Human Factors & Ergonomics (HFE) in Patient Safety AND Worker Well-Being

Pascale Carayon, Ph.D.
Department of Industrial and Systems Engineering
Wisconsin Institute for Healthcare Systems Engineering
University of Wisconsin-Madison - USA

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HFE in Patient Safety & Worker Well-Being

Special issue of Health Affairs on patient safety (2018)

Challenges and Opportunities for Improving Patient Safety Through Human Factors and Systems Engineering

HFE = design of work system (and working conditions)

Clinician Well-Being

A SYSTEM MODEL OF CLINICIAN BURNOUT AND PROFESSIONAL WELL-BEING

(NASEM, 2019)
“Ergonomics (or human factors) is the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data and methods to design in order to optimize human well-being and overall system performance.” [International Ergonomics Association]

- physical ergonomics
- cognitive ergonomics
- organizational ergonomics (macroergonomics)

SEIPS (Systems Engineering Initiative for Patient Safety) Model of Work System and Patient Safety (Carayon et al., 2006, 2014)

Work System Barriers & Facilitators – COVID-19

- PPE: access, usability, fit, disposal
- Telehealth
- "New" tools
- Technology breakdowns
- AND MORE...

- Intubation: from task to process
- Enhanced "performance pressure"
- Additional tasks: e.g. specimen collection, decontamination
- AND MORE...

- Information/communication overload & underload
- Leadership/management support
- Training: just-in-time, on your own
- Onboarding of new staff
- Supply chain management (meds, equipment, hand soap)
- AND MORE...

- ICU/ICU units
- Isolation rooms
- Visibility through patient windows,
- Access to PPE materials
- Signage & security
- Home, transportation, stores...
- AND MORE...

(Carayon & Perry, 2020)
Special Issue of the International Journal for Quality in Health Care on Human Factors
Special Issue of IJQHC on HFE

- Co-editors: Sara Albolino, Pascale Carayon, Sue Hignett
- Topics:
  - SEIPS – HFE systems approach
  - Embedding HFE in health care
  - HFE design of medical devices and health IT
  - Human-centered design
  - Risk management and communication
  - And more…