

# pan-Canadian FHIR Exchange (CA:FeX) Interoperability Specifications

## Overview

The pan-Canadian FHIR Exchange (CA:FeX) is an implementable, testable interoperability specification based on HL7 FHIR Implementation Guides, that defines building blocks to enable creating, consuming and sharing clinical data via FHIR RESTful exchange patterns.

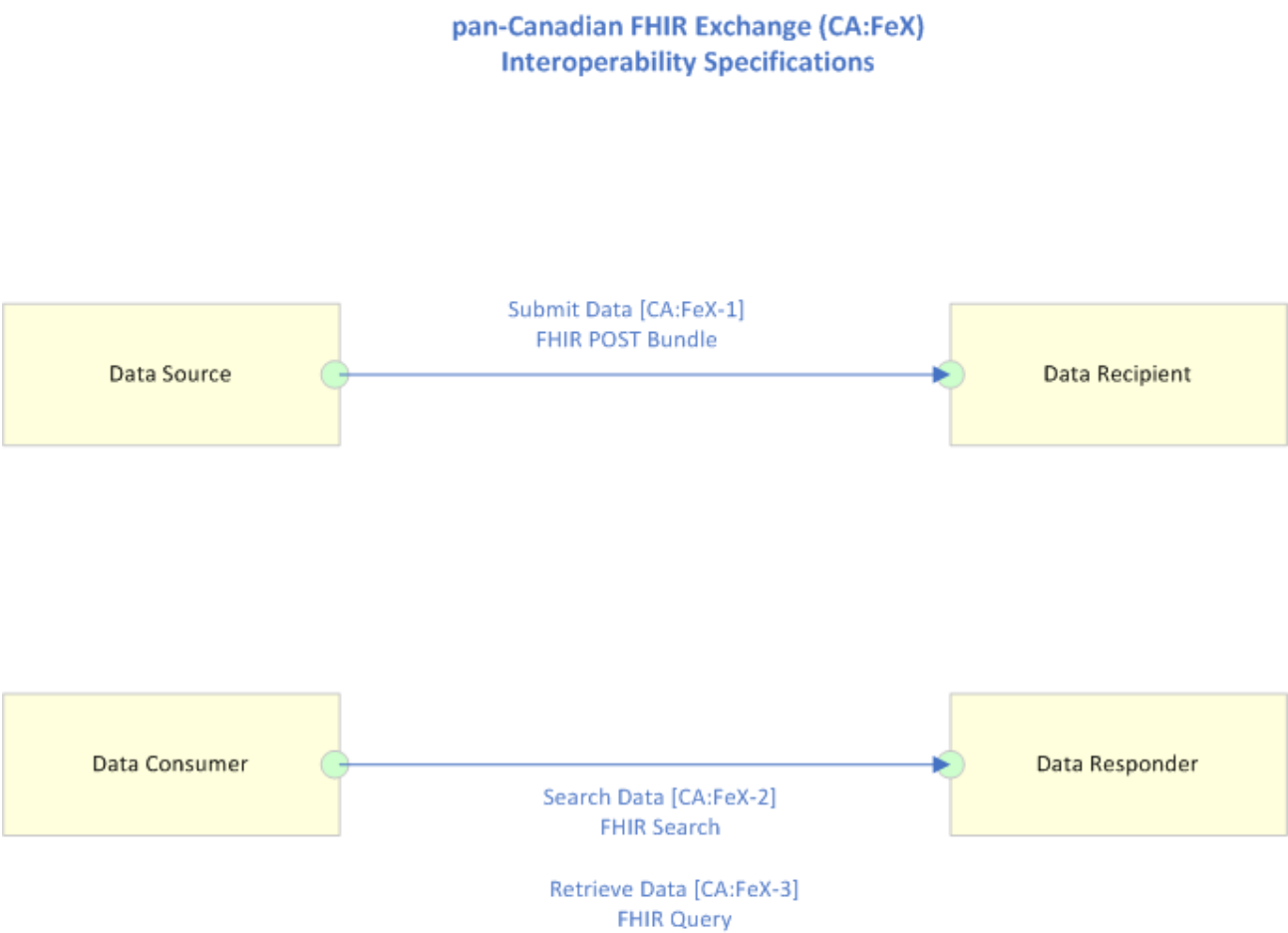
For details, refer to the pan-Canadian FHIR Exchange Interoperability Specifications ([CA:FeX v1.0.0 TI](#)).

The following are some examples of the benefits of CA:FeX:

- Supports scenarios of health care provider creating, viewing and updating documents using standardized HL7 FHIR operations such as submission, search and retrieval
- Supports safe provision of care in a scheduled or unscheduled medical situation
- Supports transitions of care or transfers of patients across the continuum of care
- Supports coordination and collaboration of a patient's care

## Actors and Transactions

The following diagram provides an overview of the CA:FeX Actors, Transactions and their interactions.



The table below lists the transactions for each actor directly involved in CA:FeX. To claim compliance with CA:FeX, an actor shall support all required transactions (labeled “R”).

| Actor          | Transaction            | Optionality |
|----------------|------------------------|-------------|
| Data Source    | Submit Data [CA:FeX-1] | R           |
| Data Recipient | Submit Data [CA:FeX-1] | R           |

|                |                          |   |
|----------------|--------------------------|---|
| Data Consumer  | Search Data [CA:FeX-2]   | R |
|                | Retrieve Data [CA:FeX-3] | R |
| Data Responder | Search Data [CA:FeX-2]   | R |
|                | Retrieve Data [CA:FeX-3] | R |

## Transactions

- Submit Data [CA:FeX-1] – this transaction passes a Submit Data Request from a Data Source to a Data Recipient. Uses a FHIR POST to transfer a FHIR resource or a Bundle of FHIR resources, commonly a FHIR Document.
- Search Data [CA:FeX-2] – used to find FHIR Resources that satisfy a set of query parameters. The request is received by a Data Responder which returns a Bundle containing the resources matching search parameters.
- Retrieve Data [CA:FeX-3] – used by the Data Consumer to retrieve data from the Data Responder. Uses an HTTP GET request based on a known resource id. This operation will return a Bundle of FHIR resources that was previously identified in a search/or prior retrieval.

## Sequence Diagram

