FHIMS Lab-Orders and Observation Domain
Meeting Minutes (March 21ST)
Agenda for the next meeting (March 28TH)

Date/time of call:
Monday, March 21ST , 2011, 10-11:30 AM (EST)
Call: 1-800-767-1750**, Passcode:** 84287
Microsoft Office Live Meeting

Leadership team

Kosta Makrodimitris, Galen Mulrooney, Cindy Vinion
Website: https://www.projects.openhealthtools.org/sf/projects/fhims/

Attendees

Neelima Chennamaraja, VA
Mike Fitch, DoD
Glenn Hatfield,
Kosta Makrodimitris, FDA
Galen Mulrooney, VA
Anne Pollock, CDC
Vijay Varma, Atlanta VA Medical Center
Cindy Vinion, NG/CDC
Steve Wagner, ONC

Agenda

- Dr. Vijay Varma director of Anatomic Pathology (Lab Med, Informatics) at VA-Atlanta: Electronic Pathology Systems,15'
- ALL-FHIMS WG Cases-Processes, Metrics review of discussions and document given to Steve,5'
- ALL-Kosta-Neelima-Cindy-Ira : Discuss use case/ scenarios and subgroups,5'
- ALL-Kosta-Cindy S&I LRI communication and strategies and subgroups,5'
- ALL: Milestones-Plans-Risks for modeling & use cases(3rd-4TH iteration), 5'
- ALL-Galen: Information Modeling (classes, patterns, granularity),30-40'
- ALL: Lab-OO interfaces-participation S&I Lab, NHIN Direct, HIMSS HL7 Lab-OO

Guiding principal: FHIM Lab-OO will distinguish and categorize lab tests and results, and reports based upon the data needed to:
(1) Order the test,
(2) Perform or process the test,
(3) Obtain, interpret and store data/results of the test,
(4) Report and/or release the (full/partial) results,
(5) Receive, interpret and process the report.
Actors: Hospital, Clinic, Lab types, Public Health Agency (fed-state-local), Patient, Physician, Nurse

Summary of Discussion

Electronic Pathology Systems

Dr. Vijay Varma, Director of Anatomic Pathology and Laboratory at the Atlanta VA Medical Center & Emory University faculty member
Discussion Overview: Research has shown that 70-80% of the data in a medical chart comes from a lab; especially in complex patient situations such as cancer. Labs categories differ significantly in structure and the reports needed for clinical decision systems.
With funding from a CDC grant, the Atlanta VA Medical Center created a database system used to create pathology reports using the data set captured by the database system. Currently, this system is capable of producing a printed report so that the data can be entered into a cancer registry. To prevent rekeying this information, future plans include changing from printed reports with rekeying to an electronic data exchange directly to the cancer registry following Meaningful Use guidelines. The team does want to get Meaningful Use certification for EHR, but the system is still in its infancy - the report is a text block generated from more detailed data captured in the database.
Initially, the team started with building a system accessible via a web page, but the team found that deployment was a challenge due to new platform software needing to be installed. The final system uses MicroSoft InfoPath forms connecting to a MicroSoft Access database system that does not require new platform software easing the deployment issues. See article "*Electronic Pathology System May Improve Accuracy and Efficiency*" on http://www.medscape.com.

- Anne - Anne has seen the system and thinks it is good from the anatomical pathology viewpoint and is very flexible.
- Kosta - Can Vijay share the database models they developed for this system?
    - Vijay - The models can be shared.

Modeling

- Galen - Struggling with characteristics that distinguish chemical testing from pathology, biological testing, and other laboratory testing.
    - Vijay - It is very difficult to have one data model that can cover all lab tests. For example, glucose testing is very different from pathology testing and TB testing.
- Anne - The current FHIM model seems to include VA laboratory processes following their Standard Operating Procedures (SOPs) and protocols.
- <Blood culture discussion>
- Galen started modeling the VA model using reports the laboratory produces to go back to the ordering provider. The model is a result of those reports, which can be very complex and change over time as more results come in even including multiple people who are testing the specimen. It was these reports that led to gram stain being given a separate class. From the reports, gram stain occurs first and has very quick results (the results were sent to the emergency room in the example report).
    - Mike/Vijay - More than just the gram stain results are on the report and are very important for the diagnosing physician to know. From the example report, the fact that the gram stain was performed on the "anaerobic bottle" is important as it "gram positive" and "cocci in clusters".
    - Cindy - In this case, did anything happen before the gram stain?
        - Anne/Mike/Vijay - A culture with probably between 6-12 hours of growth. (Note: see **Anaerobic bacteria culture** at http://www.surgeryencyclopedia.com/A-Ce/Anaerobic-Bacteria-Culture.html for information on performing an anaerobic culture.)
        - Cindy - It sounds like media is important and may be introduced at specimen collection (i.e., the medium is already in the collection container) or during specimen processing prior to testing.

General Discussion

- Kosta - FHIM Lab needs to discuss how to map HL7's EHR-S Functional Profile to FHIM Lab. Our choices include using a spreadsheet or a UML diagram.
    - Anne is familiar enough with the EHR-S Functional Profile to know that its lab information is weak especially in the area of metrics. There are currently no evidence-based metrics showing how lab work impacts patient care or outcome with the exception of some anatomic pathology metrics.
    - Galen - While the UML diagram is more desirable because we could, eventually, generate code from the model, a spreadsheet could work from now.
- Kosta would like to map each agency's interest to the EHR-S Functional Profile to FHIM Lab mapping.
    - Galen - We have not been tracking agency interest so far. We have not been mapping to agency systems either.
    - Anne - That is why Anne suggested using CLIA as a basis for the information modeling effort; federal labs may be subject to CLIA, so it is a good place to start

RESOURCES

- *http://www.medscape.com/viewarticle/732504 Electronic Pathology System May Improve Accuracy and Efficiency*
- *http://pathology.emory.edu/AdminFacultyMember.cfm?Name_seq=123 Dr. Varma*
- *http://aspe.hhs.gov/sp/reports/2010/erpreglim/report.shtml#_Toc259701197 Electronic Reporting in Pathology*
- *http://www.hl7.org/ehr/ EHR-S functional profile*
- S&I LRI UCR Structured Data Sub-Workgroup page and read the definition and material posted
- http://wwwn.cdc.gov/clia/regs/toc.aspx All of the laboratories (CLIA subcategories) we have listed must meet the requirements specified in: Sec. 493.1230 through 493.1256, Sec. 493.1261, and Sec. Sec. 493.1281 through 493.1299(test request/report CLIA)

Agenda Next Call: March 28TH 2011

- ALL-Galen: Information Modeling (classes, patterns, granularity),30'
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- ALL-Kosta-Cindy S&I LRI communication and strategies and subgroups,5'
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- ALL: Lab-OO interfaces-participation S&I Lab, NHIN Direct, HIMSS HL7 Lab-OO,2'

Action Items

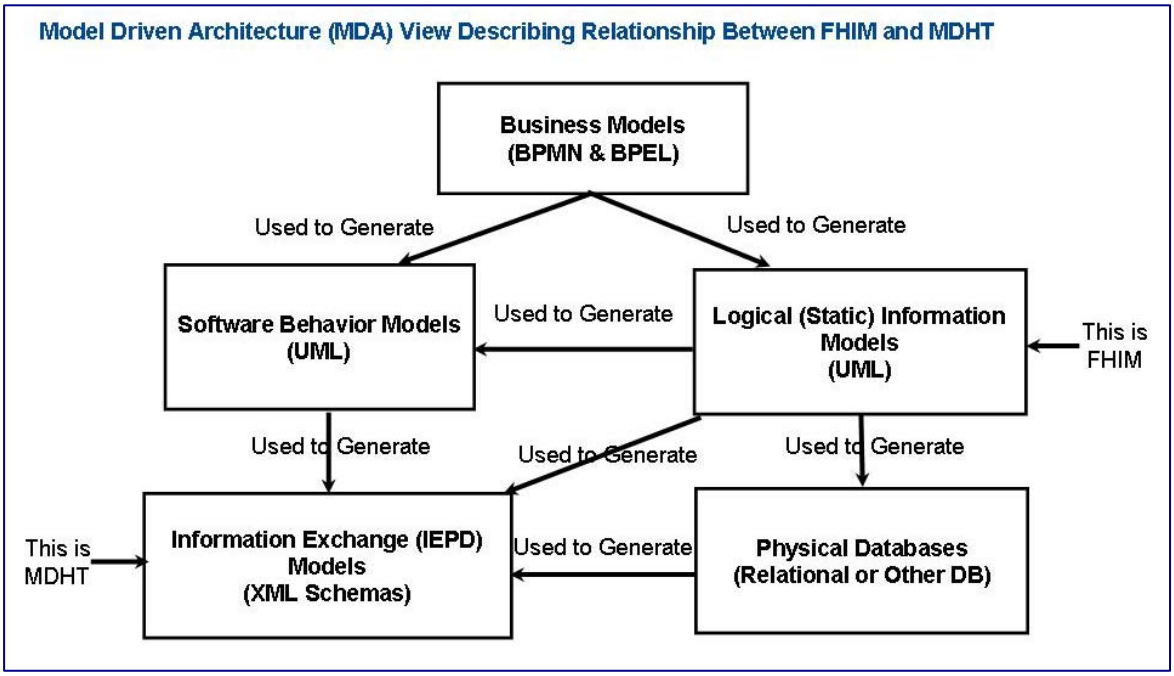
Start Date	Priority	Action Item	Status
11/22/10	Low	7) Wendy-Kosta-Galen-Cindy: Clarify Specimen-Sample filler and placer order nr, test identifier, placer group number and universalServiceIdentifier. The Pathology Lab uses specs from DICOM (Supplement 122, specimen, accession number, etc) in workflow.	In process
11/22/10	Low	8) Kosta-Steve Hufnagel: Services Aware Interoperability Framework and Lab-OO FHIMS relevance (Lab-OO HI7 domain has done some work, Cindy)	In process
11/15/10	High	9) Mike, Cindy, Galen: Finalize definitions for and use of different identifiers & numbers in lab - filler order number, placer order number, group number, test identifier, etc.	In process
11/8/10	Med	10) Need to discuss different scenarios involving different people (ward clerk, nurses, physicians, physician's assistants, interns, etc) and people in a data exchange.	Not started
11/8/10	Low	11) Tim (ICLN) to determine if they would like to participate in FHIMS.	In process
11/1/10	Low	12) Cindy will update sample accessioning scenarios.	In process
11/1/10	Med	13) Anne will write up lab processes to include as additional scenarios.	In process
11/1/10	Low	14) Cindy to identify and contact FBI person from LRN National Meeting for participation in the FHIMS Lab calls when we start doing Chain of Custody, phase 2.	Not started
11/1/10	Low	15) Kosta/Cindy to transform flowchart of outpatient scenario to BPMN. The first BPMN 1.2 draft is done and need to review and add data objects.	In process
10/25/10	Low	16) Keep in touch with Ted Klein and get material and links Update 11/1: Ted waiting for approval to release draft version of volume V	In process
10/25/10	Med	17) Cindy- Contact laboratory experts, LIMS admins, HL7 OO WG Update 11/1: HL7 OO WG information shared with interested participants	In process
11/09/10	Med	18) Kosta to present relevant material for Automated Laboratory Management, FERN, eLEXNET, Sentinel and Medical Countermeasures (FDA/contractors/partners)	In process
11/08/10	Med	19) Galen to update weekly the FHIMS Lab-OO html model and collaborate with Kosta to update about changes from baseline(map .xls-overview)	In process (reccuring)
11/17/10	Low	21) Kosta to invite CFSAN statisticians, lab experts to present possible scenario for Lab collaboration with CDC (sample hygiene-diseases)	In process
11/17/10	Low	22) Kosta to prepare sample business case for FDA/ORA ALM lab automation and model (draft). Organize library of BPMN cases, EHR functional mapping	In process
03/4/11	High	28) ALL Business cases diagrams, EHR functional model mapping, robustness model and data exchange elements to standardize	In process
03/18/2011	**High**	29) Dr. Varma introduced by W.Scharber communicated with Lab-FHIMS to join the domain and learn more about the modeling efforts at ONC/FHA	In process
03/25/2011	**High**	30) Maps to our classes, domains, agencies(strategy, framework, spreadsheets)	In process

Completed/Not Tracked Action Items

Start Date	Priority	Action Item	Status
11/8/10	Low	6) Tim (ICLN) to discuss with DHS the sharing of the Actionable Data Elements spreadsheets with definition.	Completed
11/1/10	Low	5) Cindy to share meeting information for the next meeting when it is sent by the co-chairs (ICLN).	Completed
11/17/10	Low	20) Kosta-Galen-Cindy-Steve-Neelima to prepare and design AND PRESENT a FHIMS-Lab-OO poster accepted for AAAS meeting in DC(Feb-20th 2011)	Completed
2/28/11		25) Kosta - Develop definitions for structured and unstructured data (S& LRI WG)	Completed
3/7/11		26) Nikolay - Share ISDS Syndromic Surveillance Implementation Guide with Lab	Completed
2/28/11	High	27) Develop overview and plan for Lab domain using the Report of 2010 document. Deliver to Steve 3/18/11	Completed
03/4/11	High	24) Kosta-Galen Create space for 6 sub-WG under Lab domain(HITSP-EHR, FERN, Sentinel, cancer-pathology, genetics, lab report exchanges)	Completed
11/17/10	High	23) Kosta-Cindy-Galen-Steve: Plans and documentation of modeling and cases during the last 3 meetings the 2nd iteration. Schedule the 3rd iteration Jan-April 2011	Completed

Appendix

by Steve Wagner (AAAS11 Lab-poster)



By Kosta Makrodimitris (conceptual maps for FHIM, General FHIMS meeting 2011-03-25)