Abstract
Due to the complex and dynamic nature of healthcare systems, it has become pertinent to utilize the science of Human Factors and its systematic approach to human centered design. Human Factors and Ergonomics can be applied to a wide variety of areas within the health care system: patient-staff-machine work systems; health care teams; health care technology design and implementation; and patient safety and medical errors. My talk will consist of a description of my relevant background research that I’ve conducted at the Institute for Simulation and Training. Following this, I will describe how human-centered design can aid the human-centered needs of medicine and health care. My talk will specifically review the complex nature of health care systems; the current needs due to this complexity; possible models for addressing the basis of health care: the patient-staff-machine work system, and its place within larger medical systems; and how current human factors theories and paradigms can resolve issues arising from the complex nature of health care, both nationally and globally.

Bio
Joseph R. Keebler is a doctoral candidate in the Applied/Experimental Human Factors Psychology program at the Team Performance Laboratory, University of Central Florida/Institute for Simulation and Training. Mr. Keebler has worked extensively in a multi-disciplinary team including cognitive scientists, electrical and mechanical engineers, computer scientists, and modeling and simulation researchers. His research has ranged from interface design for transportation security X-ray baggage screening, development of simulation-based training for memorization of complex objects, to the creation of theoretical models for human-robot interaction in future military operations using intelligent robotic agents. Mr. Keebler comes from a generalist practitioner model, with a focus on applied and valid experimental research and methods based in cognition and information processing. His training includes fundamental Human Factors principles, and specializations in human-computer interaction, human-robot interaction, simulation-based training, information processing, mental model acquisition and testing, situation awareness, cue recognition, expertise, learning and advanced statistical techniques.