



Institute for Health & Equity
Division of Biostatistics



Announcing a CTSI Biostatistics, Epidemiology and Research Design (BERD) Summer Workshop in association with the CTSI Biomedical Informatics Service
“An introduction to big data mining of electronic health records with Jupyterhub, R, SQL and SAS”

Presented by:

Kristen Osinski, Senior Enterprise Business Analyst

Rodney Sparapani, PhD, Associate Professor Associate Professor of Biostatistics

Bradley Taylor, MBA, Chief Research Informatics Officer, CTSI

Course Objective:

Since the Affordable Care Act mandated meaningful usage of Electronic Health Records (EHR) data systems in 2011, there has been a paradigm shift in clinical/translational research towards studying EHR administrative databanks. The Clinical and Translational Science Institute (CTSI) of Southeast Wisconsin has been at the forefront of this emerging trend. CTSI Biomedical Informatics has painstakingly created the Clinical Research Data Warehouse (CRDW) with its Honest Broker tables. The CRDW provides access to the EPIC EHR and other ancillary digital databanks; however, searching and manipulating the CRDW was challenging even for those familiar with it. Recently, in 2020, a Jupyterhub server was created so that users could explore the CRDW directly with relatively ease via programming languages in common use among statisticians, bioinformaticians and data scientists: SQL, R and SAS. This workshop will provide you with a hands-on introduction to the CRDW via Jupyterhub. CITI training and MCWCORP username/password authentication is recommended.

Learning Objectives/Knowledge Gained:

- Pertinent definitions/jargon for Electronic Health Records (EHR)
- A series of online resources are developed for EHR
- Background of the Clinical Research Data Warehouse (CRDW)
- An overview of the CRDW Jupyterhub environment
- Brief history of SQL, R and SAS
- Hands-on experience with the Jupyterhub by meaningful examples
- Short introduction of RASMACRO

Agenda:

8:00am Speaker/attendee introductions

8:15am Bradley Taylor, Chief Research Informatics Officer

8:30am Kristen Osinski, Business Analyst IV, CTSI

9:15am Overview

10:00am Break: getting to know each other

10:30am Hands-on with Jupyterhub

12:00pm Lunch (provided)

12:30pm Hands-on with Jupyterhub

2:00pm Biological break

2:15pm Hands-on with Jupyterhub

3:45pm Q and A

4:15pm Closing ceremonies