Board Report: IHE Patient Care Coordination Domain

**Sponsors:**

* Health Information Management Systems Society (HIMSS)
* American College of Physicians (ACP)

**Leadership:**

* Secretariat: Celina Roth, HIMSS (croth@himss.org)
* Board Representative: John Donnelly, IntePro Solutions Inc.
* Plan Cmte Co-chair: Laura Heermann, Intermountain Healthcare
* Plan Cmte Co-chair: Tone Southerland, Greenway Medical Technologies
* Tech Cmte Co-chair: Emma Jones, Allscripts
* Tech Cmte Co-chair: Laura Bright, eHealth Ontario
* Nursing Sub-Cmte Co-chair: Denise Downing, Association of periOperative Registered Nurses

**Membership Rosters:**

* Planning Cmte: <ftp://ftp.ihe.net/Patient_Care_Coordination/ROSTER_PCC/>
* Technical Cmte: <ftp://ftp.ihe.net/Patient_Care_Coordination/ROSTER_PCC/>
* Nursing Sub-Cmte: <ftp://ftp.ihe.net/Patient_Care_Coordination/ROSTER_PCC/>

**Activity:**

* Domain Scope: IHE Patient Care Coordination addresses integration issues that cross providers, patient problems or time, with general clinical care aspects including document exchange, order processing, and coordination with other specialty domains. It addresses workflows that are common to multiple specialty areas and the integration needs of specialty areas that do not have a separate domain within IHE.
* Current Cycle Timeline/Milestones: <http://wiki.ihe.net/index.php?title=PCC_Development_Timeline>
* Background: IHE PCC was established by HIMSS and ACP in 2004 and the nursing sub-committee was added in 2008 as this clinical discipline expressed an interest in incorporating nursing documentation into the IHE profile process.

**Most Significant Profiles:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Title** | **# vendor (Cthon)** | **# product (Registry)** | **Description** | **Notes** |
| Medical Summaries (MS) | **71 (Cons); 41 (Create)** | 51 (Cons); 25 (Create) | Describes the content and format of Discharge Summaries and Referral Notes | * Deployments in USA being adapted to the supplement changes anticipated from the C-CDA initiative in USA * Most equivalent to the CCD-documents that are part of the USA’s Meaningful Use (MU) Stage 2 product certification requirements. * Discharge Summary and e-referral document types included as specific documents in HL7 C-CDA ballot |
| Exchange of Personal Health Record (XPHR) | **38 (Cons); 26 (Create)** | 39 (Cons);  24 (Create) | Describes the content and format of summary information extracted from a PHR system for import into an EHR system, and vice versa. | * Deployments in USA being adapted to the supplement changes anticipated from the C-CDA initiative in USA * Most equivalent to the ONC’s HITSP C32 construct that is part of the USA’s Meaningful Use (MU) Stage 1 product certification requirements. |
| Emergency Dept Referral (EDR) | **30 (Cons); 15 (Create)** | 31 (Cons);  13 (Create) | Communicates medical summary data from an ambulatory EHR System to an EDIS System. | * Deployments in USA being adapted to the supplement changes anticipated from the C-CDA initiative in USA |
| Antepartum Profiles (APS, APHP, APL, APE) | **3-12 (Cons), 2-6 (Create)** | 5-11 (Cons);  0-2 (Create) | Records the aggregation of significant events, diagnoses, and plans of care (APS), H&P, results from standard laboratory tests (APL), and educational material provided (APE) during an antepartum episode. | * APS is by far the most adopted profile of the series with the max number of vendors for both the Creating and Consuming actors. * Integration Statements impacted by changes from single APS to suite of ‘AP’ profiles. |
| Emergency Dept Encounter Summary Profiles  (EDES: TN, NN, CTNN, EDPN) | **2-16 (Cons), 2-4 (Create)** | 14-17 (Cons);  3-4 (Create) | A set of profiles to record the care actions conducted in an emergency dept encounter including: triaging a patient upon presentation (TN), nursing care delivered (NN), and the notes from a ED physician (EDPN). A composite triage and nursing care document (CTNN) is also possible. | * Consumption easier to implement due to relationship to other CCC-based profiles |
| Immunization Content (IC) | **25 (Cons), 15 (Create)** | 34 (Cons);  21 (Create) | Exchanges immunization data with Immunization Information Systems (IIS) as well as EMR systems, HIEs, PHR systems, and other public health systems. | * HL7 CDA-based successor to the current HL7 v2 immunization message exchange. * This profile is equivalent to the USA’s ONC HITSP C78 construct. * Although USA’s Meaningful Use (MU) Stage 2 has established the HL7 v2 message as the minimum requirement, a number of States have started to include this document profile also. |
| Labor and Delivery Profiles (LDHP, LDS, MDS |  | 6-10 (Cons);  0-1 (Create) |  | * Follow on care from Antepartum Profiles * Shares some components with Antepartum Profiles for reuse opportunities |

**Significant Deployment Activity:**

* North Carolina Health Information Exchange [NCHICA]
  + Profiles: XDS-MS; pilot installation
* Keystone Health Information Exchange [KeyHIE] (Geisinger Health System)
  + Profiles: XPHR; pilot installation
* Health Information Exchange of New York [HIXNY]
  + Profiles: XPHR; pilot installation
* Greater Rochestor RHIO (GRRHIO)
  + Profiles: XPHR; pilot installation
* San Diego County HIO
  + Profiles: IC; pilot installation, USA ONC Beacon Community project
* Due to the recent ONC initiative to harmonize the CDA template guidance, entitled the CDA Consolidation (C-CDA) project, resulting in a CDA ballot in Fall 2011, the IHE PCC content profiles utilizing CDA that were planning to be utilized in USA interoperability initiatives are now expected to reflect the results of this new HL7 Ballot result. This C-CDA initiative in 2011-2012 has a direct impact on the further deployment of the PCC Content Profiles, at least in the USA. This initiative established a harmonized set of data section templates/OIDs related to specific HL7 CCD-based document types identified in the ONC-sponsored projects, e.g. Transitions of Care. The approach taken for the incorporation of the results of this USA-based C-CDA initiative on the complete set of PCC Content Profiles, which are intended for use by the international HIT community, is to support either the USA-specific C-CDA templates or those previously included in the PCC content profile (see Summary of Future Plans below).
* IHE PCC profiles have been the underpinning of a number of interoperability constructs published by the HHS/ONC HITSP initiative in the USA. Commencing in 2012, the ONC successor organization to HITSP, the Standards and Interoperability (S&I) Framework, has established its own repository of interoperability implementation guides resulting from its own projects, e.g. Transitions of Care, and other S&I endorsed community-led projects, e.g. Public Health Reporting. The ongoing uptake of IHE profiles, at least in the USA region in the near term, is contingent on 1) their editing to reflect the C-CDA template/OID guidance, and 2) the incorporation into one or more of these ONC-sponsored projects. The goal of the C-CDA Harmonization effort in PCC is to allow such implementations to produce one template that conforms to both.

**Demonstrations and Other Events:**

* HIMSS Annual  Conference (USA)
  + Theme-focused demonstrations including Ambulatory, Emergency and Acute Care settings, Public Health agencies, Clinical Research organizations, Laboratory Services, Imaging Services and Home Care
* Public Health Information Network (PHIN) conference (USA)
  + Public health focused demonstrations (e.g. Immunization and Cancer Registry Reporting and Utilization)
* HIMSS/World of Health IT (WoHIT) (2012: Copenhagen, Denmark)
  + Theme-focused demonstrations including Ambulatory, Emergency and Acute Care settings and Laboratory Services. Not continued in 2013.
* HIMSS AsiaPac12 (2012: Singapore)
  + Theme-focused demonstrations including Ambulatory, Emergency and Acute Care settings, and also Home-based and clinically-deployed devices

**New Profiles:**

* Referral/Order Linking [ROL]
  + This profile describes what is necessary to communicate and link the referral and/or order number in documentation and metadata associated with services requested by an order placer. It does not describe where orders are placed when the referral and/or order is communicated using CDA documents. It can be used within the context of profiles using the Cross Enterprise Document Workflow, or it can be used outside of those contexts. [Trial Impl: Aug 2013]
* Patient Care Plan [PtCP]
  + Patient Care Plan is a content profile that defines a centralized patient care plan that will meet the needs of many stakeholders (providers and patients) and provide a method to reconcile and consolidate the many disparate care plans that can be attached to a patient. It provides the beginning of a framework for a centralized patient care plan. [Trial Impl: Aug 2013]
* Early Hearing Detection and Intervention-Workflow Definition [EHDI-WD]
  + This profile is built upon the ITI XDW Profile
  + This profile specifies a standard workflow to orchestrate the collection and exchange of newborn hearing screening information between clinical and EHDI program public health information systems. [Trial Impl: Aug 2013]
* CCDA Harmonization
  + The purpose of this supplement is to update IHE PCC Templates to be consistent with the most recent version of HL7 templates published in the IHE Health Story Consolidation Implementation Guide. This supplement addresses how IHE templates are to be versioned, and how new versions of templates can be created to replace existing templates. [Trial Impl: Aug 2013]
* Cross Enterprise Basic eReferral Workflow Definition [XBeR-WD] (<http://www.ihe.net/Technical_Framework/upload/IHE_PCC_Suppl_XBeR-WD.pdf>)
* This profile is built upon the ITI XDW Profile
* The eReferral, without an instrument to manage its workflow, is only an order without any information about the status of the order itself. The purpose of the XBeR-WD profile is to precisely define the workflow associated with an eReferral Document, the actors involved and the digital documents related with this process.[Trial Impl: Aug 2012]
* X Cross Enterprise TeleHomeMonitoring Workflow Definition [XTHM-WD] (<http://www.ihe.net/Technical_Framework/upload/IHE_PCC_Suppl_XTHM-WD.pdf>)
  + This profile is built upon the ITI XDW Profile
  + The workflow related to the management of patients with chronic diseases (e.g., heart failure, COPD, diabetes) followed by a telemonitoring service is a cross-enterprise workflow since many different individuals from different enterprises can be involved: specialists and physicians, working in hospitals, rural areas or urban areas, general practitioners (GP), and general caregivers, as well as the telemonitoring centre’s staff. [Trial Impl: Aug 2012]
* X Cross-Enterprise Tumor Board Workflow Definition [XTB-WD] (<http://www.ihe.net/Technical_Framework/upload/IHE_PCC_Suppl_XTB-WD.pdf>)
  + This profile is built upon the ITI XDW Profile
  + Tumor Board Reviews are meetings where a team of medical professionals of different professions, and often from different hospitals, get together (physically or by remote conference) to assess the cases of oncological patients (using medical images and other relevant medical information), discuss the cases, and advise on the further treatment of the patient. This workflow definition describes the different Tasks of a Tumor Board Review process, and the accompanying information in the form of input- and output documents that are linked to the different Tasks in the process. [Trial Impl: Aug 2012]
* EMS Transfer of Care [ETC] (<ftp://ftp.ihe.net/Patient_Care_Coordination/yr5_2009-2010/Technical%20Committee/TrialImplementation/CommitteeVersions/>)
  + Facilitates transfer of information from EMS systems to emergency room systems. [Trial Impl: July 2009]
  + Incorporated into the Transport Record Summaries profile in 2010-2011 cycle
* eNursing Summary [ENS] (<ftp://ftp.ihe.net/Patient_Care_Coordination/yr6_2010-2011/Technical%20Committee/ProfileWork/NursingSummary/>)
  + Develops a structure to create safe, effective communication, ensuring continuity of patient care through transitions in nursing care providers. These transitions, or “hand-offs”, occur multiple times each day in a hospital and at every change of care location. [Trial Impl: Aug 2010]
* Postpartum Visit Summary [PPVS] (<ftp://ftp.ihe.net/Patient_Care_Coordination/yr6_2010-2011/Technical%20Committee/TrialImplementation/CommitteeVersions/>)
  + Describes the content and format of the summary document that will be used to complete the pregnancy care record. PPVS captures any episode of treatment occurring during the postpartum period. [Trial Impl updated: Sept 2011]
* Newborn Discharge Summary [NDS] (<ftp://ftp.ihe.net/Patient_Care_Coordination/yr6_2010-2011/Technical%20Committee/ProfileWork/NewbornDischargeSummary/>)
  + Produced when a newborn infant leaves the hospital and can play a critical role in creating a new ambulatory EHR at the time of the first visit following discharge. [Trial Impl updated: Sept 2011]
* Perinatal Workflow [PW] (<ftp://ftp.ihe.net/Patient_Care_Coordination/yr6_2010-2011/Technical%20Committee/TrialImplementation/CommitteeVersions/>)
  + Perinatal workflows involve communication between ambulatory providers, laboratories, imaging facilities, and labor and delivery centers. The Perinatal Workflow profile simplifies exchanges between these various providers of care by utilizing profiles and transactions from several IHE domains to support the continuum of care of expectant mothers and newborns. [Trial Impl: Aug 2010]
* Reconciliation of Diagnosis, Allergies and Medications [RECON] (<ftp://ftp.ihe.net/Patient_Care_Coordination/yr7_2011-2012/Technical%20Committee/TrialImplementation/RECON/>)
  + Provides the support necessary to automate reconciliation of electronically available clinical information during any transfer or transition of care from one healthcare practice setting to another that every healthcare provider performs as part of inpatient and outpatient workflows. The scope of this profile is limited to diagnoses, allergies or medications. [Trial Impl: Sept 2011]
* Transport Record Summaries Profiles (<ftp://ftp.ihe.net/Patient_Care_Coordination/yr7_2011-2012/Technical%20Committee/ProfileWork/InterfacilityTransportProfile/>)
  + This profile contains the specific information that will be shared during both pre-hospital (911/EMS-supported) and interfacility medical transports. It combines the previously published EMS Transfer of Care [ETC] profile supplement with the newly introduced profile for Interfacility Transport Summary [ITS]. [Trail Impl: Sept 2011]

Trends:

* The uptake and deployment of PCC Content profiles are highly related to the specific use case priorities being promoted in a region. For example, the ONC-sponsored projects are the leading impetus for which clinical exchanges are deployed in the USA.
* Patient Care Coordination, as an overall objective, has both clinical and administrative components as reflected by the industry initiatives of PCMH (Patient-Centered Medical Home) and ACOs (Accountable Care Organizations). The PCC domain scope and profiles to-date have only addressed the clinical exchange component. The IHE position/coverage of the administrative requirements for this objective is becoming increasingly important.
* The utilization of the latest PCC profiles focused on workflow automation will be dependent on an appropriate organization in the healthcare ecosystem recognizing their value and “owning” the administration of the rules engine.

**Summary of Future Plans: [Overall Objective: less new profiles and more consolidation and workflows]**

* Continue to assess the uptake plans of the USA-sponsored C-CDA initiative on the international HIT community and monitor the adoption of the C-CDA Harmonization profile published for Trial Implementation in 2013. Author and execute CP’s against the IHE PCC TF and C-CDA Harmonization supplement as needed to align with any future C-CDA changes that are reflected in HL7 C-CDA ballot results.
* Coordinate Patient Plan of Care and Patient-centered Coordination Plan supplement development with AORN Syntergy for peri-operative structured nomenclature *(incorporation of the C-CDA project results topic moved this to a lower priority)*
* Continue edits to the PCC Technical Framework to emphasize the XDS folder capability for the deployment of groups of related PCC content profiles, e.g. APS being one of the documents contained in an Antepartum Document folder; TN being one of the documents contained in an Emergency Dept Encounter folder, etc *(incorporation of the C-CDA project results topic moved this to a lower priority)*
* Investigate issues and concerns impacting the uptake of the QED profile in that this profile is a long-standing PCC profile (published in Aug 2008) with minimal support from the vendor community *(incorporation of the C-CDA project results topic moved this task to a lower priority)*
* Coordination with Quality, Research and Public Health [QRPH] domain regarding QED instances in support of QRPH outcomes and requirements and the structuring of PCC profiles to provide maximum “re-purposing” of its content for QRPH profiles
* Validate the purpose and charge for the Nursing Subcommittee and review the overall set of nursing-related profiles and TF supplements to promote vendor uptake and reflect the accurate integration of nursing workflow and documentation exchanges
* In general, the near-term focus of the PCC domain, besides the effective incorporation of the C-CDA results on the TF of the Domain, is the organization of existing profiles into harmonized sets of information exchanges and their respective workflows and to promote the uptake of these sets into products. Deployment of the PCC profiles beyond the initial MS and XPHR profiles in harmonization with national/regional projects and priorities will also be emphasized.