GREEN MD
SEMINAR SERIES

A HUMAN FACTORS APPROACH TO INFORM HEALTHCARE DELIVERY AND PATIENT SAFETY WITHIN A SYSTEMS ENGINEERING FRAMEWORK

In this talk I will discuss my research program and my lab as well as the research collaboration with my clinical colleagues. I will discuss a specific series of projects about reducing medication administration errors in anesthesia delivery. The goal of our research is to understand the work complexity, the latent risks, and the variability in work practices in order to design and evaluate interventions for reducing the risk of patient harm associated with anaesthesia medication delivery. The Systems Engineering Initiative for Patient Safety (SEIPS) model is used as the framework for our assessment and design strategies as part of a research partnership between researchers at Clemson, MUSC and Johns Hopkins. The interventions being evaluated include medication labels and icons, medication trays, syringe holders, workstation layout and furniture/equipment design, and event reporting systems. This talk will describe these interventions as well as the evaluation strategy (as impacted by COVID-19). I will also discuss the extension of this work into other areas (e.g., NORA (Non-Operating Room Anaesthesia)) and the strategies for broader evaluation.

David Neyens, Ph.D.

Associate Professor,

Industrial Engineering

Dr. David Neyens is an Associate Professor of Industrial Engineering and a Faculty Research Scholar in CUSHR. Before joining Clemson University, he graduated from the University of Iowa in 2010 and completed a post-doc at the University of Washington. He directs the Ergonomics & Applied Statistics Lab where his primary research interest focuses on human factors application in transportation and health care. Dr. Neyens and his students use sophisticated analytical models to quantify operators' behavior and performance in complex systems and situations. He is particularly interested in understanding the effects of technology on operator's behavior and performance and overall system effectiveness. He has published over 25 peer-reviewed papers and has active funding from NIH.

May 6, 2021 • 3:30 p.m.

Virtual seminar

https://clemson.zoom.us/j/99704686077

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