



Gaps in Patient-Centric Healthcare Standards

IEEE Health IT Standards Study Group

March 29, 2006

MedCommons Standards Participation

- **HIMSS – IHE**
- **ASTM-CCR**
- **Liberty Alliance Project**
- **ONC HITSP**
- **IEEE-SA**

Consumer Orientation

- **Banking Business Model**
 - Neither payor nor provider
 - Voluntary participation
 - Clear and practical
 - Standardized and fungible
 - Compete on privacy and service

Problem:

Database Quality and Privacy

- **Big Central Database**
- **Record Locator Service**
- **Application Specific Database**
- **Informed Consent Database (PHR Service)**
- **No Database (Paper)**

The Consumer as a Bridge

A wide-angle photograph of a modern cable-stayed bridge with three tall, white, A-frame pylons. The bridge spans a deep valley with green hillsides and a small town in the distance. The sky is blue with scattered white clouds. The text 'Public Interest' is overlaid on the left side of the image, and 'Business Interest' is overlaid on the bottom right.

**Public
Interest**

**Business
Interest**

Bridging NHIN Perspectives

- **Public Interest**

- Biosurveillance and Public Health
- Health Promotion (Pay-for-Performance)
- Volunteerism (Blood Banks, Transplants)

- **Consumer**

- Value
- Simplicity
- Portability

- **Business**

- Branding
- Proprietary Advantage
- Profit

**Consumer-Friendly
Standards and
Informed Consent**

The diagram features a central text block 'Consumer-Friendly Standards and Informed Consent' in bold. To its left, there are three bullet points: 'Public Interest', 'Consumer', and 'Business'. To the right of the central text, there are two vertical lines. From the top of the upper vertical line, a horizontal arrow points left towards the 'Public Interest' bullet point. From the bottom of the lower vertical line, a horizontal arrow points left towards the 'Business' bullet point. This layout suggests that the central text acts as a bridge or common ground between the public interest and business perspectives.

Interoperability

- ***Not Integration***
- ***Cross-Enterprise***
- ***Policy-Driven***
 - *Choice of Long Distance Carrier, Telephone Hw., Phone Number Portability, Mac and PC...*
- ***Stupid Network***
- ***Independent PHR Banking***
- ***Innovation***

Interoperability Drivers

- **Objective Quality Metrics**
 - Pay for Performance
 - Consistent Coding of Health Status
- **Biosurveillance**
- **Decision Support Innovation**
 - Rules, alerts, pre-accreditation, co-pay
 - Personalized Medicine
- **Privacy**

Privacy and Trust Protocols

LAYER

INTERFACE

Top

Federation.....

Corporations

Single Sign-On.....

People

Linkage.....

Accounts

Bottom

Content.....

Private Information

Cross-Enterprise Standards

- **Federation...**
- **SSO Consent ...**
- **SSO...**
- **Preview PHR...**
- **Import PHR...**
- **Export PHR...**
- **Enterprise Accountability**
- **Identity Linkage**
- **Security Logs**
- **Role Sensitivity**
- **Relevance / Sections**
- **The PHR as Avatar**

CXP is the
Commons eXchange Protocol



Personal Health Records

- Government (My HealtheVet)
- Proprietary (Medem, WebMD)
- Hospital (Epic)
- Insurer
- Employer
- "Quicken for Healthcare"

CCR



CXP

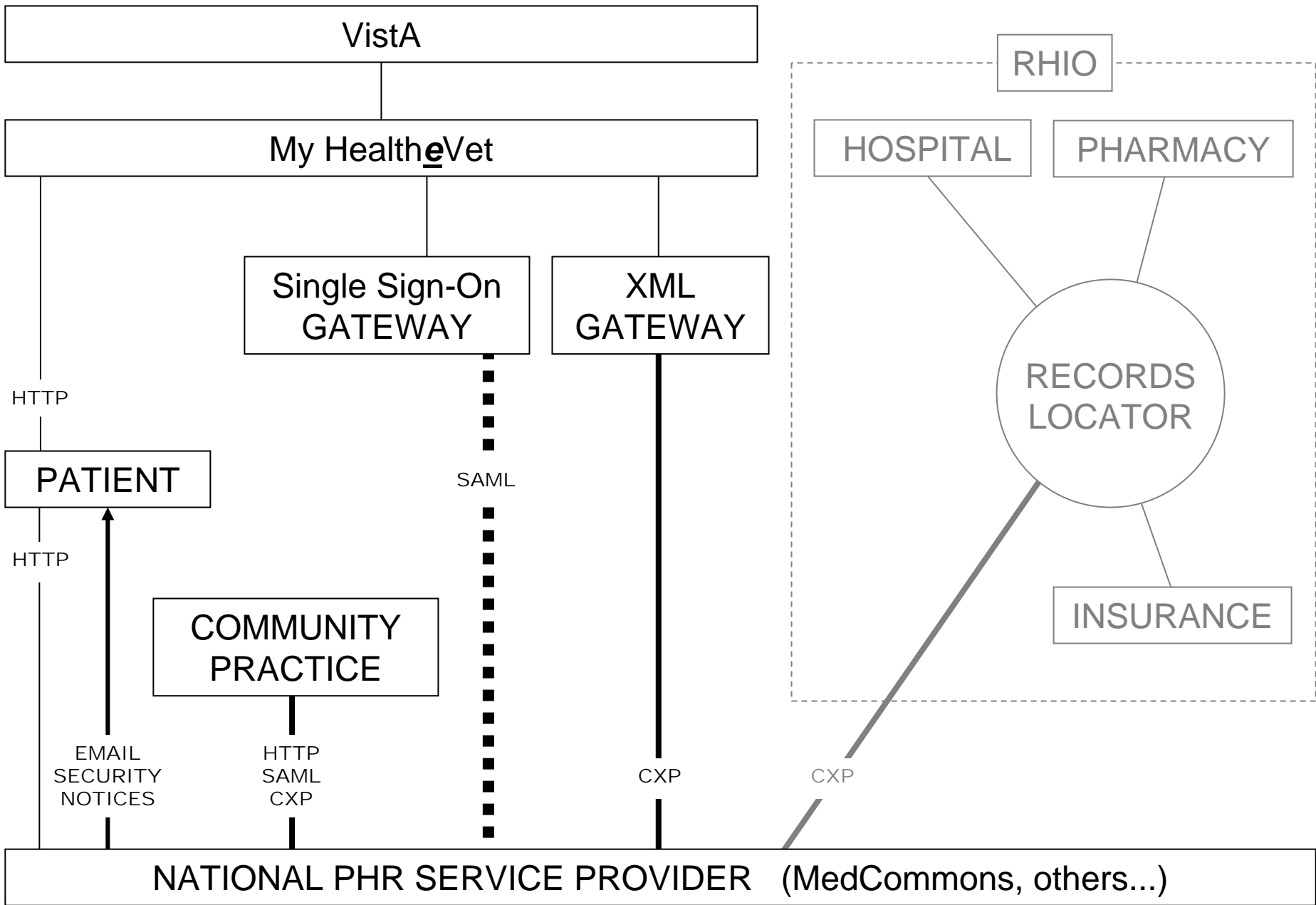


CCR

CXP

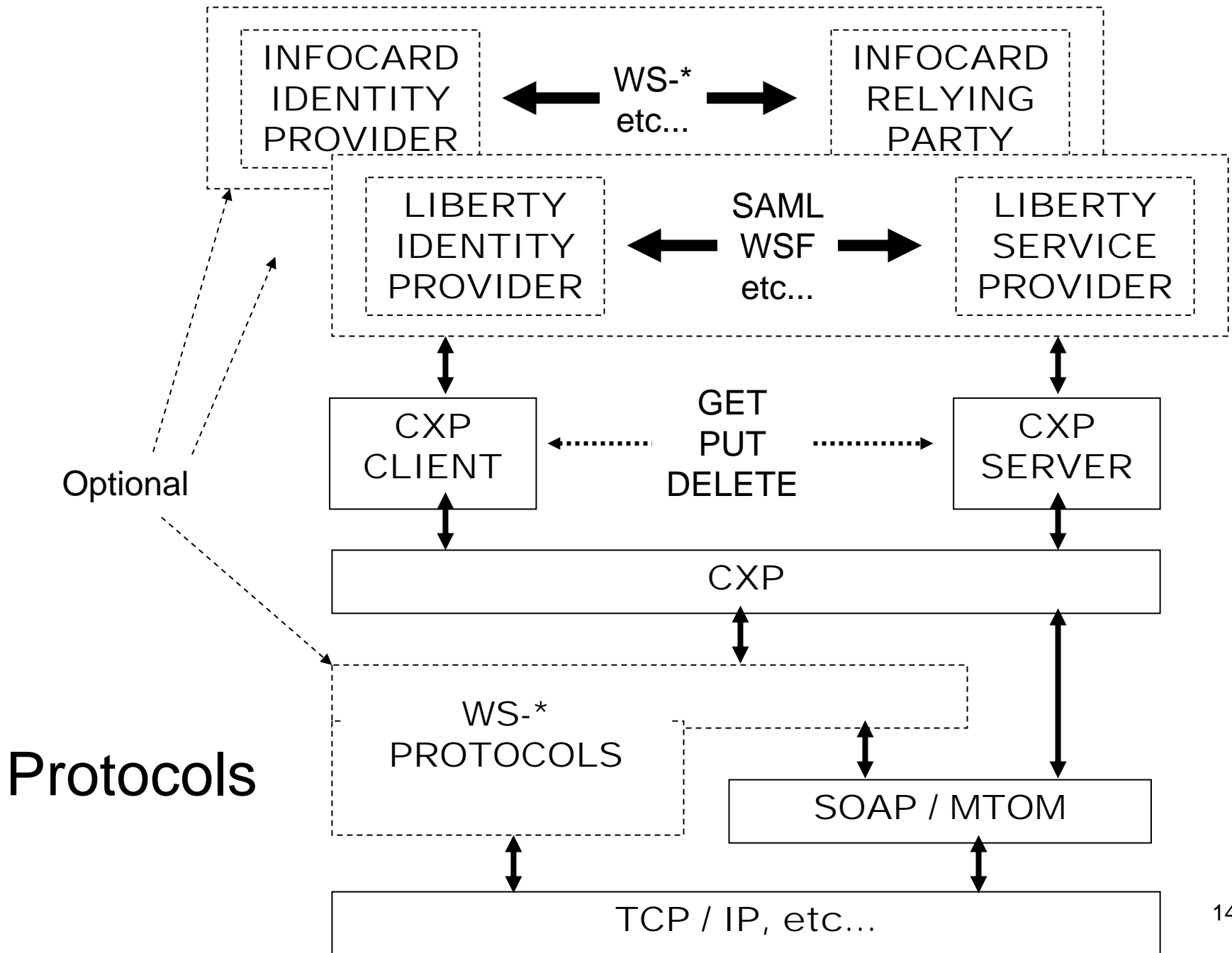
Community Practices

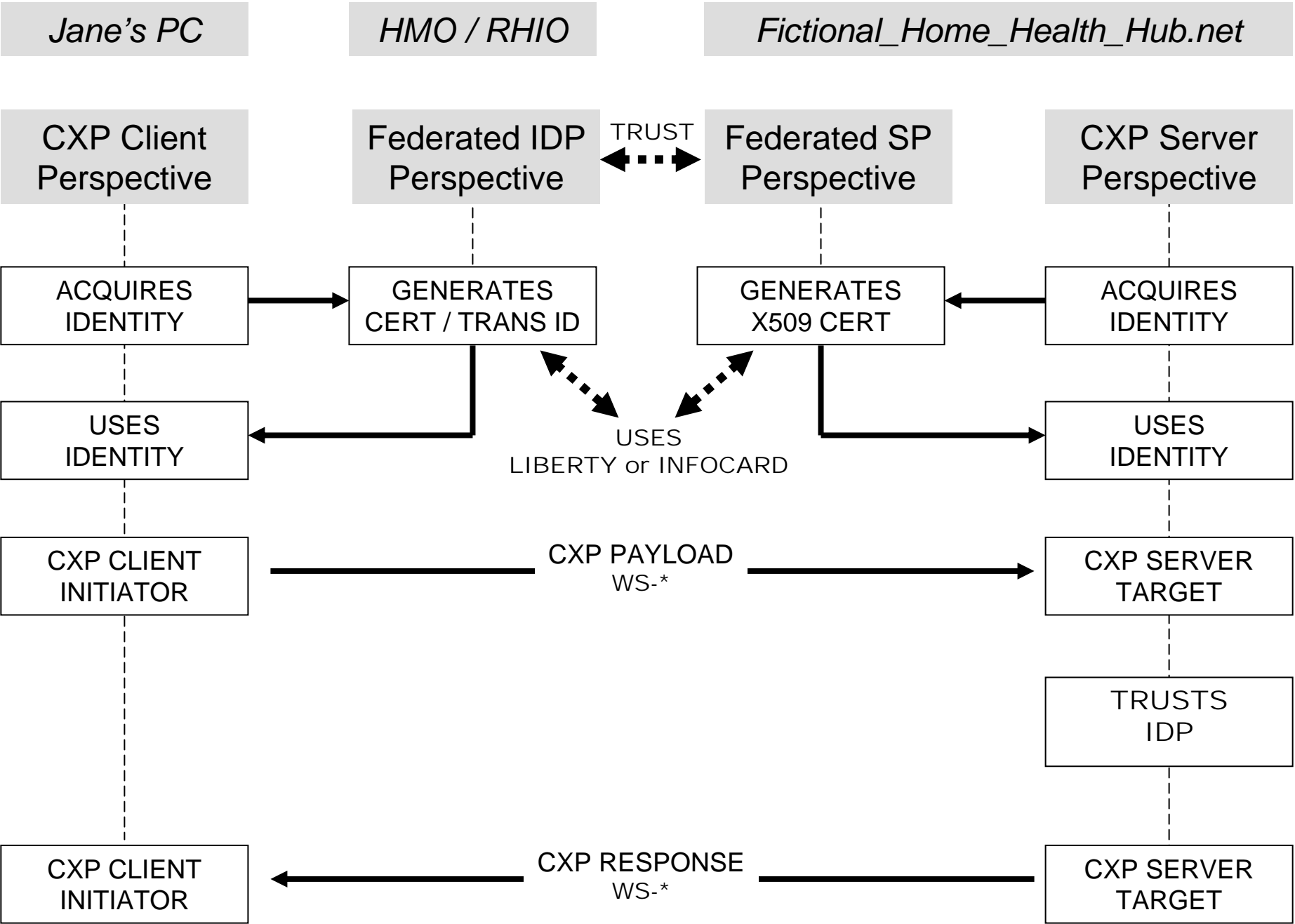
- Hospitals
- Independent Practices
- RHIO Services
- Home Health



CXP = PHRs on the Web

- **Not tied to CCR**
 - ASTM CCR is the only XML patient summary available today.
- **Supports all Patient ID schemes**
 - Both US and European privacy approaches
- **Public Domain**
 - Not controlled by MedCommons
 - Can remain in the public domain or be brought into any interested standards organization.



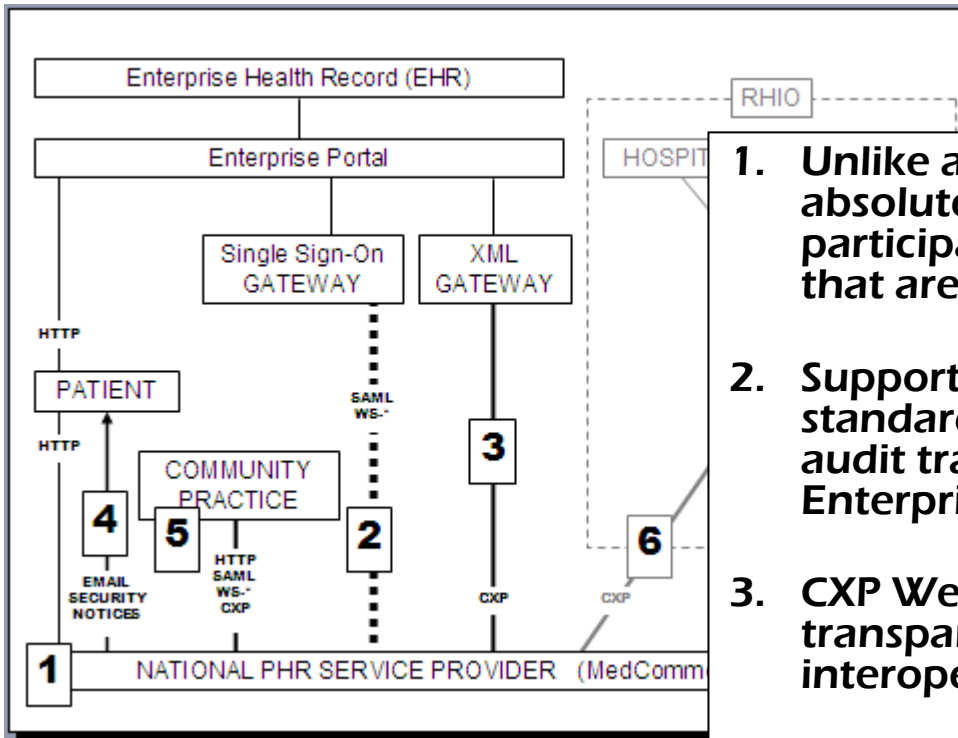


Demo

CXP in a PHR or EHR

- **CXP Web Service Configuration**
 - Patient chooses registry
 - Patient consents to account linkage
- **Export**
 - Patient or clinician sends a medical summary
 - Receives a confirmation code and privacy code (PIN)
- **Import**
 - Preview on Web if desired
 - Merge vs. Create New
- **Notification**
 - Account Changes
 - CXP Transfers

Consumer Centered



1. Unlike a typical RHIO, MedCommons indexes absolutely no private information and does not participate in master patient index arrangements that are presumed by typical RHIOs.
2. Support for two-factor authentication and SAML standard single sign-on provides a strong forensic audit trail for identity assertions across the Enterprise – MedCommons boundary.
3. CXP Web service protocol is standards based and transparent to CCR and future XML-based PHR interoperability standards per market demand.
4. MedCommons sends simple, privacy-safe emails notices to the patient each time their PHR account is accessed or updated by anyone.
5. The patient and community practitioners can access the patient's PHR using any modern web browser or via CXP-compatible PHR and EHR software.
6. MedCommons provides an informed consent mechanism for the patient to forward information to secondary registries such as a RHIO.

Additional Information

CXP Protocol

- CXP 1.0 Protocol Specification
 - http://www.medcommons.net/CXP/VI%20-%20cxp_protocol_specification_1.0.pdf
- CXP and Federated Identity White Paper
 - <http://www.medcommons.net/CXP/CXP%20and%20Federated%20Identity.pdf>
- CXP C# Sample Client Documentation
 - <http://www.medcommons.net/CXP/MedCommons%20CXP%20Client.pdf>
- CXP C# Sample Client Source Code

HIMSS 2006 Interoperability Showcase Demo

- SAML Single Sign-On and Voluntary Account Linkage Presentation
 - <http://www.medcommons.net/images/SSO%20and%20Linkage.GIF>
- Liberty Alliance
 - <http://www.projectliberty.org/>



Thank You!

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