

HUMAN FACTOR APPROACH TO COMPUTER DOCUMENTATION DESIGN, IMPLEMENTATION, AND WORKPLACE ERGONOMICS

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Introduction: Applying human factors principals to EMR design and workplace ergonomics focuses on product design, human-computer interactions, ergonomics, workplace safety, and human capability-error. This is done by designing easy to understand interfaces, assessing stylistic changes to improve product performance usefulness, and exploring ways that people interact with computers and their workplace environment.

Background: Level I Trauma Adult and Children University Medical Centers seeking to implement Perianesthesia EMR with redesign of Main Trauma PACU workstations.

Objectives:

- Identify staff's capabilities and limitations with cognitive perception of workstation ergonomics and human-computer interaction.
- Identify criteria for graphic design, usability, error prevention, and standards utilizing ASPAN, State, and JCAHO guidelines.
- Utilize educational technology and instructional message format design with virtual reality employee training
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Process Implementation: Systematic literary review of human factor psychology, direct observation, shared governance focus group, and staff surveys to:

- Determine human-computer interaction cognitive needs and perception
- Create focus groups to involve staff input to facilitate user ownership
- Research guidelines with EHR design
- Implement Virtual Training modules, simulation, and evaluation
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Statement and Implication for successful advancement of Perianesthesia Practice:

Successful staff satisfaction with computer documentation was demonstrated by smooth transition, decreased documentation errors, and improved workplace performance. Supportive human factor individualization with advent of change facilitates improvement of perianesthesia practice.