Quality Data

Collaboration

Technology

UC Research eXchange (UC-ReX)
Our Mission
We improve UC collaborative research by enhancing access to clinical data for research. We are:
• Building a technical infrastructure to allow cross-institutional data, harmonized to enable comparison
• Optimizing the use of clinical data for research
• Informing data collection processes

Our Values
Ethical – We comply with all regulatory and ethical standards
Consensus Building – We engage stakeholders across clinical data activities to maximize alignment
Quality – We aspire to the highest standards to provide meaningful data
Ease – We will create easy access to EHR derivative data
Diversity – We respect diversity of ideas, people, and opportunities to identify the best solutions to improve collaboration in research

Our Vision
To promote innovation by enabling collaboration and efficiencies in research through effective sharing of clinical data
Initial Goal

With UCOP funding under BRAID oversight, the UC ReX Program was initiated to advance UC collaborative research capability.

Year 1 – [2011–2012]

Enable cross-campus cohort identification

- Develop representative governance
- Select and implement a technical infrastructure
- Harmonize selected data
- Enable access and support
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<th>1. Management</th>
<th>UCSF</th>
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<th>UCI</th>
<th>UCLA</th>
<th>UCD</th>
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University of California Research eXchange (UC ReX)

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  Davis

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  Irvine

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  Los Angeles

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  San Francisco

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- Joe Franco
  Los Angeles

- Ustun Yildiz
  San Diego

- Douglas Berman
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- Kimberly Romero
  San Francisco
Work Group Accomplishments Year 1

**Governance**
- Selected i2b2 SHRINE technology
- Initiated workgroups
- Hired program manager
- Developed IRB Protocol

**Data Harmonization**
- Selected initial data (Demographics: age, race, ethnicity, marital status; Diagnosis – ICD-9)
- Developed semantic rules and harmonized data
- Supported target ontology development
- Documented data data dictionary

**Technology**
- Identified prioritized demonstration projects and developed selection criteria
Work Group Accomplishments – Year 1

Technical Implementation

- Implemented Data Explorer cohort discovery (powered by i2b2 SHRINE)
  - Oversaw technology solution vendor (Recombinant)
  - Deployed i2b2 SHRINE technology infrastructure at 4 sites (UCLA coming Q4)
  - Developed target ontology and ETL
  - Managed data loading, mapping and testing
- Processed IRB request
- Partnered to develop website

User Support

- Developed user support model
- Developed requirements and implemented user access to tool
- Designed and partnered with Technical Implementation to build website
- Developed orientation and training tools
Completing Cohort Discovery

There is additional work required to complete initial goals.

The executive committee met to discuss future planning and Year 2 goals.
Our Challenge

Clinical data across UC Medical Centers have been created and stored on disparate platforms with little attention paid to interoperability, semantics or reuse scenarios.

Year 2 Planned Deliverables

Data Harmonization

- Implement semantic lifecycle process for next phase data (labs, medications, vital statistics and status)
- Partner with Data Quality and Technical Implementation to ensure data readiness
- Assess ICD-10 requirements to ensure readiness

Data Quality (Proposed New Work Group)

- Identify and implement standards to ensure optimal data quality
Our Opportunity

The UC biomedical campuses are in different states of development in terms of technology and user support. Appropriate balance in infrastructure design will enable us to move forward together.

YEAR 2 Planned Deliverables

Technical Implementation

- Maintain i2b2 SHRINE
- Partner with Harmonization, and Strategy workgroups
- Partner with User Support to update website

User Support

- Expand support model to include required support
- Maintain and expand website
- Implement user Pilot

Technology

- Monitor progress of i2b2 SHRINE
- Propose sustainable model for technology
Cohort discovery and identified data go together. We are analyzing solutions to enable next phase capability.
Our Challenge

Understanding campus readiness, industry benchmarks and cost to implement will help us implement meaningful projects.

Going Beyond Cohort Discovery

The Technology workgroup developed criteria by which to assess demonstration projects to ensure that selected projects are feasible, relevant, and add value.
Our Challenge

We will need to identify ways to transform legacy data into usable forms and gain a better understanding of emerging technologies and data storage solutions needed to present robust sets of clinical data.

Proposed Demonstration Projects

- Medication Surveillance
- Clinical Outcomes of Spine Surgery
- Colorectal Surgery Outcomes
- DSRIP Diabetes Intervention Outcomes
- Next Generation Cancer Registry
Strategic Plan Focus

Governance
- Develop fiscally sustainable model
- Market Data Explorer
- Engage and leverage partners and stakeholders
- Align with existing UC and partner capabilities and resources

Data and Quality
- Implement semantic life cycle process
- Improve data quality

Technology
- Maintain Data Explorer Tool
- Ensure site readiness for planned implementations
- Develop meaningful capabilities that enable research collaboration

Support
- Develop easy to use, valued user support
Our Opportunity

We have proven the ability to share decision making, implement solutions, and achieve a common goal. The future is promising.

UC understands the value of UC ReX as 11+MM patient records.

Others do too…
Our Opportunity

Members of the UC ReX Executive Committee and Technical Implementation Team make news at the Annual SHRINE Conference in Boston.

SHRINE Conference 2012 – Boston, Massachusetts
Lisa Dahm described the very impressive 11 million patient UCReX SHRINE Implementation that is currently likely the largest near-real-time clinical patient data resource.
Thank You! Gracias! Merci! Danke!

Funding Partner
University of California Office of the President (UCOP)

Oversight Committee
BRAID

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Thank You! Gracias! Merci! Danke!

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