

MSCS MESS

Department of Mathematics, Statistics, and Computer Science
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Linux Ladies Hosting Scavenger Hunt!

Linux Ladies is hosting a scavenger hunt on **May 5th** from **4pm till 5pm!** Come to **RNS 202** to work in a team and learn about the different technology-related spots around campus. There will be yummy treats at the end of the hunt!

Seniors: Share Your Plans and Memories!

Every spring, the MSCS Mess publishes a special issue highlighting our graduating seniors, including their future plans and their favorite MSCS memories at St. Olaf. If you're a senior, then please share your plans and/or memories! To do so, fill out **this Google Form**, and please email **mcgowa2@stolaf.edu** if you have any questions.

Today's Seminar

Title:	Implementation and design of a behavioral economics electronic health record (BE-EHR) module to reduce overtreatment of diabetes in older adults
Speaker:	Hayley Belli
Date:	Friday, April 29
Time:	3:30pm
Location:	RNS 204

About the talk: Behavioral economics is a field that combines insights from economics and psychology to recognize that humans are not perfectly rational agents who quickly synthesize all available evidence to make optimal choices (economics), but rather make predictable decision errors with known mechanisms (psychology). Be-

havioral economics-themed interventions (termed “nudges”) have been increasingly applied in health-care settings. Integrating BE principles with electronic health records (EHRs) and clinical decision support (CDS) tools is a novel approach for delivering clinical care and improving health outcomes using nudges. In this talk, we’ll discuss results from a pilot study and the design of a large, cluster-randomized trial of 66 clinics within the New York University Langone Health (NYULH) system that delivers BE- inspired nudges to promote appropriate diabetes management in older adults. The clinical objective of the study was to reduce intensive glycemic control, which is of unclear benefit and often carries increased risk for older adults with diabetes. Furthermore, the American Geriatrics Society’s (AGS) Choosing Wisely (CW) guideline promotes less aggressive glycemic targets and reduction in pharmacologic therapy for older adults with type II diabetes. The primary research aim of this study was to test the effectiveness of the BE-EHR module comprising six nudges that were developed through a series of design workshops, interviews, user-testing sessions, and clinic visits. BE principles utilized in the nudges included framing, social norming, accountable justification, defaults, affirmation, and gamification. Pilot study results indicated that CW compliance among patients increased 5.1% from a 16-week interval at baseline to a 16-week interval post-intervention, suggesting that the BE-EHR module shows promise for promoting the AGS CW guideline and improving diabetes management in older adults. Finally, this talk will discuss statistical aspects of clinical trial design, controlling for bias when collecting outcomes using EHR records, as well as considerations for intervention development and scalability.

About the speaker: Hayley Belli, PhD, is Assistant Professor of Biostatistics in the Department of Population Health at New York University Grossman School of Medicine, where she conducts research in the design, conduct, and analysis of pragmatic and adaptive clinical trials. Her work develops and tests interventions that utilize behavioral economic theory and digital health tools to improve clinical outcomes for chronic conditions. She is also interested in pragmatic studies embedded within electronic health records, and methods

for extracting evidence from real world data in the context of Expanded Access Programs. In addition to collaborating with researchers across NYU, she is member of the data coordinating center for the National Institutes of Health-sponsored Early Phase Pain Investigation Clinical Network, a member of the Working Group on Compassionate Use and Pre-Approval Access within the Division of Medical Ethics, and co-chairs the Ethics and Real-World Evidence Research Project.

To submit an article, event, or anything else for publication in the Mess, email mcgowa2@stolaf.edu; to receive the Mess digitally each Friday, email habero1@stolaf.edu; visit <http://wp.stolaf.edu/mscs/mscs-mess/> for a digital archive of previous MSCS Mess issues.

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