

# IISE Transactions Webinar

Wed, September 28, 2022 | 9-10a.m. US CT (10-11a.m. ET)

Zoom Meeting ID: 992 3042 2447, Passcode: 030817

## Frontiers of Medical Decision Making in the Modern Age of Data Analytics

Recent decades have seen considerable advances in developing industrial engineering/operations research (IE/OR) models for improving decision-making in healthcare. These approaches span the full range of descriptive, predictive, and prescriptive models for supporting patients' and clinicians' decision-making. The pervasive use of information technology to collect and store electronic health records, insurance claims, genomic information, and other observational data has opened new doors for developing, validating, and applying these types of data-driven IE/OR models. This article describes opportunities at the frontier of medical decision-making, emphasizing the intersection of medicine, data analytics, and operations research. Many of the examples covered intersect the fields of statistics, machine learning, and artificial intelligence. A series of motivating examples illustrate the possibilities and some promising future research directions. This webinar is based on an *IISE Transactions* [perspective paper of the same title](#).

### Speaker



**Brian Denton** is the Stephen M. Pollock Professor and Chair of the Department of Industrial and Operations Engineering at the University of Michigan. His research interests include data-driven sequential decision making and optimization under uncertainty with applications to healthcare and industrial systems. Before joining the University of Michigan, he worked at IBM, Mayo Clinic, and North Carolina State University. He is a fellow of IISE and INFORMS, past Chair of the INFORMS Health Applications

Section, and past-President of INFORMS.

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