

Bethany Daily, MHA

Cecilia Zenteno, PhD



**Monday**  
**November 16, 2015**  
**4:30PM**  
**in 1123 LBME**

## **OR in the OR (and beyond) at Massachusetts General Hospital**

In this talk we present a general overview of how Operations Research techniques are used to re-design and improve care processes at Massachusetts General Hospital (MGH) in collaboration with the Sloan School of Management at MIT. We describe the implementation of data-driven scheduling strategies for elective and non-elective cases. First, we describe how we increased the effective capacity of the surgical general care units by rearranging the surgical block time with integer programming. We then outline how we used simulation to inform how much OR capacity to reserve in order to increase access for non-elective surgical patients while maintaining high utilization of expensive resources. If time allows, we will discuss an extension of this approach to provider scheduling in the largest primary care practice at MGH.

**Bethany Daily** is the Senior Administrative Director, Perioperative Services at Massachusetts General Hospital. As a member of the Executive Perioperative Services team, her administrative responsibilities include the strategic direction and implementation of information systems, statistical reporting, financial analysis and budgeting, quality and process improvement, and facilities/technology planning. Bethany acts as the MGH Program Director for the MGH/MIT Collaboration, which brings together the talents of MIT Sloan School and clinicians at MGH to develop solutions to optimize patient flow.

Ms. Daily received her Bachelor of Arts at the University of Michigan-Ann Arbor and her Master of Healthcare Administration at University of North Carolina-Chapel Hill.

**Cecilia Zenteno** is an Operations Research Manager at MGH and a Research Affiliate at MIT. Her responsibilities span mathematical modelling, data analysis, and executing initiatives in collaboration with all levels of health care providers and administrators. She provides oversight and mentoring to the MIT post-doctoral fellows, master and undergraduate students that are part of the MGH-MIT Collaboration.

Cecilia received her Ph.D. in Operations Research from Columbia University and worked as post-doctoral fellow within the MGH-MIT Collaboration for two years before joining MGH full time in 2014. Before her graduate studies she worked for Hewlett-Packard Research Labs in Palo Alto, CA and for the Electoral Federal Institute in Mexico City, where she grew up.

The seminar series “Providing Better Healthcare through Systems Engineering” is presented by the U-M Center for Healthcare Engineering and Patient Safety: Our mission is to improve the safety and quality of healthcare delivery through a multi-disciplinary, systems-engineering approach.

For additional information and to be added to the weekly e-mail for the series, please contact [genehkim@umich.edu](mailto:genehkim@umich.edu)