IHE Work Item Proposal (Detailed)

# Proposed Work Item: <Reconciliation of Clinical Content and Care Providers>

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**Domain:** Patient Care Coordination (PCC) Technical

**Summary**

The challenge is that the information can be from within a single health care facility or from two or more facilities and can be from multiple disciplines. It can cover multiple periods in time as well as different clinical or social/family events. Multiple pieces of information can be confusing, conflicting, and lead to patient safety issue. The process of reconciling and consolidating clinical data/information and associated metadata from two or more sources can be daunting.

IHE technical framework supplement on reconciliation of diagnosis, allergies and medications attempts to solve this problem but is limited in scope to a small category of clinical data. IHE Patient Care Plan profile reconciles interventions and goals which is also limited in scope in relation to category of clinical data.

# A Reconciliation of Clinical Content and Care Providers profile will Identify and examine heuristics that can be used to facilitate identification of duplicated, overlapping, conflicting or superseded entries. This will be done by developing a reconciliation template that is generic enough to be used to reconcile any clinical data that needs reconciling. The reconciliation template will identify the performers of the reconciliation process, and the clinical data and sources that were used in that process.

**World Health Organization (WHO)** World Alliance for Patient Safety and Collaborating Centre identifies the problems, impact, issues and suggested action for reconciliation accuracy at transitions of care. In the United States, clinical information reconciliation is needed as a component of Health Information Technology: Standards, Implementation Specifications, and Certification Criteria for Electronic Health Record Technology, 2014 Edition final rule. Australia Department of Health Victoria (Australia) Quality Use of Medicine includes reconciliation of medication as a key patient safety effort.

**IHE will be a good venue to solve this problem because IHE has identified this issue and has attempted to solve a component of the problem by developing the RECON profile (reconciliation of allergies, medications and problems) and the Patient Care Plan profile (reconciliation of interventions and goals).**

# The Problem

Currently, in IHE you can only reconcile medications, allergies, and diagnosis (problems) using the RECON profile. When patient care plan information is exchanged, there needs to be a way to reconcile and consolidate data so that information is easy to understand and patient care is optimized. We need to provide the ability to electronically reconcile and consolidate all types of clinically relevant data. Business rules determine the data that would need to be reconciled. This profile will provide the guidance to accomplish clinical data and care provider reconciliation.

Currently, reconciliation and consolidation of clinically relevant data is done manually. This can be time consuming and prone to human error. We need the ability to assist in reconciling and consolidating data that will assist with the heavy lifting and make it easier for human intervention. This is not intended to replace human action, but is meant to augment and assist in the act of reconciling and consolidating clinical information.

# Use Cases

Clinician receives Care Plan information in home health EHR from two different providers about the same patient. Patient is post hip replacement surgery.

* Provider A (PCP): Activity intervention is bed rest, turn Q2 hrs with assistance due to right hip fracture. Goal is to prevent skin breakdown.
* Provider B (Orthopedic Surgeon): Activity intervention is ambulate TID utilizing a walker status post total right hip replacement surgery. Goal is to increase patient ambulation at least ten feet with a walker.

Manual reconciliation and consolidation is needed to determine which activity intervention, goal and care provider is the most appropriate for the patient at this time.

Home Health clinician receives Care Plan information in home health EHR from two different providers about the same patient. Upon receipt of the two different ambulation intervention, goal and provider information, the home health EHR determines the following:

* Which intervention and goal is the most recent.
* Compares indication for both interventions and goals and determines which is the most recent.
* Compares and determine most recent care provider
* All information is presented to the user. User is better able to determine the intervention, goal and care provider that are most appropriate for the patient at this time or if follow-up with the provider(s) is required.

# Standards & Systems

**Existing Systems:**

* Primary Care Physician’s EHR
* Specialist Physician (Orthopedic Surgeon) EHR
* Home Health EHR
* Hospital EHR
* Care Management EHR
* HIE Systems
* PHRs

**Applicable Standards:**

* + HL7 Patient Care and Service Oriented Architecture Work Groups Care Plan Reconciliation Project
  + Content
    - IHE RECON Profile
    - IHE Harmonization work
    - CDA Medical Summary Document
    - CCDA
    - HL7 Version 2, 3
    - HL7 CDA Release 2
  + Vocabularies
    - LOINC
    - SNOMED

# Technical Approach

* Identify and examine heuristics that can be used to facilitate identification of duplicated, overlapping, conflicting or superseded entries.
* Develop a reconciliation act that is generic enough to be used to reconcile data that need to be reconciled
* Provide ability for areconciliation act that must identify the performers of the reconciliation process, and the clinical data and sources that were used in that process. The results of the reconciliation act are recorded as the subjects of the act.

**New actors**

* No new actors

**Existing actors**

* Reconciliation Agent
* Content Creator
* Content Consumer
* Clinical Data Source
* Clinical Data Consumer

**New transactions (standards used)**

* No new transactions

**Impact on existing integration profiles**

* Share Content (PCC TF-1 :2.1)
* Query Existing Date [PCC-1] (QED :3.1)

**New integration profiles needed**

* No new integration profiles

**Breakdown of tasks that need to be accomplished**

* Review the IHE volume 2 content profile and IHE CDA content profiles and describe general attributes that would need to be considered in the reconciliation and consolidation process.
* Review RECON profile and generalize to be included in this profile.
* Review PtCP profile and generalize to be included in this profile.
* Create reconciliation ACT that is generic to accommodate any data that would need reconciliation.
* Write profile
* Consider retiring RECON profile.

# Risks

Inappropriate identification and merging of data could lead to duplicate data. Duplication may result in over-flagging with consequences such as

* Overuse of the user’s time to correct these duplication
* Alert fatigue
* Low morale
* System distrust or minimization of confidence in results of the system
* Implementation of “workarounds” that short-circuit the reconciliation process to avoid consequences.

# Open Issues

* Reconciliation of structured templates (templates with entries) – IHE goal template is text only. Can we utilize null flavors and point to the text from the recon Act?
* Would reconciliation of providers be treated differently than reconciliation of entries in sections?
* Source of truth – who owns the reconciled data? Is this something that should be addressed with this profile?
  + Reconciliation as a service Vs Reconciliation at the document level

# Effort Estimates

<The technical committee will use this area to record details of the effort estimation.>