Shared Medication Plan

Projectathon Lightning Talk, 17 September 2024

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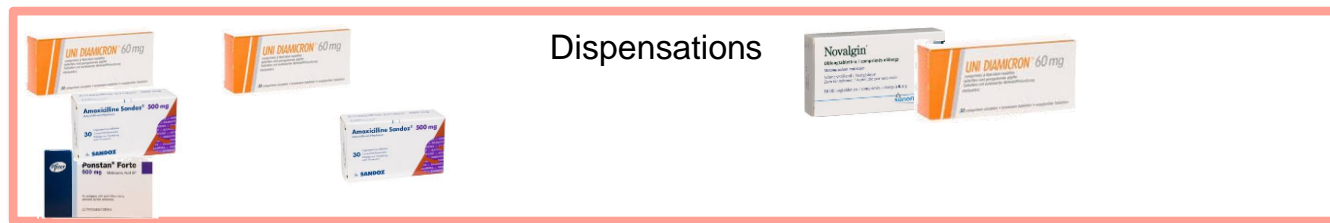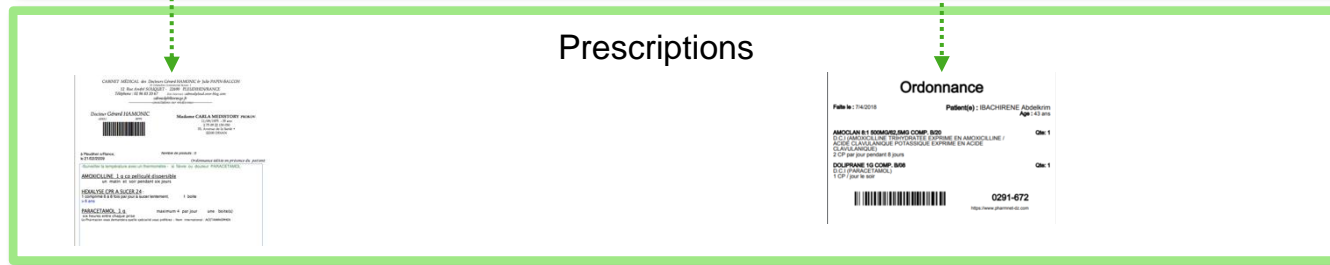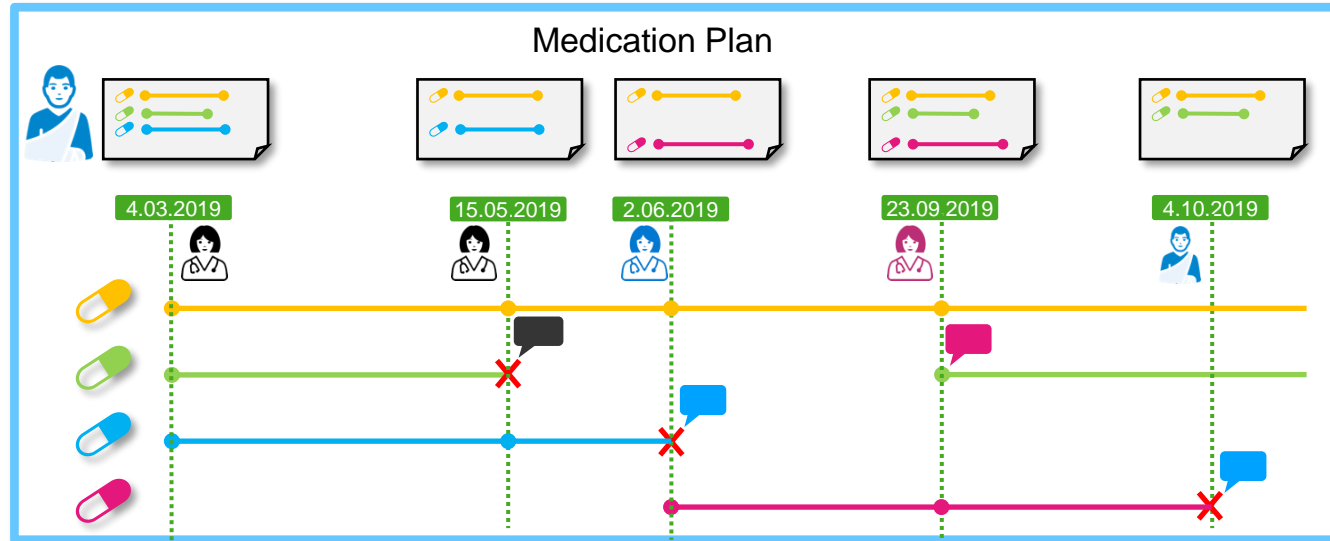**Service cybersanté & télémédecine, HUG**

eMedication Project

❑ **Started more than 5 years ago…**
  ▪ It follows a prototype available in MonDossierMedical.ch since 2012.

❑ **Clinical orientation**
  ▪ What medication the patient is taking or has taken in the past.
  ▪ ePrescription
  ▪ Dispensation

❑ **Actors: healthcare professionals + patient**

Typical Scenario

Main Goal

The shared medication plan:

➢ *Supports* medical anamnesis
  ➢ By providing a global view of the patient's medication and its history
  ➢ By allowing all actors – patient included – to contribute

➢ DOES NOT perform medical reconciliation
  ➢ Medical reconciliation is a process that must stay at the prescriptor/dispenser level
  ➢ A decision support system is also excluded since it depends too much on heterogeneous user needs
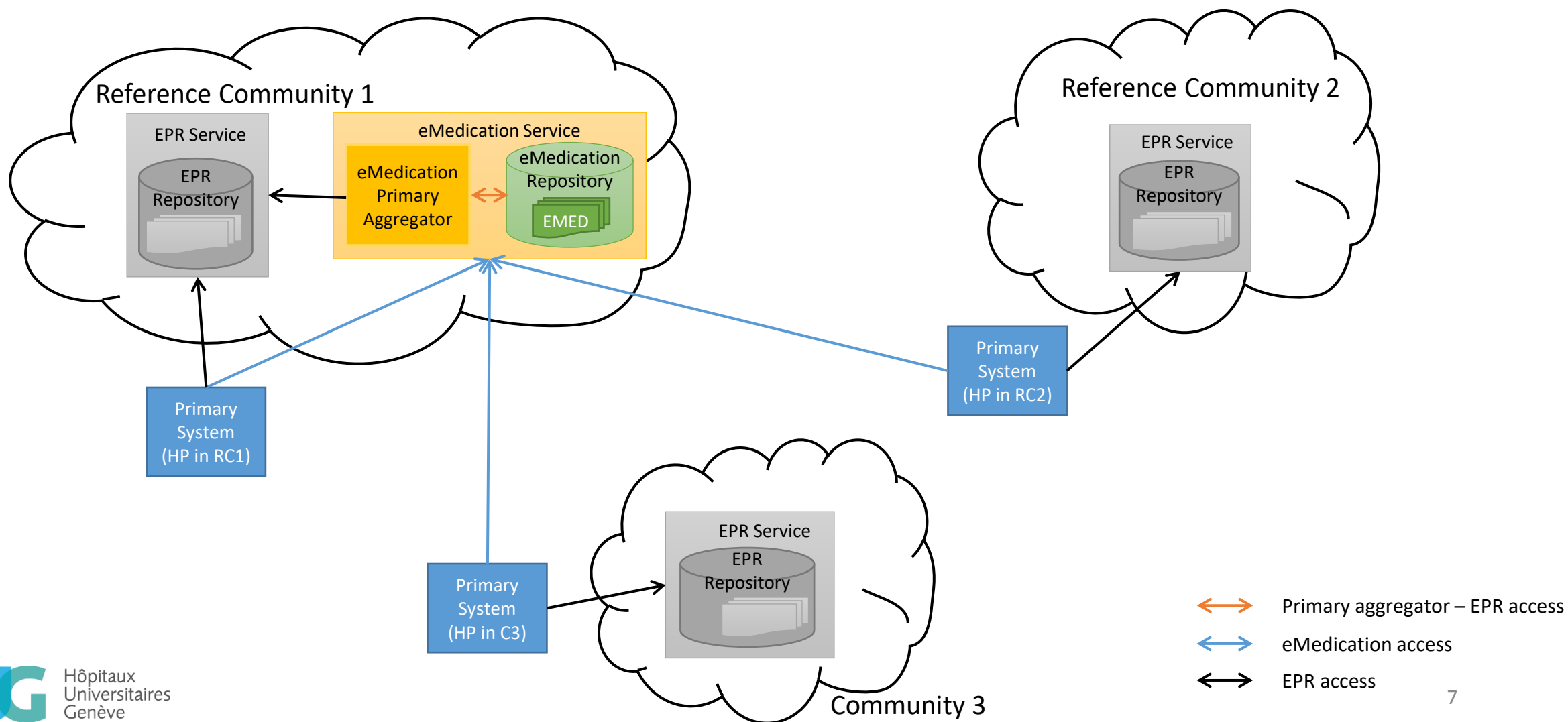
Proposal for a National Architecture (2020)

❑Decentralized

❑EPR complementary service → constraints alignment

❑Ad-hoc management of access rights
- ▪ "All or nothing" (1 confidentiality level only)
- ▪ Not tied to the EPR access rights management

❑"Patient-centred" architecture (EPR: "HCP-centred")

Proposed Architecture (decentralized)
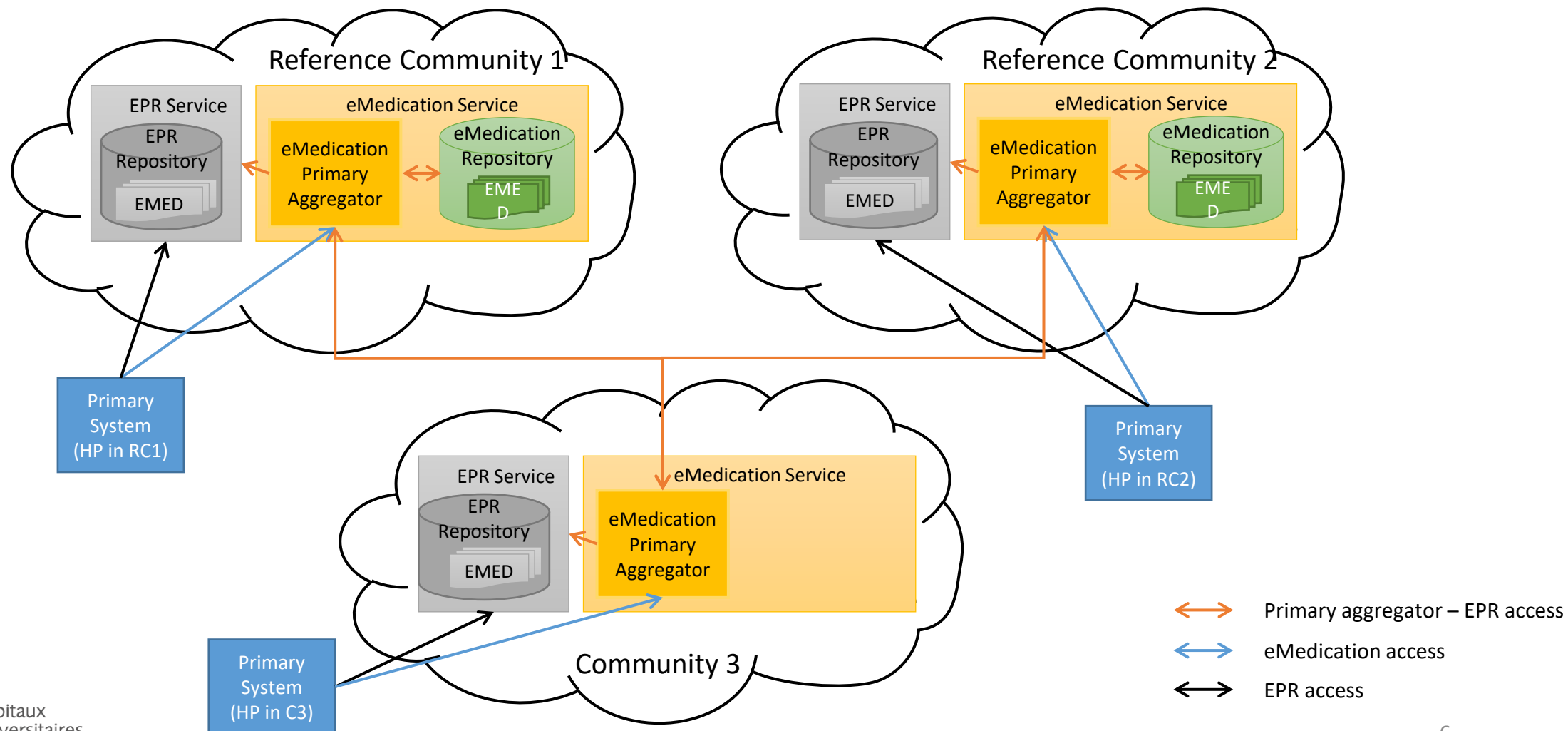
Current Architecture

Task Distribution

❑ EPR

- Patient directory management (MPI – Master Patient Index)
- Healthcare professionals directory management (HPD – Healthcare Professionals Directory)
- Authentication management

❑ Shared Medication Plan

- eMedication content management
- Real time consolidation of eMedication data (aggregation)
- Management of access rights concerning the eMedication service

Content Management

❑ **Prerequisites**
- Patients must have an EPR
- Healthcare professionals must be registered in an EPR community
- Patients must sign up for the Shared Medication Plan service

❑ **Basic Principles**
- Each action is modelled in a document
- Existing documents are not to be modified
- The consolidated view is the result of *replaying* all the actions performed on the treatment plan
- Only authenticated individuals can access the Shared Medication Plan

Documents

❑ eMedication – CH EMED EPR IG (FHIR)
- MTP – Medication Treatment Plan
  - Root document for a medication in the SMP
- PRE – Prescription
- DIS – Dispense
- PADV – Pharmaceutical Advice: advice, changes, comments…
- PML – Pharmacy Medication List: non-consolidated eMedication content
- PMLC - Pharmacy Medication List / Consolidated: medication card PDF, consolidated eMedication content

❑ Consent
- APPC document – Advanced Patient Privacy Consents (IHE)
  - Contains the access rules for the patient's Shared Medication Plan
  - Structured content in XML
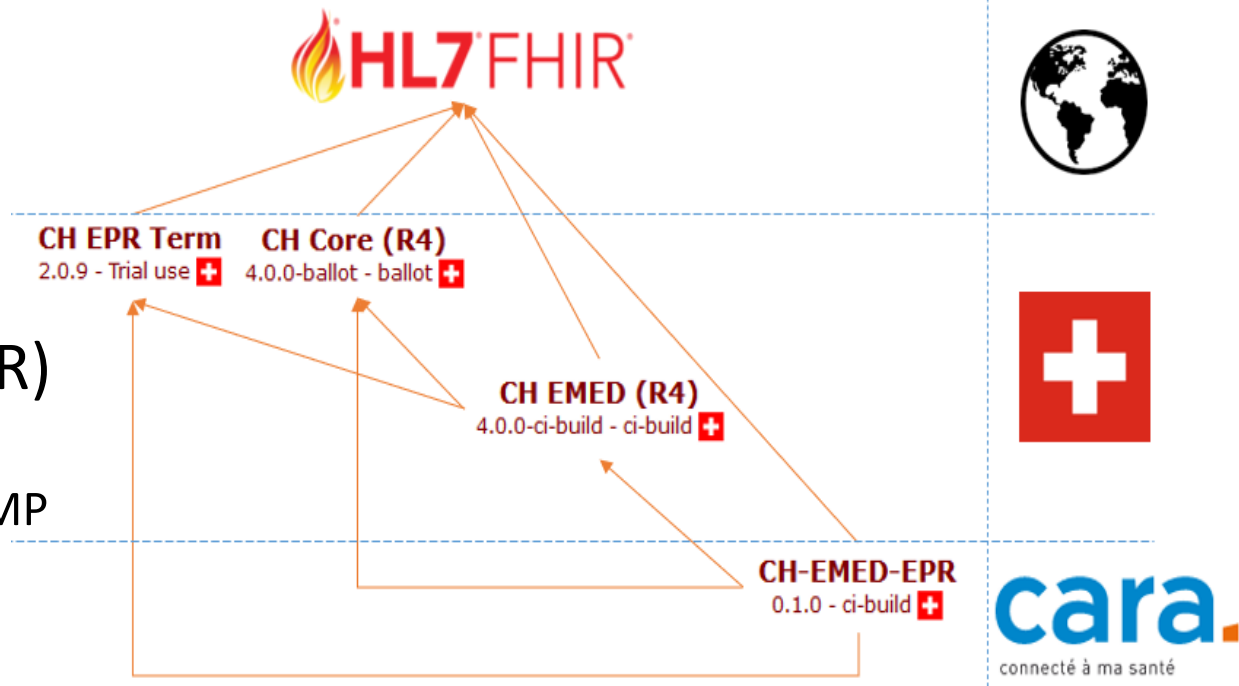
Workflow
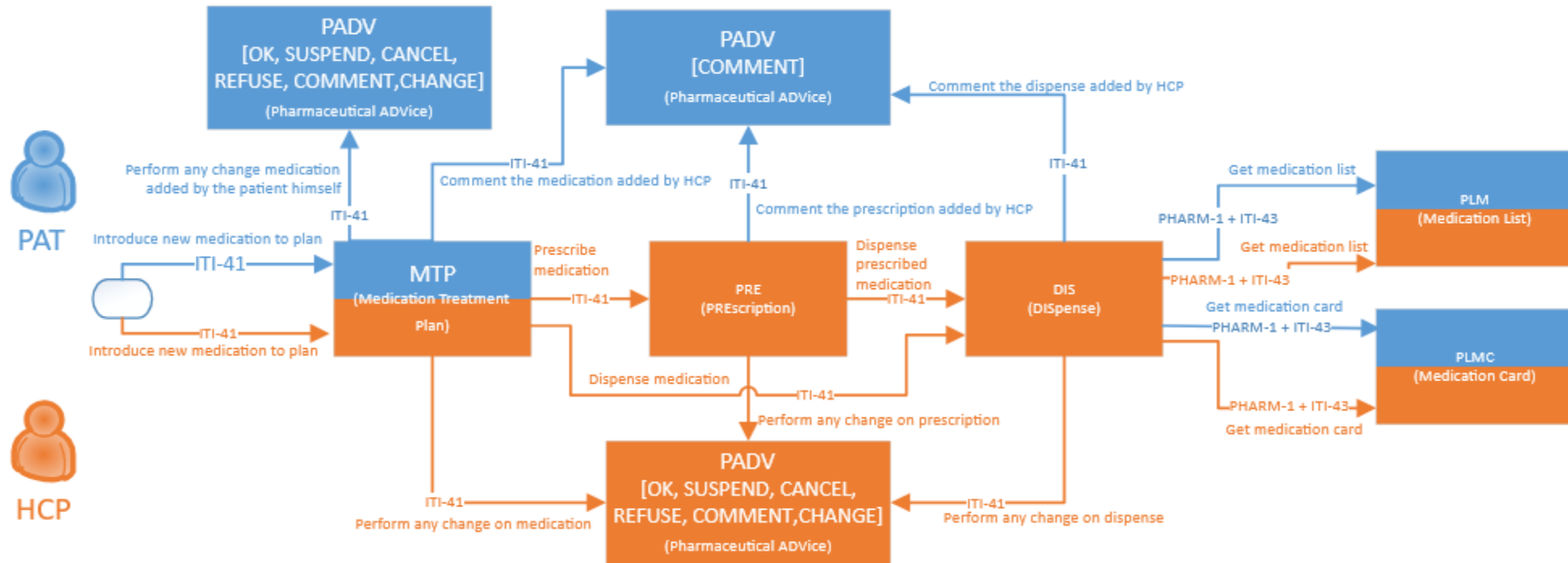
❑ Exchange format and workflow based on:
- IHE Pharmacy – Community Medication Prescription and Dispense (CMPD)
- IPAG eMedication report from 7/6/2017

Access

❑ Based on IHE transactions
  ▪ Same principle as for the EPR

❑ Two Modalities
  ▪ Based on XDS profiles (as for the EPR, SOAP protocol)
  ▪ Based on MHD profiles (RESTful)

❑ Dedicated endpoints for
  ▪ Access to Shared Medication Plan content
  ▪ Audit trails related to the Shared Medication Plan

Transactions Overview

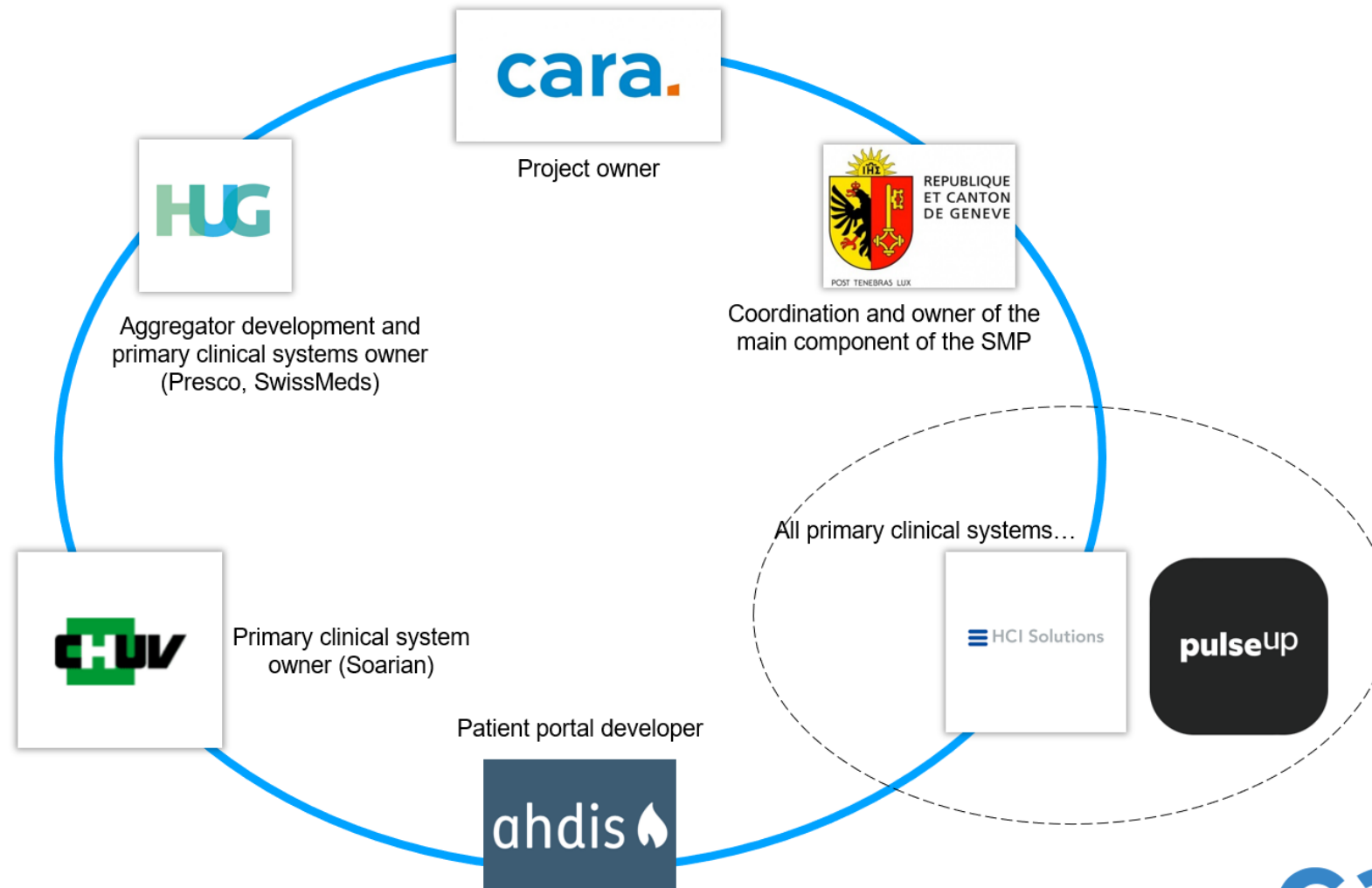| Fonctionnalité	Transaction	soap / RESTful	EPR / SMP
EPR-SPID retrieval	PIXv3 Query (ITI-45)	(soap)	EPR
XUA token retrieval	XUA	(soap)	EPR
SMP-PID retrieval	PIXv3 Query (ITI-45)	(soap)	SMP*
SMP-PID creation (patient registration)	PIXv3 Feed (ITI-44)	(soap)	SMP
Documents list	ITI-18	XDS (soap)	SMP
	ITI-66	MHD (RESTful)	SMP
Lists (coherent set of documents, lists)	PHARM-1	XDS (soap)	SMP
	PHARM-5	MHD (RESTful)	SMP
Document publication	ITI-41	XDS (soap)	SMP
	ITI-65	MHD (RESTful)	SMP
Document retrieval	ITI-43	XDS (soap)	SMP
	ITI-68	MHD (RESTful)	SMP
Notifications	ITI-51	XDS (soap)	SMP
Audit trail logging	ITI-20	(soap/RESTful)	SMP
Patient audit trail consumption	CH:ATC	RESTful	SMP

Documentation

❑Service guide
   https://cara-ch.github.io/emed-service-guide
   - Detailed rules of all the IHE-based supported transactions
     https://cara-ch.github.io/emed-service-guide/transactions/
   - Detailed information about the supported eMedication workflows
     https://cara-ch.github.io/emed-service-guide/workflows/
   - Details on the eMedication service endpoints
     https://cara-ch.github.io/emed-service-guide/endpoints/

❑CH EMED EPR FHIR Implementation Guide (eMedication content exchange format):
   https://fhir.ch/ig/ch-emed-epr/index.html

Key Partners of the SMP Project

cara.
Project owner

HUG
Aggregator development and primary clinical systems owner (Presco, SwissMeds)

REPUBLIQUE ET CANTON DE GENEVE
POST TENEBRAS LUX
Coordination and owner of the main component of the SMP

CHUV
Primary clinical system owner (Soarian)

ahdis
Patient portal developer

All primary clinical systems…

HCI Solutions

pulseup

EPR vs SMP: Documents List

EPR vs SMP: Document Publication