



Geoffrey Barnes, MD, MSc



**Health Systems Engineering and Implementation Science:
Using the Best of Both Worlds to Standardize
Periprocedural Anticoagulation**

**Monday November 20, 2017
4:40PM in 1123 LBME**

Oral antithrombotic medications (“blood thinners”) are some of the most commonly used and dangerous medications that patients take. This is especially true around the time of a surgical procedure, when the medications must be stopped to avoid bleeding related to the procedure. With the recent introduction of 4 new oral antithrombotic medications, many patients and providers are confused as to the best methods to manage anticoagulants. Using health systems engineering methods, we aimed to understand the current work flow for patients planning to undergo surgical procedures while taking chronic oral antithrombotic medications. We then developed a re-organized care model aimed at improving safety and coordination of care. Using implementation science techniques, we developed an implementation plan for re-organizing periprocedural care at the University of Michigan. We are currently exploring the generalizability of these models and their implementation plan across a diverse array of health systems.

Geoffrey Barnes, MD, MSc, is a cardiologist and vascular medicine specialist at the University of Michigan. He completed his undergraduate degree in Biomedical Engineering at Washington University in St. Louis, followed by medical school, residency and fellowship training at the University of Michigan. He has been on faculty at the University of Michigan since 2014. He co-directs the Michigan Anticoagulation Quality Improvement Initiative (MAQI2), a collaborative of six health center anticoagulation clinics aimed at improving care for patients across the state of Michigan. Informed by his undergraduate engineering degree, he strives to use logical models to understand and improve healthcare delivery systems. His current research is focused on improving the delivery of anticoagulation care for patients undergoing surgical procedures.

The seminar series “Providing Better Healthcare through Systems Engineering” 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 additional information and to be added to the weekly e-mail for the series, please contact genehkim@umich.edu