canadian FHIR Exchange (CA:FeX)) seek to promote FHIR RESTful exchange patterns, developed by industry-leading FHIR standards that can be applied on top of an existing non-FHIR infrastructure just as easily as it can be applied on top of FHIR servers.

The current version of CA:FeX is focused on the FHIR RESTful exchange of documents, which FHIR offers multiple structures and patterns to achieve. CA:FeX aims to provide clarity to implementers by identifying some of the choices currently available using FHIR, ranging from simple to a higher level of sophistication. As the development of CA:FeX continues, the Interoperability Specifications may evolve into a more formal Integration Profile (similar to existing international profiles reviewed below) that provides more comprehensive guidance on FHIR RESTful exchange patterns than what currently exists today.

It should be noted that the scope of CA:FeX may evolve beyond document-based exchange to explore a more atomic nature of health information exchange in the future. This will depend on the development of a multi-phased CA:FeX roadmap, the evolving needs of the Canadian healthcare market, and emerging trends within the international FHIR health information exchange community.

For more information, please refer to the [CA:FeX Interoperability Specifications](#).

In parallel with CA:FeX, Canada Health Infoway is also facilitating a national collaborative effort to develop the [pan-Canadian Patient Summary Interoperability Specifications \(PS-CA\)](#), an implementable, testable specification, based on the IHE International Patient Summary specification and the HL7 IPS Implementation Guide. The PS-CA Reference Architecture will reference the CA:FeX Interoperability Specifications as an optional implementation pattern for submitting, searching and retrieving a Patient Summary document.



CA:FeX v2.0.0 White Paper

Introducing [CA:FeX v2.0.0 White Paper](#)! This link provides access to:

- Canadian FHIR Exchange (CA:FeX) white paper: Optimizing Canada's Health System Resources through Patient-Centered Health Information Exchange
- CA:FeX v2.0.0 DFT video recording from the Projectathon 2023
- CA:FeX v2.0.0 DFT FHIR implementation guide
- What's next!