HL7 EHR WG/EHR Interoperability SWG

Current Activities

Co-Facilitators:
Gora Datta, Gary Dickinson

10 January 2011

EHR Interoperability SWG Activities

"Standards Convergence"

- ISO 16223 – "Standards Convergence to Promote EHR Interoperability"
  - Prior "Simplification Strategy" (HITSP proposal)
- ISO TC215 New Work Item Proposal
  - Target: ISO Technical Report (Informative)
- Status – Sep 2010:
  - Failed to pass NWIP Ballot
  - 11 Affirmative, 4 Negative, 10 Abstentions (ISO NMBs)
  - Expert Quorum: Only 4 named (of 5 needed to pass)
  - Remains a Preliminary WG8 Work Item, will seek to broaden support
- Documents posted on EHR Interop Wiki

EHR Interoperability SWG Activities

EHR Interop/Lifecycle to FM R2

- May 2009 – Kyoto – EHR WG agreed to incorporate EHR Interoperability and EHR Lifecycle Model DSTUs into EHR System Functional Model Release 2
- Status:
  - Proposed Strategy and R2 “inserts” reviewed and posted
- Also: Weekly EHR Interop teleconferences mostly devoted to EHRS FM R2 spreadsheet review
  - Currently Section IN.2
  - Tuesdays, 2PM ET, just before full EHR WG call
  - See EHR Interop Wiki for “inserts” and weekly updates

EHR Interoperability SWG Activities

EHR Record Meta-Data Crosswalk

- Prior DSTU: "Implementation Guide for Clinical Document Architecture, Reference Profile for EHR Interoperability", 2008
- Now: Detailed analysis of record meta-data across three HL7 specifications
  - EHR Interoperability Model DSTU
  - Records Management and Evidentiary Support (RM-ES) Functional Profile Release 1 (FP of the EHR System Functional Model)
  - Clinical Document Architecture Release 2
- Based on key accountability paradigm
  - Health or Healthcare Action (instance) is
  - Evidenced by an Action Record (instance); which may be
  - Persisted as EHR record entry

EHR Interoperability SWG Activities

EHR Record Meta-Data Crosswalk

Action (instance) → Action Record (instance) → EHR record entry	
Requirements (HL7 EHR WG)	**Reference Implementation** (HL7 Structured Documents WG)
HL7 EHR Interoperability Model – Specifies Meta-data to enable interoperable EHR records – Crosswalk Lead: Gary Dickinson, EHR WG Co-Chair	HL7 Clinical Document Architecture R2 (CDA R2) – May be implemented as Action Record instance – May be persisted as EHR record entry – Includes Meta-data sufficient to enable EHR Interoperability and RM-ES requirements – Crosswalk Lead: Calvin Beebe, Structured Documents WG Co-Chair
HL7 RM-ES Functional Profile – Specifies Meta-data to enable EHR management and provide evidentiary support – Crosswalk Lead: Michelle Dougherty, RM-ES Facilitator and Recorder	

EHR Interoperability SWG Activities

EHR Record Meta-Data Crosswalk

- Found:
  - Broad correspondence of concepts but often divergent terminology
  - Many variants and nuances in record status, staging and sequence – and how each is evidenced in Meta-data
  - Areas and issues needing further examination
- Going Forward – Potential Objectives:
  - Refinement of prior analysis
  - Use Cases to describe sample EHR Interoperability and RM-ES Meta-data in sequenced CDA R2/R3 instances
  - Recommendations for harmonization of Meta-data and related terminology
  - Detailed enumeration of EHRS FM R2 Meta-data correspondence with CDA R3 Meta-data

EHR Interoperability SWG Activities

Clinical Doc Architecture Release 3

- Proposal to resolve five (5) outstanding EHR/IM requirements in CDA R3 (access, audit, authorization)
  - As Detailed in “Implementation Guide for CDA R2, Reference Profile for EHR Interoperability DSTU”, published Feb 2008
  - Maps EHR Interoperability Model requirements to CDA R2 Attributes
- Status
  - Reviewed and dispositioned by Structured Documents Team
  - Potential Incorporation in v3 “Medical Records” Messages
  - Proposals and Dispositions Posted to CDA R3 Wiki

EHR Interoperability SWG Activities

Paper/Electronic – Legal Record Continuity

- Show Legal Characteristics of Paper Record and Continuity in Electronic Form
  - Content, Context
  - Continuity over Record Lifespan
  - Method of Replication: Paper vs. Electronic
  - Method of Content Verification
- Status: Draft in Development
- Posted on EHR Interop Wiki

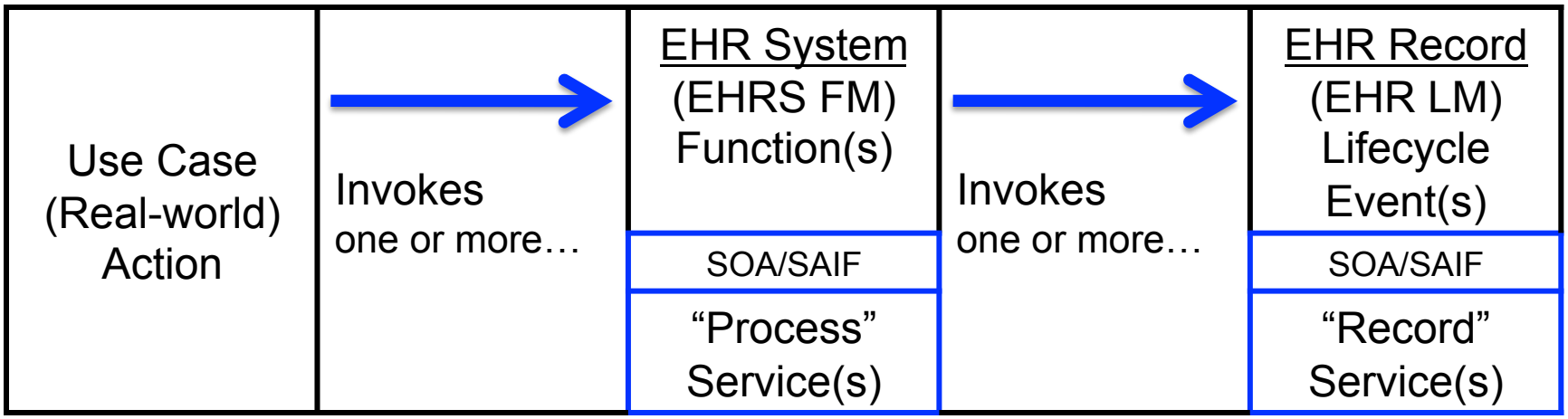
EHR Interoperability SWG Activities

HL7 SAIF

- To incorporate key aspects of EHR, EHRS and PHRS Models in HL7 Services-Aware Interoperability Framework (SAIF)
  - EHR and PHR System Functional Models
  - EHR Interoperability and Lifecycle Models
- Collaboration between Architectural Review Board, EHR and EHR Interoperability WGs
- Status:
  - Review of EHR Interop and Lifecycle Models Complete
- Next: Develop integration plan as appropriate
- Details posted on EHR Interop Wiki

Real-World to EHR System to EHR Record

Use Case > Function > Event



Process Services	Persistent Record Services			
Action	Action Record Lifecycle Event (per EHR/LM)	Record Instance	State of Action Record Instance	
			Pre-Event	Post-Event
Order Medication	Originate/Retain	1	----	New Instance
Check Interactions Verify Med Order	Verify		Existing Instance	Instance noted as "Verified"
Transmit Med Order (copy to Pharmacy)	Transmit		Existing Instance	Instance noted as "Transmitted"
Order Received (copy in Pharmacy)	Receive/Retain		Existing Instance	Instance noted as "Received"
Dispense Med	Originate/Retain	2	----	New Instance
Administer Med (without incident)	Originate/Retain	3	----	New Instance
Administer Med (after 5 minutes, patient upchucks)	Originate/Retain	4	----	New Instance
	Amend		Existing Instance	Instance noted as "amended" with original + new content

EHR Interop SWG Activities – 2011 “Meaningful Use”

Quality Reporting

- Based on US EHR Incentive Program requirements for quality and performance measurement and reporting
- As per Alignment Analysis, show coverage & gaps WRT
  - Functions of EHR and PHR System Functional Models
  - Relevant requirements of EHR Interop and Lifecycle Models
  - EHR Record content requirements
- Status: Review Underway
- Next
  - Review collection, capture, filtering, analysis and reporting requirements for each proposed measure
  - Identify gaps in process and information
- Leads: Kim Salamone, Gora Datta

EHR Interoperability SWG Activities

HL7 Diabetes Use Case

- Collaboration between HL7 EHR and Patient Care WGs, Clinical Interoperability Council and others
- Agreed Project Scope specifies EHR Interoperability Use Case Templates (as employed in ONC/AHIC Use Case analysis) as alternative to DAM/DIM approach
- Status: Detailed data analysis complete, initial use cases formed
- Next: Build Out Use Case Scenarios, Events and Actions in Template, associating Data (elements, templates) with each (Action)
- EHR, EHR Interop Leads: Pat Van Dyke, Gary Dickinson
- Details on Diabetes Data Strategy (Team Docs) and EHR Interoperability Wikis (Use Case Alignment Templates)

Global Interoperability Standards Activities

1B ISO TC215 – "Standards Convergence"

EHR/PHR Record & System Level Interoperability

2A EHRS Functional Model Release 2 – Incorporate Interoperability and Lifecycle Models

2D Record Meta-Data

2E HL7 Clinical Document Architecture Release 3

2G Paper vs. Electronic – Legal Record Continuity

Implementation Activities

3A HL7 Services-Aware Interoperability Framework (SAIF)

3B Quality Reporting – 2011 Meaningful Use Criteria

3C HL7 Diabetes Use Case

EHR Interoperability WG

Reference Point

http://wiki.hl7.org/index.php?title=EHR_Interoperability_WG