

NORTH CAROLINA STATE UNIVERSITY

**OPERATIONS RESEARCH PROGRAM
SEMINAR SERIES**

**January 22, 2024
4:30PM-5:45PM**

**In-Person: 4134 Fitts-Woolard Hall
Zoom details – bottom of page**

RTI Health Solutions

**Dr. Stephanie Earnshaw
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Title

The Role of Operations Research in Access to Pharmaceuticals

Abstract

Have you ever wondered what goes into getting pharmaceuticals and medical devices and diagnostics to market? Patient access to these products is not as simple as going to your doctor and demonstrating a need. Even after demonstrating safety and efficacy in clinical trials, access may be limited by the primary payer (typically insurance in the US) for a variety of reasons. Decision-analytic models provide a framework for compiling clinical and economic evidence in a systematic fashion which enables the demonstration and communication of a product's value which can be assessed by healthcare decision makers. In this presentation, we will review the market access hurdles for these types of products and present examples of real-world case studies using decision analytic modeling methods to solve problems in the pharmaceutical industry.

Biography



Dr. Stephanie Earnshaw

Stephanie Earnshaw is Senior Vice President of Health Economics at RTI Health Solutions. Dr. Earnshaw's research focus is in applying decision-analysis techniques to support access to pharmaceutical, biotechnology, and diagnostic and medical device products through performing health economics and outcomes research. Her areas of specialization include mathematical programming (constrained optimization) and Markov, simulation, and other state transition modeling. She has developed innovative mathematical models using these methods to determine the cost effectiveness, pricing strategy, predict clinical outcomes, allocate resources, and cost care pathways particularly in support of medical diagnostics. She also has experience in budget impact modeling where she has published extensively on this topic as one of the lead authors of "Budget-Impact Analysis of Health Care Interventions: A Practical Guide" and is a key instructor for the International Society for Pharmacoeconomics and Outcomes Research (ISPOR) budget impact courses. She has published her work in several peer-reviewed journals and her therapeutic area focus includes cardiovascular disease, gastrointestinal disorders, respiratory disease, acute care, infectious disease, osteoporosis, and vaccines.

She is a member of the Institute for Operations Research and the Management Sciences and of ISPOR. Dr. Earnshaw has served on the ISPOR Board of Directors and as Chair of the Audit Committee and is the current Educational Council Chair and member of ISPOR's the Health Science Policy Committee, Short Course Committee, and Finance Committee. She has also held an Adjunct Faculty appointment at the University of North Carolina's Eshelman School of Pharmacy, Division of Pharmaceutical Outcomes and Policy, is honored as a Distinguished Alumni in Industrial and Systems Engineering at North Carolina State University.

Biography



Dr. Kyle Paret

Kyle Paret, PhD, is an Associate Director of Health Economics at RTI Health Solutions (RTI-HS). Dr. Paret is experienced in developing decision analytic models to evaluate health and economic implications of health technologies. He has developed models and analyses in the areas of oncology, cardiovascular diseases (e.g., heart failure, hypertrophic cardiomyopathy), rare neurodegenerative diseases (e.g., amyotrophic lateral sclerosis [ALS], Huntington's Disease), and COVID-19 vaccination. Dr. Paret also has experience developing strategies to prepare for and respond to Institute for Clinical and Economic Review (ICER) evaluations. Prior to joining RTI-HS, he worked for nine years as a civilian in the Department of Defense as an Operations Researcher and Cost Engineer. His research has been presented at various professional conferences and published in peer-reviewed journals.

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