Access EMR Data for Research

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Outline

• UF Health Electronic Health Data Architecture Overview

• Challenges – Data Elements

• SAP Business Objects/Clarity Reports

• Integrated Data Repository (i2b2 & Custom)

• OneFlorida Clinical Research Consortium

• Getting Assistance
**UF Health Electronic Health Data Architecture**

### Decision support service
- Epic’s data warehouse
- Star schema – relational SQL data warehouse
- Can integrate with other data sources like SQL databases, flat files, etc.
- Enterprise information management
- Comes with SAP Webi a Business Intelligence reporting tool
- Can integrate with other data sources like SQL databases, flat files, etc.
- A large-scale database that collects and organizes information from across UF Health’s clinical and research enterprises.

### UF Health Information Technology
- **EpicCare Hyperspace**
  - Patient-centered electronic health record
- **Chronicles Cache**
  - Reporting workbench
  - Real-time Operational Reporting
  - No-SQL database – KB SQL language
- **Clarity SQL Server**
  - Clarity Reporting / Enterprise Reporting
  - Most of the Chronicles data is pushed here
  - Snowflake schema – relational SQL data warehouse
  - One day old data
- **SAP Business Objects**
  - Integrated Data Repository (IDR)
- **Caboodle**
Challenges – Data Elements

• What data elements are needed?
  • Translating research data elements to clinical data elements
  • Experimental Pathologists
    • May have most difficult time
    • Collaborate/consult a clinician/pathologist

• Where are the required data elements located in EMR databases?
  • Epic Clarity / IDR / SAP BO / i2b2 etc.
  • Collaborate with biomedical/clinical informaticist

• Understanding the quality and limitations of the query used to pull the data?
  • Collaborate with clinician/pathologist and biomedical/clinical informaticist
Clinicians/Pathologists - SAP Business Objects/Clarity Reports

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UF Health Information Technology

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Decision support service

Caboodle

SAP Business Objects

Integrated Data Repository (IDR)

EpicCare

Hyperspace

Chronicles Cache

Clarity SQL Server

Integrated Data Repository (IDR)
Researchers can access IDR data in two ways

- i2b2 Cohort Discovery tool
- Data Support / IRB Data Requests

https://www.ctsi.ufl.edu/research-initiatives/completed-projects/integrated-data-repository/
i2b2: Informatics for Integrating Biology and the Bedside

• Built on IDR

• i2b2 Cohort Discovery tool that can be used to ask these questions and more
  • How many patients in the health system have particular ailments?
  • How many meet study eligibility criteria?
  • How many have agreed to be contacted for research studies?
  • Etc..

• https://idr.ufhealth.org/i2b2/

• Office hours for i2b2 assistance
  • https://www.ctsi.ufl.edu/2018/01/09/office-hours-announced-for-i2b2-assistance/
Custom Data Requests

• i2b2 cohort data / custom data - apply for IRB approval to obtain detailed data from the IDR for further research analysis

• You will work with IDR team to obtain identifiable/de-identified datasets

• Data Retrieval From IDR is not free – CTSI Vouchers

• [https://idr.ufhealth.org/services/](https://idr.ufhealth.org/services/)
OneFlorida Clinical Research Consortium

• [http://onefloridaconsortium.org/](http://onefloridaconsortium.org/)

• Fee Structure
  • [http://onefloridaconsortium.org/front-door/fee-structure/](http://onefloridaconsortium.org/front-door/fee-structure/)

• Lot of Data – understand the quality steps involved in acquiring the data from various institutions.
CTSI Research Project Navigator will help,
  • Bob Kolb - kolbhr@ufl.edu - 352.273.8882

Classify your study between QA/QI vs Research
  • http://irb.ufl.edu/irb01/researcher-information/qaqi-vs-research.html

IRB process

CTSI Vouchers – Data Retrieval From EMR Repositories like IDR is not free
  • https://www.ctsi.ufl.edu/research/voucher-request/

Get in touch with right informatics people for retrieving data (IDR Team)

Biomedical Informatics team at Dept. of Pathology, Immunology and Laboratory Medicine
  • Srikar Chamala, Ph.D. – Director Biomedical Informatics; schamala@ufl.edu.
Thank you!!