

# Integrating the Healthcare Enterprise and HL7

Use of HL7 Standards



# HL7 and Integrating the Healthcare Enterprise



Use of HL7 Standards



# Your Presenter

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- Co-chair, IHE Patient Care Coordination
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# IHE Domains using HL7

- 1. Radiology**
  - ✓ HL7 V2
- 2. Radiation Oncology**
  - ✓ HL7 V2
- 3. Cardiology**
  - ✓ HL7 V2
- 4. Laboratory**
  - ✓ CDA R2, HL7 V2, HL7 V3
- 5. Pathology**
  - ✓ CDA R2, HL7 V2
- 6. IT Infrastructure**
  - ✓ CCOW, HL7 V2, HL7 V3, CDA R2
- 7. Patient Care Coordination**
  - ✓ CDA R2, HL7 V2, HL7 V3
- 8. Quality, Public Health and Research**
  - ✓ CDA R2, HL7 V2, HL7 V3
- 9. Patient Care Devices**
  - ✓ HL7 V2
- 10. Pharmacy**
  - ✓ HL7 V2
- 11. Eyecare**
  - ✓ HL7 V2



# IHE Domains NOT USING HL7

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# Other Standards used by IHE

● **ASTM**

● **DICOM**

● **IEEE**

● **IETF**

● **ISO**

● **LOINC**

● **OASIS**

● **SNOMED**

● **W3C**



# Organizational Comparison

## ● IHE

- Profiling Organization
- 11 Domains
  - Planning
  - Technical
- Domain Sponsors
- Domain Co-chairs
- National Deployment Committees
- Public Comment Process
  - ISO TR Process
  - Open Comment Period
  - All Comments Answered
  - Domain Committee Vote
  - Schedule Driven

## ● HL7

- Standards Development Organization
- ~ 50 Working Groups
- 4 Steering Divisions
- Technical Steering Committee
- Architecture Review Board
- National Affiliates
- Balloting Process
  - Membership Vote
  - All Comments Answered
  - 60% (Draft)/90% (Standard) Approval
  - No Fixed Schedule



# IHE is a Profiling Organization

## Profile $\approx$ Implementation Guide

- **Organized around Use Cases**
- **Uses Multiple Industry Consensus Standards**
  - Relies on Developed Standards
  - Coordinates with Standards Organizations
- **Constrains Use**



# A History of IHE/HL7 Collaboration

- **2005 HL7 / IHE Connectathon and Demonstration**
- **Memoranda of Understanding**
  - IHE and HL7 Members treated equally by both organizations
  - Joint Meetings at HL7 WGM
- **Overlapping Membership**
  - HL7 Members permeate throughout IHE
  - IHE Members permeate throughout HL7
- **Overlapping Leadership**
- **HL7 CEO on IHE Board**
- **IHE Profiles use HL7 Standards**
- **HL7 Implementation Guides use IHE Profiles**



# ITI Final Text Profiles

- **Patient Identifier Cross-referencing (PIX)**
  - Supports determination of matching patient identifiers (ADT^A01, A04, A05, A08, A31, A40; Q23)
- **Patient Synchronized Applications (PSA)**
  - CCOW synchronization (Patient Context, User Context)
- **Patient Demographics Query (PDQ)**
  - Query for patient ID given partial or complete demographic information (Q22, Q23, ZV1)
- **Scanned Documents (XDS-SD)**
  - CDA for Sharing Scanned Documents
- **Basic Patient Privacy Consents**
  - CDA Structures to Indicate Consent to Privacy Policies



# ITI Trial Implementation Profiles

- **Document-based Referral Request (DRR)**
  - Transmission of requests for consultation or referral (ORM)
- **PIX and PDQ using HL7 v3**
  - Adds use of HL7 v3 to PIX and PDQ Pediatric (Patient Registry Query – HL7v3)
- **Demographics Option for PIX and PDQ**
  - Add information needed for pediatric patients
- **Sharing Value Sets (SVS)**
  - Publication and distribution of value sets to value set users (CTS informative reference)



# IHE Laboratory Profiles

## ● HL7 Version 2.5.1

- Laboratory Testing Workflow (LTW)
- Laboratory Device Automation (LDA)
- Laboratory Barcode Labeling (LBL)
- Laboratory Point Of Care Testing (LPOCT)
- Laboratory Code Sets Distribution (LCSD)
- Inter Laboratory Workflow (ILW - trial)

## ● CDA Release 2.0

- Sharing Laboratory Reports (XD-LAB)



# Patient Care Coordination

## ● Clinical Document Architecture and CCD

### ➤ Final Text

- Medical Summaries (XDS-MS), Emergency Department Referral (EDR), Exchange of Personal Health Record Content (XPHR)

### ➤ Trial Implementation

- Emergency Department Encounter Summary (EDES), Antepartum Record (APR), Labor and Delivery Record (LDR), Functional Status Assessments (FSA), Immunization Content (IC), Patient Plan of Care (PPOC), EMS Transfers of Care (ETC)

### ➤ New for 2010

- Perioperative Plan of Care
- Post-Partum Visit Summary
- Newborn Discharge Summary
- Perinatal Workflow



# Patient Care Coordination

- **HL7 V3 Care Record and Care Record Query (Trial Implementation)**
  - Query for Existing Data (QED)
  - Care Management (CM)
  - Request for Clinical Guidance (RCG)
- **HL7 Version 2 (All new for 2010)**
  - Perinatal Workflow
    - V2.5.1 ADT/ORL/ORU
  - Patient Centered Coordination Plan
    - V2.5.1 ADT/ORM?



# Patient Care Devices

- **Device Enterprise Communications (DEC)**
- **Alarm Communication Management (ACM)**
- **Subscribe to Patient Data (SPD)**
- **Patient Identity Binding (PIB)**
- **Point of Care Infusion Verification (PIV)**



# Other Domains

## ● Radiology

- Structured Workflow (SWF)
- Patient Information Reconciliation (PIR)
- Simple Image and Numeric Report (SINR)
- Charge Posting (CHG)

## ● Cardiology

- Cath Workflow (CATH)
- Echo Workflow (ECHO)

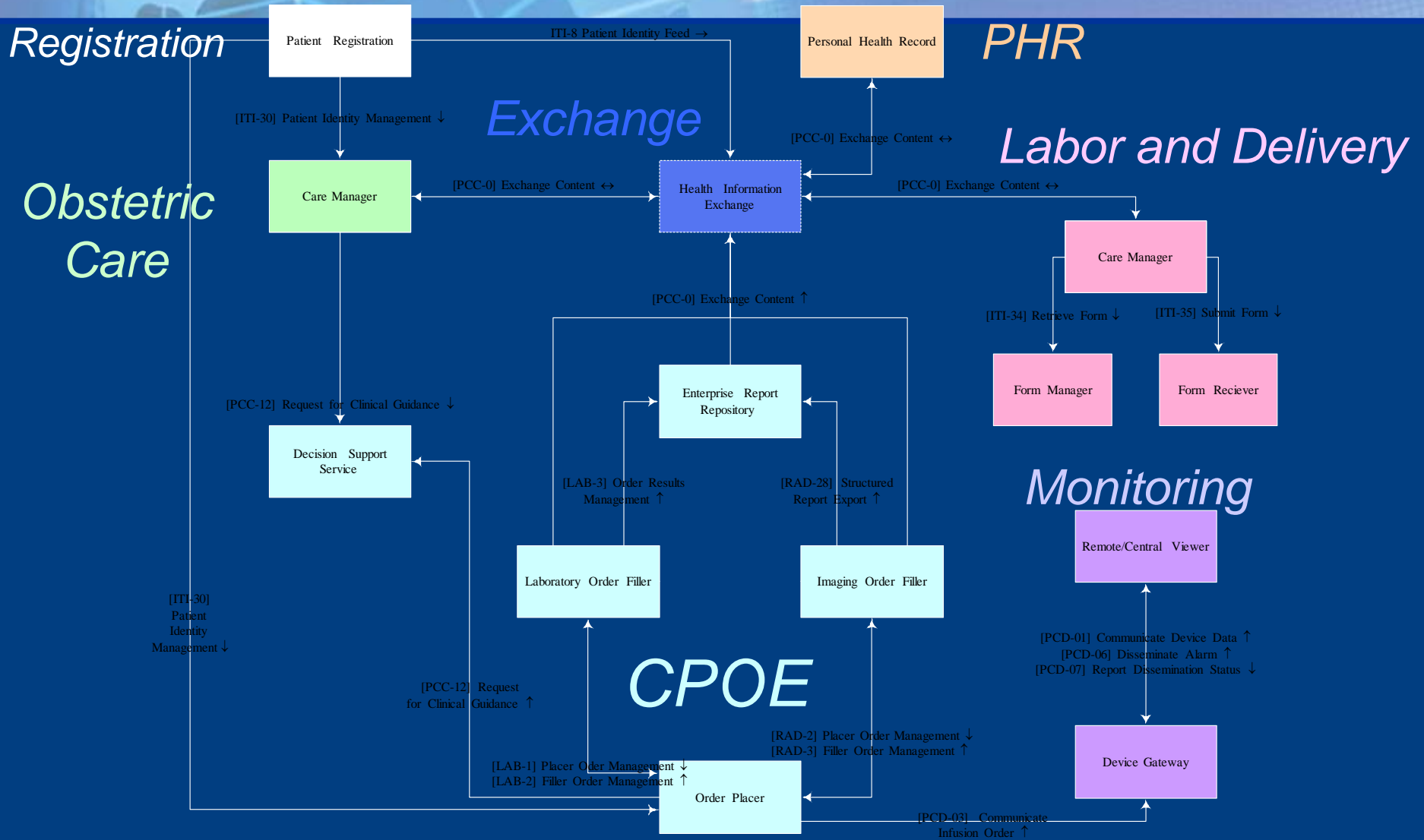


# Other Commitments to HL7

- **HL7 Templates Registry Pilot Project**
  - Commitment to Store and Test IHE PCC, ITI and Lab Templates to the Registry
- **HL7, IHE, HITSP, EHRA**
  - Coordination on CCD Implementation



# Perinatal Workflow Use of HL7



# IHE, HL7 and Meaningful Use

- **Patient Summary Exchange**
  - CCD -> Exchange of Personal Health Records (XPHR)
- **Laboratory Results**
  - HL7 V2.5.1 -> Laboratory Testing Workflow (LTW)
- **CPOE**
  - HL7 V2.5.1 -> LTW, Radiology Structured Workflow (SWF)
- **Patient Demographics**
  - HL7 V2.5.1 -> IHE PIX and PDQ
- **Problems, Medications and Allergies**
  - HL7 CDA Release 2.0 and CCD -> IHE Medical Summaries
- **Discharge Summaries**
  - HL7 CDA Release 2.0 -> IHE XDS-MS Discharge Summary



# Questions



# Resources

- **IHE Website**

- <http://www.ihe.net>

- **IHE Wiki**

- <http://wiki.ihe.net>

