PROVIDING BETTER HEALTHCARE THROUGH SYSTEMS ENGINEERING

Applications of Artificial Intelligence in Low-Resource Settings

Akbar Waljee, MD, MSc

Monday 10/4 at 4:30 PM ET

All seminars will be held in-person in IOE 1680 as well as virtually on Zoom. For the Zoom link and password, RSVP here.

In response to the development of new highly effective but expensive treatments, policymakers, payors, and health systems are considering novel and pragmatic ways to provide high-cost treatments to patients. One approach targets treatments using AI/ML-based approaches to those most likely to benefit (i.e., risk stratify to identify those at highest risk of complications); another is to optimize the delivery of treatment to provide high-value care while containing costs. In addition, there may be broader applicability of AI/ML-guided care in low resource settings, such as low- and middle-income countries. AI/ML can do this in a variety of settings and is exemplified in the article provided. This seminar will outline one such approach using a treatment for inflammatory bowel disease (IBD) as a use case.

Dr. Akbar K. Waljee, is a Professor in the Department of Internal Medicine Dr. Waljee serves as the Associate Director of the Data and Methods Hub and the Director of the Michigan Integrated Center for Health Analytics and Medical Prediction (MiCHAMP) both at the UM Institute for Healthcare Policy & Innovation (IHPI). He also serves as the Director of the VA CCMR Prediction Modeling Unit (PMU) and, clinically, he is the Director of the Inflammatory Bowel Disease clinic both at the VA Ann Arbor Healthcare System.

Dr. Waljee was born in Kenya and moved to the United States to complete his undergraduate and medical degrees at Emory University in Atlanta, GA. He then completed his residency and fellowship at the University of Michigan. Dr. Waljee holds a Master's degree in Health Services Research from the University of Michigan and completed a heath care policy fellowship at the Center for Health and Research Transformation.

Dr. Waljee's work is at the forefront of using machine learning and deep learning techniques to improve healthcare access, quality, and efficiency (high-value care) in resource constrained settings. He uses novel machine learning techniques to implement decision support systems and tools that facilitate more personalized care for disease management and healthcare utilization to ultimately deliver efficient, effective and equitable therapy for chronic diseases. To test and advance these principles, he built operational programs that are guiding—and improving—patient care in costly gastroenterology and liver disorders in under-resourced settings both domestically and abroad.

This seminar series is presented by the U-M Center for Healthcare Engineering and Patient Safety (CHEPS): Our mission is to improve the safety and quality of healthcare delivery through a multi-disciplinary, systems-engineering approach. For the Zoom link and password and to be added to the weekly e-mail for the series, please RSVP. For additional questions, contact CHEPSseminar@umich.edu. Photographs and video taken at this event may be used to promote CHEPS, College of Engineering, and the University.