Inpatient – Ambulatory Connectivity for ONC/AHIC

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The EHRVA Standards and Interoperability WG submits this proposal for approval by the full EHRVA membership to form the basis for an EHRVA position to ONC/AHIC and to inform CCHIT's on-going EHR interoperability environment scan.

This proposal identifies the use case for the standardized exchange of key health information between inpatient EHRs and ambulatory clinics. It supports the flow of patient referral from ambulatory to the inpatient setting as well as the flow of discharged patients for follow-up in ambulatory clinics. This type of connectivity is critical in supporting the donation of EHRs by hospitals to participating physicians in the context of Stark Relaxation.

As a vendor organization, EHRVA is looking for CCHIT to provide a robust "plug and play" interoperability certification in line with HITSP specifications. EHRVA encourages that both content and the underlying transport be specified so that the proposed solution may easily scale up to the NHIN in the future.

Use Case

- A hospital wants to contribute to the deployment of Ambulatory EMRs in a number of Ambulatory Clinics with which it cooperates. It is assume that on average 2 to 8 clinics would be connected (a mini HIE, managed by the Hospital IT staff).
- An Ambulatory Clinic may be connected to two to three such hospitals in the community it serves (belong to multiple mini-HIEs).

Patient Chart Summary Exchange *(first priority):*

- Information shared centered on a "core patient chart" to be transferred when patients are referred to that hospital, discharged from the hospital, or at a later ambulatory follow-up.
- The summary extract of the patient chart should include: medications, problems, allergies in structured form and other specific information (chief complaint, reason for referral, etc.).
- Should allow with minimal technical effort:
    - an eventual transition of the "multi-mini HIEs (each with its own infrastructure) into a Community HIE (shared infrastructure) in the two-three years horizon.
    - to start directly with a community HIE model, if a community chooses to.

Laboratory Results *(second priority):*

- Use of the hospital laboratory services with the electronic receipt of laboratory results (will not be discussed further as it is on the CCHIT roadmap).

Assumptions

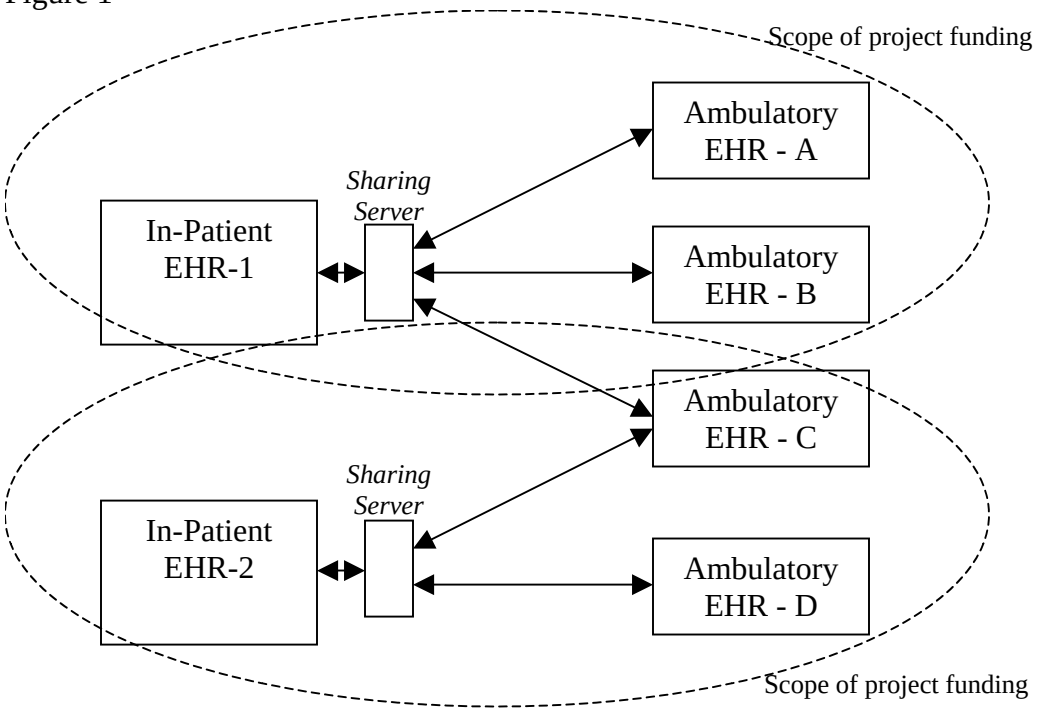
1. Needs to be sufficiently simple to implement in 2008 (vendors and hospitals).

2. Need to leverage existing standards harmonization work form HITSP (IS-03, TP-13, C-32).
3. Synergistic with CCHIT roadmaps (Inpatient Roadmap-June 2007 and Ambulatory Interoperability Roadmaps-March 2007).

Proposal

A typical example is depicted below: One hospital (EHR-1) established a project with two clinics (A&B). Another hospital (EHR-2) in the same community established a separate project with Clinics C&D. Although Clinic C was not part of the EHR-1 project it has elected to be also connected to the first hospital (EHR-1) as it refers patients to both hospitals.

Figure 1



To enable patient continuum of care as the patient moves between their clinic and their hospital or specialty clinic, there is a need to communicate clinical documents to and from these EHRs. This use-case is technically not unlike the use-case where the exchange takes place in a Health Information Exchange. It is proposed to implement it as an intermediate step for the clinic/hospital between today's disconnected care and the future community HIE. The proposed approach is a simplified subset of a HITSP compliant HIE for the EHRs at the clinic or hospital.

It is proposed to leverage the HITSP Interoperability Specifications, now approved by AHIC, recognized by HHS Secretary Leavitt who announced intent to accept them by end of 2007. Specifically, EHRVA recommends leveraging parts of HITSP IS-03 (based on HL7/ASTM CCD plus IHE XDS) and of HITSP IS-02 (IHE XDS-MS).

Note: It is simply proposed to use for clinical content HITSP C-48 Encounter Document (IHE XDS-MS), which adds referral and discharge specific information. not covered by HITSP C-32 (CCD). XDS-MS is nearly identical to HITSP C-32 (CCD based Registration and Medication History Document) with largely overlapping elements (header, medication, allergies and problem sections). The HITSP C-32 terminologies will be used. IHE-XDS (HITSP TP-13) web services transactions are used to interact with the sharing server (submit and query/retrieve these medical summary documents).

Each EHR, interacts with a "sharing server" by pushing a medical summary (when discharge is completed or when a referral is signed) to the shared server. The summary is retrieved upon request and available to import into the designated authorized EHR.

To keep costs down, both in infrastructure costs as well as installation and maintenance, some policy decisions are proposed about the infrastructure.

1. The use-case does not require the long-term storage of the shared documents, so the sharing server (Acting as a document Registry and Repository) could be configured with an automatic purge of documents after some configured (policy) time-period such as 90 days.
2. To enable these workflows, the sharing server is a specially configured XDS Registry and Repository that could be hosted by the hospital or third party.
3. A simplified patient identity management could be used.
    a. The most basic configuration would communicate the Patient ID via non-automated means leveraging existing channels: phone call, fax, secure email, patient, etc.
    b. This might be pre-negotiated to be the Patient ID used at the hospital, one that the patient carries, or the one defined at the source EHR.
    c. A more advanced scheme can use the HITSP transactions for patient demographics query (HITSP T-23 - PDQ) and patient ID cross-referencing (HITSP TP-22 - PIX), but this should not be required initially.