The Office of the National Coordinator for
Health Information Technology

eHealth week
11 - 13 MAY 2015
RIGA, LATVIA

ORGANISED BY

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Health Information Exchange Perspectives

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May 13, 2015, Riga, Latvia

Agenda

- **Health Information Portability – WHY?**
  - Case Study: Tourists
  - Migrant Workers, Refugees, (E)Immigrants

- **Health Information Portability – HOW?**
  - Standards Evaluation: EU-US
  - **Inter**national **Pa**tient **S**ummary (**INTERPAS**)

- **Next Steps**

About ONC

- The Office of the National Coordinator for Health Information Technology (ONC) principal federal entity that supports the adoption of health information technology and the promotion of US nationwide health information exchange to improve health care.

- ONC is organizationally located within the Office of the Secretary for the U.S. Department of Health and Human Services (HHS).
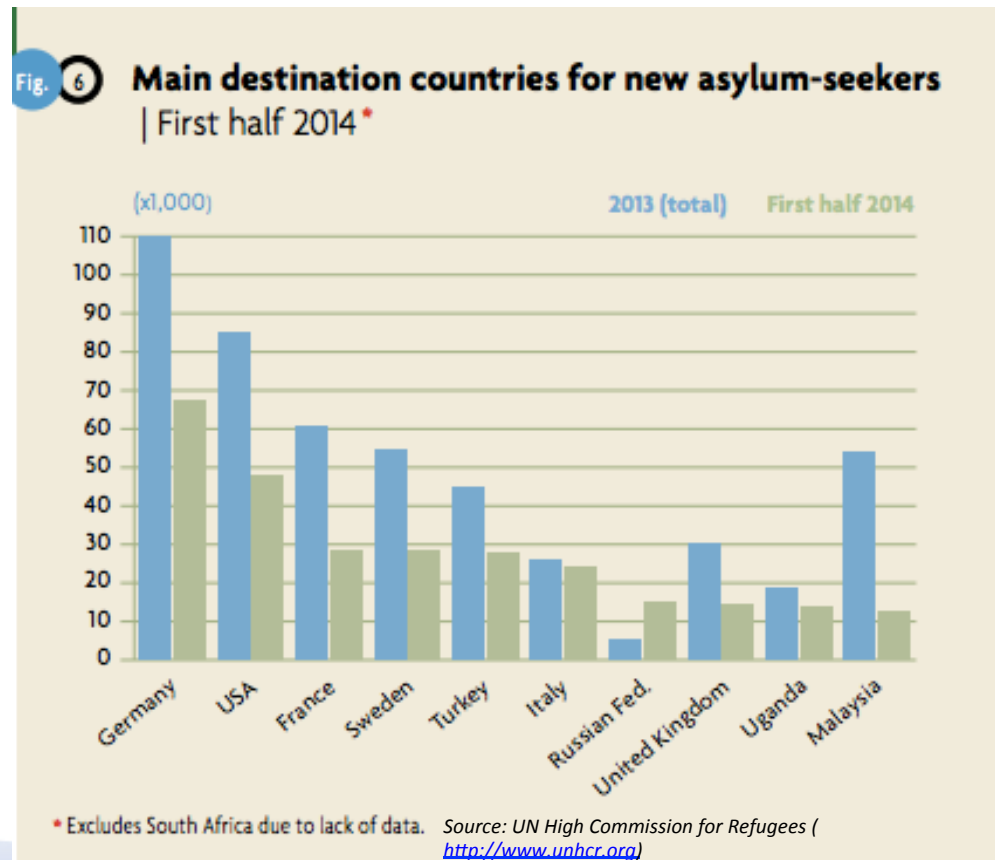
Why Health Information Portability Across Borders?

- **Tourists:**
  1. 23 yo male with toe laceration, 2x2x1 cm wound with dirt; occurred while playing soccer bare foot, on dusty plains of Peruvian mountains.
  2. 25 yo male awakes ~2:00 am in tent with fever, chills and dyspnea.

- **No written record of health information.**
- **Non-Spanish speaking.**

Other Reasons,…

- **Human Migrations**
  - Workers
  - Refugees
  - (E/)Immigrants
  - …etc.

Main destination countries for new asylum-seekers | First half 2014*

Source: UN High Commission for Refugees (http://www.unhcr.org)

* Excludes South Africa due to lack of data.

Health Information Portability: Major Issues

- **Communications Barrier:**
  - loss of valuable time to correctly diagnose and treat
  - Duplicative diagnostic services and vaccinations
  - Potential for medication errors due to undocumented allergies
  - Translation services
  - ….
- **Economic and social impact on local community**

Why Health Information Portability?

- **Faster patient assessment**

- **Faster and more confident intervention**

- **Minimizes interventional and care costs**

- **Minimizes unintended medical errors**

- **Improved transition of care**

How do we achieve Health Information Portability?

- **MOU between US and EU (2010)**

- **Objectives** *(among others)*

  - Identify and compare existing standards for exchanging patient summary content between the EU and the US.

  - Analyze and document outcomes.

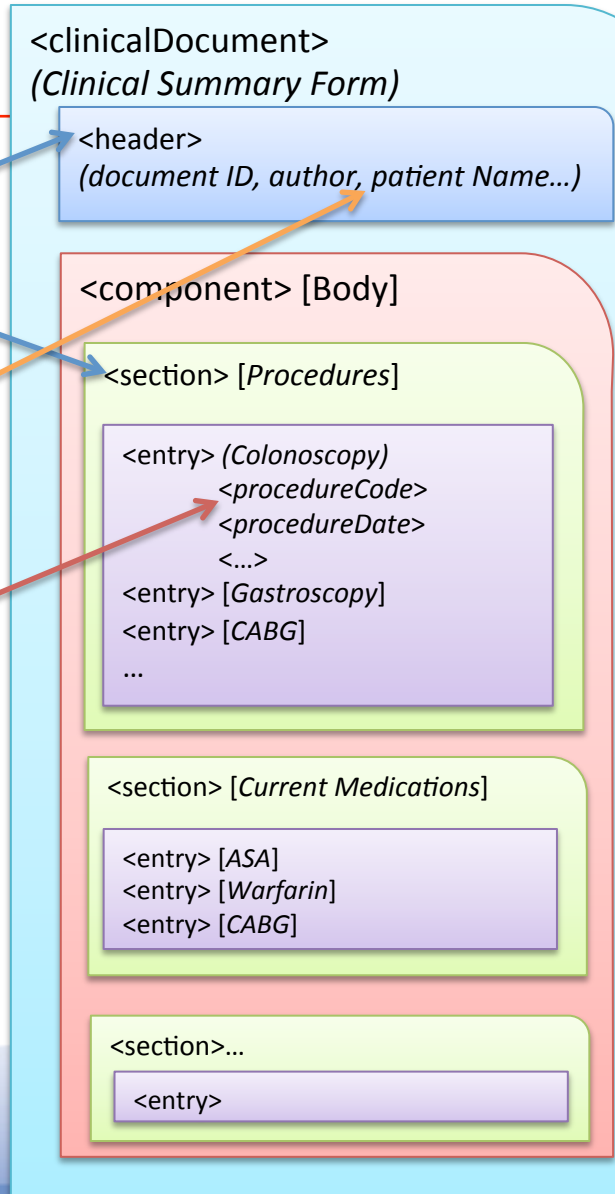 - Explore approaches to move information across country borders.

Standards Analyzed
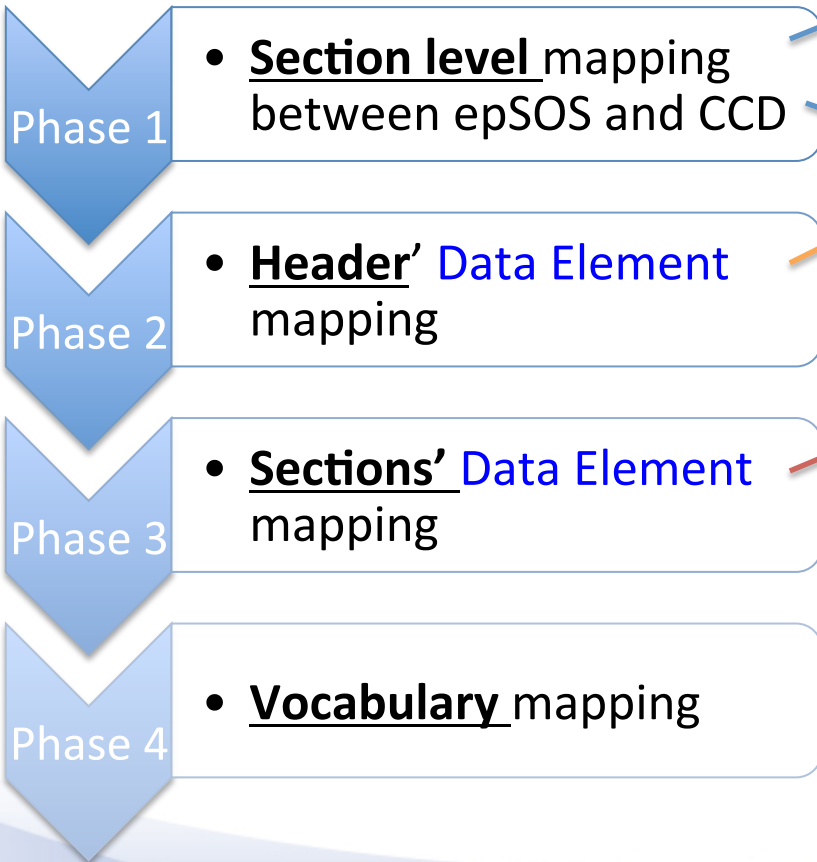
Standard Name	Patient Summary (PS)	Continuity of Care Document (CCD)
Base Standard (Structure)	HL7 CDA 2.0	HL7 CDA 2.0
Publication Date	April 2007	July 2012
Acronym	epSoS PS v1.4	C-CDA R1.1 CCD

Analysis Phases

Data Granularity and Complexity

Phase 1
- **Section level** mapping between epSOS and CCD

Phase 2
- **Header**' Data Element mapping

Phase 3
- **Sections'** Data Element mapping

Phase 4
- **Vocabulary** mapping

<clinicalDocument>
(Clinical Summary Form)

<header>
(document ID, author, patient Name...)

<component> [Body]

<section> [*Procedures*]

<entry> *(Colonoscopy)*
        <procedureCode>
        <procedureDate>
        <...>
<entry> [*Gastroscopy*]
<entry> [*CABG*]
...

<section> [*Current Medications*]

<entry> [*ASA*]
<entry> [*Warfarin*]
<entry> [*CABG*]

<section>...

Comparative Analysis – in numbers

Analysis/Mapping Type	C-CDA	epSoS
Header Fields (e.g. Patient Name, Address, Physician Name)	~100 fields	~100 fields
Sections (e.g. Medication section, Disease Section)	18 sections	16 sections
Section Fields (e.g. Drug Name, Disease Name)	>150 fields	~70 fields
Vocabularies/Value Sets (e.g. RxNorm, ATC, SNOMED CT)	74 Value Sets	45 Value Sets

Common **Header** Fields

Section	Core Data Element
Patient	**Patient Name**
	Family Name or Surname
	Given or First Name
	Gender
	Date of Birth
	Patient IDs
	Primary: Regional/National Health ID
	Address
	Street
	Street Nr.
	City
	Country
	Telecommunication
	Telephone
	Email
	Preferred Language
Health Care Professional/Document Author	Family Name or Surname
	Given or First Name
	ID number (code)
	Telecommunication
	Telephone
	Email
Document Identification	Date of Creation
	Date of Last Update
	ID
	Code
	Title
	Confidentiality Code
	Legal Authenticator
	Language Code

Common **Body** Fields

Section	Core Data Element
Level 1	
Allergies	Allergy Type Display Name (Allergy Type Description or Name)
	Allergy Type Id Code
	Allergy Onset (Start) Date
	Agent Description (Allergen Description or Name)
	Agent Code (Allergen Code)
Problems (Illnesses, Diseases, Diagnoses)	Problem Description
	Problem Code
	Problem Onset (Start) Date
Medications	Medication Brand Name or Active Ingredient Description (Active Ingredient Name)
	Medication Brand Code or Active ingredient Code
	Strength
	Number of Units Per Intake
	Frequency of intake
	Duration of Treatment
	Date of Onset of treatment
Level 2	
Procedures (Major Surgical)	Procedure Description
	Procedure Code
	Procedure Date
Medical Equipment (Medical Devices)	Device or Implant Description
	Device or Implant Code
	Device Implant Date
Diagnostic Test Results	Blood Group Observation Description (Name)
	Blood Group Observation Code
	Blood Group Observation Value
	Blood Group Determination (Observation) Date

Analysis Observations

- **Complex and time-consuming.**

- **Mapping of fields often "approximate"**
  - More generic terms need to be mapped to more specific and vice verse.

- **Requires highly trained IT and clinical team.**

- **"Expires" quickly as country-specific standards change.**

- **Mapping difficult to scale beyond 2 countries.**

Comparative Analysis between HL7 C-CDA R1.1 CCD and epSOS v1.4 PS
EU-US eHealth Cooperative Initiative; v1.3

Comparative Analysis
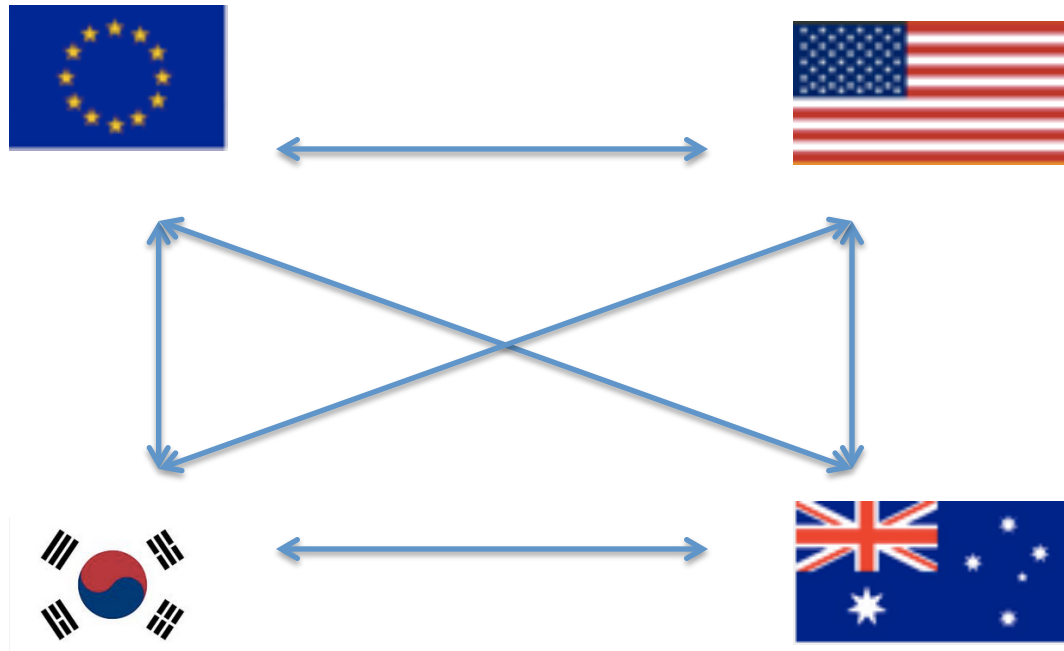**Between HL7 C-CDA R1.1 CCD and epSOS PS v1.4**
Document Version: v1.3

8/20/2014

Available at:
http://wiki.siframework.org/ Interoperability+of+EHR+Work +Group

Standards versioning –> Mapping Implications
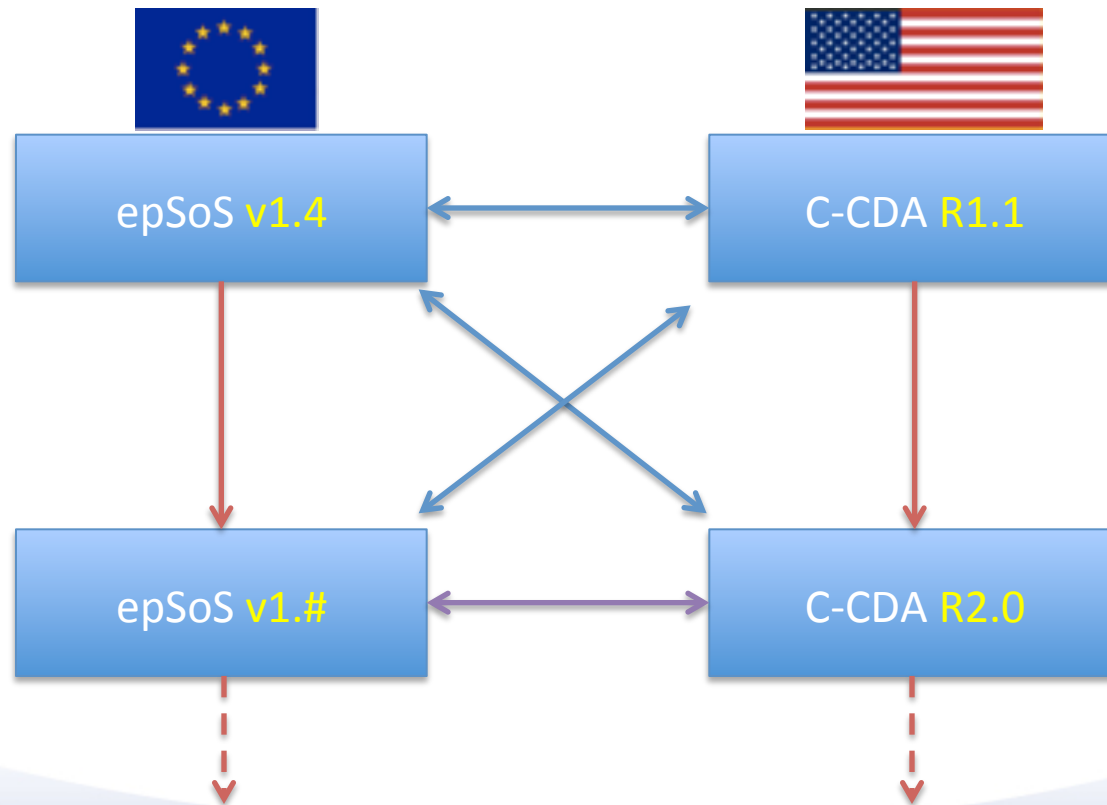
Standards: multiple countries


# of mappings= n/2*(n − 1)= 4/2* (4-1)= **6**

Approach: Single International Standard

Developed By   Promoted By

Single International Standard

Adopted by
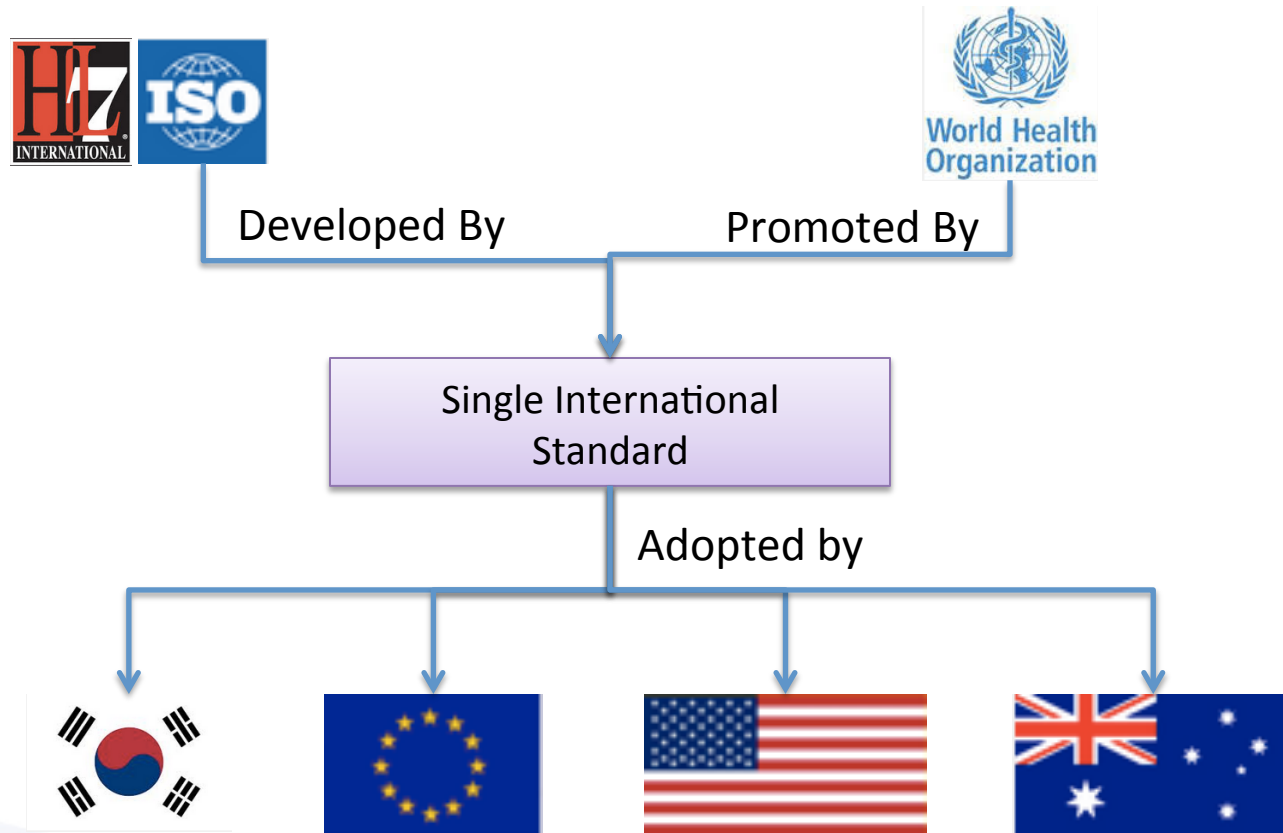
INTERPAS

- **Objective:**
  - Develop International Patient Summary (INTERPAS) template based on common structure, core clinical data elements and high frequency vocabulary subsets.

- **Target Users:**
  - Tourists and migrants.

- **SDOs involved:**
  - HL7, ISO, and others.

- **Adoption:**
  - WHO
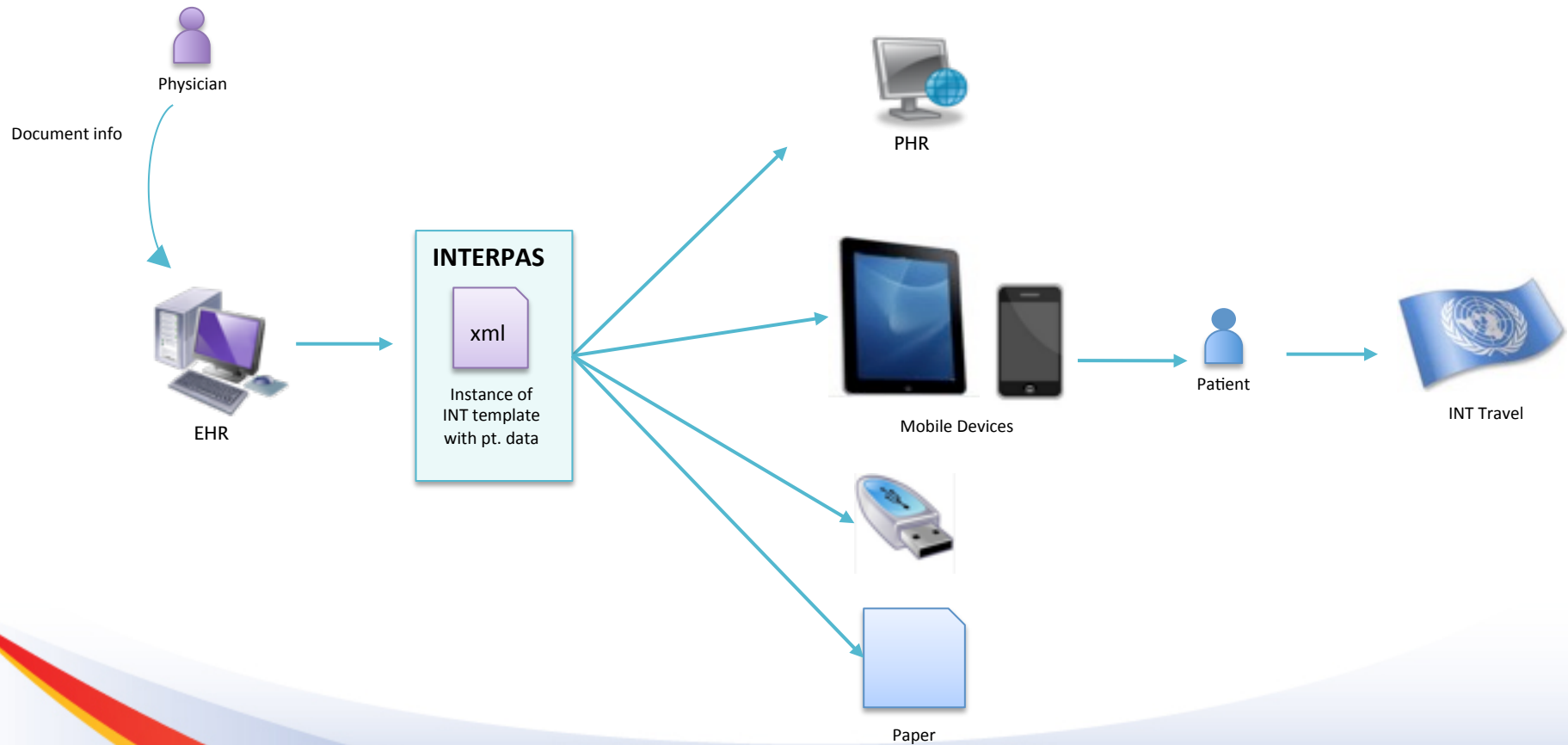
Next steps

- **Engage stakeholders from industry and government.**

- **Engage patients and physicians.**

- **Governance of standards and standards updates.**

THANK YOU

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Ministry of Health
Republic of Latvia

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WHIT

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