HL7® International

Global Passport Series

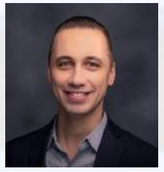
IPS: Cross Border Collaboration and Interoperability Issues

IPS: Cross Border Collaboration and Interoperability Issues

Moderator

Ticia Gerber
HL7 Global Director, Partnerships & Policy

Panelists



Dan Vreeman, DPT, FHL7
HL7 Chief Standards Development Officer

John D'Amore, MS
President, More Informatics Inc.

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Senior Product Manager, Interoperability Solutions & Pan-Canadian Patient Summary, Canada Health Infoway

Italo Macedo
Interoperability Architect, Hospital Sírio-Libanês & Chair of the Technical Committee, HL7 Brazil

Grant M. Wood
President & CEO, Global Genomic Medicine Collaborative (GGMC)

Isaac Vetter
Integration Team Lead, Epic

Jason Vogt
Development Manager, APIs & Structured Documents, MEDITECH

Expanding Access, Ensuring Freedom

HL7 International: your trusted convener and forum for solving interoperability problems together

HL7 Global Passport Series

IPS: Cross Border Collaboration and Interoperability Issues

Daniel J. Vreeman, PT, DPT, MS, FACMI, FIAHSI, FHL7

Chief Standards Development Officer

HL7 International

Chair

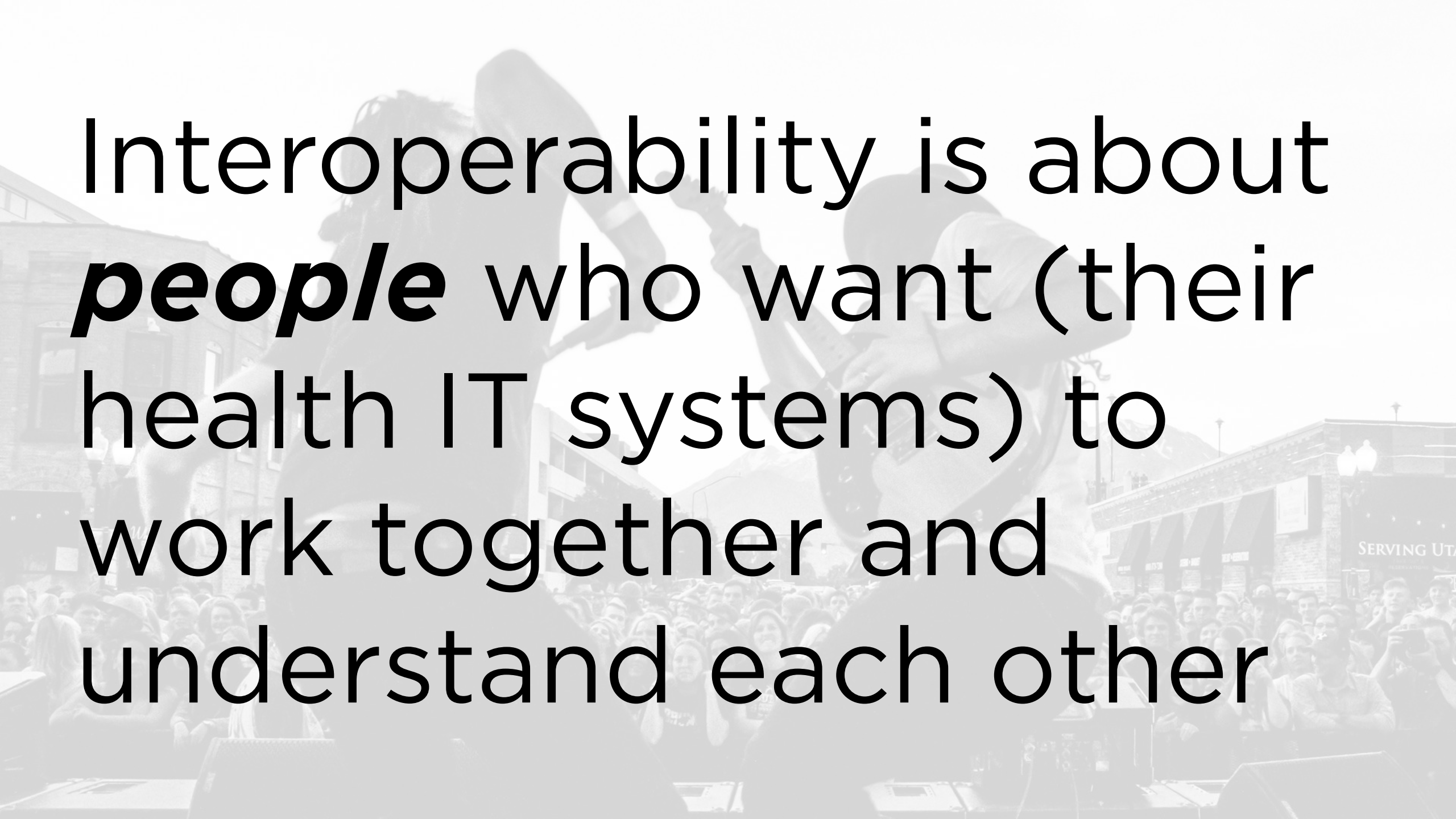
Joint Initiative Council (JIC)

HL7® International

Reality (still today):

People move ***faster*** and ***further*** than their health information.

Open data standards:
fuel for innovation



Interoperability is about ***people*** who want (their health IT systems) to work together and understand each other

HL7® International

Organizational Profile

Not-for-profit (501c6)

Standards Development Organization

Founded in 1987

ANSI-accredited

Globally trusted

Product Families

HL7® FHIR®

HL7® CDA®

HL7® V2™

HL7 Product Portfolio

Cheat Codes for Digital Innovation

Semantically interoperable health data at scale

SMART App Launch

Standard integration for apps interacting with FHIR data

Bulk

Simple export of big FHIR data (e.g. for model training)

CDS Hooks

Workflow-integrated interaction with CDS (including AI)

CQL

Standardized clinical knowledge and metrics

SMART Health Cards and Links

Tamper-proof, verifiable, and easily shareable health data

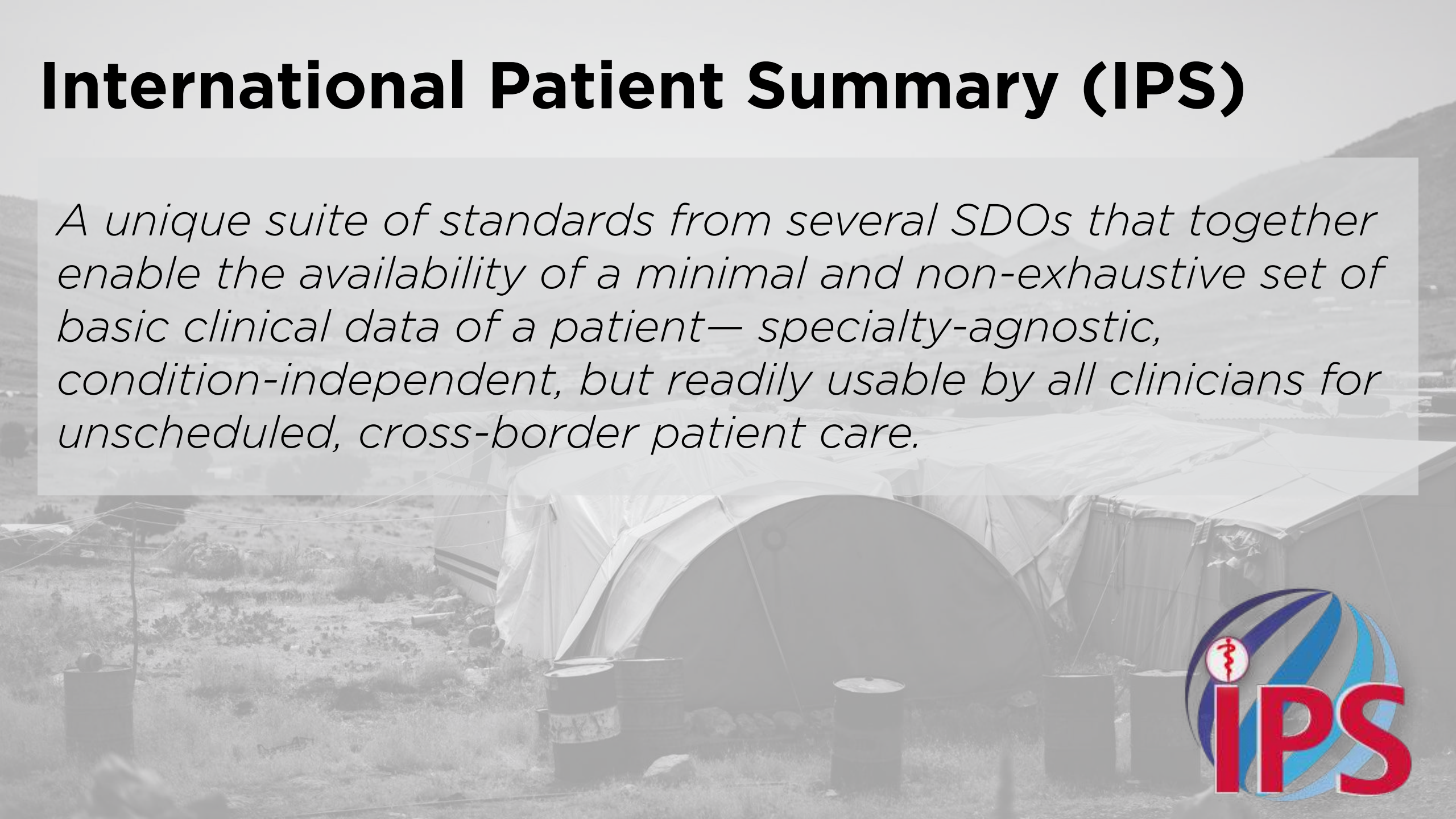

HL7® FHIR®
Freedom to
Harness global interoperability wisdom
Implement, inspect, and improve the specification
Redistribute refinements, helping others

Example Use Cases for FHIR in 2024

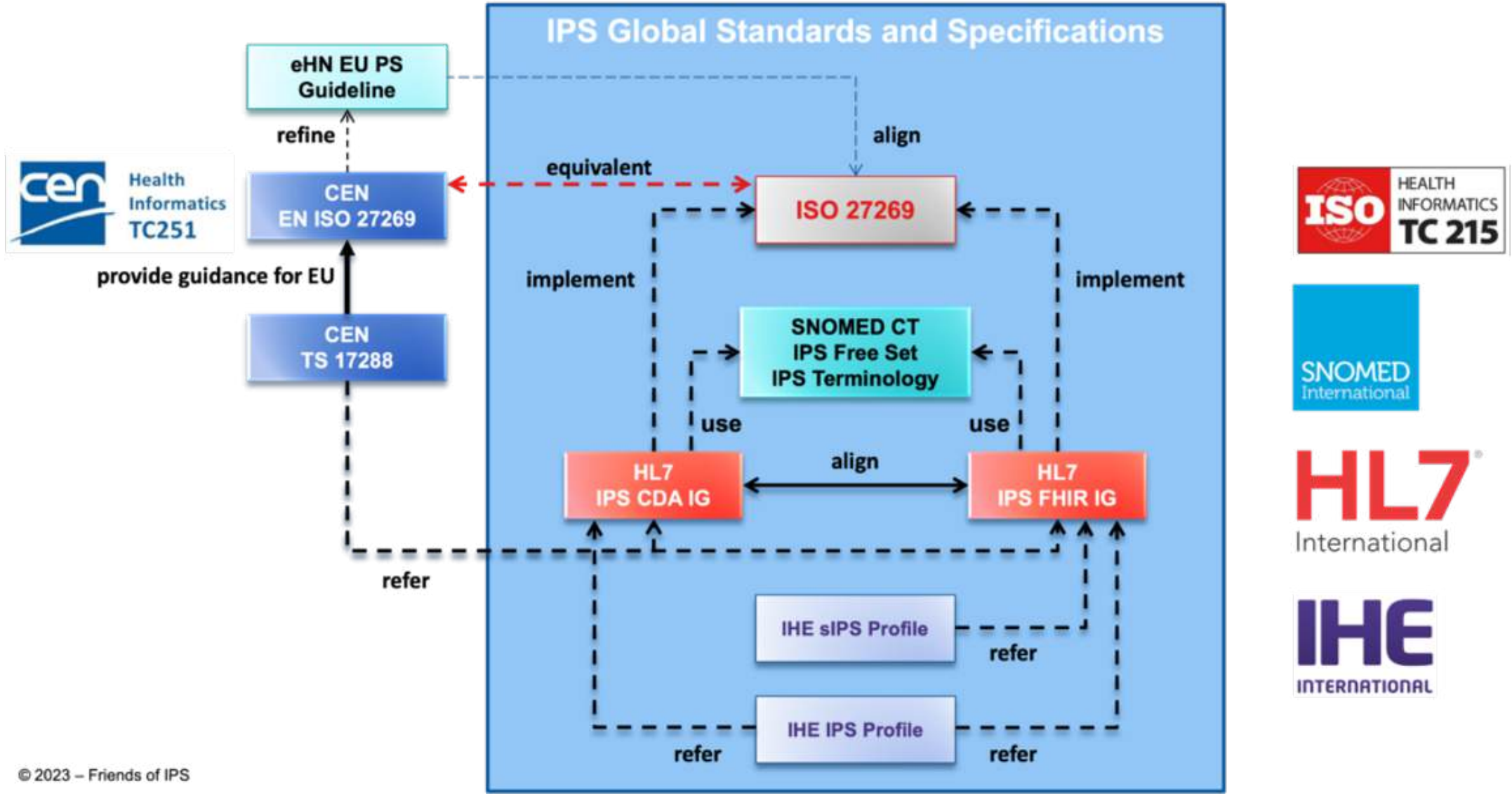
Patient Cost Transparency	Payer Data Exchange	Quality Improvement Core
Adverse Events in Clinical Research	Central Cancer Registry Reporting	Digital Insurance Card
Pharmaceutical Quality	Electronic Long-Term Services and Supports	Value-based Performance Reporting
Multiple Chronic Condition Care Plans	SDOH Data Exchange	Electronic Case Reporting

International Patient Summary (IPS)

A unique suite of standards from several SDOs that together enable the availability of a minimal and non-exhaustive set of basic clinical data of a patient— specialty-agnostic, condition-independent, but readily usable by all clinicians for unscheduled, cross-border patient care.



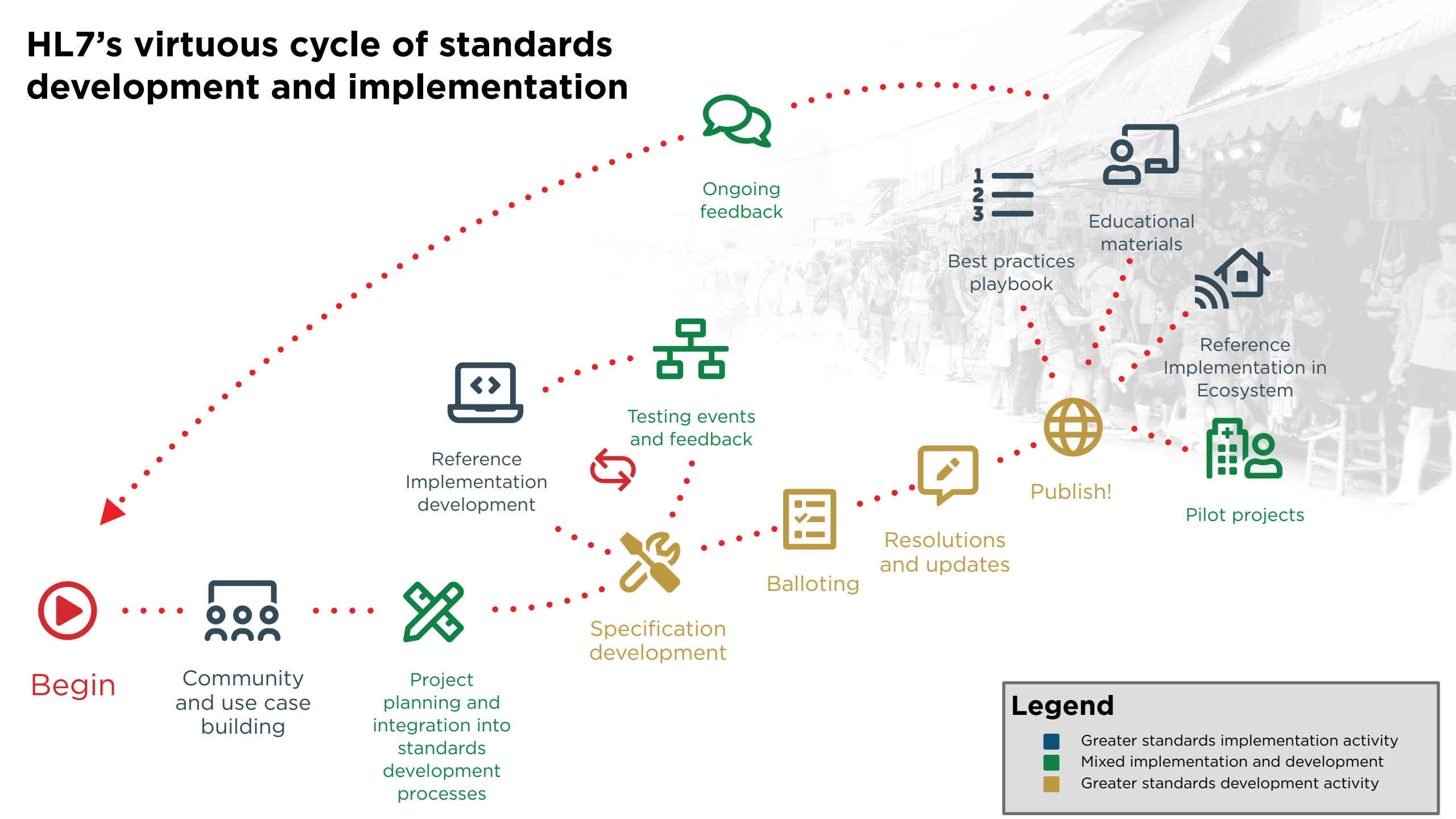
The IPS is a Multi-SDO Collaboration



HL7's View of the Ideal Standards Process

1. Fosters consensus
2. Ensures content is fit for purpose
3. Ensures content is implementable
4. Establishes an implementer community
5. Ensures ongoing maintenance of the standard

HL7's virtuous cycle of standards development and implementation



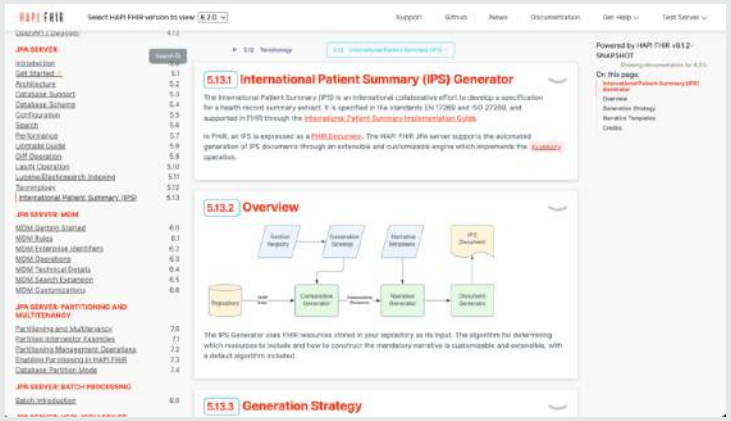
Legend

- Greater standards implementation activity
- Mixed implementation and development
- Greater standards development activity

HL7 ❤ IPS

HL7 IPS FHIR IG

HL7 IPS CDA IG



HL7 IPS Tools: Reference Implementation, Validator

HL7 Connectathon Events

Outreach Events and Presentations

HL7 Standards are Advanced by an Active Community Worldwide

Many integrated components of our global community

HL7 Membership

300+ corporate members

1300+ individual members

HL7 Affiliates

HL7 Argentina
HL7 Australia
HL7 Austria
HL7 Belgium
HL7 Brazil
HL7 Canada
HL7 Central America & Dominican Republic
HL7 Chile
HL7 China
HL7 Colombia
HL7 Croatia
HL7 Czech Republic
HL7 Denmark
HL7 Ecuador
HL7 Finland
HL7 France
HL7 Germany
HL7 Greece
HL7 Hong Kong
HL7 India
HL7 Italy
HL7 Japan
HL7 Mexico
HL7 Netherlands
HL7 New Zealand
HL7 Norway
HL7 Peru
HL7 Philippines
HL7 Poland
HL7 Portugal
HL7 Romania
HL7 Russia
HL7 Singapore
HL7 Slovakia
HL7 Slovenia
HL7 Spain
HL7 Sweden
HL7 Switzerland
HL7 Taiwan
HL7 UAE
HL7 UK
HL7 Ukraine

HL7 Regional Partner

HELINA HEALTH INFORMATICS IN AFRICA
The Pan African Health Informatics Association

AeHIN Asia eHealth Information Network

Zimam Developing Careers in Digital Health

GCC Taskforce on Workforce Development in Digital Healthcare

HL7 Education Partners

firely

AEGIS

HL7 Collaborations

Collaboration agreements with 30+ other organizations

Support Organization

HL7 FHIR Foundation

FHIR Accelerator Program

HL7 FHIR ARGONAUT PROJECT

FAST FHIR AT SCALE TASKFORCE HL7 FHIR

carin Creating Access to Real-time Information Now through Consumer-Directed Exchange

gravity PROJECT

CodeX Common Oncology Data Elements eXtensions

HELIOS

DA VINCI HL7 FHIR

VULCAN HL7 FHIR

HL7 International Liaisons to (45) other organizations

- Alliance of Community Health Plans *(J Skapik)*
- America's Health Insurance Plans *(L James)*
- American College of Physicians *(C Jaffe)*
- American Dental Association *(R Fiehn)*
- American Health Information Management Association *(V Nguyen)*
- American Hospital Association *(open)*
- American Medical Association *(C Jaffe)*
- American Medical Informatics Association *(C Jaffe)*
- American Society for Testing Materials *(open)*
- Council for Affordable Quality Healthcare *(V Nguyen)*
- CEN/TC 251 *(E Hammond)*
- Civitas Networks for Health *(C Jaffe)*
- Clinical Data Interchange Standards Consortium *(open)*
- Coalition for Health AI *(C Jaffe)*
- College of Health Information Management Executives *(C Jaffe)*
- Designated Standards Maintenance Committee *(A Goss)*
- Digital Imaging and Communication In Medicine *(B Bialecki)*
- GS1 *(N Piper)*
- Global Consortium for eHealth Interoperability *(D Vreeman)*
- Healthcare Information and Management Systems Society *(V Nguyen)*
- IEEE *(E Hammond)*
- Integrating the Healthcare Enterprise International, Inc *(D Vreeman)*
- Interamerican Development Bank *(D Kaminker)*
- International Conference on Harmonisation *(open)*
- International Medical Informatics Association *(E Hammond)*
- International Organization for Standardization *(multiple)*
- Joint Initiative Council *(D Vreeman)*
- National Council for Prescription Drug Programs *(F McKinney)*
- Object Management Group *(K. Rubin)*
- Observational Health Data Sciences and Informatics *(E Hammond)*
- Open Concept Lab, LLC *(D Vreeman)*
- OpenMRS, Inc. *(D Vreeman)*
- Pharmaceutical Users Software Exchange *(P Guerra)*
- Regenstrief Institute, Inc. *(D Vreeman)*
- The Sequoia Project *(A Truscott)*
- SHIELD *(J Skapik)*
- SNOMED International *(A Truscott)*
- TransCelerate BioPharma, Inc *(C Jaffe)*
- UDAP.org *(D Pyke)*
- U.S. Department of Veterans Affairs *(K Rubin)*
- U.S. Food and Drug Administration *(C Jaffe)*
- U.S. Office of the National Coordinator for Health IT *(C Jaffe, D Vreeman)*
- Web3D Consortium *(E Hammond)*
- Workgroup for Electronic Data Interchange *(C Jaffe)*
- World Health Organization *(D Vreeman)*
- X12 *(J Keegan)*

HL7 ❤ JIC

Joint Initiative Council

The Forum for International Health SDO Collaboration

A non-legal consortium established in 2007, now with 15 members advancing global interoperability together

Current Chair HL7 International (D Vreeman)

cdisc

LOINC® from Regenstrief

ISO HEALTH INFORMATICS TC215

DICOM Digital Imaging and Communications in Medicine

SNOMED International

ITU-T SG16 Multimedia

GS1

cen Health Informatics TC251

IEEE SA STANDARDS ASSOCIATION

HL7 International

IHE INTERNATIONAL Integrating the Healthcare Enterprise

OECD

ICCBBA

open EHR

GMDN

🤝 JIC Executive Meeting in Athens


INTEROPERABILITY IS A TEAM SPORT
FACILITATOR
Dr Daniel Vreeman
Chair-elect, Joint Initiative Council for Global Health Informatics Standardisation
@djvreeman
Dr NT Cheung FAIDH
Hong Kong representative to the Global Digital Health Partnership
Heather Grain FAIDH
Convenor ISO TC215
@HeatherGrain
Dr Eza Hafeza
Director of Terminology Operations and Services Regenstrief Institute
Dr W Ed. Hammond
Director, Duke Center for Health Informatics HL7 International
@duke_hammond
Don Sweete
CEO
SNOMED International
@Snomedct
@TheInstituteDH #MEDINFO23
AIDH
NSW Health

JIC ❤ IPS

Joint Initiative Council

An exemplar of multi-SDO collaboration

The JIC has been the home for coordinated joint work on patient summary standards since 2014

Joint Initiative Council

Joint Initiative Council for Global Health Informatics Standardization

TERMS OF REFERENCE

International Patient Summary Coordination Committee
(the '**Committee**')

Version 1.0
Effective date: 19 September 2024

1. Background

1.1 The International Patient Summary (**IPS**) is defined by the **IPS Suite**, which comprises the following (each an **IPS Artefact**):

(a) *ISO 27269 Health informatics — International patient summary*, which is maintained by ISO/TC 215 Health informatics through TC 215/WG 1 Architectures, frameworks and models;

JIC's IPS Coordination Committee

The Future of IPS as a Global Public Good

a discussion paper from the

Joint Initiative Council for Global Health Informatics Standardisation

JIC IPS Discussion Paper (2024)

JIC Listening Sessions with IPS Stakeholders

The IPS is a *Global* Collaboration

- HL7 International
- ISO
- CEN
- SNOMED
- LOINC
- IHE

JIC

- Open Concept Lab, LLC (OCL)
- OpenMRS, Inc.
- HIMSS
- WHO
- GDHP

and SO MANY more...
including YOU!

You are welcome in our merry band!

HL7® International

International Patient Summary (IPS)

IPS Structure and Value

John D'Amore, MS
@ HL7 Global Passport Series

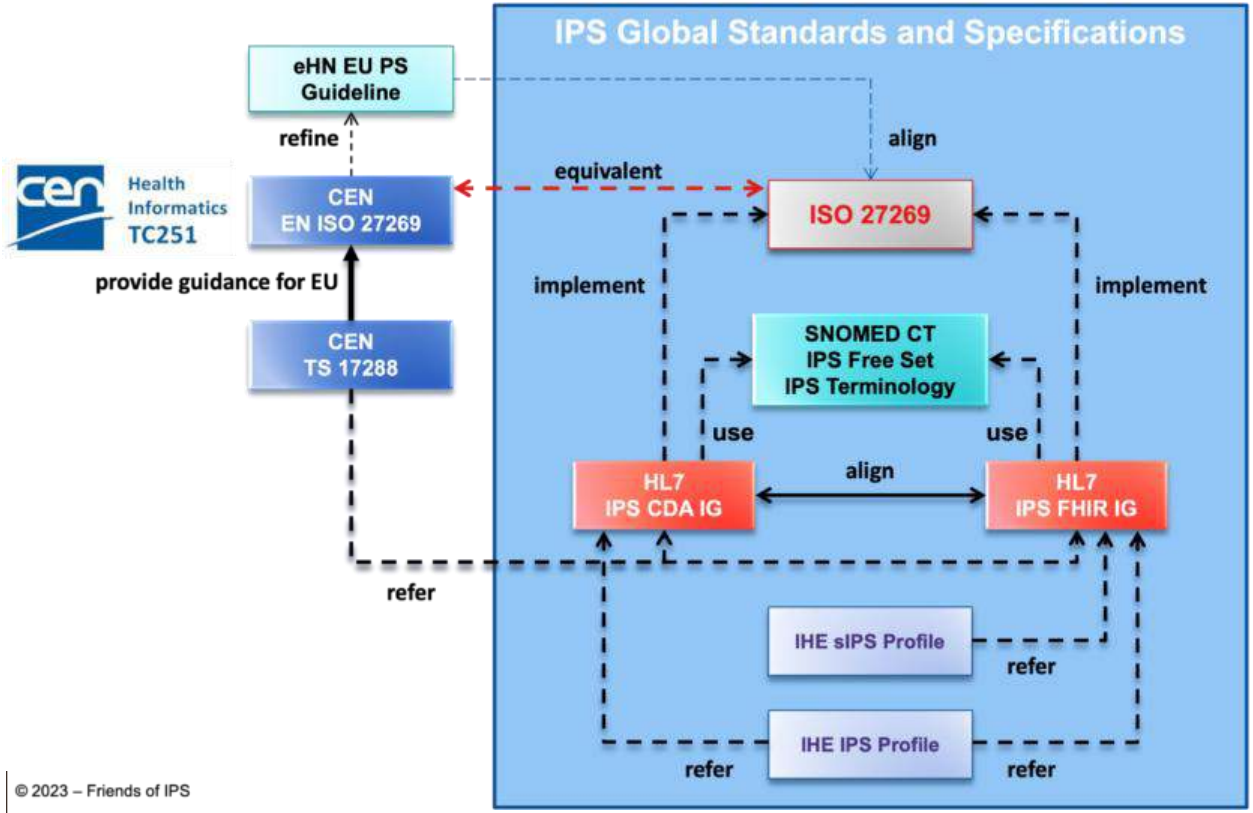
Thursday 10am US ET, March 13, 2025

Agenda

- A Brief Introduction to the IPS
- Why a Patient Summary, Why Now?
- What's Upcoming for IPS?

A BRIEF INTRODUCTION TO THE IPS

Cross-SDO Collaboration



What is the IPS?

- A standardized set of basic clinical data
- Includes most important health and care related facts
- A summarized version of a patient's clinical data provides health professionals the essential information needed for care

The International Patient Summary is a minimal and non-exhaustive set of basic clinical data of a patient, specialty-agnostic, condition-independent, but readily usable by all clinicians for the unscheduled (cross-border) patient care.

What is the IPS?

Continuity of Care

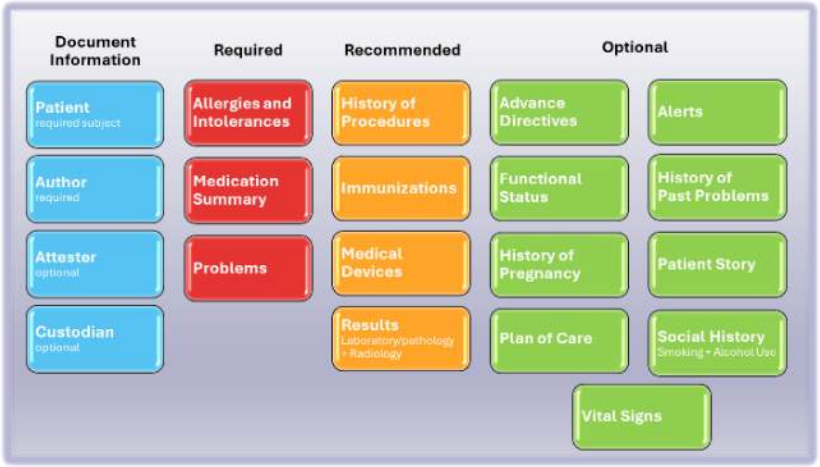
&

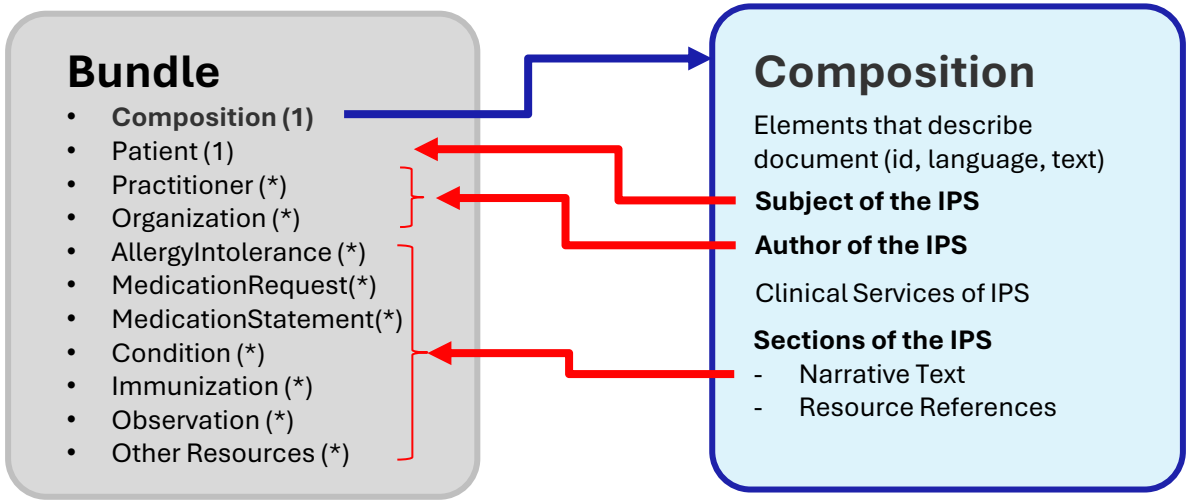
Cross-Border

- National
- Provincial
- State/Regional
- Local
- Organizational

IPS as FHIR Document

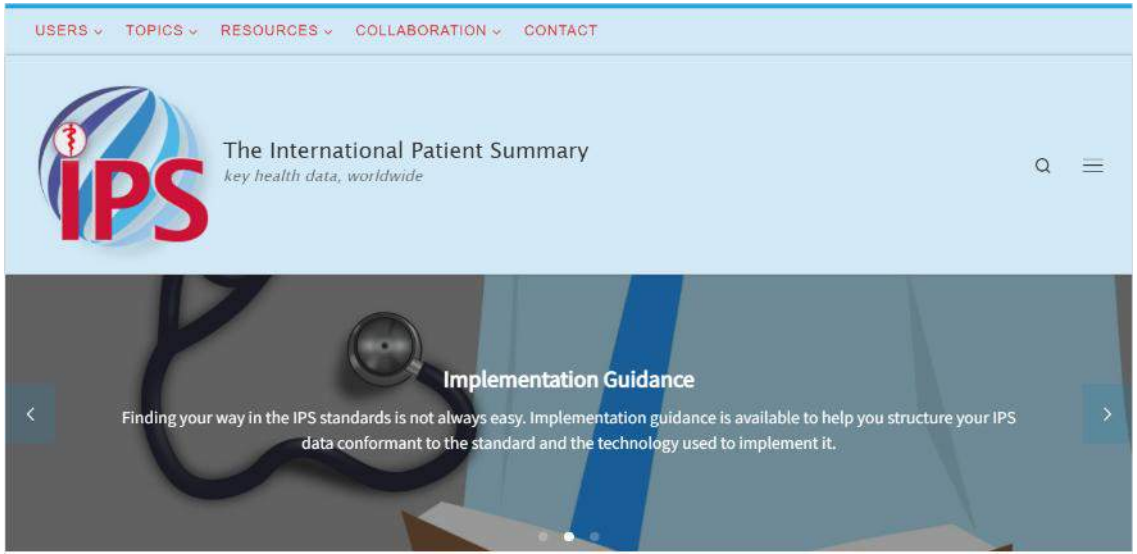
- The IPS is a Bundle which uses the Composition resource to organize the patient's summary. It's both machine readable and human renderable





Want a Broader Introduction?

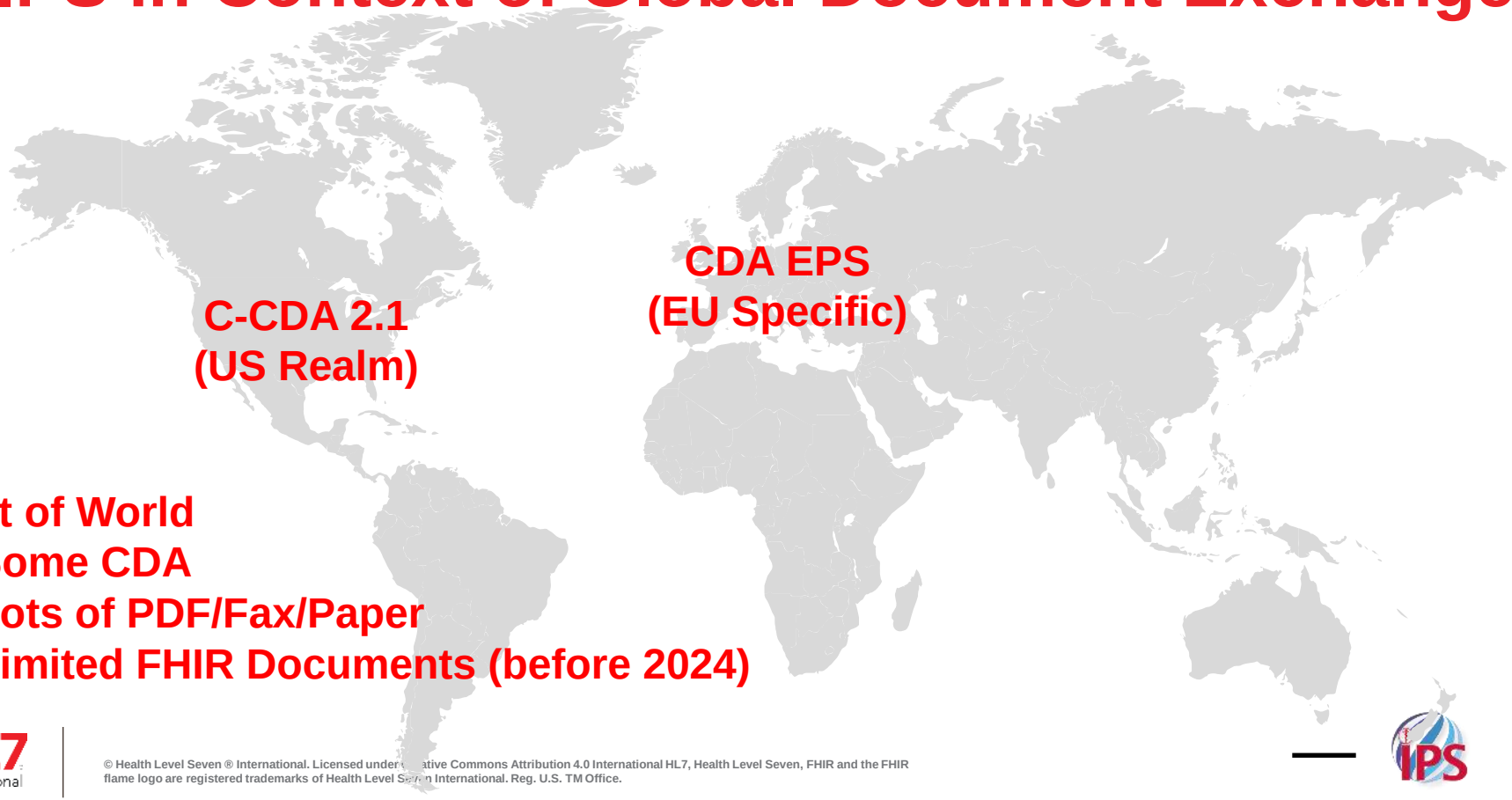
https://international-patient-summary.net/



SCAN ME

WHY A PATIENT SUMMARY, WHY NOW?

IPS in Context of Global Document Exchange



Rest of World

- Some CDA
- Lots of PDF/Fax/Paper
- Limited FHIR Documents (before 2024)

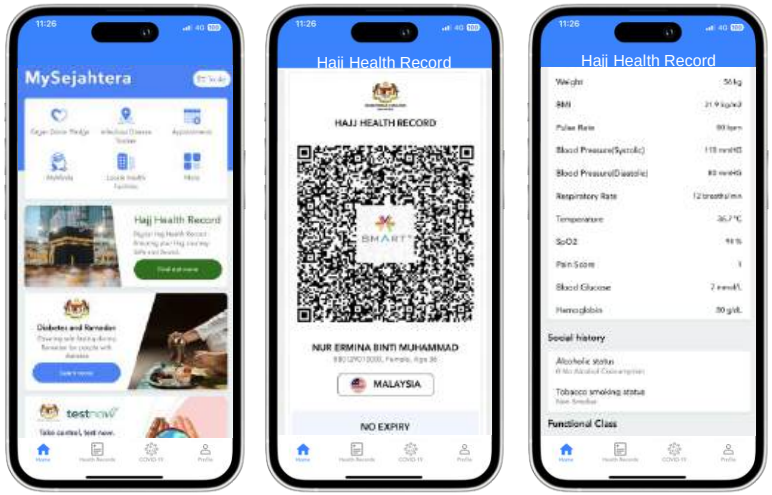
IPS

Value of the IPS

- Provides international format (“universal realm”) baseline with region-agnostic terminologies
- Empowers patient and provider-mediated exchange
- Leverages global FHIR investments
- Domestic adaptation possible for local needs
- Support from major technology vendors
- Builds on documented benefits of interoperability
  https://digitalhealthcanada.com/wp-content/uploads/2022/06/Value-of-the-IPS-in-Canada-v11-03-2021.pdf

2024 Proof Points

- IPS issued for 200,000+ Hajj pilgrims (image right)
- Canada launches IPS in two provinces (New Brunswick & Alberta)
- Brazil publishes IPS plan
- ePatientDave @ HIMSS 24
- Major vendors launch (or announce) IPS support



Example from Malaysia's MySejahtera application

IPS

WHAT'S UPCOMING FOR IPS?

Upcoming for IPS

- Publish 2.0 IPS FHIR guide
  (1.1 last published November 2022)
- Continue support for IPS tooling and reference implementations
- Advance patient mediated exchange using QR codes and IPS
- Coordinate activity among SDOs
  (IPSCC launched in 2024)

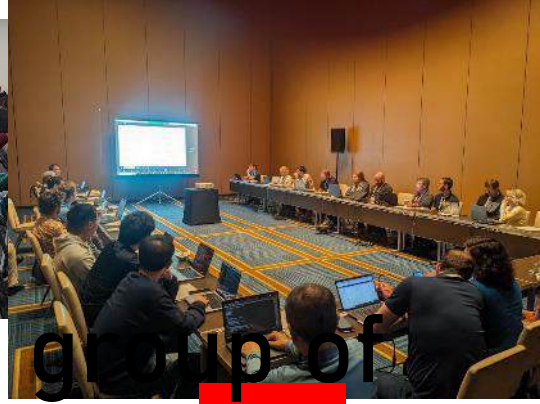
ipsviewer.com

Click “**Try a Sample**”

The IPS Community

2016

2022



2024

2023

"Never doubt that a small group of thoughtful, committed citizens can change the world; indeed, it's the only thing that ever has"

HL7 International

How to Get Involved?

- Come to an HL7 or IHE Connectathon!
- Attend the weekly IPS Project Calls
- Join us on https://chat.fhir.org
- Attend a working group meeting
- Comment on the specification https://build.fhir.org/ig/HL7/fhir-ips/

Thank You

- Questions at end of panelists. But feel free to reach out!

- John D’Amore, MS
  More Informatics, Inc.
  johnd@moreinformatics.com

Canada Health Infoway

Connected Care

Pan-Canadian Patient Summary

Allana Cameron, Senior Product Manager

March 13, 2025

Canada Health Infoway

About Us

- Connected & Collaborative: We work with governments, health care organizations, clinicians, and patients to digitize health care.
- Access for All: Ensuring everyone can access personal health information and services online.
- Transforming Health: Partnering with health system stakeholders to advance digital solutions for improved patient outcomes.
- Independent & Funded: An independent, not-for-profit organization funded by the federal government.

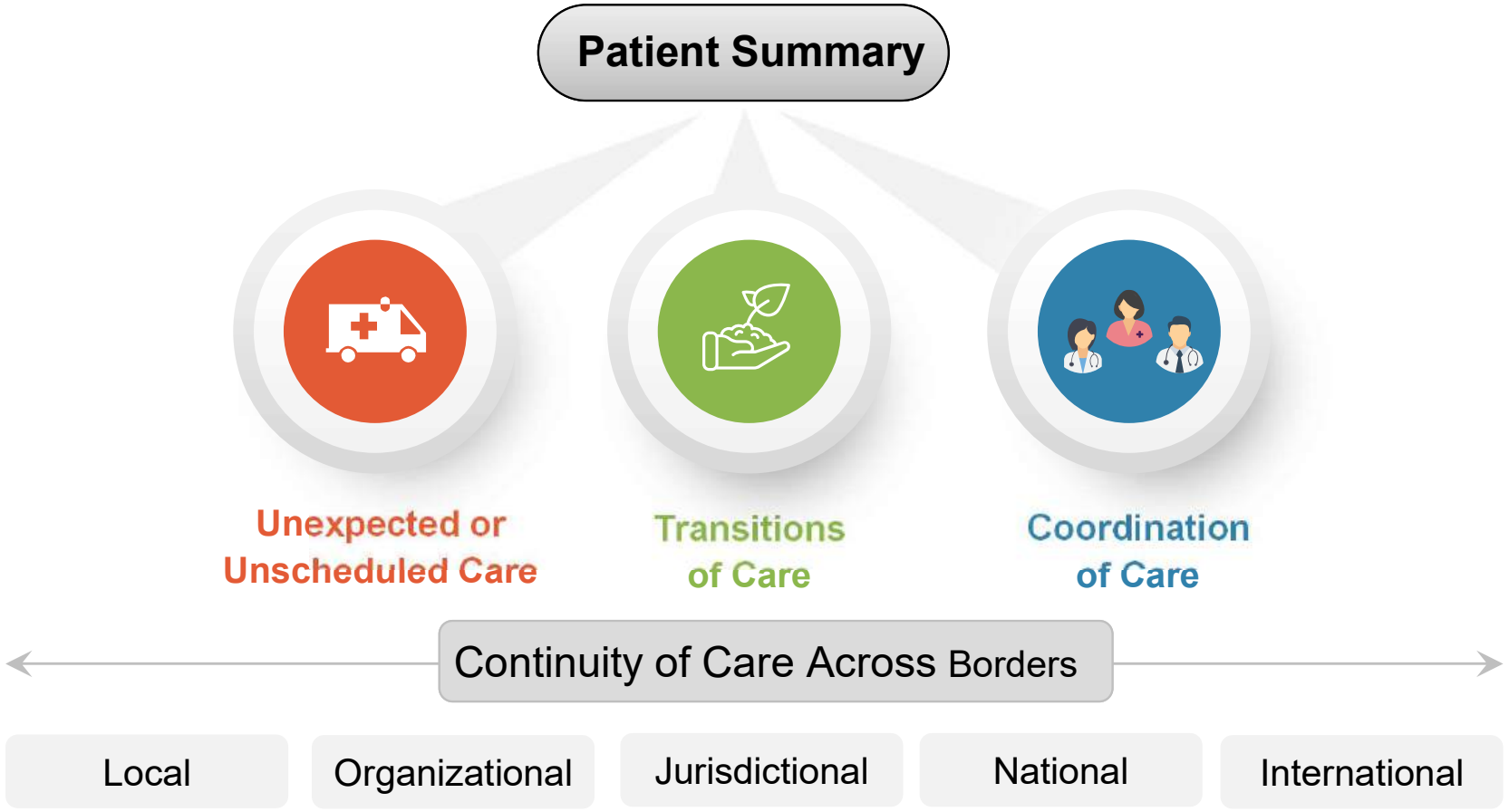
What is a Patient Summary?

- ✓ A standardized set of **basic clinical data**, which includes the most important health and care related information about the patient, such as medications they are taking, any allergies or intolerances they have and their key medical issues.

- ✓ This summarized version of a patient's clinical data provides health professionals the **essential information needed at the point of care**, such as during medical emergencies, walk-in clinic visits, and transitions of care.

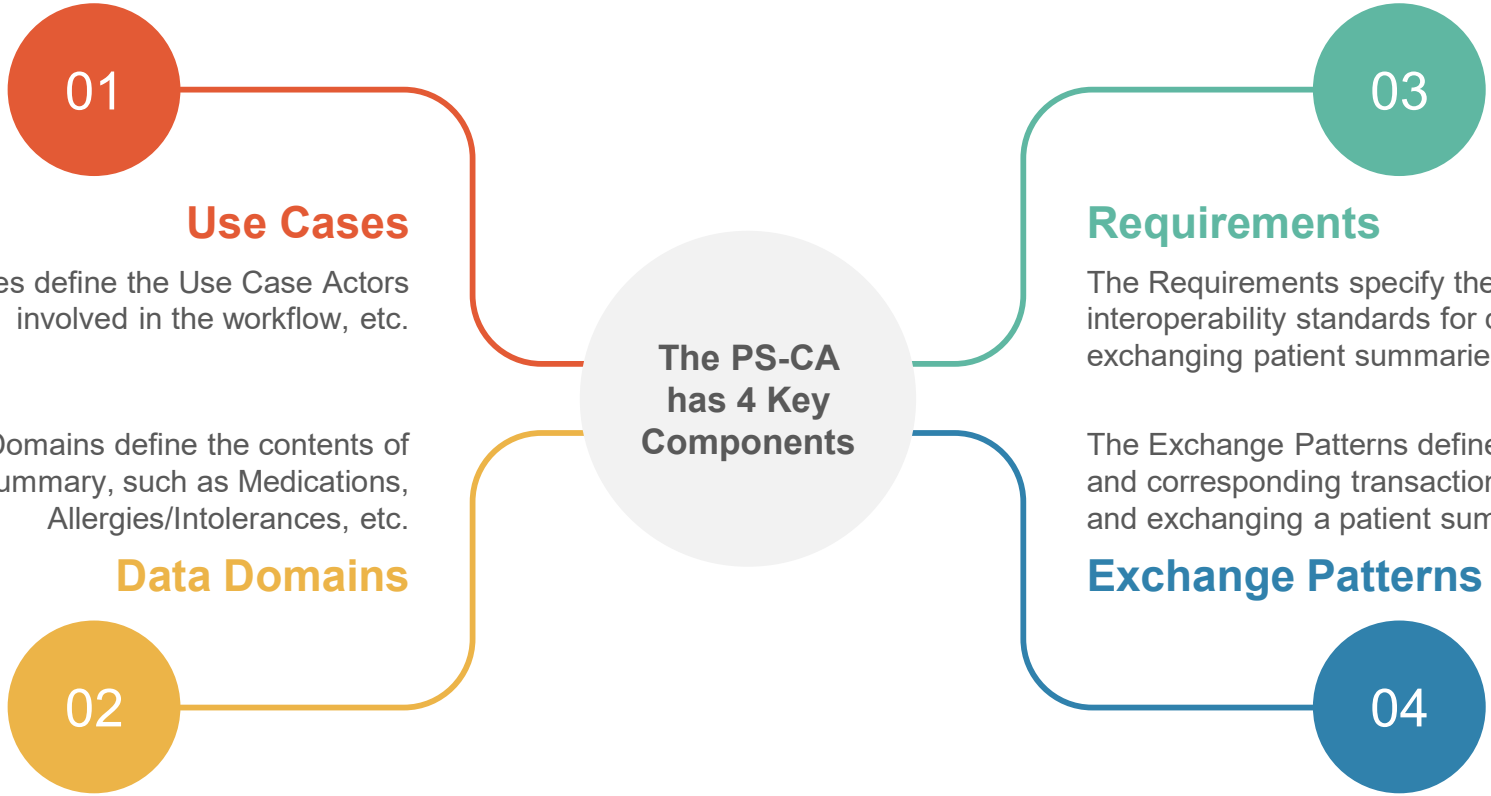
It represents a minimal and non-exhaustive set of clinically relevant standardized patient data, which is specialty-agnostic and condition-independent, but readily usable by patients and authorized health care providers.

Patient Summary Supports Care Across Borders



Canada Health Infoway

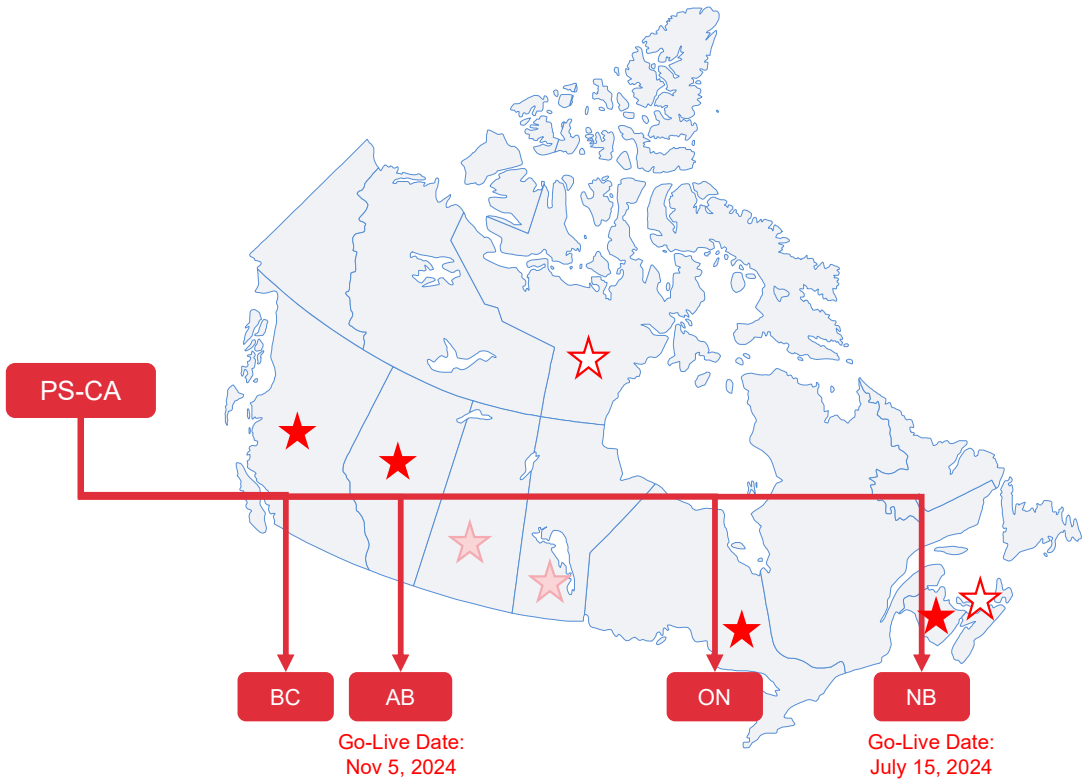
Pan-Canadian Patient Summary (PS-CA) Specifications Components



Access the PS-CA specifications here

Canada Health Infoway

Current PS-CA Initiatives



★	PS-CA implementations live or in progress
☆	PS-CA implementation planning underway
☆	"PS-like" implementation w/ plans to migrate to PS-CA

- ✓ The pan-Canadian Patient Summary aligns with the IPS and includes adaptations for the Canadian health context
- ✓ Clinical engagement throughout to inform content, workflow approaches, and identify opportunities for adoption

Patient Summary Use Cases

Two primary methods of sharing the Patient Summary:

1. Provider-mediated
2. Patient-mediated Access with Shareable Health Links

PS-CA Release in New Brunswick
(Summer 2024)

MyHealthNB Records Landing Screen

Privacy Notice

QR / Share Link Screen

Source: MyHealthNB, Government of New Brunswick

Canada Health Infoway

IPS and pan-Canadian Patient Summary Alignment

	IPS-UV		PS- CA	AB	BC	MB	NB	NL	ON	SK	v2.0.0 DFT	Upcoming
Header	Subject	Header	Subject								✓	✓
	Author		Author								✓	✓
	Attester		Attester								✓	✓
	Custodian		Custodian								✓	✓
Required	Medication Summary	Required	Medication Summary								✓	✓
	Allergies and Intolerances		Allergies and Intolerances								✓	✓
	Problem List		Problem List								✓	✓
Recommended	Immunizations	Recommended	Immunizations								✓	✓
	History of Procedures		History of Procedures								✓	✓
	Medical Devices		Medical Devices (IPS-UV)								✓	✓
	Diagnostic Results		Diagnostic Results								✓	✓
Optional	Vital Signs	Optional	Vital Signs (IPS-UV)								✓	✓
	Past history of Illness		Past History of Illness								✓	✓
	Social History		Social History								✓	✓
	Advance Directives		Advance Directives (IPS-UV)								✓	✓
	Pregnancy		Pregnancy (IPS-UV)								✓	✓
	Functional Status		Functional Status (IPS-UV)								✓	✓
	Plan of Care		Plan of Care (IPS-UV)								✓	✓
	Patient Story (coming soon)		Patient Story (IPS-UV)								N/A	✓
	Alerts (coming soon)		Alerts (IPS-UV)								N/A	✓
		EXT	Extension(s)									
			Family History								✓	✓

The evolution of the PS-CA and IPS is a collaborative effort, **with *each providing guidance and input to the other.*** Infoway **collaborates with stakeholders** to understand jurisdictional needs and to reach a **consensus on priorities.**

Legend
- **Blue**: header domains
- **Red**: required domains
- **Orange**: recommended domains
- **Green**: optional domains
- **Grey**: common domains by jurisdiction
- **White**: domains not identified by jurisdictions as priority and/or not yet included in the PS-CA

Canada Health Infoway

Infoway Partnerships

Working together to **evolve the IPS** through **formal processes**, introducing changes based on **implementation experience**, for the **benefit of all IPS implementers**!

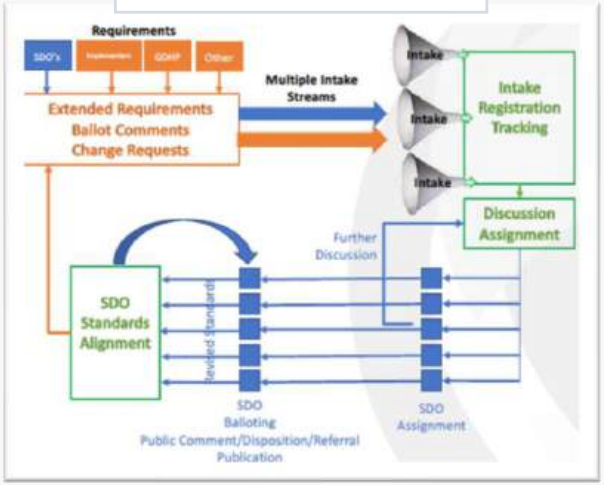
Legend
GDHP: Global Digital Health Partnership
GDHCN: Global Digital Health Certification Network
SDOs: Standards Development Organizations
IPSCC: IPS Coordination Committee
PCHOs: pan-Canadian Health Organizations

Canada Health Infoway

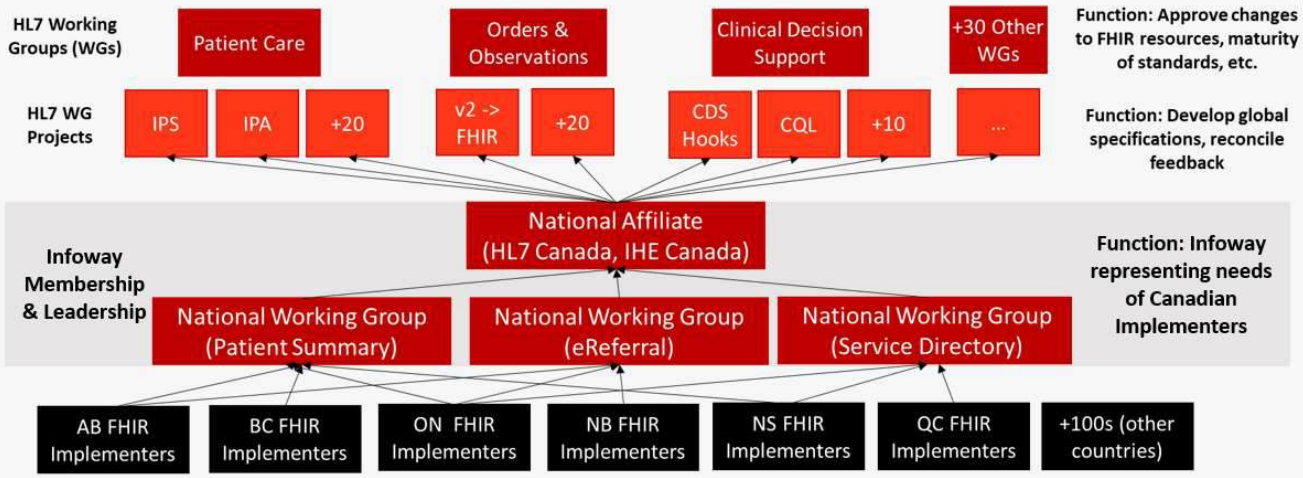
How Canadian Requirements Enter the Global Landscape

Canada Health Infoway represents the Canadian implementers' needs into the IPS and applies IPS updates to the PS-CA

IPS Coordination Committee Process Model



HL7 Consensus Structures



- IPSCC is introducing a new process model for inputs into the IPS. Infoway is participating in a pilot of the new process
- Meetings bi-weekly with participation from the 5 SDOs: HL7, ISO, SNOMED, IHE and CEN. (+ Infoway)

Canada Health Infoway

Canada Health Infoway

Thank you!

Contact Information

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VISIT OUR WEBSITE
infoway-inforoute.ca

VISIT OUR SURVEY WEBSITE
insights.infoway-inforoute.ca/

LET'S CONNECT ON LINKEDIN
linkedin.com/company/canada-health-infoway/

LET'S CONNECT ON TWITTER
@infoway

IPS Brazil: Driving Continuity of Care with Interoperability.

Italo Macêdo
italo@gointerop.com

Introduction

- **What is IPS?**
  - The **International Patient Summary (IPS)** is a globally recognized health record designed for cross-border interoperability.
- **Why is it important?**
  - Facilitates **seamless patient data exchange** across different healthcare systems and nations.

Introduction

- **IPS Brazil Overview:**
  - A government-backed initiative under **PROADI-SUS**.
  - Managed by the **Office of Innovation and Health Informatics (CGIIS), which is part of the Office of National Coordination (SEIDIGI) of the Secretary of Health (Ministério da Saúde)**.
- Developed in partnership with **Hospital Sírio Libanês** (Jan 2023 - Dec 2024).

Introduction

Truth to be told

- We were thinking about unscheduled cross border care;
- However, continuity of care within borders seemed more appealing later;
- Which is fine.

Objectives

- **Primary Goal:**
  - Implement a standardized **International Patient Summary** for Brazil within the **Ministry of Health**.
- **Key Components Included:**
  - **Immunizations, Lab Exams, Allergies/Adverse Reactions, Procedures, and Medications**.
- **Strategic Alignment:**
  - Supports **Brazil's Digital Health Strategy (ESD 20-28)**.
  - Ensures compliance with **global healthcare interoperability standards**.

Barriers

- **Semantic Interoperability:**
  - Ensuring Brazilian health terminologies aligned with **international standards like SNOMED CT and LOINC**.
  - Mapping local codes to **globally accepted IPS vocabularies**.
- **Technical Challenges:**
  - Implementation of **FHIR-based solutions** and integration with **existing national systems**.
  - Establishing **Open Concept Lab (OCL) for terminology management**.
- **Regulatory and Policy Constraints:**
  - Navigating **Brazilian data protection laws (LGPD)** while ensuring **cross-border data exchange**.
  - Aligning with **global health regulations and national policies**.
- **Stakeholder Engagement:**
  - Collaborating with **public and private health organizations** for smooth adoption.
  - Encouraging **healthcare professionals** to adopt and use IPS efficiently.
- **Testing and Validation:**
  - Participation in **global Connectathons** to ensure compliance and interoperability.
  - Addressing **feedback from international testing environments**.
- **Lack of experience:**
  - Study, obtain certifications;
  - Participate in Workgroups;
  - Listen, Engage, Connect with other implementers;
    i. Shoutout to John, Rob, Allana, Grahame, José Costa Teixeira, and many others. The best community.
  - Connectathons, connectathons, connectathons;

Barriers

Challenges We Faced (Some of Them)

- Align with existing information models
- Comply with mandates from the Ministry of Health
- Correct flawed technical implementation guides
- Eliminate unnecessary and illogical extensions
- Remove restrictive cardinality constraints
- Standardize the use of **Must Support**
- Resolve inconsistencies in official identifiers
- Define proper **Naming Systems**
- Decommission incorrect URIs and establish sustainable ones
- Develop new **Code Systems** and refine existing ones
- Curate and maintain **Value Sets**
- Create and validate **Concept Maps**

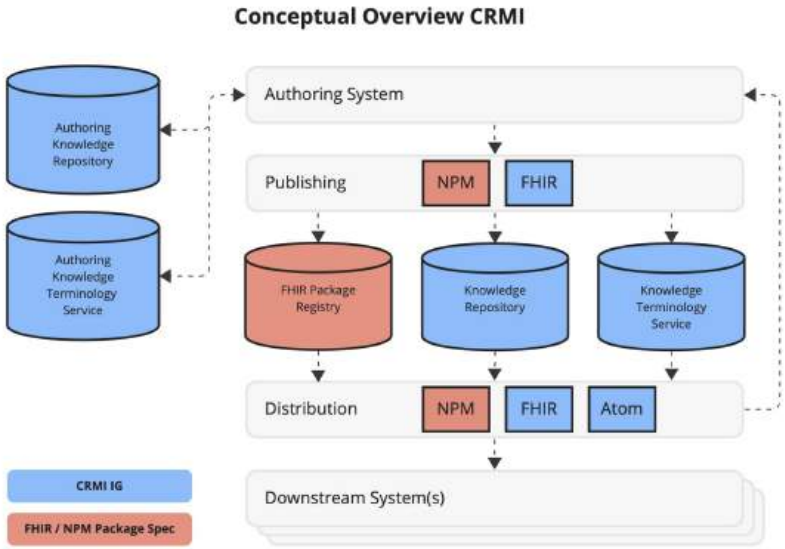
Methodology

Phase 1: Semantic Repository

- Adopting **standardized clinical terminologies** in the **RNDS (National Health Data Network)**.
- Using **Open Concept Lab (OCL)** to store and manage health terminology and mappings.
- Ensuring **HL7 Common Terminology Services 2 (CTS2)** compatibility.

Phase 2: Mapping Local to International Vocabularies

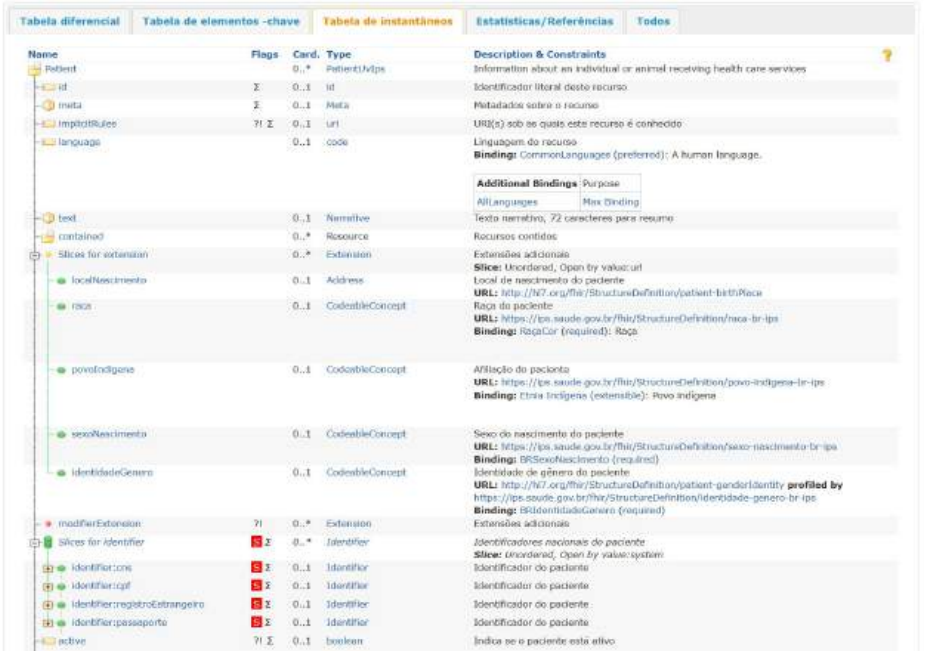
- Mapping **Brazilian health vocabularies** to **LOINC, SNOMED CT IPS** and other **international terminologies**.
- Standardizing concept maps using **ABNT ISO TR – 12300**.
- Defining equivalence rules for **semantic accuracy and interoperability** using **ISO/TS 21564**.



Methodology

Phase 3: Semantic and Referential Couplings

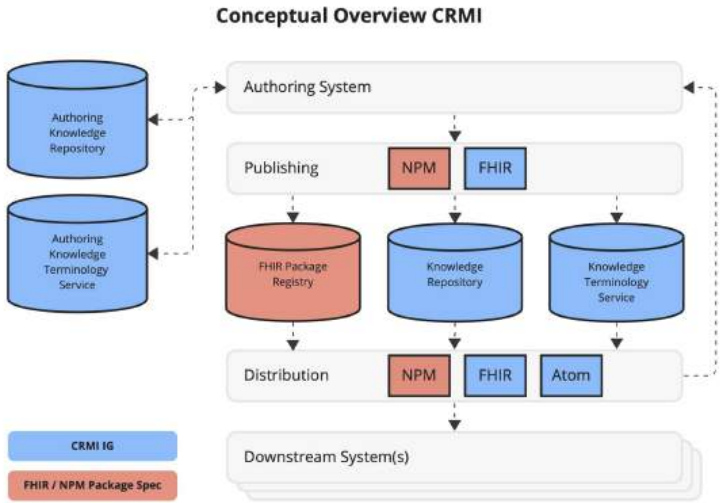
- Incorporating **HL7 FHIR IPS profiles** aligned with Brazilian national terminologies.
- Utilizing **FHIR concept maps** to ensure correct data translation and reference.



Methodology

Phase 4: Development of the IPS Brazil Implementation Guide

- Creating a **detailed technical guide** for national IPS implementation.
- Ensuring compliance with **HL7 IPS Implementation Guide**.
- Provide guidance;
- Distribute it with Structure Maps, Concept Maps, and all the needed fundamental things to enable any party in the Brazil to be able to build their own IPS.



Methodology

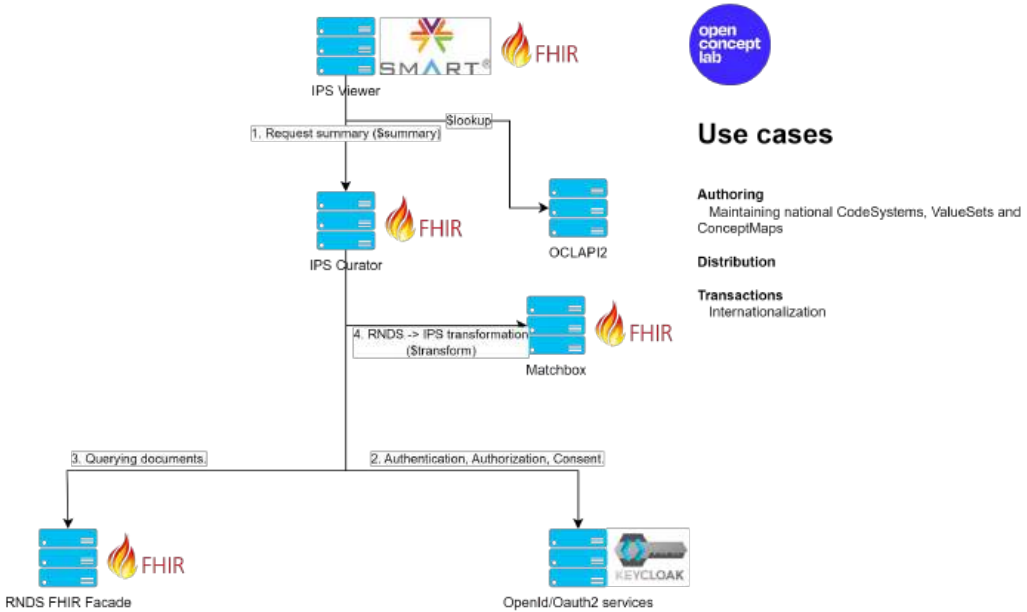
Phase 5: Participation in Global Connectathons

- **Engagement in international health IT events** to validate IPS adoption:
  - **2nd RACSEL/LACPASS (São Paulo, Oct 2023)**
  - **36th HL7 FHIR Connectathon (Dallas, May 2024)**
  - **3rd RACSEL/LACPASS (Bogotá, Oct 2024)**

36th HL7 FHIR Connectathon (Dallas, May 2024)

Results

- Open Concept Lab;
  - Authoring;
  - Mapping;
- Implementation guide;
  - Governance;
  - Guidance;
  - Distribution;
- IPS Viewer;
  - SMART on FHIR;
  - Patient standalone launch;
- IPS Curator;
  - FHIR Broker Adapter (HAPI FHIR Facade);
  - Structure Map/Concept Map using Matchbox;
- Patient-centered sharing using SMART Health Links (SHL);
- Onboarding of Brazil's MoH to GDHCN and sharing these links in the scope of PH4H;



Results


9:41
gov.br
ACESSO À INFORMAÇÃO
PARTICIPE
gov.br
gov.br
Conta de acesso única do Governo
Informe o seu CPF
Digite seu CPF
CADASTRAR
PRÓXIMA
Acesso com certificado em nuvem
Dificuldade com sua conta?
Dúvidas frequentes


9:41
SIP
Sumário Internacional do Paciente
Português
Defina seu PIN


9:41
SIP
Sumário Internacional do Paciente
Crie seu PIN de acesso, com 4 dígitos, com a finalidade de proteger o seu Sumário Internacional do Paciente.
PIN
0000
Mostrar PIN
Gerar QR Code


9:41
SIP
Sumário Internacional do Paciente
NOME DO PACIENTE
Sumário Internacional do Paciente
Emitido em DD/MM/AAAA às HH:MM:SS
Válido até 19 de novembro de 2024
PIN
••••
Mostrar PIN
Para que terceiros acessem seu sumário, exiba o QR Code ou disponibilize o link e informe seu PIN.
Visualizar Sumário
Compartilhar link

Results


9:41
SIP
Sumário Internacional do Paciente
NOME DO PACIENTE
Sumário Internacional do Paciente
Emitido em DD/MM/AAAA às HH:MM:SS
Nome Social
Nome Social ou Nome do Paciente
Data de Nascimento
01/01/1901
CPF
000.000.000-00
Mostrar mais
Alergias e Intolerâncias
Status Clínico
Inativo
Status de Verificação
confirmado
Mostrar mais
Condições ativas
Nome da condição
Miopia (H521)
http://www.saude.gov.br/fhir/r4/
CodeSystem/BRCIAP2
Status
Ativo
Mostrar mais
Medicamentos de uso
Nome do Medicamento
Cefalexina 500 mg cápsula (BR0267625-1)
http://www.saude.gov.br/fhir/r4/
CodeSystem/BRCIAP2
Dosagem
Valor da dosagem
Mostrar mais
Sinais Vitais
Nome do sinal vital
Nome do sinal vital (0000)
Status
Preliminar
Mostrar mais
Histórico de Procedimentos
Nome do procedimento
Consulta Médica em Atenção Primária (0301010064)
http://www.saude.gov.br/fhir/r4/
CodeSystem/BRTabelaSUS
Status
Cancelado
Mostrar mais
Imunizações
Nome do imunizante
VPC10
http://www.saude.gov.br/fhir/r4/
CodeSystem/BRImunobiologico
Data de aplicação
01/01/2001
Mostrar mais

Discussion

- Authoring system;
- Implementation guide;
- Distribution using CRMI;
- IPS and IPA;
- Patient-centered sharing;
- VHL;
- Onboarding to GDHCN/PH4H.

Future Prospects & National implementation

- **Brazil's Digital Health Vision:**
  - Expanding **IPS adoption across public and private healthcare providers**.
  - Ensuring **integration with existing national health records** (e-SUS, RNDS, etc.).
- **Global Impact:**
  - Strengthening Brazil's role in **international digital health initiatives**.
- **Challenges & Next Steps:**
  - Addressing **data governance through the use of national implementation guides, privacy, and security concerns**.
  - Training healthcare professionals for **effective IPS adoption** through connectathons and educational events.
  - Deploy IPS to the whole country:
    i. Viewer;
    ii. Curator;
    iii. Patient-centered sharing using Smart Health Links (SHL);

Conclusion & Call to Action

- **IPS Brazil is an important step towards continuity of care.**
- **Call to Action:**
  - Encourage collaboration from **health institutions, policymakers, and developers**.
  - Highlight the importance of **adopting standardized health information models**.
- **Final Thought:**
  - "A connected health system leads to better patient outcomes and a stronger healthcare ecosystem."

March 13, 2025

HL7 IPS Spotlight: Cross Border Collaboration and Interoperability

IPS Innovation in Genomics

Global Genomic Medicine Collaborative

What we will cover

- International clinical genetics
- Can IPS support clinical genetics?
- Innovative use cases and applications for the future of IPS and genomics

Challenges for international genomics

Global Genomic Medicine Collaborative

A tale of two doctors

- A doctor works in a public hospital in a low-income country with limited resources and facilities.
- The doctor is particularly interested in genetics and the potential benefits of genetic testing for patient treatments.
- The hospital's lack of advanced equipment for genetic testing frustrates the doctor, as it limits the care for patients.

- Conversely, another doctor operates in a high-income country with access to advanced genomic technologies.
- The clinic can swiftly decode entire genomes and integrates this data with advanced algorithms for preventive healthcare.
- The doctor’s vision includes personalized treatment plans based on individuals' genetic information.

Government support and regulatory challenges

- Insufficient government vision and financial support for personalized heathcare, including genetic-based care.
- High cost of genetic testing and personalized treatment plans, determining the clinical utility versus price tag.
- Regulatory disparities: some countries have advanced genetic regulations, others lack them.
- Delays in approval and regulation of genetic testing technologies.
- Confusion around regulatory requirements for cross-border genetic services and data sharing.

Cultural and Societal Acceptance

Barriers to Acceptance

Cultural beliefs can significantly hinder the acceptance of genetic technologies in various communities, leading to skepticism and resistance.

Understanding Genetic Concepts

A lack of understanding of genetic concepts often obstructs the adoption of genetic testing and counseling services.

Community Perspectives

Different societal attitudes towards genetics reflect diverse perspectives, which can influence health decisions in a community. Also, language barriers.

Availability of Trained Professionals

Shortage of Genetic Professionals

There is a notable shortage of trained genetic professionals, hindering the delivery of essential genetic services.

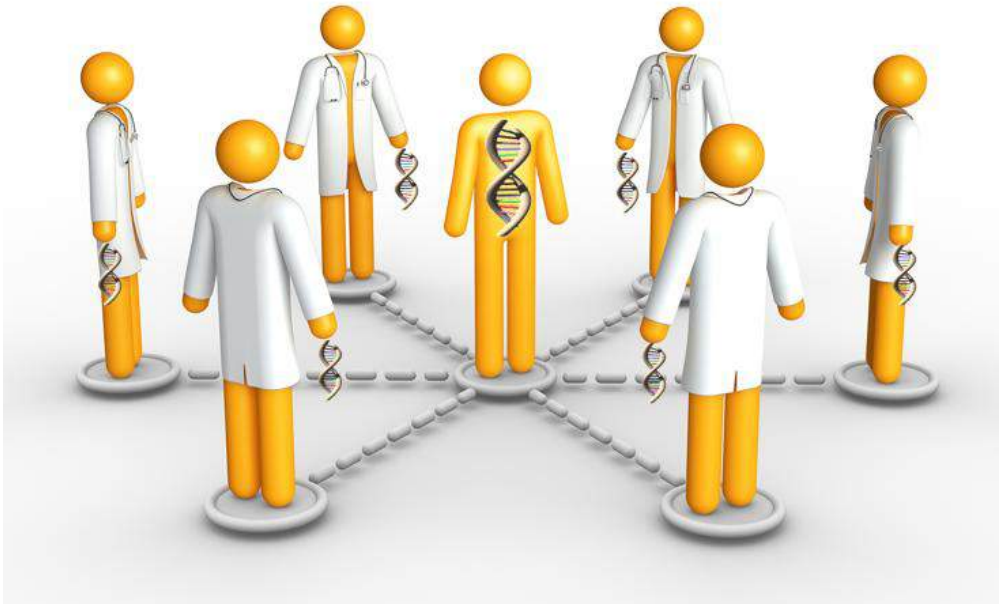
Impact on Genetic Services

The lack of expertise in many regions hampers the effective implementation of genetic services, affecting patient care.

Need for Training Programs

To address the shortage, there is an urgent need for training programs aimed at educating future genetic counselors and clinical geneticists.

Other issues



- Healthcare systems facilitating cross-border genetic-based healthcare
- Use of mobile system
- Genetic data integration
- Patient-centered care, patient empowerment
- Genomics-based care coordination
- Personalized care plans, targeted therapies
- Telemedicine supporting genetics

Integrating Genomic Data Into HL7 IPS

IPS Composition

IPS Composition

Potential IPS application

Genetic testing results, variants, genomic implications (diagnostic, therapeutic, molecular consequence), molecular biomarkers, LOINC codes

SNOMED codes for family health history and genetic-related disease risk, polygenic risk score

For pharmacogenomic analysis

Targeted care plan – recommended actions (early surveillance, pharmacogenomics, etc.)

Innovative Use Cases and Applications

Global Genomic Medicine Collaborative

Personalized Medicine and Treatment Plans (CDS?)

Tailored Treatment Plans

Personalized medicine customizes treatment plans to match individual genomic profiles, enhancing treatment outcomes.

Improving Therapy Effectiveness

This innovative approach can lead to more effective therapies by considering individual genetic traits.

Reducing Adverse Reactions

Personalized treatment plans can help minimize adverse reactions by aligning therapies with genetic predispositions.

IPS and AI Avatars as health advisors

The use of online avatars to collect and manage patient data in the HL7 International Patient Summary (IPS) format presents several possibilities. Leveraging avatars in healthcare can enhance patient engagement, improve data accuracy, and facilitate seamless data integration, especially in telemedicine and remote monitoring contexts.

1. **Enhanced Patient Engagement**: Avatars can provide a more interactive and engaging interface for patients, making it easier and more comfortable for them to share health information[1](https://www.hl7.org/fhir/uv/ips/).
2. **Improved Data Accuracy**: Through structured interactions, avatars can guide patients in providing comprehensive and accurate health information, which is crucial for the IPS format's standardized data elements[2](https://confluence.hl7.org/spaces/PC/pages/40739013/International+Patient+Summary+IPS...).
3. **Ease of Data Integration**: Avatars can facilitate the collection of patient data directly into the IPS format by asking specific questions aligned with the IPS dataset elements. This ensures that data is collected in a manner that is readily integratable into electronic health records (EHRs) and other health information systems[3](https://blog.hl7.org/international-patient-access).
4. **Remote Patient Monitoring**: Avatars can be used in telehealth platforms to monitor patients remotely. They can collect real-time data and update the IPS records, ensuring continuous and up-to-date patient summaries[4](https://confluence.hl7.org/download/attachments/104568480/International%20Patient%20Summary%20Overview%202022-08-08.pdf?version=1&modificationDate=1659995465516&api=v2).
5. **Language and Accessibility**: Avatars can be designed to communicate in multiple languages and accessible formats, making it easier for patients from diverse backgrounds to input their health data[5](https://wiki.international-patient-summary.net/index.php?title=IPS_implementationguide_1).

IPS and AI Avatars as health advisors

6. **Personalized Interaction:** By utilizing AI, avatars can personalize interactions based on the patient's history and preferences, enhancing the quality of data collected and ensuring it is relevant and comprehensive[1].
7. **Data Security:** Online avatars can ensure data security and privacy by incorporating secure communication protocols and encryption, which aligns with the ethical requirements for managing patient data[3].
8. **Scalability:** Using avatars to collect patient data can be scaled across various healthcare settings, from urban hospitals to rural clinics, thereby standardizing how data is collected and managed in the IPS format on a global scale[2].
9. **Cost Efficiency:** The implementation of avatars can reduce the cost associated with human-mediated data collection processes, making it a cost-effective solution for healthcare institutions[5].
10. **Integration with Advanced Technologies:** Avatars can integrate with other advanced technologies, such as wearable devices and IoT, to automatically update patient summaries in the IPS format with minimal patient intervention[4].

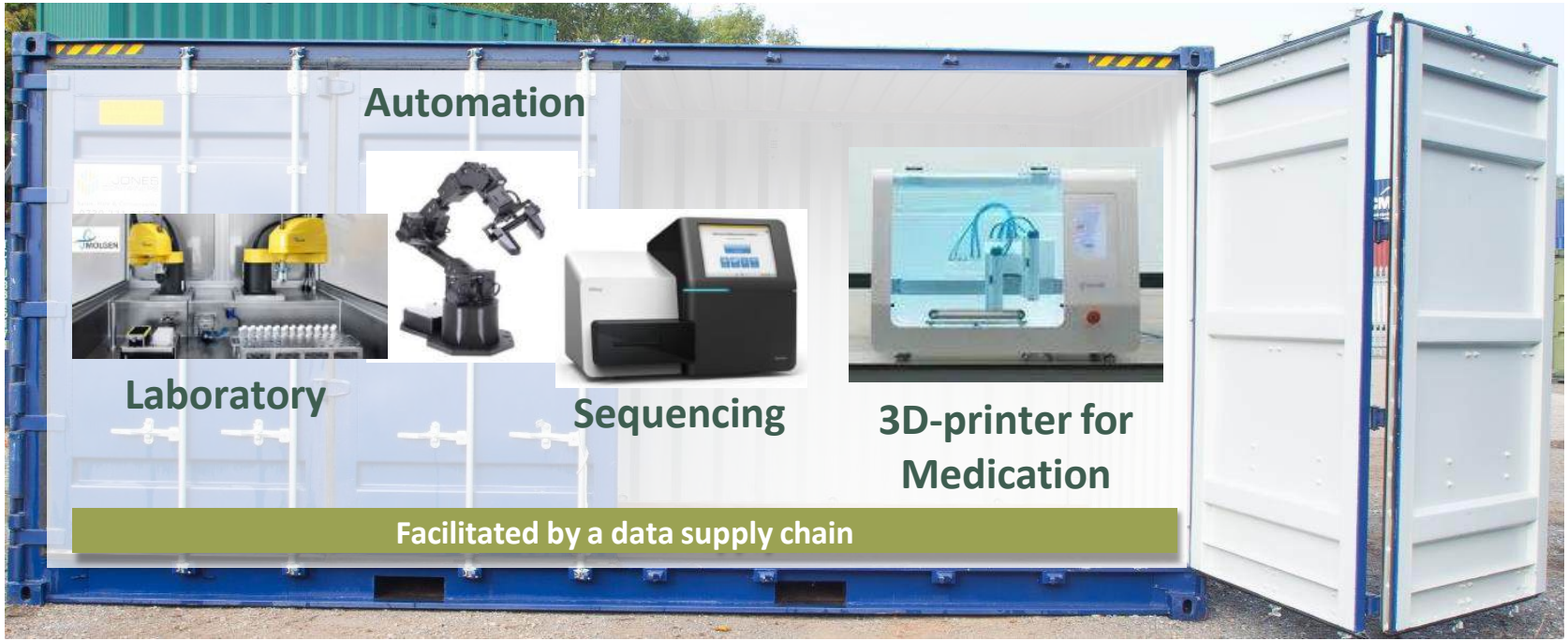


Figure source: Primo Medda

March 13, 2025

The End

IPS Innovation in Genomics

Global Genomic Medicine Collaborative

International Patient **Summary** (IPS)
international-patient-summary.net

Epic

IPS: What & Why

International Patient **Access** (IPA)
ipa.hl7.org

isaac vetter, *epic*

International Patient Access

- Secure RESTful APIs: SMART, search parameters
- Minimal profiles: reflect current state
- Terminologies specified locally

HL7 International

International Patient Access
1.0.0 - STU1

HL7 FHIR

Home | Conformance | Using The API | Security and Privacy | Artifact Index | Support

Table of Contents > **International Patient Access**

This page is part of the International Patient Access (v1.0.0: STU 1) based on FHIR R4. This is the current published version. For a full list of available versions, see the Directory of published versions

1 International Patient Access

Official URL: `http://hl7.org/fhir/uv/ipa/ImplementationGuide/hl7.fhir.uv.ipa`	*Version*: `1.0.0`
Active as of 2023-02-01	*Computable Name*:


Jurisdictions with Core FHIR specs
Individual styles
Switzerland
Netherlands
Australia
Denmark
Finland
Norway
New Zealand
United Kingdom
France
Canada
Belgium
Japan
United States
Argentina
Brazil
Chile
Colombia
Cyprus
Estonia
Germany
Israel
Luxembourg
Mexico
Norway
Peru
Czechia
Taiwan
Greenland
Iceland
Finland
Sweden
Russia
Ukraine
Kazakhstan
Mongolia
China
South Korea
Afghanistan
Iraq
Iran
Pakistan
India
Thailand
Indonesia
Papua New Guinea
Australia
New Zealand
France
Spain
Italy
Algeria
Libya
Egypt
Saudi Arabia
Mali
Niger
Chad
Sudan
Nigeria
Ethiopia
Kenya
DRC
Tanzania
Angola
Namibia
Botswana
Madagascar
South Africa
Canada
Colombia
Peru
Bolivia
Argentina
North Atlantic Ocean
South Atlantic Ocean
Indian Ocean
Pacific Ocean

Summary is a noun; Access a verb

IPS

IPA

IPA Resources are accessed individually

- Patient
- Allergy
- Medication
- Problem
- Immunization
- Condition
- Observation

IPS Composition is bundled

- Patient
- Author
- *metadata, etc*
- Medications
  Section *with narrative*
- Allergies
  Section *with narrative*
- Problems
  Section *with narrative*
- Immunizations
  Section *with narrative*
- Results
  Section *with narrative*
- Procedures
  Section *with narrative*

TREATMENT EXCHANGE

Care Everywhere Impact

Built on Document Exchange

20M
Charts a day

100%

of **Epic customers**
can interoperate

Half

of exchanges are
with **other vendors**

Australia · Canada · Lebanon · The Netherlands · Saudi Arabia · Switzerland · UAE · UK · USA

TREATMENT EXCHANGE

Interoperability Improves Care

Nearly 50% reduction

in risk of code blue events for highest acuity patients

5,300

duplicate imaging orders avoided every month, saving up to **$10M annually**

… using external data

FHIR International Patient Summary

powered by Care Everywhere

Established Workflows

International Standard

Global Investment

Produce IPS
for provider exchange

COMING SOON
MAY 2025

Receive & Display
IPS from other systems

FUTURE

Come together on universal standards

International Patient Summary

MEDITECH

Customers Across the World

Inpatient Facilities Only

MEDITECH Canada

British Columbia	197
Ontario	139
Alberta	128
Newfoundland & Labrador	52
Nova Scotia	33
New Brunswick	26
Yukon	8
Nunavut	3

MEDITECH's Strategy

- Furthering our transition to full FHIR
- Supporting our international markets where CCD exchange is unlikely to occur
- Supported Implementations
  - Base IPS Specification
  - pan-Canadian Patient Summary (PS-CA)
  - Ontario Patient Summary (PS-CA:ON)
  - British Columbia Patient Summary (PS-CA:BC)

Things to consider

- Do NOT recreate the US Document exchange issues
  - MUST be a summary of the patient hopefully by the patient
  - MUST be concise (what I must know to initially treat this patient)
  - Patients perspective MUST be included
  - It should not contain all data need to transfer care
- IPS can be the initial FHIR context needed to initiate FHIR APIs
  - Patient, Encounter and other contexts already included
- Can be exchange through a network (Provider to Provider) or pulled and viewed from a QR code