

Biostatistics and Data Science Seminar Series

Hosted by Department of Data Science, John D. Bower School of Population Health

Optimizing Patient Care through Real-World Evidence and Artificial Intelligence

Keynote Speaker: Kelly H. Zou, PhD, PStat®, FASA,

Head

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Abstract: Technologies utilizing cutting-edge methodologies, including artificial intelligence (AI), machine learning (ML) and deep learning (DL), present powerful opportunities to help evaluate, predict, and improve patient outcomes by drawing insights from real-world data (RWD) generated during medical care. Real-world data (RWD) and evidence (RWE) also play important roles by helping protect healthcare providers, prioritize care for vulnerable populations, predict disease trends, and find optimal therapies. Potential applications across therapeutic areas include diagnosis, disease management and patient journey mapping. Use of fit-for-purpose datasets for ML models is seeing growth and may potentially help additional enterprises develop AI strategies. However, biopharmaceutical companies often face specific challenges, including multi-setting data, system interoperability, data governance, and patient privacy requirements. There remains a need for evolving regulatory frameworks, operating models, and data governance to enable further developments and additional research. We explore opportunities and examine the hurdles faced by researchers in the biopharmaceutical industry to fully realize the promise of AI/ML/DL for patient-centric purposes.

Key Words: real-world data; real-world evidence; artificial intelligence; machine learning; deep learning; patient-centricity.

Date: Thursday, February 1, 2024

Time: 12:00 PM – 1:00 PM, Central Time

Join in person: TR203, Translational Research Center

OR Join virtually: [WebEx](#)

About the speaker: Kelly H. Zou, Ph.D., PStat® is Head of Global Medical Analytics and Real World Evidence, and Health Economics & Outcomes Research, Viatriis Inc. She is an elected Fellow of the American Statistical Association and an Accredited Professional Statistician. Previously at Pfizer Inc, she was Vice President and Head of Medical Analytics & Insights; Senior Director of Real World Evidence, Group Lead of Methods & Algorithms and Analytic Science Lead; Senior Director of Statistics. She was Associate Professor of Radiology at Harvard Medical School, as well as Director of Biostatistics at its affiliated teaching hospitals. She was Associate Director of Rates at Barclays Capital. She received both MA and PhD degrees in Statistics from the University of Rochester. She completed her Postdoctoral Fellowship at Harvard. Her research interests include health policy, real world evidence, signal detection, and artificial intelligence, with over 155 professional articles and 5 books. She was featured as an Outstanding Woman in Data Analytics by Forbes, an Inspirational Women in Statistics & Data Science by Wiley, and an Accomplished Woman in Statistics and Data Science by the American Statistical Association. She was the winner of the Chief Data and Analytics Officers' Forum's Future Thinking Award, Reuters Events Pharma USA's Most Valuable Data & Insights Initiative Team Award, and CPhI Digital Innovation Team Award.

Pizza will be provided, first-come first-serve.

For more information, email yzhang4@umc.edu