



Department of Industrial
and Systems Engineering
UNIVERSITY OF WISCONSIN-MADISON



Presents:

Dr. Pascale Carayon

Leon and Elizabeth Janssen Professor, Dept. of Industrial & Systems Eng.
Director, Wisconsin Institute for Healthcare Systems Engineering, UW-Madison

Human Factors and Systems Engineering in Health Care: The SEIPS Journey

Abstract. While US health care spending keeps growing and, in 2019, accounted for almost 18% of the GDP, we also know that the US health care system continues to face multiple problems of avoidable patient harm, failure of care coordination and low-value care. Health care systems engineers, in particular those trained at the University of Wisconsin-Madison, have made important scholarly and operational contributions to address the human, organizational and societal impact of poorly designed work systems and care processes. In this presentation, I will describe our journey of developing the SEIPS (Systems Engineering Initiative for Patient Safety) program.

I will provide a historical perspective on the SEIPS program, building on the work system model and the Balance Theory developed by Mike Smith and me, and the strong foundation in human factors and health systems in ISyE at UW-Madison. Since its publication in 2006, the SEIPS model has been extensively applied in multiple research projects and improvement initiatives, for instance to redesign or improve clinical work systems, care transitions, and health information technologies. I will show how the SEIPS model has evolved in order to tackle increasingly complex health care problems. Finally, I will share some reflections on future research in human factors and systems engineering in health care and patient safety.

Biography: Pascale Carayon, PhD, is the Leon and Elizabeth Janssen Professor in the Department of Industrial and Systems Engineering and the Director of the Wisconsin Institute for Healthcare Systems Engineering at the University of Wisconsin-Madison. She has three decades of research experience analyzing, designing and improving complex work systems such as those in health care. In the last 20 years, her research in human factors and systems engineering has focused on patient safety and health care issues such as design of health information technologies, safety in high-risk care processes, and clinician well-being. She is a Fellow of the *Human Factors and Ergonomics Society*, and a Fellow of the *International Ergonomics Association*. She was the chair of the National Academies' Board on Human-Systems Integration and contributed to multiple National Academies' consensus studies and committees, including the recent report on Tackling Clinician Burnout: A Systems Approach to Professional Well-Being. Since 2015, Becker's Hospital Review has selected her yearly as *one of 50 experts leading the field of patient safety*.

Friday, 4/30/2021

Zoom

12:00 PM