Biomedical Informatics Grand Rounds
Wednesday, October 9, 2024
3:00 pm – 4:00 pm

Observational Research Using EHR Data: Insights on COVID-19 & Diabetes from the National COVID Cohort Collaborative (N3C)

Rachel Wong, M.D.

Assistant Professor, Department of Internal Medicine and Biomedical Informatics, Stony Brook University

Join Zoom Meeting https://stonybrook.zoom.us/j/95617197636?pwd=KytzZ2pVRG9SZGpKZUtpNXJISjNjZz09
Meeting ID: 956 1719 7636 Passcode: 924293

Bio: Rachel Wong is an Assistant Professor in the Department of Internal Medicine and Biomedical Informatics, and has a broad background in quality improvement, primary care, medical education and clinical informatics. She has implemented QI in safe opioid prescribing and educational curricula using telehealth and EHR tools to coordinate complex care. She conducts observational research related to diabetes and COVID-19 and is the Co-Chair for the National COVID Cohort Collaborative (N3C) Diabetes and Obesity team and site PI for the RECOVER EHR efforts to conduct research on Long COVID. She is interested in the integration of clinically actionable insights from machine learning into clinical decision support, explainable AI, and stakeholder-engaged participatory research.

Abstract: Knowledge discovery and data mining refers to the process of extracting meaningful patterns from biomedical data using automated computational and statistical tools on large data sets. There are a variety of local, regional and national data sets that contain EHR data, but significant work is required to extract and harmonize data, ensure data quality, handle issues like missingness, and curate data into concepts to make the data usable. Additionally, it is important to develop and use appropriate methods for observational research to derive clinically meaningful patterns and reduce bias. Using examples from studies conducted in the National COVID Cohort Collaborative (N3C) Data Enclave, we will explore real-world scenarios in using a large EHR data set to conduct observational research.

Educational Objectives:
1. Familiarize participants with the process of knowledge discovery and data mining, and with EHR data sets that are available for research
2. Discuss methods for data harmonization, quality assurance, and statistical analysis that are used in observational research to study clinically meaningful outcomes
3. Explore real-world use cases and studies that have been conducted in collaboration with the N3C

Disclosure Statement: The faculty and planners have no relevant financial relationship with ineligible companies, whose primary business is producing, marketing, selling, reselling, or distributing health care products used by or on patients.

Continuing Medical Education Credits: The School of Medicine, State University of New York at Stony Brook, is accredited by the Accreditation Council for Continuing Medical Education to provide continuing medical education for physicians. The School of Medicine, State University of New York at Stony Brook designates this live activity for a maximum of **1 *AMA PRA Category 1 Credits™.*** Physicians should only claim credit commensurate with the extent of their participation in the activity.