Human Factors Workshop

Re-engineering Patient Safety:
Application of human factors and safety systems principles

May 17, 2022 ● 8:30 AM to 12:30 PM ● LIVE Virtual Session

Program Overview

Despite considerable investment and advances in patient safety, there are still hundreds of thousands of patients being harmed by medical error each year. A different way of thinking is required to 'move the needle' on patient safety. Human factors approaches underpin current patient safety and quality improvement science, offering an integrated, evidenced, and coherent approach to patient safety, quality improvement, and clinical excellence. Human factors rests on a systems approach — one must examine the human, interactions, and inter-dependencies within a larger system in order to optimize performance. The system-wide adoption of these concepts offers a unique opportunity to support cultural change and empower clinicians to put patient safety and clinical excellence at the center of their work. Human factors and systems safety focus on re-designing work as opposed to re-designing the human who does the work. Incorporating a human factors and systems safety approach allows for the development and integration of knowledge, skills and attitudes that facilitate successful performance at the front lines of care. This approach will help identify safe, sustainable and resilient solutions.

The application of innovative human factors approaches supports the much-needed transformation of healthcare from reactive and less effective or non-sustainable solutions to proactive, evidence-based, effective and sustainable person-centered safety mitigations. Effective solutions must satisfy a number of constraints arising from clinical needs, social interactions, cognitive limitations, and healthcare policy. Such solutions require multidisciplinary teams to accelerate discovery, address the complexity of challenging health problems, improve patient outcomes, and decrease costs. The solutions must be designed with appropriate consideration of the actual work environment, and must compensate for known human abilities, limitations, and baseline human error rates while considering the demands of the complex healthcare environment. At this workshop, healthcare leaders will learn how to apply human factors and systems safety concepts to understand true hazards in their organizations while fostering a culture of safety. The faculty includes human factors engineer and a healthcare safety leader who have vast experience studying risk and implementing innovative change within healthcare organizations.

Learning Objectives

At the end of this workshop, attendees will be able to:

- **Describe how the work-system elements (e.g. people, organization, equipment) interact to create safe/unsafe conditions.**
- **Define system-engineering approaches and describe how these concepts integrate into applied safety efforts.**
- **Apply human factors engineering concepts to identify system hazards and design/develop solutions for safer care delivery systems.**
- **Describe the importance of usable technology and devices and apply device usability into safety programs to select and safely implement technology and devices in your healthcare environment.**
- **Design system solutions to support the way humans work, minimize the opportunity for error, and mitigate the impact of error once it occurs.**

TO REGISTER: *https://marylandpatientsafety.org/education/*

About the Faculty

Sadaf Kazi, PhD

Sadaf is a Research Scientist at MedStar Health National Center for Human Factors in Healthcare and Assistant Professor of Emergency Medicine at Georgetown University Medical Center. After receiving her PhD in Engineering Psychology in 2016 from the Georgia Institute of Technology, she worked at the Johns Hopkins Armstrong Institute for Patient Safety and Quality. As a human factors scientist working in the field of healthcare, the focus of her research is to understand how complexities embedded in the healthcare system (e.g., balancing patient safety with efficiency in multi-step high risk processes, data identification, aggregation, and synthesis, patient-provider interactions) contribute to cognitive workload, and to design systems to optimize this workload while achieving safety. As Principal and Co-Investigator on grants by the Agency for Healthcare Research and Quality (AHRQ) and the Government of the District of Columbia, she has extensive experience in eliciting provider and patient needs and workflows using rigorous multi-method designs.

Christopher Bonk, MSN, RN, CNL

Chris is a Research Scientist and Clinical Human Factors Specialist within the MedStar Health National Center for Human Factors in Healthcare, and a lecturer at the University of Maryland, College of Information Studies. He holds a Master of Science in human computer interaction from the University of Maryland, College Park and a Master of Science in nursing from the University of Maryland School of Nursing. He also holds a certification as a Clinical Nurse Leader (CNL). Chris provides unique expertise in nursing practice and patient safety for a variety of projects and grants. His professional expertise is in the integration of medical technology within facilities, the assessment of best practice for medical staff, and user experience design of both web and mobile applications. His nursing practice is based in emergency medicine and was a founding member of the unit practice council on his unit to implement and continuously improve the unit/department-specific Relationship-Based Care (RBC) delivery model and related outcomes.

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