



Pathfinding Session: Cardiology

IHE North America Webinar Series 2008

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GE Healthcare



Learning Objectives

Your Product:

- What Profiles may be relevant?
- What do the Profiles do?
- If the relevance isn't clear, Ask now.

Goal:

Help you decide which detailed webinars to attend

About the IHE Cardiology Domain

- YES, it's true - the IHE Cardiology Domain is officially dormant in 2008
 - Withdrawal of sponsorship funding from ACC
 - No new work this year
 - Efforts underway to restore sponsorship for 2009
- **BUT - the already adopted IHE Cardiology Profiles are still in effect and will be tested at Connectathon**
 - **No lack of opportunities to improve product interoperability through IHE!**

Cardiology Product Classes

- **Cardiovascular Information Systems**
- **ECG Management Systems**
- **Office-based Cardiology EMR / Practice Management**
- **Cardiovascular Imaging Modalities**
- **Hemodynamic, Electrophysiology and Stress Test Monitors**
- **Cardiovascular PACS**
- **Cardiovascular Workstations**

Not covered:

- **Bedside Patient Monitors (see Patient Care Devices)**
- **Implantable Devices**

Cardiovascular Information Systems

- **Focus on inpatient CVIS**
 - Operating in HL7 environment
- **Generally look for “Department System Scheduler / Order Filler” actor (DSS/OF)**
 - Manages department resources and operations
- **Also potentially appropriate “Report Creator”, “Report Manager”, “Report Repository” actors**
 - Depending on the specific report handling functions of your CVIS

CVIS - Workflow Profiles

- Radiology **Scheduled Workflow (SWF)** and **Patient Information Reconciliation**
 - Support imaging orders, worklists, and status (for cardiology: CTA, CVMR, Nuc)
 - Basis for cardiology specific workflow
- Cardiology **Cath, Echo, and Stress**
 - Requirements for multi-modality coordination
- IT Infrastructure **Patient Administration Management**
 - More fully featured ADT, using HL7 v2.5

CVIS - Reporting

- Radiology **Evidence Documents** and **Key Image Notes**
 - Cardiology options: **Cath, Echo, Stress**, and **CTA/MRA**
 - Extract measurements from DICOM SR into reports
 - Identify key images to be included in report
- Cardiology **Displayable Reports**
 - PDF reports conveyed in HL7 v2 messages
 - Report signature/release cycle
 - May be archived in PACS
- Radiology **Radiation Exposure Monitoring**
 - Summarize / analyze DICOM SR Dose Reports
- IT Infrastructure **Retrieve Information for Display**
 - Web access to clinical reports
 - Server or client

CVIS – Cross-Enterprise

- IT Infrastructure **Cross-Enterprise Document Sharing (XDS)**
 - Audit Trail and Node Authentication (ATNA)
 - Cross-Enterprise Media Interchange (XDM) and Point-to-Point Interchange (XDR)
 - Patient Identity Management (PIX / PDQ)
- Radiology **XDS for Imaging (XDS-I)**
- Patient Care Coordination **Medical Summary**
 - Inbound (Content Consumer) and outbound (Content Creator)

ECG Management Systems

- Cardiology **Displayable Reports**
 - Push model – ECG report as PDF in HL7 v2
- Cardiology **Retrieve ECG for Display**
 - Pull model, based on IT Infrastructure **Retrieve Information for Display**
- IT Infrastructure **Cross-Enterprise Document Sharing (XDS)**
- IT Infrastructure **Patient Administration Management**

Office-based EMR / Practice Management

- IT Infrastructure **Cross-Enterprise Document Sharing (XDS)**
- Radiology **XDS for Imaging (XDS-I)**
- Patient Care Coordination **Medical Summary** and **PHR Exchange**
- Workflow (Echo, Stress, SWF) partial implementation – modality interface

Cardiovascular Imaging Modalities

- Radiology **Scheduled Workflow (SWF)**
 - Modality Worklist, Performed Procedure Step, Storage Commit
- Cardiology **Cath, Echo, and Stress**
 - Requirements for specific information objects, compression, image labeling, etc.
 - Includes IT Infrastructure **Consistent Time**
- Radiology **Nuclear Medicine Imaging with Cardiology option**
- Radiology **Evidence Documents**
 - Cardiology options: **Cath, Echo, Stress, and CTA/MRA**
 - DICOM SR measurements
- Radiology **Radiation Exposure Monitoring**
 - DICOM SR Dose Reports for X-ray and CT
- Radiology **Key Image Notes**

Hemodynamic, Electrophysiology and Stress Test Monitors

- Cardiology **Cath** and **Stress**
 - Workflow – Modality Worklist, Performed Procedure Step, Storage Commitment
 - EP is included in Cath Profile
 - Requirements for specific information objects (waveforms), procedure stage/phase labeling, etc.
 - Includes IT Infrastructure **Consistent Time**
- Radiology **Evidence Documents**
 - Cardiology options: **Cath** and **Stress**
 - DICOM SR measurements, procedure logs

Cardiovascular PACS - Workflow

- Radiology **Scheduled Workflow (SWF)** and **Patient Information Reconciliation**
 - Basic workflow, archive, query/retrieve
- Cardiology **Cath, Echo, and Stress**
 - Requirements for multi-modality coordination and intermittently connected modalities
- Radiology **Nuclear Medicine Imaging**
- IT Infrastructure **Patient Administration Management**
 - More fully featured ADT, using HL7 v2.5

Cardiovascular PACS - Reporting

- Radiology **Evidence Documents, Key Image Notes and Radiation Exposure Monitoring**
 - DICOM SR measurements, procedure logs, dose reports
- Cardiology **Displayable Reports with DICOM Storage option**
 - Archive DICOM-encapsulated PDF reports
 - Provide access through IT Infrastructure **Retrieve Information for Display**
- Radiology **XDS for Imaging (XDS-I)**

Cardiovascular Workstations - Imaging

- Radiology **Scheduled Workflow (SWF)**
 - DICOM image query/retrieve
- Cardiology **Cath, Echo, and Stress**
 - Requirements for specific information objects, compression, image labeling, etc.
- Radiology **Nuclear Medicine Imaging**
 - Requirements for image layout display

Cardiovascular Workstations - Reporting

- Radiology **Evidence Documents**
 - Cardiology options: **Cath, Echo, Stress, and CTA/MRA**
 - DICOM SR object display – specific cardiac display requirements
- Radiology **Key Image Notes and Radiation Exposure Monitoring**
- Cardiology **Displayable Reports**
 - Create PDF reports and send in HL7 v2 messages
 - Display DICOM-encapsulated PDF reports
- IT Infrastructure **Retrieve Information for Display**
 - Cardiology **Retrieve ECG for Display**
 - Web-based display of clinical reports

All Systems

- IT Infrastructure
 - Audit Trails and Node Authentication
 - Enterprise Use Authentication
 - Shared Value Sets (new)

Resources: Webinars

Webinar Schedule:

- Session 1: **Overview** of the IHE Connectathon Testing Process for New Participants - Tuesday, June 10
- Session 2: **Pathfinding**: HIT Products and IHE Profiles - Tuesday, June 17
- Session 3: **Radiology, Mammography and Nuclear Medicine** - Tuesday, June 24
- Session 4: **Eye Care** - Tuesday, June 24
- Session 5: **Laboratory** - Tuesday, July 8
- Session 6: **Patient Care Devices** - Tuesday, July 8
- Session 7: **Quality, Research and Public Health** - Thursday, July 10
- Session 8: **Cardiology** - Thursday, July 10
- Session 9: **IT Infrastructure: Profiles for Health Information Exchange** - Tuesday, July 15
- Session 10: **Patient Care Coordination: Medical Document Content Profiles** - Wednesday, July 16
- Session 11: **IT Infrastructure: Security and Privacy** - Tuesday, July 22
- Session 12: **IT Infrastructure: New Profiles for 2008** - Tuesday, August 5
- Session 13: **Connectathon Registration How-To** - Thursday, August 28

Resources: www.ihe.net

Web Resources:

- http://www.ihe.net/north_america/connectathon2009.cfm
Info on Connectathon 2009 including timeline, Webinar schedule and recorded sessions
- http://www.ihe.net/Technical_Framework/index.cfm
IHE Technical Frameworks and Supplements
- <http://www.ihe.net/profiles/index.cfm>
Overview of IHE profiles and brief descriptions
- <http://wiki.ihe.net/index.php?title=Profiles>
More detailed descriptions of many profiles
- ihe@himss.org, ihe@rsna.org
Inquire about Connectathon, committee participation, IHE membership, etc.