

Surgeons are a key input to achieving high quality surgical care. Unfortunately there is accumulating evidence that some surgeons are not competent by the time they finish their training and enter independent practice. The causes of these deficits are manifold and complex, but regardless represent a failure of the healthcare educational system to keep pace with a) the rapidly changing healthcare delivery system, b) the increasing complexity of modern medicine, and c) changing cultural norms. New approaches will be needed to update the training paradigm, including the application of engineering methods such as quality assurance, predictive analytics, and quality/process improvement. This talk will describe some of the innovations occurring in these domains as well as present a roadmap for how more rigorous analysis and design should shape future medical education policy.

**Dr. Brian C. George** is an Assistant Professor of Surgery at the University of Michigan. He serves in many local and national leadership roles in surgical education, including as the Executive Director of the Procedural Learning and Safety Collaborative, a multi-institutional research consortium, and the Associate Program Director for the University of Michigan's General Surgery Residency and the Surgical Critical Care Fellowship.

Dr. George completed his undergraduate degree in Engineering Physics at the University of Michigan and then worked as a software engineer in Silicon Valley. He later completed his MD at the University of California San Francisco, his residency at Massachusetts General Hospital, and a Trauma/Surgical Critical Care fellowship at University of Washington's Harborview Hospital. He also has a Master's degree in Quantitative Assessment and Evaluation from the University of California Berkeley's School of Education.

Dr. George's primary academic focus is on operative performance assessment and bridging the gap between surgical education research and health services research. Dr. George's ultimate goal is to help develop evidence-based and patient-centered standards for surgical training.

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 <a href="mailto:genehkim@umich.edu">genehkim@umich.edu</a>

