BRIGHAM AND WOMEN'S HOSPITAL
HARVARD MEDICAL SCHOOL

181 Longwood Avenue
Boston, Massachusetts 02115-5804

Department of Medicine
Channing Division of Network Medicine

Channing Methods Seminar

September 10 (Tuesday), 2024, 11AM (ET)

MCP 5th-floor conference room & Zoom:
https://us02web.zoom.us/j/579497999?pwd=cHNlWHMzWUlFUUVJTG1EeVJmY05aQT09
Meeting ID: 579 497 999
Passcode: 844168

Yi-Han Sheu, MD, MPH, ScD

Center for Precision Psychiatry at Massachusetts General Hospital and Harvard Medical School

Clinical Prediction Models with Real World Data

The manifestations of medical illnesses are highly dynamic and heterogeneous across individuals. However, the current standard of medical care primarily relies on evidence based on averages or rigid rule sets and models, falling short in providing guidance for effective individual-based assessments and interventions. The increasing accessibility of large-scale real-world data, coupled with advances in flexible machine-learning modeling techniques that can potentially integrate with domain knowledge and causal inference methods, provides a possible basis to address this significant gap. Nevertheless, linking and modeling real-world phenomena with observational data poses unique challenges that are often under-recognized. In this talk, Dr. Sheu will discuss, with examples from psychiatry, the principles, potentials, and pitfalls of utilizing AI and real-world data—such as electronic health records and beyond—to model complex medical conditions, thereby enabling more precise and effective personalized care.

***Bio**: Yi-han Sheu, MD, MPH, ScD, is an Instructor in Psychiatry and research faculty at the Center for Precision Psychiatry at Massachusetts General Hospital and Harvard Medical School. He received his MD degree and completed residency and fellowship training in psychiatry at National Taiwan University and its affiliated Hospital. Later, he completed his MPH in Healthcare Management and Policy, and Doctor of Science in Neuropsychiatric Epidemiology, both at the Harvard School of Public Health. His current research focuses on developing individualized clinical prediction tools for risk stratification and interventional suggestions, integrating machine learning/AI, causal inference, effective sampling, and clinical domain knowledge, with the aim of effectively linking data and knowledge priors with real-world applications. His long-term goal is to continue pushing the boundaries of precision psychiatry and to catalyze a fundamental shift in medical practices, from the average-based paradigm to a fully personalized approach aimed at delivering care that is optimized for each unique patient.*

Hosted by Yang-Yu Liu