# Core Interoperability Specification Requirements

## Actor Mapping to Interoperability Specification

The Use Case Actors and the Services they support are described at a functional level in the Patient Summary – Companion Guide to Use Cases and Definitions. Services may be Recommended or Optional. The Use Case Actors, Services and Optionality are conveyed in the first three columns of Tables 1 to 3 in the section below. The second part of the table (columns 4-6) provides the mapping of the Use Case Actor to the detailed specifications (such as IHE Profiles, Technical Actors, Optionality) that systems shall implement to exchange healthcare information in the context of these Use Cases. The purpose of the tables below is to map the use case actors to the technical actors and the services they are supporting. These tables are aligned with the flow captured in the sequence diagrams which are included in the Companion Guide: Reference Architecture section.

For a selected Use Case Actor (columns 1-3), the system shall implement all the requirements (some optionality when allowed) listed in the second part of the table (columns 4-6). This includes the referenced healthcare profiles, the standards specified and terminology standards. For Technical Actors, which map to IHE Profiles or pan Canadian Interoperability Specifications (*MHD, PDQm, PMIR, CA:FeX, etc.*), refer to the Reference Architecture RA v0.1.0 DFT. Additionally, the two implementation options defined (MHD and CA:FeX), are both focused on solving the same set of use cases.

The following interoperability requirement tables are categorized by options for implementation patterns that jurisdictions may choose based on their maturity, capabilities and current state:

1. Document Repository/Registry Pattern using MHD
2. FHIR Health Information Exchange (HIE) Pattern using CA:FeX

### Published Versions

This is an evolving specification, the release cycle assumes some degree of change will happen across versions. Versions of the artefacts that are employed by the PS-CA Specifications will be clearly defined and align to testing requirements. For information about the supported versions of the in scope IHE Profiles that have been referenced in this PS-CA Specification refer to the Reference Architecture RA v0.1.0 DFT.

### Legend

R = Required

O = Optional

## Table 1.1 Interoperability Conformance Requirements for Use Case 1: HCP Creates PS-CA

### Option 1: Document Repository/Registry Pattern

For details about the referenced IHE Profiles and Standards listed in the table below, refer to the Reference Architecture RA v0.1.0 DFT.

| PS-CA USE CASE 1: HCP Creates PS-CA | | | | MAPPING TO SECTIONS FROM THIS AND REFERENCED INTEROPERABILITY SPECIFICATIONS | | |
|---|---|---|---|---|---|---|
| USE CASE ACTOR | SERVICE SUPPORTED | O PT | TECHNICAL ACTOR | O PT | PROFILE / STANDARD | |
| PS-CA Producer | Authenticate User | O | Client (e.g., EMR) | O | Internet User Authorization (IUA) | |
| | Identify Patient | O | Client (e.g., EMR) | O | Use Existing Standards Employed by the Clinical System | |
| | | O | Patient Demographic Consumer | O | PDQm | |
| | Retrieve clinical data from local data sources (Patient Identifier) | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System | |
| | Assemble and review Patient Summary | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System | |
| | Update Current Valuesets and ConceptMaps | O | Client (e.g., EMR) | O | SVCM | |
| | Omit or Mask Data based on Jurisdictional Policy | O | Client (e.g., EMR) | O | Jurisdictional Requirement | |
| | Save PS-CA to Document Repository | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System | |
| | | R | Document Source | R | MHD | |
| Document Repository (Local to PS-CA Producer or Central) | Save PS-CA to Document Repository | R | Document Recipient | R | MHD | |
| Central Infrastructure | Identify Patient | O | Patient Identity Registry | O | PMIR | |

# Table 1.2 Interoperability Conformance Requirements for Use Case 1: HCP Creates PS-CA

**Option 2: FHIR Health Information Exchange (HIE) Pattern**

For details about the referenced IHE Profiles and Standards listed in the table below, refer to the Reference Architecture RA v0.1.0 DFT.

| PS-CA USE CASE 1: HCP Creates PS-CA | | | MAPPING TO SECTIONS FROM THIS AND REFERENCED INTEROPERABILITY SPECIFICATIONS | | |
|---|---|---|---|---|---|
| USE CASE ACTOR | SERVICE SUPPORTED | OPT | TECHNICAL ACTOR | OPT | PROFILE / STANDARD |
| PS-CA Producer | Authenticate User | O | Client (e.g., EMR) | O | Internet User Authorization (IUA) |
| | Identify Patient | O | Client (e.g., EMR) | O | Use Existing Standards Employed by the Clinical System |
| | | O | Patient Demographic Consumer | O | PDQm |
| | Retrieve clinical data from local data sources (Patient Identifier) | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System |
| | Assemble and review Patient Summary | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System |
| | Update Current Valuesets and ConceptMaps | O | Client (e.g., EMR) | O | SVCM |
| | Omit or Mask Data based on Jurisdictional Policy | O | Client (e.g., EMR) | O | Jurisdictional Requirement |
| | Save PS-CA to Document  Repository | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System |
| | | R | Data Source | R | CA:FeX |
| Document Repository (Central)* | Save PS-CA to Document  Repository | R | Data Recipient | R | CA:FeX |
| Central Infrastructure | Identify Patient | O | Patient Identity Registry | O | PMIR |

*For Option 2, **Document Repository** use case actor is a logical role enacted by the Data Recipient which is described in detail in the 'Companion Guide: Reference Architecture'.

# Table 2.1 Interoperability Conformance Requirements for Use Case 2: HCP Views/ Consumes PS-CA

**Option 1: Document Repository/Registry Pattern**

For details about the referenced IHE Profiles and Standards listed in the table below, refer to the Reference Architecture RA v0.1.0 DFT.

| PS-CA USE CASE 2: HCP Views/ Consumes PS-CA | | | MAPPING TO SECTIONS FROM THIS AND REFERENCED INTEROPERABILITY SPECIFICATIONS | | |
|---|---|---|---|---|---|
| USE CASE ACTORS | SERVICE SUPPORTED | OPT | TECHNICAL ACTOR | OPT | PROFILE / STANDARD |
| PS-CA Consumer | Authenticate User | O | Client (e.g., EMR) | O | Internet User Authorization (IUA) |
| | Identify Patient | O | Client (e.g., EMR) | O | Use Existing Standards Employed by the Clinical System |
| | | O | Patient Demographic Consumer | O | PDQm |
| | Request Patient Summary References (Patient Identifier) | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System |
| | Request Patient Summary (Patient Summary References) | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System |
| | Return Patient Summary References | R | Document Consumer | R | MHD |
| | Return Patient Summary | R | Document Consumer | R | MHD |
| | Perform transformation between different formats | O | Client (e.g., EMR) | O | Use Existing Standards Employed by the Clinical System (Render to Specific Format (PDF)) |
| | | O | Client (e.g., EMR) | O | CA:FMT (e.g., FHIR to CDA, Export to PDF, etc.) |
| | Download/Print PS-CA | O | Client (e.g., EMR) | O | Use Existing Standards Employed by the Clinical System |
| | Update Current ValueSets and ConceptMaps | O | Client (e.g., EMR) | O | SVCM |
| Document Repository (Local to PS-CA Producer or Central) | Retrieve PS-CA References from Document Repository | R | Document Responder | R | MHD |

| | Retrieve PS-CA from Document Repository | R | Document Responder | R | MHD |
|---|---|---|---|---|---|
| Central Infrastructure | Identify Patient | O | Patient Identity Registry | O | PMIR |

## Table 2.2 Interoperability Conformance Requirements for Use Case 2: HCP Views/ Consumes PS-CA

**Option 2: FHIR Health Information Exchange (HIE) Pattern**

For details about the referenced IHE Profiles and Standards listed in the table below, refer to the Reference Architecture RA v0.1.0 DFT.

| PS-CA USE CASE 2: HCP Views/ Consumes PS-CA | | | | MAPPING TO SECTIONS FROM THIS AND REFERENCED INTEROPERABILITY SPECIFICATIONS | |
|---|---|---|---|---|---|
| USE CASE ACTOR | SERVICE SUPPORTED | O PT | TECHNICAL ACTOR | O PT | PROFILE/ STANDARD |
| PS-CA Consumer | Authenticate User | O | Client (e.g., EMR) | O | Internet User Authorization (IUA) |
| | Identify Patient | O | Client (e.g., EMR) | O | Use Existing Standards Employed by the Clinical System |
| | | O | Patient Demographic Consumer | O | PDQm |
| | Request Search Patient Summary (Patient Identifier) | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System |
| | Request Patient Summary (Bundle ID) | R | Client (e.g., EMR) | R | Use Existing Standards Employed by the Clinical System |
| | Return Patient Summary Compositions | R | Data Consumer | R | CA:FeX |
| | Return Patient Summary | R | Data Consumer | R | CA:FeX |
| | Perform transformation between different formats | O | Client (e.g., EMR) | O | Use Existing Standards Employed by the Clinical System (Render to Specific Format (PDF)) |
| | | O | Client (e.g., EMR) | O | CA:FMT (e.g., FHIR to CDA, CDA to FHIR, Export to PDF, etc.) |
| | Download/Print PS-CA | O | Client (e.g., EMR) | O | Use Existing Standards Employed by the Clinical System |
| | Update Current ValueSets and ConceptMaps | O | Client (e.g., EMR) | O | SVCM |
| Document Repository (Local to PS-CA Producer or Central)* | Retrieve Patient Summary Compositions From Document Repository | R | Data Responder | R | CA:FeX |
| | Retrieve Patient Summary Bundle Document Repository | R | Data Responder | R | CA:FeX |
| Central Infrastructure | Identify Patient | O | Patient Identity Registry | O | PMIR |

*For Option 2, **Document Repository** use case actor is a logical role enacted by the Data Recipient which is described in detail in the 'Companion Guide: Reference Architecture'.

## Table 3.1 Interoperability Conformance Requirements for Use Case 3: Patient Views/Consumes PS-CA

**Option 1: Document Repository/Registry Pattern**

For details about the referenced IHE Profiles and Standards listed in the table below, refer to the Reference Architecture RA v0.1.0 DFT.

| PS-CA USE CASE 3: Patient Views/ Consumes PS-CA | | | | MAPPING TO SECTIONS FROM THIS AND REFERENCED INTEROPERABILITY SPECIFICATIONS | |
|---|---|---|---|---|---|
| USE CASE ACTOR | SERVICE SUPPORTED | O PT | TECHNICAL ACTOR | O PT | PROFILE / STANDARD |
| Patient Portal | Authenticate User | O | Client App | O | Internet User Authorization (IUA) |
| | Identify Patient | O | Client App | O | Use Existing Standards Employed by the Clinical System |
| | | O | Patient Demographic Consumer | O | PDQm |
| | Request Patient Summary References (Patient Identifier) | R | Client App | R | Use Existing Standards Employed by the Clinical System |
| | | | | | |

| | Request Patient Summary (Patient Summary References) | R | Client App | R | Use Existing Standards Employed by the Clinical System |
|---|---|---|---|---|---|
| | Return Patient Summary References | R | Document Consumer | R | MHD |
| | Return Patient Summary | R | Document Consumer | R | MHD |
| | Perform transformation between different formats | O | Client App | O | Use Existing Standards Employed by the Clinical System (Render to Specific Format (PDF)) |
| | | O | Client App | O | CA:FMT (e.g., FHIR to CDA, Export to PDF, etc.) |
| | Download/Print PS-CA | O | Client App | O | Use Existing Standards Employed by the Clinical System |
| | Save to Portable Media | O | Client App | O | Use Existing Standards Employed by the Clinical System |
| | | O | Portable Media Creator | O | XDM (Future scope) |
| Document Repository (Local or Central) | Retrieve PS-CA References from Document Repository | R | Document Responder | R | MHD |
| | Retrieve PS-CA from Document Repository | R | Document Responder | R | MHD |
| Central Infrastructure | Identify Patient | O | Patient Identity Registry | O | PMIR |

## Table 3.2 Interoperability Conformance Requirements for Use Case 3: Patient Views/Consumes PS-CA

**Option 2: FHIR Health Information Exchange (HIE) Pattern**

For details about the referenced IHE Profiles and Standards listed in the table below, refer to the Reference Architecture RA v0.1.0 DFT.

| PS-CA USE CASE 3: Patient Views/ Consumes PS-CA | | | | MAPPING TO SECTIONS FROM THIS AND REFERENCED INTEROPERABILITY SPECIFICATIONS | |
|---|---|---|---|---|---|
| USE CASE ACTOR | SERVICE SUPPORTED | O PT | TECHNICAL ACTOR | O PT | PROFILE / STANDARD |
| Patient Portal | Authenticate User | O | Client App | O | Internet User Authorization (IUA) |
| | Identify Patient | O | Client App | O | Use Existing Standards Employed by the Clinical System |
| | | O | Patient Demographic Consumer | O | PDQm |
| | Request Search Patient Summary (Patient Identifier) | R | Client App | R | Use Existing Standards Employed by the Clinical System |
| | Request Patient Summary (Bundle ID) | R | Client App | R | Use Existing Standards Employed by the Clinical System |
| | Return Patient Summary Compositions | R | Data Consumer | R | CA:FeX |
| | Return Patient Summary | R | Data Consumer | R | CA:FeX |
| | Perform transformation between different formats | O | Client App | O | Use Existing Standards Employed by the Clinical System (Render to Specific Format (PDF)) |
| | | O | Client App | O | CA:FMT (e.g., FHIR to CDA, CDA to FHIR, Export to PDF, etc.) |
| | Download/Print PS-CA | O | Client App | O | Use Existing Standards Employed by the Clinical System |
| | Save to Portable Media | O | Client App | O | Use Existing Standards Employed by the Clinical System |
| | | O | Portable Media Creator | O | XDM (Future scope) |
| Document Repository (Local or Central)* | Retrieve Patient Summary Compositions from Document Repository | R | Data Responder | R | CA:FeX |
| | Retrieve Patient Summary Bundle from Document Repository | R | Data Responder | R | CA:FeX |
| Central Infrastructure | Identify Patient | O | Patient Identity Registry | O | PMIR |

*For Option 2, **Document Repository** use case actor is a logical role enacted by the Data Recipient which is described in detail in the 'Companion Guide: Reference Architecture.'