Global Perspectives: Update on IPS

Collaborative Template Review Wrap-up; Relevant Global Use Case: Exchange of Immunization information

Rob Hausam
Lisa Nelson
Mike Nusbaum
Amit Trivedi

INTERNATIONAL PATIENT SUMMARY
IPS CONCEPTS AND OVERVIEW

Rob Hausam
Hausam Consulting LLC
+1 (801) 949-1556
rob@hausamconsulting.com

The Beginning of IPS
HL7 Int. CEN/TC 251 agreement (April 2017)

Vision
• “In order to further the care for citizens across the globe, we agree to collaborate on a single, common International Patient Summary (IPS) specification that is readily usable by all clinicians for the (cross-border) unscheduled care of a patient.”

Scope
• “The IPS specification shall focus on a minimal and non-exhaustive Patient Summary, which is specialty-agnostic and condition-independent, but still clinically relevant.”
International Patient Summary

- **Health record extract**
  - Snapshot in time of a subject of care’s health information and healthcare

- **International**
  - Generic solutions for global application beyond a particular region or country

- **Scoped**
  - Designed for Unscheduled cross-border care
  - …but it provides a base-line usable also within other cases and planned care cases.

---

The IPS: a focused Patient Summary

- Provide a healthcare summary for a citizen at the point of care
- It is minimal and non-exhaustive
- It is specialty-agnostic and condition-independent…..but still clinically relevant

---

The IPS: a focused Patient Summary

- Designed to be simple and implementable
- Usable any time, in any place, by any one
- Multi-beneficiaries: Individuals, Healthcare Providers, Society
The IPS landscape

IPS Use Cases

- Cross-border IPS document exchange of clinical data
  - Developed initially for unplanned care – but may also be planned
  - Patient mediated data transfer (e.g., mobile device)
  - But may use exchange infrastructure (e.g., national gateways)
  - May be regional or institutional boundaries (not only national)
- Specialized use of individual profile “building blocks”
  - Vaccination and test result data exchange (e.g., COVID-19)
  - May have use for digital vaccination certificate “passport”
  - Supporting care for rare diseases, chronic conditions – or pandemics!
  - Potentially many others

COLLABORATIVE TEMPLATE REVIEW PROJECT

Lisa Nelson
MaxMD
lnelson@max.md
Collaborative Template Review Project

This pilot project will explore using a collaborative review process, performed by resources from across a small set of domain workgroups, to facilitate collaboration on CDA template assessment.

The objective is to understand what is involved in working across workgroups to facilitate collaboration on CDA template assessment.

The project is investigative, in that it intends to investigate and document the identified changes needed to align and harmonize the templates, but it does not include doing the work to address the changes. Once the agreed upon list of changes has been identified, a separate project or projects will be initiated to address making the needed changes.

Scope:
- PC WG – Problems Section (Problem Concern) and Allergies and Intolerances Section (Allergy And Intolerance Concern)
- FM WG – Payer Section
- Pharmacy WG – Medications Section

Effective Time: 20181212 - 20210728

Summary of produced artifacts and findings

- Project Documentation: https://confluence.hl7.org/display/CDA/Collaborative+Template+Review+Project
  - Complete Project Documentation is on Confluence within the CMG Space

- PC WG
  - Substantial input was documented over an 18-month period.
  - Collaborative review documented changes PC felt would be beneficial for the purpose statements and constraints expressed within the templates.

- FM WG
  - Collaborative review notes documented recommending aligning the C-CDA Coverage Activity template with the FHIR Coverage Resource, which would involve changing the guarantor performer and aligning the value sets used to represent this information.

- Pharmacy WG
  - Initial scope of review document was developed but no collaborative review was performed.

Conclusions/Outcomes

- Cross-work group collaboration can produce meaningful insight about beneficial changes for C-CDA templates that could be considered in new template designs or new versions for existing templates.
- Success depends on the level of interest in CDA implementation guides and the availability of resources to support creating a team of analysis participants with the needed knowledge to support the review.
- Follow-up for designing and building new templates would additionally require participation of resources skilled with template tooling, IG publishing tools, and HL7 ballot processes.
- A useful analysis method was developed through the use of Art Decor to produce new templates that merge constraints of multiple templates.

Expanded use of the Merged Template Design analysis will be demonstrated on Immunizations templates at the July 2021 C-CDA IAT.
Opportunity/Recommendations

- Next C-CDA Update being planned for January 2022 ballot
- PC WG (collaboration team) should consider submitting JIRA tickets to transform collaborative analysis into a set of specific requests for template redesign requirements
- FM WG (collaboration team) should consider submitting JIRA tickets to transform collaborative analysis into a set of specific request for template redesign requirements

IPS «UNION» C-CDA NEW MERGED TEMPLATE DESIGNS FOR IMMUNIZATIONS

Immunization Harmonized Template

Tooling Advances:
Art Décor makes it easy to “Merge” template designs.
**Immunizations Section**

- Title
- Text
- Code (ST:3000-8)
- Entry
- Template ID

**IPS Compared to C-CDA**

- Used for Given / Not Given
- TBD: how to indicate no vaccines / no info:
  - Nullflavored section (C-CDA)
  - Explicit code in the entry (IPS)

**IPS Compared to C-CDA**

- Drug Vehicle
The Patient Summary journey…

IPS: Now a Cross-SDO Initiative

IPS Standards Artefacts

- ISO/DIS 27269 awaiting approval
- CEN/EN 17269 and CEN/TS 17288 published
- HL7 FHIR and CDA Implementation Guides (IG) published as “Standard for Trial Use”
- IHE IPS Profile for both CDA and FHIR published for “Trial Implementation”
- SNOMED CT has published the free for use “Global Patient Set” including the IPS free set
IPS Artefacts

There is only one IPS!

The CDA Imperative

- FHIR is emerging, but implementation is still a journey
- IPS is international, and CDA implementations are very pervasive worldwide
- There may be a 10+ year window where CDA is dominant
- CDA recognized by CEN, HL7 and IHE as an important IPS implementation consideration
- IHE Connectathon testing attracted vendors testing with CDA

Learnings from the IPS experience

- xSDO collaborations work very well when there is a focused need
- Each SDO brings their unique expertise, tooling and processes
- A suite of artefacts that work together ultimately helps the end user
- Growth and maintenance are key steps that can’t be forgotten
- Adoption and implementation can be improved by leveraging existing international collaborations:
  - Joint Initiative Council
  - Global Consortium for eHealth Interoperability
  - Global Digital Health Partnership
IPS References

- The EN/ISO standards, which describe the notion of an IPS as a document and standardise the data elements that are essential, required, recommended, and optional in the IPS
- The HL7 IPS Implementation Guides, which specify what an IPS looks like in HL7 CDA and HL7 FHIR
- The IHE IPS Profile, which provides a few scenarios and bindings with the transport technology
- An IPS Overview and video
- Joint Initiative Council’s Patient Summary Standards Set

International Patient Summary: Global Development

Global Pandemics Drive Global Action

- Urgent clinical need for an up-to-date clinical summary available at the point of care anywhere in the world
- Equitable in usage to ensure effectiveness across regions and resource levels
- Universality of use requires broad collaboration

Specifications
- EN/ISO standards
- HL7 FHIR
- IHE Integration Profile

Terminology
- SNOMED CT

Implementation
- HL7 CDA
- HL7 FHIR
- IHE Integration Profile

Conformity Assessment
- IHE
- HL7 FHIR

INTERNSATIONAL PATIENT SUMMARY
GLOBAL IMPACT

Amit Trivedi, MS
@alvedi
INHSUSA.org
GlobalHealthInterop.org
HealthIT.gov
International Patient Summary: Global Action

Global Digital Health Partnership
Interoperability Work Stream
International Patient Summary Work Group
- Government-to-government knowledge exchange
- Addressing interoperability challenges through standards and technology
- Focus on pilot implementations of IPS by member countries

International Patient Summary: ONC Interest

HHS designated ONC to serve as the lead US representative to the GDHP along with the HHS Office of the CTO.
- ONC facilitates key discussions and projects to advance interoperability across the GDHP countries and territories and chairs the GDHP Interoperability Work Stream:
  - Overcome patient data sharing challenges between health care providers, health organizations, caregivers, and patients.
  - Determine the path forward for addressing interoperability challenges through standards and technology.
- IPS: Importance of being able to have a patient’s data follow them wherever they go so that they can retrieve the data when and where it matters most. The value sets are based on global vocabularies that are usable and understandable in any country. This means that key pieces of patients’ health data can be transferred between countries so emergency care providers can use this data to provide patients with personalized care.

International Patient Summary: Global Consortium for eHealth Interoperability

Global Health Standards Adoption Project
Concurrent with HL7 & IHE Connectathon Testing Events
- Encourages international collaboration in standards development, testing, and implementation efforts by highlighting key interoperability and standards global goals:
  - Content: Highlighting existing, relevant standards, profiles, implementation guides and best practices to promote standards adoption and success
  - Software: Supporting the accessibility and availability of robust open-source tools, validators, reference implementations, and developer sandboxes
  - Services: Panel discussions, demonstrations, education events, and workshops – content curated by HIMSS, HL7, IHE and other health IT interoperability subject matter experts to support standards adoption
**International Patient Summary: Global Consortium for eHealth Interoperability**

**Development Activities**

Global Health Standards Adoption Project

- **March 2021:** Launched developers' sandbox leveraging OpenHIE/HAPI FHIR/OpenMRS architecture at IHE North American Connectathon
- **May 2021:** Demonstrated use of developers' sandbox to test IHE International Patient Summary Profile at HL7 FHIR Connectathon
- **June 2021:** Proof of concept completed to test interoperability of International Patient Summary profile in commercial software at IHE European Connectathon

**Professional Development**

On Demand Education

- **July-September 2020:** HIMSS20 Digital Series
  - International Patient Summary: Cross-Border Interoperability at a Global Scale
    - Don Rucker, MD, Former National Coordinator for Health IT, United States
    - Dr. Petra Wilson, European Program Director, Personal Connected Health Alliance
    - Derek Ritz, IHE Canada Liaison
    - Walter Ricciardi, President, Italian National Institute of Health
    - Rob Hausam, MD, Co-Chair, HL7 Vocabulary and Orders and Observations (OO) Work Groups
    - Giorgio Cangioli, Chair, HL7 Italia
    - Michael Nusbaum, President, MH Nusbaum & Associates
    - Rob Hausam, MD, Co-Chair, HL7 Vocabulary and Orders and Observations (OO) Work Groups - Global Health Standards Adoption Project Lab
    - Derek Ritz, IHE Canada Liaison
    - Jan Flowers, Director of Global Health Informatics, Clinical Informatics Research Group, University of Washington

**International Patient Summary: Implementers**

- Global Health Standards Adoption Project Events
- OpenHIE/HAPI FHIR/OpenMRS Developers' Sandbox
- LMIC Stakeholder Outreach & Participation
  - Haiti
  - Kenya
  - Tanzania

**International Patient Summary: Next Steps**

- August 10, 2021, Las Vegas
  - HIMSS Global Conference Interoperability Showcase Sessions – SDO Collaboration Panel Session @3:30pm PT
- September 2021, Virtual
  - HL7 FHIR Connectathon: IPS Track, IHE Testing Track
- January 14-18, 2022, Henderson, NV
  - HL7 FHIR Connectathon
- January 24-28, 2022, Chicago
  - IHE North American Connectathon: Global Health Standards Acceleration Program
International Patient Summary: Challenges

- Accelerate progress by coordinating resources and better aligning development and testing events
- Improve global stakeholder equity by addressing education and awareness gaps
- Abstracting information for other purposes of use beyond unexpected cross-border care

For further information:

Rob Hausam
rob@hausamconsulting.com

Lisa Nelson
lisa@max.md

Michael Nusbaum
michael@mhnusbaum.com

Amit Trivedi
Amit.Trimedi@himss.org