

pan-Canadian Patient Summary

Companion Guide: Reference Architecture

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1 Introduction

The pan-Canadian Patient Summary - Companion Guide to Reference Architecture provides guidance on how to apply specific IHE patterns and pan-Canadian Interoperability Specifications to address interoperability needs pertaining to the Patient Summary-CA use cases. It defines the interoperability landscape and outlines the rules of engagement to support the development of a connectivity platform for which external vendors can test and validate their solutions.

For more information on core IHE Profiles and specific Canadian implementation guidance, refer to the Reference Architecture available here: RA v0.1.1 DFT.



2 Intended Audience

The intended audience of the pan-Canadian Patient Summary - Companion Guide to Reference Architecture includes, but is not limited to, the following:

- IT departments of healthcare institutions (technical product managers, IT managers, operations staff)
- Technical staff of vendors participating in the IHE initiative
- Experts involved in standards development
- Individuals and teams responsible for implementing software solutions such as project managers, CTOs, CISOs, software engineers, technical product managers, IT managers, operations staff, and other similar roles.



3 Overview

This document is a Companion Guide to Reference Architecture for the PS-CA. It contains a list of recommended IHE candidate profiles and pan-Canadian Interoperability Specifications that can meet specific needs of the PS-CA. The sequence diagrams group together actors and transactions from multiple profiles to address the business requirements of the PS-CA use cases.

Within the Reference Architecture, two options for implementation have been highlighted, with Option 1 having two scenarios.

- Option 1, Scenario #1: MHD implementation, where the Document Repository is Central
- Option 1, Scenario #2: MHD implementation, where the Document Repository is Local
- Option 2: FHIR HIE Implementation
- A preferred option is indicated with an asterisk* (e.g. Option 1, Scenario #1)

For details about the Reference Architecture, refer to the RA v0.1.1 DFT.



4 How to Use the pan-Canadian Patient Summary - Companion Guide to Reference Architecture

Below list summarizes how to use this document:

- **Role Identification**: Jurisdictions and vendors will need to identify their role (e.g. actors) from the Reference Architecture and sequence diagrams for each of the use cases in scope for the Patient Summary-CA project.
- **Gap Identification**: Based on the role(s) identified from the Reference Architecture and sequence diagrams, potential assessment is needed for identification of gaps for meeting the requirements of the standardized actors and transactions needed to satisfy particular PS-CA use cases.
- **Provincial Reference Architecture**: Provinces and jurisdictions may need to draft their own version of Reference Architecture specific to their needs. Current technology landscape, existing architecture and current business priorities will help in developing a version for the province.
- **Document Evolution and Feedback**: This is a living document and will evolve based on feedback and refinements to the PS-CA uses cases and business requirements. This document is published on InfoScribe to capture comments and feedback from all key stakeholders. Additionally, multiple sessions will be conducted to discuss and update the content of this document.
- Vendor Conformance Testing (Connectathon / Projectathon): This document will provide an opportunity for vendors to prepare for conformance testing of the Patient Summary-CA Standard via the IHE Gazelle platform. IHE Gazelle is an open-source, web-based test platform supporting a wide portfolio of interoperability test tools suited to validate interface conformity to IHE Profiles and project-specific standards-based interoperability specifications. Vendors can validate their products and eHealth projects to procure interfaces they deploy. For additional information on Gazelle, please refer to the following link: IHE Gazelle

*Note: It's expected that the reader should have a moderate degree of familiarity with IHE profiles, especially MHD, MHDS, PMIR, PIQm, PDQm, mCSD, ATNA, CT and IUA.



5 Sequence Diagrams for UC-01: HCP Creates PS

This section provides a summary of the sequence diagrams for Use Case-01:

Use Case-01: HCP Creates/Produces a PS-CA

A Health Care Provider in any care setting creates/produces a PS-CA for use at point of care, including for unscheduled/scheduled local care, which is made available to PS-Consumers.

Implementation Option 1: MHD

This option is recommended for jurisdictions who would like to use document repository/registry patterns and promote HL7 FHIR standards for the creation and viewing of a Patient Summary-CA.

Implementation Option 2: CA:FeX

This option is recommended for jurisdictions who would like to use FHIR health information exchange (HIE) patterns that provide support for submitting, searching and retrieving a Patient-Summary-CA to and from a central Document Repository using FHIR resources.

Additional Considerations

The sequence diagrams included in this section do not showcase all of the possible combinations of IHE profiles and transactions that can be used for a particular implementation pattern. For example, ITI-83 transaction can be used in place of ITI-78 if the preferred implementation pattern is PIXm/PMIR.

5.1 UC-01: Implementation Option 1: MHD

Scenario / Assumption(s): Patient Summary-CA is stored in Central or Local (Decentralized) Document Repository

Release 1: Clinical data (e.g. medication, lab results, immunization) is retrieved from local sources only

Implementation Option 1: This sequence diagram provides the option of using the MHD IHE profile, including a Document Repository actor and supporting HL7 FHIR standards.

*Note: Please refer to the pan-Canadian Patient Summary – FHIR Implementation Guide for the Patient Summary-CA Valuesets

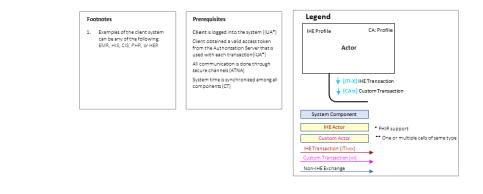
Sequence Diagram Overview:

- This sequence diagram illustrates how the different standardized actors of systems should interact with each other to carry out specific standardized transactions, and the order in which the transactions and interactions occur when Use Case 1 of the Patient Summary-CA is executed.
- The legend on the bottom right corner describes the different system components, actors and transactions that are necessary to carry out this particular use case.
- The green swim lane is a simplified view of the actors and transactions required by the Foundational Profiles, defined here, in addition to the other ones that are not explicitly illustrated on the diagram (e.g. ATNA, CT) but included as a white note. These are pre-requisite conditions for this particular use case and it is assumed that these will be satisfied.
- The blue swim lanes groups sequence of processes (along with their required actors and transactions) that are needed to occur to satisfy this particular use case. These are to be read from left to right and top to bottom.



- The red note boxes describe important call outs, information and notes that provide more context for the sequence diagram.
- For more information on core IHE Profiles and specific Canadian implementation guidance, refer to the RA v0.1.1 DFT.

| | | ored in Central or Local (Dece inical data (e.g. medication, la | ıb results, immur | nization) is ret | | om local s | ources only | | Document Rep | ository | | | |
|-----|-----------------------------------|---|-------------------------------------|--|--------------------------|----------------|-------------|--------|--|-------------------------------|--|------------------------------------|---------------------|
| | | | PS-CA Producer | | | | | (Local | to PS-CA Produ | | ntral) | Central Infrastru | ucture |
| | Client ¹ (c.g. EMR) | | iment urce | [| PDQm* Patient Cons | Demogr umer | | | MHD* Docu Recip | | | | ldentity istry |
| | | ician is authenticated in possession of a t token is passed with each subsequent tra | | | Re | fer to IUA* | | | | | | User is authen | ticated |
| | | | | | | | | | | | | Identify | y Patient |
| Opt | | Request Patient Identifier Return P | atient Identifier | | • | | | | including Patient graphics Query (Return Patier | ITI-78] | | uding Patient Identifier) | |
| | | Retrieve clinical data) from local data sources [Patient Identifier] | | | | | | | | | | Retrieve clinical local data se | |
| | | Optionally the EMR uses SVCM* profile t current ValueSets and ConceptMaps | o update | Refe | r to SVCM* | | | | | | | | |
| Opt | | | • profile notes in PS-CA Specifi | cations | | | | | | | | Assembl revie Patient Su | w |
| | | quest Save Patient Summary | (including | Save Patient Summ. g method for handli ovide Document Bu | ng versions | | | | DK | Sumr (crea Save Refe | Patient Patient Patient Patient Patient Patient Summa Patient Summa Patient Summa Patiences Pati | Document | S-CA to Reposito |



5.2 UC:01: Implementation Option 2: CA:FeX

Scenario: Clinical Solution A Retrieves Patient Summary-CA from Central Document Repository

Assumption: Patient Summary-CA is stored in Central Document Repository

Implementation Option 2: This sequence diagram provides the option of using the CA:FeX Interoperability Specifications that provide support for saving and retrieving a Patient Summary-CA to and from a central

Document Repository. This profile includes a Data Source and a Data Recipient actor. Additionally, this sequence diagram uses the 'Submit Data' FHIR operation.

Note: Additionally, this sequence diagram includes the CA:FMT Interoperability Specifications that handle transformations to and from various formats (e.g. FHIR to PDF, CDA, etc.). Additional details will be included in the PS-CA Interoperability Specifications.

Sequence Diagram Overview:

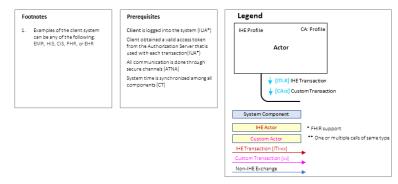
- This sequence diagram illustrates how the different standardized actors of systems should interact with each other to carry out specific standardized transactions, and the order in which the transactions and interactions occur when Use Case 1 of the Patient Summary-CA is executed.
- The legend on the bottom right corner describes the different system components, actors and transactions that are necessary to carry out this particular use case.
- The green swim lane is a simplified view of the actors and transactions required by the Foundational Profiles, defined here, in addition to the other ones that are not explicitly illustrated on the diagram (e.g. ATNA, CT) but included as a white note. These are pre-requisite conditions for this particular use case and it is assumed that these will be satisfied.
- The blue swim lanes groups sequence of processes (along with their required actors and transactions) that are needed to occur to satisfy this particular use case. These are to be read from left to right and top to bottom.
- The red note boxes describe important call outs, information and notes that provide more context for the sequence diagram.
- This sequence diagram includes the CA:FeX Interoperability Specifications and CA:FMT Specifications. Additional details will be included in the PS-CA Interoperability Specifications.
- For more information on core IHE Profiles and specific Canadian implementation guidance, refer to the RA v0.1.1 DFT.

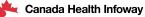


UC-01: HCP Creates PS – CA:FeX

PS is stored in Central Document Repository

| | RI – clinical data (e.g. medication, lar | b results, immunization) is retrieved fr | om local sources only | | |
|-----|---|--|--|----------------------------------|---|
| | | PS-CA Producer | | Document Repository (Central) | Central Infrastructure |
| | Client ¹ (c.g. EMR) | | | CA:FeX* Data Recipient | PMIR* Patient Identity Registry |
| | Clinician is authenticated in possession of a to the token is passed with each subsequent tran | | fer to IUA* | | User is authenticated |
| Opt | Request Patient Identifier | | Request Patient Demographics Inf PMIR*/PDQm* Mobile Patient Der | mographics Query [ITI-78] | Identify Patient |
| | Retrieve clinical data from local data sources (Patient Identifier) | | | | Retrieve clinical data from local data sources |
| Opt | | • profile • profile tes in PS-CA Specification | | | Assemble and review Patient Summary |
| | Request Save Patient Summary (trigger) OK | Request Save Patient Summary (including method for handling versions) CA-FeX* Submit Data [CA-FeX-1] | | _OKSave Patie | |





6 Sequence Diagrams for UC-02: HCP Views/Consumes a PS-CA

This section provides a summary of the sequence diagram for Use Case-02:

Use Case-02: HCP Views/Consumes a PS-CA

A Health Care Provider in any care setting requests and uses a PS-CA at the point of care, including for unscheduled/ scheduled local care.

Implementation Option 1: MHD

This option is recommended for jurisdictions who would like to use document repository/registry patterns and promote HL7 FHIR standards for the creation and viewing of a Patient Summary-CA.

Implementation Option 2: CA:FeX

This option is recommended for jurisdictions who would like to use FHIR health information exchange (HIE) patterns that provide support for submitting, searching and retrieving a Patient-Summary-CA to and from a central Document Repository using FHIR resources.

Additional Considerations

The sequence diagrams included in this section do not showcase all of the possible combinations of IHE profiles and transactions that can be used for a particular implementation pattern. For example, ITI-83 transaction can be used in place of ITI-78 if the preferred implementation pattern is PIXm/PMIR.

6.1 UC-02: Implementation Option 1: MHD

Scenario: Clinical Solution A Retrieves Patient Summary-CA from MHD Document Registry – (MHD* IHE Profile).

Assumption: Patient Summary-CA is stored in Central or Local (Decentralized) Document Repository.

Implementation Option 1: This sequence diagram provides the option of using the MHD IHE profile, including a Document Repository actor and supporting HL7 FHIR standards

Note: Additionally, this sequence diagram include the CA:FMT Interoperability Specifications that handle transformations to and from various formats (e.g. FHIR to PDF, CDA, etc). Additional details will be included in the PS-CA Interoperability Specifications.

Sequence Diagram Overview:

- This sequence diagram illustrates how the different standardized actors of system should interact with each other to carry out specific standardized transactions, and the order in which the transactions and interactions occur when Use Case 2 of the Patient Summary-CA is executed.
- The legend on the bottom right corner describes the different system components, actors and transactions that are necessary to carry out this particular use case.
- The green swim lane is a simplified view of the actors and transactions required by the Foundational Profiles, defined here, in addition to the other ones that are not explicitly illustrated on the diagram (e.g. ATNA, CT) but included as a white note. These are pre-requisite conditions for this particular use case and it is assumed that these will be satisfied.
- The blue swim lanes groups sequence of processes (along with their required actors and transactions) that are needed to occur to satisfy this particular use case. These are to be read from left to right and top to bottom.



- The red note boxes describe important call outs, information and notes that provide more context for the sequence diagram.
- This sequence diagram includes the CA:FMT Interoperability Specifications that handle transformations to and from various formats (e.g. FHIR to PDF, CDA, etc.). Additional details will be included in the PS-CA Interoperability Specifications.
- For more information on core IHE Profiles and specific Canadian implementation guidance, refer to the RA v0.1.1 DFT.



UC-02 HCP Views/Consumes PS-CA - MHD

| Clinical Solution A Retrieves PS from MHD Document Registry – (MHD* IHE Profile ²) | |
|--|--|
| PS is stored in Central or Local (Decentralized) Document Repository | |

| | | PS- | CA Consum | er | | | 1 [| | ument Rep S-CA Produ | pository ucer or Centr | al) | | Cen | tral Infrastruct | ture |
|-----|-----------------|--|---|--|-----------------------|----------------|-----------|---------------------------------|-------------------------|---------------------------|-------------------|-------------|---------------|----------------------------|--------------------|
| | Clie (c.g. E | | | | | Demogr umer | | | | ument ponder | | | | PMIR* Patient I Regi | |
| | | Clinician is authenticated in possession of a t the token is passed with each subsequent tra | | | | Refer t | o IUA* | | | | | | | User is authen | ticated |
| Opt | | | | | | | | | | | | | | Identify P | atient |
| | | Request Patient Identifier Return Patient Identifier | | | | | | ohics Info (inc tient Demogr | aphics Quer | | t Demograph | ics Info (i | ncluding Pati | ent Identifier) | |
| | | Request Patient Summary References [Patient Identifier] See notes in PS-CA Specifications Return Patient Summary References Request Patient Summary [Patient Summary References] Return Patient Summary | | Request Patient Sur MHD* Find Docum uest Patient Summary D 2* Retrieve Document [/ Return Patient Sur (or summaries, if r | ocument [P: TI-68] | ces [ITI-67] | leturn Pa | nary Referenc | .es | Refere Retriev | t Summary nces | | | Retrieve P Document Re | |
| Alt | | [Render to PDF] Optionally the EMR uses CA-FMT profile transformation between different forma Format PS (e.g. PDF) CA-FMT pro- See notes Display PS Download/ print PS | ts | ecifications | | Refer to CA | :FMT | | | | | | | | to specific mat |
| Ait | | [Render to CDA] Optionally the EMR uses SVCM* profile current ValueSets and ConceptMaps Map data from standard codes (e.g. FHIR Value Sets) Pastens tummary (e.g. apply code mappings) Optionally the EMR uses CA-FMT profile transformation between different forma Format PS (e.g. CDA) CA-FMT pr | ofile in PS-CA Sp o perform ts | pecifications | | Refer to SV | | | | | | | | | |

| Fo | otnotes | Prerequisites | Legend | |
|----|---|---|--|----------|
| 1. | Examples of the client system can be any of the following: EMR, HIS, CIS, PHR, or HER | Client is logged into the system (IUA*) Client obtained a valid access token from the Authorization Server that is | IHE Profile CA: Profile | |
| 2. | ITI-66 is mandatory transaction from IHE for the MHD profile; however, it is not covered in the above sequence diagram because the scope of this use case. | used with each transaction(IUA*) All communication is done through secure channels (ATNA) System time is synchronized among all components (CT) | ↓ [TI-X] IHE Transaction | |
| | | | System Component IHE Actor Custom Actor IHE Transaction (ITI-oc) Custom Transaction (IQ Non-IHE Exchange | same typ |

6.2 UC:02: Implementation Option 2: CA:FeX

Scenario: Clinical Solution A Retrieves Patient Summary-CA from Document Repository

1. 2.

Canada Health Infoway

Assumption: Patient Summary-CA is stored in Central Document Repository

Implementation Option 2: This sequence diagram provides the option of using the CA:FeX Interoperability Specifications that provide support for saving and retrieving a Patient Summary-CA to and from a Document Repository (Local to PS-Producer or Central). This profile includes a Data Consumer and a Data Responder actor. Additionally, this sequence diagram uses the 'Search Data' and 'Retrieve Data' FHIR operations.

Note: Additionally, this sequence diagram includes the CA:FMT Interoperability Specifications that handle transformations to and from various formats (e.g. FHIR to PDF, CDA, etc.). Additional details will be included in the PS-CA Interoperability Specifications.

Sequence Diagram Overview:

- This sequence diagram illustrates how the different standardized actors of systems should interact with each other to carry out specific standardized transactions, and the order in which the transactions and interactions occur when Use Case 2 of the Patient Summary-CA is executed.
- The legend on the bottom right corner describes the different system components, actors and transactions that are necessary to carry out this particular use case.
- The green swim lane is a simplified view of the actors and transactions required by the Foundational Profiles, defined here, in addition to the other ones that are not explicitly illustrated on the diagram (e.g. ATNA, CT) but included as a white note. These are pre-requisite conditions for this particular use case and it is assumed that these will be satisfied.
- The blue swim lanes groups sequence of processes (along with their required actors and transactions) that are needed to occur to satisfy this particular use case. These are to be read from left to right and top to bottom.
- The red note boxes describe important call outs, information and notes that provide more context for the sequence diagram.
- This sequence diagram includes the CA:FeX Interoperability Specifications and CA:FMT Interoperability Specifications. Additional details will be included in the PS-CA Interoperability Specifications.
- For more information on core IHE Profiles and specific Canadian implementation guidance, refer to the RA v0.1.1 DFT.



UC-02 HCP Views/Consumes PS-CA – CA:FeX

Clinical Solution A Retrieves PS from Document Repository PS is stored in Document Repository (Local to PS-CA Producer or Central)

| | | PS-0 | CA Consumer | | |] [| | cument Rep PS-CA Produc | | 1) | | Central Infrastructure |
|-------------------|-----------------|---|--|----------|---|-----------------|--|----------------------------|----------|--------------------|---------------|---|
| | Clie (o.g. E | | CA:FeX* | | Demogr umer | | [| Dat Respo | | | | PMIR* Patient Identity Registry |
| | | Clinician is authenticated in possession of a t the token is passed with each subsequent tra | | | Refer t | o IUA* | | | | | | User is authenticated |
| Opt | | | | | | | | | | | | Identify Patient |
| - Opt | | Request Patient Identifier Return Patient Identifier | | | | | Demographics Info (in Mobile Patient Demogr | raphics Query | [ITI-78] | Demographics In | fo (including | Patient Identifier) |
| | | Request Search Patient Summary [Patient Identifier] See notes in PS-CA Specifications Return Patient Summary (Bundle ID) Return Patient Summary | Request Search Patient S CA.Fex* Search Data [CA Request Patient Summ CA.Fex* Retrieve Data] | :FeX-2A] | Retu | urn Patien] | t Summary Compositio | | Compo: | Summary sitions | | Retrieve PS from Document Repository |
| Ait Opt Ait | | Display PS Download/ print PS [Render to CDA] Optionally the EMR uses SVCM* profilet current ValueSets and ConceptMaps Map data from standard codes (e.g. FHIR Value Sets) Sasemble Internal Patient Summary (e.g. apply code mappings) Optionally the EMR uses CA-FMT profilet transformation between different format Format PS (e.g. CDA) CA-FMT profilet | s file file PS-CA Specifications pupdate file sin PS-CA Specifications perform ss | | Refer to CA Refer to SV Refer to CA | CM• | | | | | | Render to specific format |

| Foo | otnotes | Prerequisites |
|-----|---|--|
| 1. | Examples of the client system can be any of the following: EMR, HIS, CIS, PHR, or EHR | Client is logged into the system (IUA*) Client obtained a valid access token from the Authorization Server that is used with each transaction(IUA*) |
| | | All communication is done through secure channels (ATNA) |
| | | System time is synchronized among all components (CT) |
| | | |

| IHE Profile | CA: Profile |
|--------------------------|---|
| Ac | or |
| • • | +X] IHE Transaction Arx] Custom Transaction |
| IHE Actor Custom Acto | FHIR support ** One or multiple calls of same 1 |
| IHE Transaction [ITI- | ¤] |
| Custom Transact | on [xx] |
| | |



7 Sequence Diagrams for UC-03 Patient Views/Obtains Personal PS-CA

This section provides a summary of the sequence diagrams for Use Case-03:

Use Case-03: Patient Views/Consumes a PS-CA

A Patient or Subject of Care accesses/views and can retrieve a copy of their own PS-CA to support unscheduled/ scheduled local care, or for any other purpose.

Implementation Option 1: MHD

This option is recommended for jurisdictions who would like to use document repository/registry patterns and promote HL7 FHIR standards for the creation and viewing of a Patient Summary-CA.

Implementation Option 2: CA:FeX

This option is recommended for jurisdictions who would like to use FHIR health information exchange (HIE) patterns that provide support for submitting, searching and retrieving a Patient-Summary-CA to and from a central Document Repository using FHIR resources.

Additional Considerations

- The sequence diagrams included in this section do not showcase all of the possible combinations of IHE profiles and transactions that can be used for a particular implementation pattern. For example, ITI-83 transaction can be used in place of ITI-78 if the preferred implementation pattern is PIXm/PMIR.
- Additionally, a jurisdictional implementation may choose to present a different version of the Patient Summary to patients than providers. For example, the patient version of the Patient Summary may use more patient friendly language, certain information that might lead to patient harm may be redacted (for example, in the case of patients undergoing behavioral health treatment).

7.1 UC-03: Implementation Option 1: MHD

Scenario: Patient Portal Retrieves PS from MHD Document Registry – (MHD* IHE Profile).

Assumption: Patient Summary-CA is stored in Central or Local (Decentralized) Document Repository.

Implementation Option 1: This sequence diagram provides the option of using the MHD IHE profile, including a Document Repository actor and supporting HL7 FHIR standards.

Note: Additionally, this sequence diagram includes the CA:FMT Interoperability Specifications that handle transformations to and from various formats (e.g. FHIR to PDF, CDA, etc.). Further details will be included in the PS-CA Interoperability Specifications. Additionally, the Document Repository in this scenario can be either (1) central or (2) at PS-CA Producer (the source where the document was produced). The Document Consumer actor would query the appropriate repository.

Sequence Diagram Overview:

Below provides guidance on how to read the sequence diagram:

• This sequence diagram illustrates how the different standardized actors of systems should interact with each other to carry out specific standardized transactions, and the order in which the transactions and interactions occur when Use Case 3 of the Patient Summary-CA is executed.



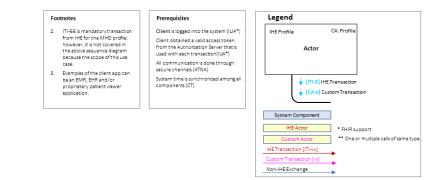
- The legend on the bottom right corner describes the different system components, actors and transactions that are necessary to carry out this particular use case.
- The green swim lane is a simplified view of the actors and transactions required by the Foundational Profiles, defined here, in addition to the other ones that are not explicitly illustrated on the diagram (e.g. ATNA, CT) but included as a white note. These are pre-requisite conditions for this particular use case and it is assumed that these will be satisfied.
- The blue swim lanes groups sequence of processes (along with their required actors and transactions) that are needed to occur to satisfy this particular use case. These are to be read from left to right and top to bottom.
- The red note boxes describe important call outs, information and notes that provide more context for the sequence diagram.
- For more information on core IHE Profiles and specific Canadian implementation guidance, refer to the RA v0.1.1 DFT.



UC-03 Patient Views/Obtains Personal PS-CA - MHD

| Patient Portal Retrieves PS from MHD Document Registry – (MHD* IHE Profile ²) |
|---|
| PS is stored in Central or Local (Decentralized) Document Repository |

| | | | Patient | Portal | | | | (Local | | Repository oducer or Cer | itral) | Central Infrastructure |
|-----|----------------------------|---|------------------------------|---------------------------------------|--------------------------------|-------|--------------------|--------------------------------------|-----------------|-------------------------------|-------------------|---|
| | Client App ³ | | MHD* Document Consumer | PDQm* Patient Cons | : Demogr sumer | | le Media ator | | | ument xonder | | PMIR* Patient Identity Registry |
| | | tient is authenticated in posse token is passed with each su | | | | I | efer to IUA* | | | | | User is authenticated |
| Opt | | Request Pa | tient Identifier | | | Reque | st Patient Demogra | aphics Info (including | g Patient Ident | (ifier) | | Identify Patient |
| | - | | Return Patien | t Identifier | 4 | PMIR* | /PDQm* Mobile Pa | atient Demographics | | | ographics Info (i | ncluding Patient Identifier) |
| | | Request Patient Summary Re (Patient Identifier) See notes in PS-CA Specificat Return Patient Summary Refe | ions | | est Patient Sun Find Docume | | | tifier] nt Summary Referen | ices | Retriew Patient Referer | Summary | Retrieve PS from Document Repository |
| | | Request Patient Summary [Patient Summary References Return Patient Summary | R | equest Patient Si IHD* Retrieve Do | | | Return Patier | it Summary as, if multiple docs/n | egistries) | Retrieve Patient | e Summary | |
| | | Optionally the EMR uses CA: transformation between diff Format PS (e.g. PDF) Display PS | | | | | Refer to CA:FMT | | | T | | Render to specific format |
| Opt | | Download/ print PS | | | | | | | | | | |
| | | | Request Save to Por | Lauré Média | ОК | • |] | | | | | |



7.2 UC:03: Implementation Option 2: CA:FeX

Scenario: Patient Portal Retrieves Patient Summary-CA from Document Repository

Assumption: Patient Summary-CA is stored in a Local or Central Document Repository

Implementation Option 2: This sequence diagram provides the option of using the CA:FeX Interoperability Specifications that provide support for saving and retrieving a Patient Summary-CA to and from a local or central Document Repository. This profile includes a Data Consumer and a Data Responder actor. Additionally, this sequence diagram uses the 'Search Data' and 'Retrieve Data' FHIR operations.

Note: Additionally, this sequence diagram includes the CA:FMT Interoperability Specifications that handle transformations to and from various formats (e.g. FHIR to PDF, CDA, etc.). Additional details will be included in the PS-CA Interoperability Specifications.

Sequence Diagram Overview:

- This sequence diagram illustrates how the different standardized actors of system should interact with each other to carry out specific standardized transactions, and the order in which the transactions and interactions occur when Use Case 3 of the Patient Summary-CA is executed.
- The legend on the bottom right corner describes the different system components, actors and transactions that are necessary to carry out this particular use case.
- The green swim lane is a simplified view of the actors and transactions required by the Foundational Profiles, defined here, in addition to the other ones that are not explicitly illustrated on the diagram (e.g. ATNA, CT) but included as a white note. These are pre-requisite conditions for this particular use case and it is assumed that these will be satisfied.
- The blue swim lanes groups sequence of processes (along with their required actors and transactions) that are needed to occur to satisfy this particular use case. These are to be read from left to right and top to bottom.
- The red note boxes describe important call outs, information and notes that provide more context for the sequence diagram.
- This sequence diagram include the CA:FeX Interoperability Specifications and CA:FMT Specifications. Additional details will be included in the PS-CA Interoperability Specifications.
- For more information on core IHE Profiles and specific Canadian implementation guidance, refer to the RA v0.1.1 DFT.

| | | Patient Portal | | | | | t Repository or Central) | Central Infra | structure |
|---|---|--------------------------------|---|-----------------|---|---|--|-----------------------------------|--------------------------|
| Client App ³ | Data Co | CA:FeX* PDQm* Insumer Const | | e Media ator | | Da Respo | | | ent I dentif Registry |
| | ticated in possession of a to ed with each subsequent tr | | F | efer to IUA* | | | | User is | authentic |
| | | | | | | | | lde | ntify Pati |
| | Request Patient Identif | er | | | | luding Patient Identifier aphics Query [ITI-78] Return Pat | ient Demographics Inf | fo (including Patient Identifier) | • |
| [Patient Iden | h Patient Summary ifier) e notes in -CA Specifications | | Patient Summary [Patient Data [CA:FeX-2A] | | n <u>t Summary (</u> | Composition Bundle | Retrieve Patient Summar Compositions | Docum | ieve PS fro ent Repos |
| Return Patien Compositions Request Patie [Bundle ID] | | | Summary Document (Bund Data [CA:FeX-3A] | ile ID] | | , | Retrieve | | |
| Return Patien | : Summary | | | | leturn Patien | it Summary Bundle | Patient Summar Bundle | Ŷ | |
| | e EMR uses CA:FMT profile on between different forma | | | Refer to CA:FMT |] | | | | |
| | e p PDF) CA:FMT p | 1 | | | - | | | Re | nder to s format |
| Display PS | | | | 7 | | | | | |
| Dpt | Pequert Sa | e to Portable Media | | | | | | | |
| | nequel co | | ОК | | | | | | |
| | | Î | | | | | | | |
| | | | Footnotes 3. Examples of the cl be an EMR, EHR an proprietary patien application. | nd/or | Client obtair from the Au used with ea All commun secure chan | ged into the system (IUA*) ned a valid access token ithorization Server that is ach transaction (IUA*) nication is done through | Legend IHE Profile | CA: Profile Actor | |

System Component
IHE Actor
Custom Actor

IHE Transaction [ITI-xx]

Non-IHE Exchange

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FHIR support
 ** One or multiple calls of same type