Patient Care Coordination (PCC) 2018 Domain Update

Presented by:
Amit Popat, PCC Planning Co-chair

Today's Presenters

Amit Popat

Planning Committee Co-Chair, IHE PCC

Epic

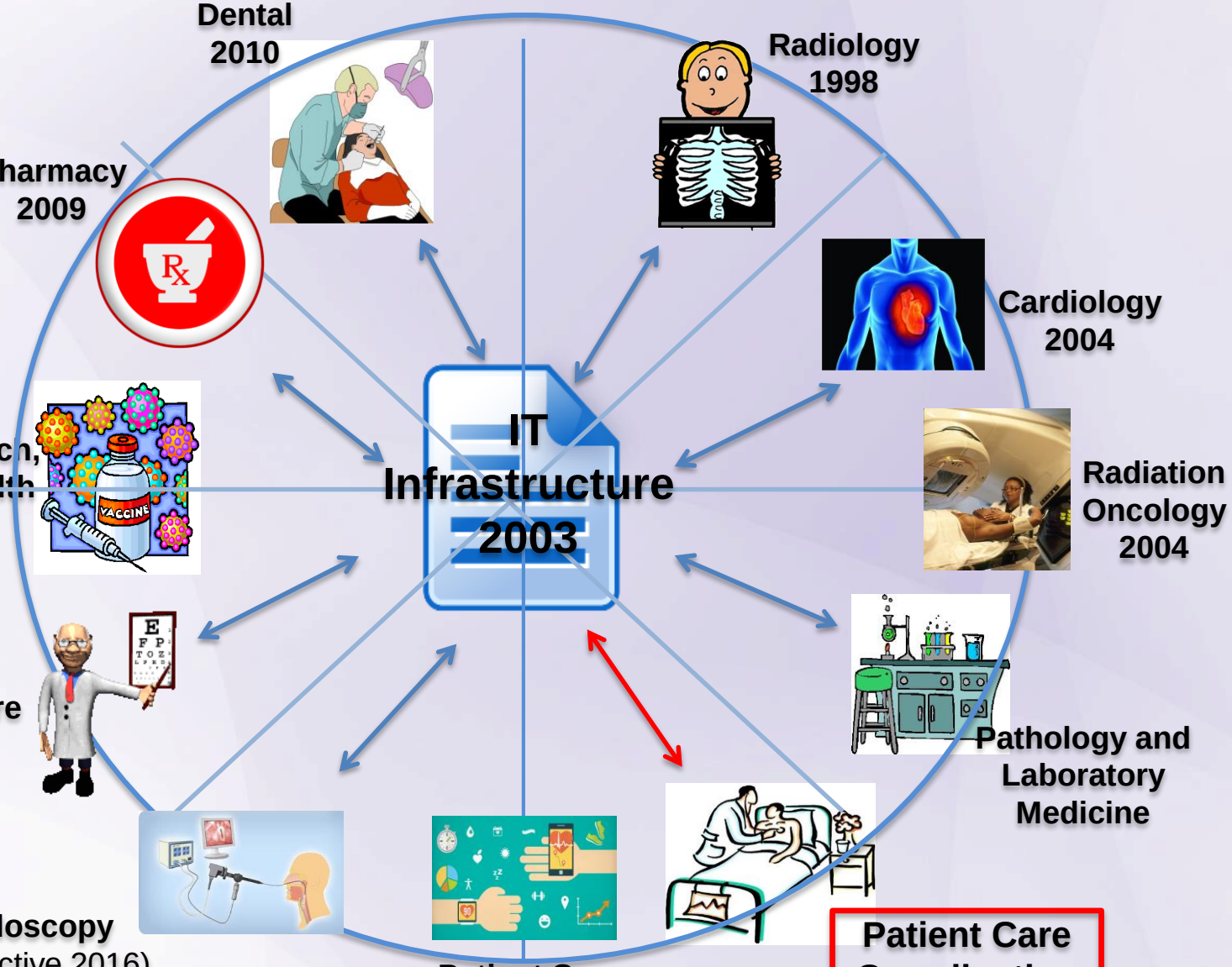
Learning Objectives

- Describe the history of IHE and the PCC Domain.
- Explain the vision, mission, and strategic goals of PCC and its relevance in IHE and the healthcare community.
- Describe the work accomplished by PCC over the most recent annual work cycle.
- Identify opportunities for your organization to participate in PCC domain activities and understand how to get engaged.

Today's Agenda

- **IHE Overview and History**
  - PCC Overview and History
- **PCC Vision and Mission**
- **Strategic Goals of PCC**
- **PCC Profiles and Technical Frameworks**
  - Key Existing Profiles
  - New Profiles
- **How to Participate**
- **Q & A**

IHE Domains


Dental
2010
Radiology
1998
Pharmacy
2009
Cardiology
2004
Quality, Research,
and Public Health
2006
IT
Infrastructure
2003
Radiation
Oncology
2004
Eye Care
2006
Pathology and
Laboratory
Medicine
Endoscopy
(non-active 2016)
Patient Care
Devices
2005
Patient Care
Coordination
2004

PCC History

- Formed in 2004
- Sponsors:
  - American College of Physicians (ACP)
  - Healthcare Information and Management Systems Society (HIMSS)
- Cross-Enterprise Sharing of Medical Summaries (XDS-MS)
  - First PCC profile and IHE's first content profile
  - Delivered in 2005 for Trial Implementation
- Profiles delivered since 2004
  - 23 content profiles
  - 9 workflow profiles
  - 7 integration profiles (including 4 FHIR-based profiles)

PCC Vision and Mission

Vision:

To continually improve patient outcomes through the use of technology connecting across healthcare disciplines and care paths.

Mission:

To develop and maintain interoperability profiles to support coordination of care for patients where that care crosses providers, patient conditions and health concerns, or time.

PCC Scope

General Clinical Care Aspects:

- Clinician Perspective
- Patient Perspective
- Coordination with other IHE Domains
- Order Processing

Workflows and Integration Needs Common to Multiple Specialty Areas:

- Document Exchange
- Clinical Message Exchange
- Clinical Reconciliation

PCC Strategic Goals

- **Content:**
  - Coordinate with external standards development organizations (SDOs) to develop and promote the use of content templates
  - Develop strategies to support multi-level content template guidance to benefit the global community
- **Workflow:**
  - Develop new profiles by reaching outward to other IHE domains to coordinate workflows across care paths
  - Develop White Papers by researching new areas that could benefit from standards based interoperability guidance
- **Nursing**
  - Explore and understand the benefit of IHE profile work for the nursing community by partnering with nursing organizations and initiatives
  - Develop Profiles and White Papers to support and explore various nursing specific workflows

http://wiki.ihe.net/index.php/Patient_Care_Coordination

PCC National and International Presence

https://www.ihe.net/ihe_worldwide/

Region	Country	Roles	Additional Information
Europe	**France**	Implementer Developer	• http://esante.gouv.fr/en/actus • https://www.ihe.net/wp-content/uploads/2018/07/case_study_france_ehr.pdf • Obstetric Use Cases, others
	Italy	Implementer Developer	• http://www.consorzioarsenal.it/we/guest • Workflow definition profiles (XDW-based)
North America	**US**	Implementer Developer	• http://www.siframework.org/ • http://www.healthit.gov • Data Access Framework National Extension, MU
	Canada	Developer	
Asia	**China**	Implementer	• https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3243277/
Middle East	**Saudi Arabia**	Implementer	• Medication, Immunization, eReferral

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Profiles and Technical Frameworks

Early Content Profiles

- **Medical Summaries (XDS-MS)**
  - Discharge and Referral Summaries exchanged between providers
  - EHR, HIS, HIE
  - Transitions of care between inpatient and ambulatory settings
- **Emergency Department Referral (EDR)**
  - Enhances XDS-MS to support “Heads-up” call to ED
  - EHR, EDIS, HIS, HIE
  - Provides critical data needed in ED visits
- **Exchange of Personal Health Records (XPHR)**
  - Exchange clinical summary data between patients and providers
  - EHR, PHR, Patient Portal
  - Ensures patients have updated lists of healthcare providers, problems, medications, allergies, immunizations, lab results, procedures, and encounters

Profiles and Technical Frameworks

Existing Clinical Decision Support Profiles:

- **Query for Existing Data (QED)**
  - Access to clinical data
  - EHR, CDR, HIS, Registries
  - For use in quality measurement, reporting, clinical decision support, and research
- **Care Management (CM)**
  - Supports communication to specialized care delivery systems for disease management
- **Request for Clinical Guidance (RCG)**
  - Access to clinical decision support as a service
  - EHR, other HIT systems
- **Retrieve Clinical Knowledge (RCK)**
  - Interface for health IT systems, Personal Health Records, and HIEs to retrieve knowledge on a topic suitable for presentation to a clinician or patient

Profiles and Technical Frameworks

Pink= Perinatal, Green = Emergency Care, Blue= Nursing and Care Coordination

25 Content Profiles:

- Antepartum Education (APE)
- Antepartum History and Physical (APHP)
- Antepartum Laboratory (APL)
- Antepartum Summary (APS)
- Labor and Delivery History and Physical (LDHP)
- Labor and Delivery Summary (LDS)
- Maternal Discharge Summary (MDS)
- Newborn Discharge Summary (NDS)
- Postpartum Visit Summary (PVS)
- Immunization Content (IC)
- Interfacility Transport Summary (ITS)
- Multiple Content Views (MCV)
- Personal Health Record (XPHR)
- Cross-enterprise Sharing of Medical Summaries (XDS-MS)
- CDA Documant Summary Sections (CDA-DSS)
- eNursing Summary (ENS)
- Nursing Note (NN)
- Patient Care Plan (PCP)
- Patient Plan of Care (PPoC)
- Triage Note (TN)
- Composite Triage Note and Nursing Note (CTNN)
- ED Physician Note (EDPN)
- Emergency Department Referral (EDR)
- EMS Transfer Summary (EMS)
- Para-medicine Care Summary (PCS)

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Profiles and Technical Frameworks

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13 Integration Profiles:

- Bed Management (BED)
- Clinical Mapping (CMAP)
- Guideline Appropriate Ordering (GAO)
- Query for Existing Data (QED)
- Query for Existing Data for Mobile (QEDm)
- Referral/Order Linking (ROL)
- Dynamic Care Planning (DCP)
- Dynamic Care Team Management (DCTM)
- Reconciliation of Clinical Content and Care Providers (RECON)
- Request for Clinical Guidance (RCG)
- Retrieve Clinical Knowledge (RCK)
- Point-of-care Medical Device Tracking (PMDT)
- Routine Interfacility Patient Transport (RIPT)

Profiles and Technical Frameworks

Pink= Perinatal, Green = Emergency Care,
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7 Workflow:

- Cross-enterprise Basic eReferral Workflow Definition (XBeR-WD)
- Care Management (CM)
- Remote Patient Monitoring (RPM)
- Perinatal Workflow (PW)
- Cross-enterprise Tumor Board Workflow Definition (XTB-WD)
- Cross-Enterprise Cardiovascular Heart Team Workflow Definition (XCHT-WD)
- Cross-enterprise TeleHome Monitoring Workflow Definition (XTHM-WD)

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Profiles and Technical Frameworks

Existing Cross Domain Profiles*

Profile	Domain	Description
Remote Patient Monitoring (RPM)	Patient Care Devices (PCD)	Standardizes measurements taken by personal healthcare devices in remote settings
Clinical Mapping (CMAP)	Patient Care Devices (PCD)	Manages nomenclature transformations mapping to and from clinical terminologies
Cardiovascular Heart Team Workflow Definition (XCHT-WD)	Cardiology (CARD)	Facilitates management of a dynamic Heart Team supporting decisions typically made in cardiology care
Perinatal Workflow (PW)	Radiology (RAD) Laboratory (LAB) Patient Care Devices (PCD) Quality, Research, and Public Health (QRPH)	Simplifies exchanges between various providers of perinatal care by utilizing profiles and transactions from several IHE domains to support the continuum of care of expectant mothers and newborns
Paramedicine Case Summary (PCS)	Quality, Research, and Public Health (QRPH)	Provides exchanges between pre-hospital emergency care providers and the hospital. Supports value sets for registries.

*Does not represent ALL profiles with cross-domain dependencies

2018 New Profiles
Patient Care Coordination

*Does not represent ALL profiles with cross-domain dependencies

Dynamic Care Planning - DCP (FHIR)

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Dynamic Care Planning (DCP)

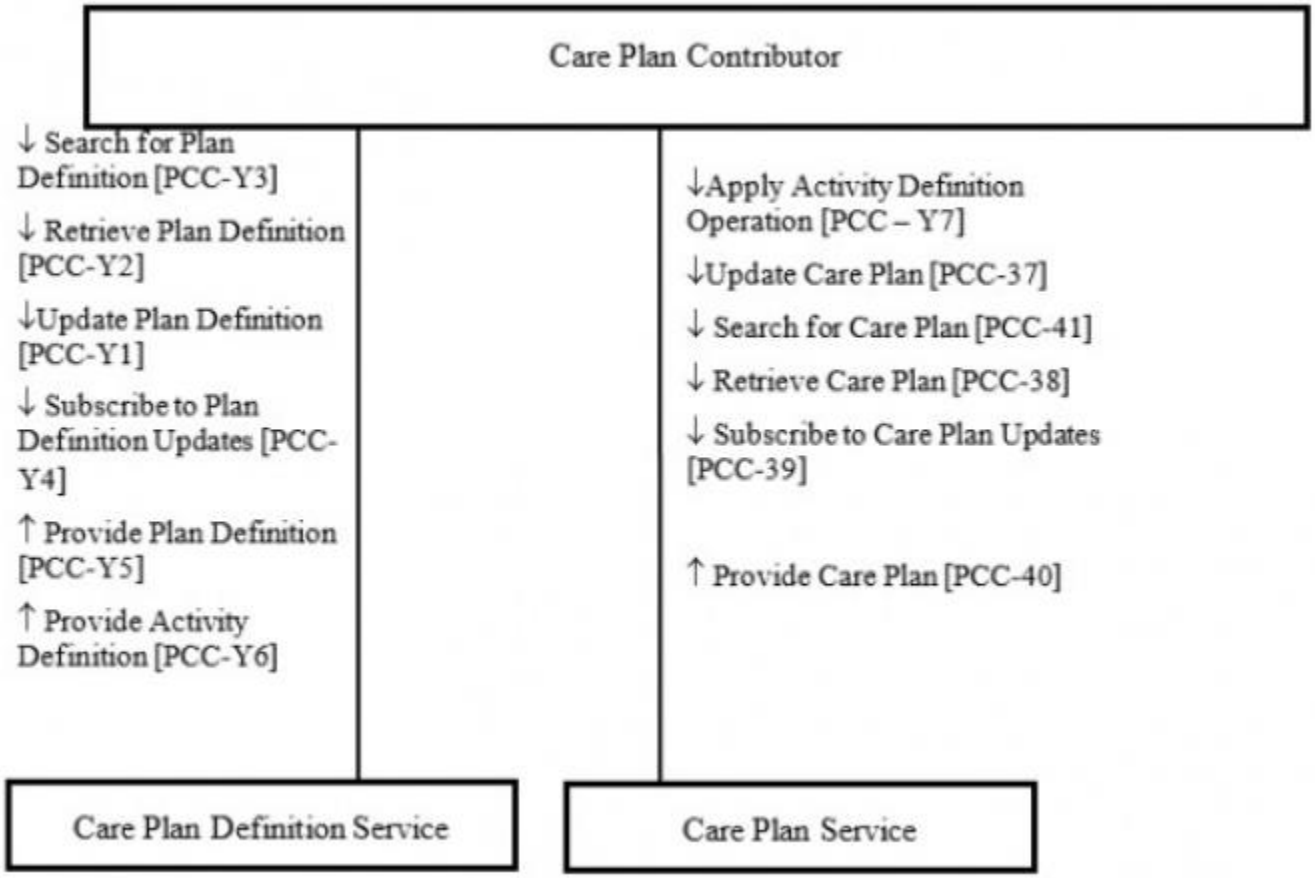
The Dynamic Care Planning (DCP) Profile provides the structures and transactions for care planning, creating, updating and sharing Care Plan Definitions (e.g. order sets, protocols, practice guidelines, etc.) and Care Plans by:

- Discovering Care Plan Definitions
- Creating/updating Care Plan Definitions
- Listing Care Plan Definitions
- Discovering Care Plans
- Creating/updating Care Plans
- Listing Care Plans

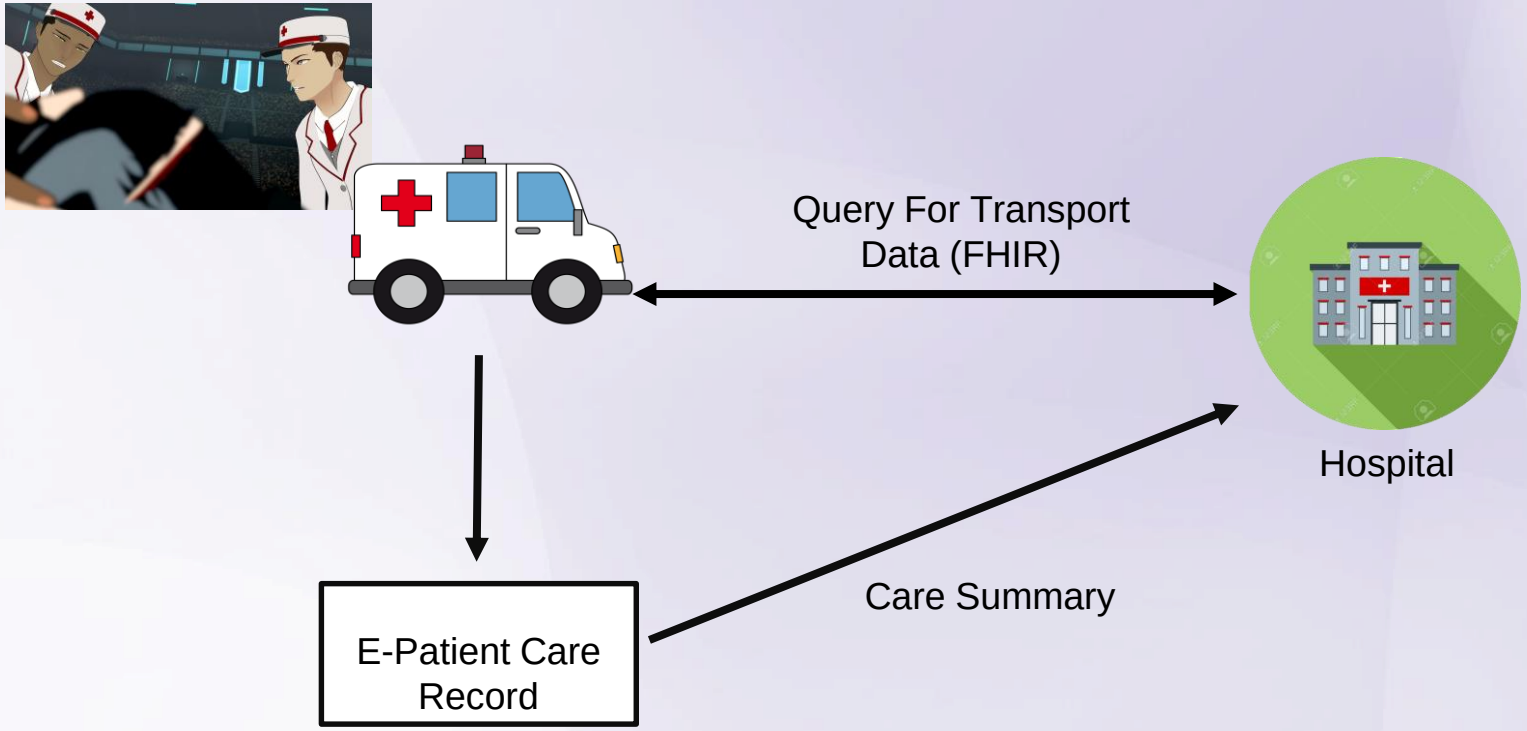
DCP Details

- Provides the structures and transactions for care plan definition and care plan creation, updates, management and sharing care planning information that meet the needs of many, such as providers, patients and payers.
- Depicts how information about multiple care plans and care plan definitions can be shared and used to provide care.
- Care plans and care plan definitions can be dynamically updated as the patient interacts with the healthcare system.
- A patient may be associated with multiple types of care plans at any given time.
- A provider is able to access, create/update care plan definitions as needed.
- Standards
  - HL7 FHIR CarePlan, PlanDefintion/ActivityDefinition and Subscription resources
  - HL7 Coordination of Care Services (CCS) Functional Model

DCP Actors and Transactions



Paramedicine Care Summary - PCS



Para-medicine Care Summary (PCS)

The Para-medicine Care Summary uses derivative of information available in CDA summary and FHIR resources to electronically communicate patient's vital medical information between EHR and Para medicine transport systems.

PCS Details

- Decreases time gathering important patient information during handoff at receiving facility
- Provides receiving care team with information to make informed interventions when the patient arrives to the facility
- Provides the hospital the ability to have the patient's paramedicine encounter quarriable within their system
  - Quality metrics
  - Potential registry participation
- Two approaches
  - CDA
  - FHIR
- Both approaches use the Document Sharing [PCC-1] transaction

CDA – Document Summary Sections CDA-DSS

CDA-Document Summary Sections

The CDA Document Summary Sections (CDA-DSS) Profile provides the ability to summarize content in the CDA document or to add summary content to a CDA document that is not already included in the document.

CDA-DSS Details

The CDA document summary sections can be created by summarizing pertinent information. The summary sections can be rendered for viewing. Content in some summary sections can be imported when possible.

- A received CDA document can be rendered showing sections summarizing information defined by the user. Note the receiver does not alter the received CDA document.
- A received CDA document can be rendered showing sections summarizing information defined by use cases provided by the CDA-DSS profile. Note the receiver does not alter the received CDA document.
- A CDA document can be created to include sections summarizing information defined by the user.
- A CDA document can be created to include sections summarizing information defined by summary section templates provided by the CDA-DSS profile.

CDA-DSS Actors and Transactions

PCC Participation

IHE International Membership

- **Apply for IHE International Organizational Membership**
  - Membership information: http://ihe.net/join/
  - 180+ members: http://ihe.net/Member_Organizations/
  - Modest annual fee
- **Participate in IHE Domains and Committees**
  - IHE Organizational members only
  - 12 clinical and operational domains https://www.ihe.net/ihe_domains/
  - Each domain has one Planning and one Technical Committee
- **Non-members may participate in comment periods, implement IHE Technical Frameworks, and act as subject matter experts**

PCC Participation

PCC Planning Responsibilities:

- Develops domain strategy and roadmap
- Identifies domain priorities and problems
- Recruiting new members
- Education
- Aligning industry initiatives
- Review and recommends IHE profile proposals

- ihe@himss.org
- Co-chair: Amit Popat
- Co-chair: Emma Jones
- pccplan@googlegroups.com
- Wiki page:
  - http://wiki.ihe.net/index.php/Patient_Care_Coordination_Planning_Committee

PCC Participation

PCC Technical Responsibilities:

- Development of IHE profiles
- Maintenance of IHE Profiles and Technical Framework
- Recruiting new members

- ihe@himss.org
- Co-chair: Denise Downing (outgoing)
- Co-chair: Gila Pyke
- pcctech@googlegroups.com
- Wiki page:

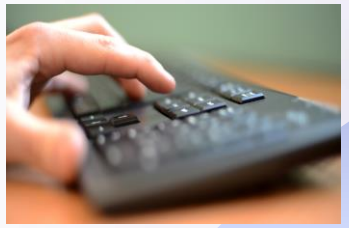
  http://wiki.ihe.net/index.php/Patient_Care_Coordination_Technical_Committee

PCC Participation

IHE Profile Development Cycle

- **Eighteen (18) month cycle**
  - Profile Proposals
    https://www.ihe.net/call_for_proposals/
    http://wiki.ihe.net/index.php/IHE_International_Call_for_Proposals_-_Timelines_%26_Procedures
  - Profile Development
  - Public Comment
  - Trial Implementation and Profile Testing
  - Feedback and Adjustment from Testing
- **Domains have Independent Schedules**
- **Opportunity for Members and Non-members to Participate**
  - Profile Development
  - Public Comment https://www.ihe.net/PCC_Public_Comments/
  - Testing and Implementation
  - Change Proposals http://wiki.ihe.net/index.php/Category:CPs
- **Overview of the IHE Cycle (next slide) →**

IHE Profiles Drafted & Revised



Published For Public Comment

Trial Implementation Posted

IHE Technical Framework Developed

months 6-13

Test at IHE Connectathons

months 14-18

Publish in IHE's Product Registry

Demonstrate at a HIMSS INTEROPERABILITY SHOWCASE

Profile Selection by Committees

IHE Call for Proposals Opens

months 1-5

IHE Improves, Safety, Quality and Efficiency in Clinical Settings

Install Interoperable products in Clinical Settings worldwide

PCC Participation

PCC Profile Development Schedule

IHE Profile Stage	Open Date	Close Date
Call for Proposals	Aug 2, 2018	Sep 21, 2018
Profile Proposal Review and Selection	Oct 10-11, 2018	Nov 14-15, 2018
Profiles Drafted in Technical Committee	Nov 2018	May 2019
Public Comment	May 2019	June 2019
2019-2020 CycleTrial Implementation Published	Early Fall 2019	
2018-2019 Cycle IHE Connectathon Registration	Sep 10, 2018	
2018-2019 IHE Connectathon Testing	Jan 21-25, 2019	

http://wiki.ihe.net/index.php?title=ITI,_PCC_%26_QRPH_Meetings

PCC Participation

IHE Connectathons are…

- Held around the world
- An unparalleled testing opportunity
- Open for all to participate in
- Held in Cleveland, OH for North America

IHE North America Connect-a-thon registration opens in September!

- https://www.iheusa.org/ihe-connectathon-registration

PCC Participation - Links & Resources

Resource	Url
IHE.net	https://www.ihe.net/ihe_domains/patient_care_coordination/
Webinar series posted online	https://www.ihe.net/resources/webinars/
Sign up for IHE International News	https://www.ihe.net/monthly-newsletters/
General PCC Questions	Email pcc@ihe.net
Google Groups (members only)	https://groups.google.com/forum/#!forum/pcctech https://groups.google.com/forum/#!forum/pccplan
Apply for IHE International Membership	https://www.ihe.net/participate/join_ihe/
IHE Technical Frameworks	https://www.ihe.net/resources/technical_frameworks/#pcc
IHE PCC Profiles (wiki)	http://wiki.ihe.net/index.php/Profiles#IHE_Patient_Care_Coordination_Profiles
IHE Connectathon Registration	http://www.iheusa.org/connectathon.aspx

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Questions?