May 20th, 12:30 PM

Providing an Adaptive Research Data Infrastructure for Clinical and Translational Investigators

Bill Amsbaugh
University of Massachusetts Medical School

Steven Ellis
University of Massachusetts Medical School

Yurima Guilarte-Murphy
University of Massachusetts Medical School

See next page for additional authors

Follow this and additional works at: https://escholarship.umassmed.edu/cts_retreat

Part of the Databases and Information Systems Commons, Data Storage Systems Commons, Health Information Technology Commons, and the Translational Medical Research Commons

Amsbaugh, Bill; Ellis, Steven; Guilarte-Murphy, Yurima; Jones, Tyrone; Leonard, Robert; and Ranauro, Paul J., "Providing an Adaptive Research Data Infrastructure for Clinical and Translational Investigators" (2014). UMass Center for Clinical and Translational Science Research Retreat. 5.
https://escholarship.umassmed.edu/cts_retreat/2014/posters/5

This material is brought to you by eScholarship@UMMS. It has been accepted for inclusion in UMass Center for Clinical and Translational Science Research Retreat by an authorized administrator of eScholarship@UMMS. For more information, please contact Lisa.Palmer@umassmed.edu.
Presenter Information
Bill Amsbaugh, Steven Ellis, Yurima Guilarte-Murphy, Tyrone Jones, Robert Leonard, and Paul J. Ranauro

Comments
Abstract of poster presented at the 2014 UMass Center for Clinical and Translational Science Research Retreat, held on May 20, 2014 at the University of Massachusetts Medical School, Worcester, Mass.

Creative Commons License
This work is licensed under a Creative Commons Attribution-Noncommercial-Share Alike 3.0 License.

This poster abstract is available at eScholarship@UMMS: https://escholarship.umassmed.edu/cts_retreat/2014/posters/5
**Title:** Providing an adaptive research data infrastructure for clinical and translational investigators.

**Authors:** Bill Amsbaugh, Steven Ellis, Yurima Guilarte-Murphy, Tyrone Jones, Robert Leonard, Paul Ranauro

**Institutional Affiliation:** University of Massachusetts Medical School

**Contact Information:** Tyrone Jones, Research Computing Services, University of Massachusetts Medical School, 55 Lake Avenue North, Worcester MA 01655.  Tyrone.Jones@umassmed.edu

**Objective:** To implement an extensible patient-oriented data management system that integrates source clinical data, clinical trials management studies, research and financial data.

**Abstract:** Data in its many forms is a critical component of effective and productive research. As technology continues to evolve, and the volume and variety of sources of data continue to grow, accessing and leveraging all of this information is an ever increasing challenge. Concurrently, technology and information science is also driving novel ways to analyze, visualize, process and store this increasing amount of data. The ability to take advantage of these growth areas in order to aid the research efforts of the university is a critical need.

The challenge to bring all of these various components into a unified resource for the university is a prodigious and multidimensional one. A subsection of the target data streams and sources include primary source clinical data, secondary source research data, clinical trials research data, financial data, genomic data to name a few. These sources reside in multiple SQL databases, HL7 message streams, hospital tracking systems, billing systems, surveys and others.

To aid in overcoming this challenge, there is an ambitious effort underway to create a platform that will facilitate the aforementioned goals. The IT department, through the efforts of its Research Computing Services division will be embarking on this leading-edge, collaborative, and much needed data repository

The proposed design of the repository will take the form of a data aggregation layer capable of handling many disparate data feeds and sources, storing data in ways that support multiple access and analysis methods, all while providing researchers with increased tools and visibility.

If our ability to manage and learn from this rapid increase of information and technologies grows, then so will our research opportunities. The effect will bring new innovations to the research community here at the university and by extension the community at large.