

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 4-7) 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 4-7). 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.*), the last column provides the reference location. These specifications may be found in Appendices to this specification document or in other referenced companion guides.

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

The following describes the published versions in scope for the required and optional IHE Profiles that have been referenced in this PS-CA Specification:

- **MHD:** v4.0.2: Trial Implementation v4.0.2 based on FHIR R4
- **IUA:** Revision 2.1 - Trial Implementation
- **PDQm:** v2.3.0: Trial Implementation) based on FHIR R4
- **PMIR:** Revision 1.3 – Trial Implementation
- **SVCM:** Revision 1.2: Trial Implementation based on FHIR R4
- **XDM:** Revision 18.0, July 30, 2021 – Final Text

*Note: The STU1 Release of the IPS-UV were reviewed as the starting point for the PS-CA profiles.

Versioning

This is an evolving specification, the release cycle assumes some degree of change will happen across versions. We've established a versioning protocol and will be clearly communicating the version of the artefacts that are employed by the PS-CA Specification and will ensure testing aligns to it. There will be a process in place to monitor changes in the current versions of the IHE profiles which will be incorporated in future versions of the PS-CA specification based on our interoperability roadmap.

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

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	REFERENCED SPECIFICATION AND STANDARDS (Refer to the sections listed below in Appendix A)
PS-CA Producer	Authenticate User	O	Client (e.g., EMR)	O	Internet User Assertion (IUA)	Appendix A: IUA Profile Overview
	Identify Patient	O	Client (e.g., EMR)	O	Use Existing Standards Employed by the Clinical System	N/A
		O	Patient Demographic Consumer	O	PDQm	Appendix A: PDQm Profile Overview

	Retrieve clinical data from local data sources (Patient Identifier)	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System	N/A
	Assemble and review Patient Summary	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System	N/A
	Update Current Valuesets and ConceptMaps	O	Client (e.g., EMR)	O	SVCM	Appendix A: SVCM Profile Overview
	Omit or Mask Data based on Jurisdictional Policy	O	Client (e.g., EMR)	O	Jurisdictional Requirement	N/A
	Save PS-CA to Document Repository	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System	N/A
		R	Document Source	R	MHD	Appendix A: MHD Profile Overview
Document Repository (Local to PS-CA Producer or Central)	Save PS-CA to Document Repository	R	Document Recipient	R	MHD	Appendix A: MHD Profile Overview
Central Infrastructure	Identify Patient	O	Patient Identity Registry	O	PMIR	Appendix A: PMIR Profile Overview

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

Option 2: FHIR Health Information Exchange (HIE) Pattern

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	REFERENCED SPECIFICATION AND STANDARDS (Refer to the sections listed below in Appendix A)
PS-CA Producer	Authenticate User	O	Client (e.g., EMR)	O	Internet User Assertion (IUA)	Appendix A: IUA Profile Overview
	Identify Patient	O	Client (e.g., EMR)	O	Use Existing Standards Employed by the Clinical System	N/A
		O	Patient Demographic Consumer	O	PDQm	Appendix A: PDQm Profile Overview
	Retrieve clinical data from local data sources (Patient Identifier)	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System	N/A
	Assemble and review Patient Summary	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System	N/A
	Update Current Valuesets and ConceptMaps	O	Client (e.g., EMR)	O	SVCM	Appendix A: SVCM Profile Overview
	Omit or Mask Data based on Jurisdictional Policy	O	Client (e.g., EMR)	O	Jurisdictional Requirement	N/A
	Save PS-CA to Document Repository	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System	N/A
		R	Data Source	R	CA:FeX	Appendix A: CA:FeX Profile Overview
Document Repository (Central)*	Save PS-CA to Document Repository	R	Data Recipient	R	CA:FeX	Appendix A: CA:FeX Profile Overview
Central Infrastructure	Identify Patient	O	Patient Identity Registry	O	PMIR	Appendix A: PMIR Profile Overview

*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

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

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

Option 2: FHIR Health Information Exchange (HIE) Pattern

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	REFERENCED SPECIFICATION AND STANDARDS (Refer to the sections listed below in Appendix A)
PS-CA Consumer	Authenticate User	O	Client (e.g., EMR)	O	Internet User Assertion (IUA)	Appendix A: IUA Profile Overview
	Identify Patient	O	Client (e.g., EMR)	O	Use Existing Standards Employed by the Clinical System	N/A
		O	Patient Demographic Consumer	O	PDQm	Appendix A: PDQm Profile Overview
	Request Search Patient Summary (Patient Identifier)	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System	N/A
	Request Patient Summary (Bundle ID)	R	Client (e.g., EMR)	R	Use Existing Standards Employed by the Clinical System	N/A
	Return Patient Summary Compositions	R	Data Consumer	R	CA:FeX	Appendix A: CA:FeX Profile Overview

	Return Patient Summary	R	Data Consumer	R	CA:FeX	Appendix A: CA:FeX Profile Overview
	Perform transformation between different formats	O	Client (e.g., EMR)	O	Use Existing Standards Employed by the Clinical System (Render to Specific Format (PDF))	N/A
		O	Client (e.g., EMR)	O	CA:FMT (e.g., FHIR to CDA, CDA to FHIR, Export to PDF, etc.)	Appendix A: CA:FMT Profile Overview
	Download/Print PS-CA	O	Client (e.g., EMR)	O	Use Existing Standards Employed by the Clinical System	N/A
	Update Current ValueSets and ConceptMaps	O	Client (e.g., EMR)	O	SVCM	Appendix A: SVCM Profile Overview
Document Repository (Local to PS-CA Producer or Central)*	Retrieve Patient Summary Compositions From Document Repository	R	Data Responder	R	CA:FeX	Appendix A: CA:FeX Profile Overview
	Retrieve Patient Summary Bundle Document Repository	R	Data Responder	R	CA:FeX	Appendix A: CA:FeX Profile Overview
Central Infrastructure	Identify Patient	O	Patient Identity Registry	O	PMIR	Appendix A: PMIR Profile Overview

*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

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	REFERENCED SPECIFICATION AND STANDARDS (Refer to the sections listed below in Appendix A)
Patient Portal	Authenticate User	O	Client App	O	Internet User Assertion (IUA)	Appendix A: IUA Profile Overview
	Identify Patient	O	Client App	O	Use Existing Standards Employed by the Clinical System	N/A
		O	Patient Demographic Consumer	O	PDQm	Appendix A: PDQm Profile Overview
	Request Patient Summary References (Patient Identifier)	R	Client App	R	Use Existing Standards Employed by the Clinical System	N/A
	Request Patient Summary (Patient Summary References)	R	Client App	R	Use Existing Standards Employed by the Clinical System	N/A
	Return Patient Summary References	R	Document Consumer	R	MHD	Appendix A: MHD Profile Overview
	Return Patient Summary	R	Document Consumer	R	MHD	Appendix A: MHD Profile Overview
	Perform transformation between different formats	O	Client App	O	Use Existing Standards Employed by the Clinical System (Render to Specific Format (PDF))	N/A
		O	Client App	O	CA:FMT (e.g., FHIR to CDA, Export to PDF, etc.)	Appendix A: CA:FMT Profile Overview
	Download/Print PS-CA	O	Client App	O	Use Existing Standards Employed by the Clinical System	N/A
Document Repository (Local or Central)	Save to Portable Media	O	Client App	O	Use Existing Standards Employed by the Clinical System	N/A
		O	Portable Media Creator	O	XDM	Appendix A: XDM Profile Overview
	Retrieve PS-CA References from Document Repository	R	Document Responder	R	MHD	Appendix A: MHD Profile Overview
	Retrieve PS-CA from Document Repository	R	Document Responder	R	MHD	Appendix A: MHD Profile Overview

Central Infrastructure	Identify Patient	O	Patient Identity Registry	O	PMIR	Appendix A: PMIR Profile Overview
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Table 3.2 Interoperability Conformance Requirements for Use Case 3: Patient Views/Consumes PS-CA

Option 2: FHIR Health Information Exchange (HIE) Pattern

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	REFERENCED SPECIFICATION AND STANDARDS (Refer to the sections listed below in Appendix A)
Patient Portal	Authenticate User	O	Client App	O	Internet User Assertion (IUA)	Appendix A: IUA Profile Overview
	Identify Patient	O	Client App	O	Use Existing Standards Employed by the Clinical System	N/A
		O	Patient Demographic Consumer	O	PDQm	Appendix A: PDQm Profile Overview
	Request Search Patient Summary (Patient Identifier)	R	Client App	R	Use Existing Standards Employed by the Clinical System	N/A
	Request Patient Summary (Bundle ID)	R	Client App	R	Use Existing Standards Employed by the Clinical System	N/A
	Return Patient Summary Compositions	R	Data Consumer	R	CA:FeX	Appendix A: CA:FeX Profile Overview
	Return Patient Summary	R	Data Consumer	R	CA:FeX	Appendix A: CA:FeX Profile Overview
	Perform transformation between different formats	O	Client App	O	Use Existing Standards Employed by the Clinical System (Render to Specific Format (PDF))	N/A
		O	Client App	O	CA:FMT (e.g., FHIR to CDA, CDA to FHIR, Export to PDF, etc.)	Appendix A: CA:FMT Profile Overview
	Download/Print PS-CA	O	Client App	O	Use Existing Standards Employed by the Clinical System	N/A
	Save to Portable Media	O	Client App	O	Use Existing Standards Employed by the Clinical System	N/A
		O	Portable Media Creator	O	XDM	Appendix A: XDM Profile Overview
Document Repository (Local or Central)*	Retrieve Patient Summary Compositions from Document Repository	R	Data Responder	R	CA:FeX	Appendix A: CA:FeX Profile Overview
	Retrieve Patient Summary Bundle from Document Repository	R	Data Responder	R	CA:FeX	Appendix A: CA:FeX Profile Overview
Central Infrastructure	Identify Patient	O	Patient Identity Registry	O	PMIR	Appendix A: PMIR Profile Overview

*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.'