

## **Overview of Human Factors and Ergonomics Activities to Reduce Fatigue, and Stress and Burnout During the COVID-19 Response**

Responding to the COVID-19 pandemic will take a significant emotional and mental toll on many who are responding to the crisis, e.g., healthcare workers, disaster management, etc.. Limited resources, longer shifts, disruptions to sleep and work/life balance, as well as occupational hazards associated with exposure to COVID-19, will all contribute to physical and mental fatigue, stress and anxiety, and potentially burnout over the coming months. These challenges will occur in addition to the rapid uptick in new cases of depression and anxiety in the general population as the COVID-19 crisis unfolds, and an exacerbation of symptoms among existing patients.

A wide range of Human Factors research is available to help mitigate these challenges, including:

1. Implementation and evaluation of organization-wide initiatives to reduce the risk of fatigue and burnout, foster professional well-being, and enhance patient care by improving the work environment.<sup>[3]</sup>
2. Recommendations for assessment methods to quantify healthcare workers' fatigue and burnout.<sup>[1,2]</sup>
3. Agile development of mobile health (mHealth) tools to facilitate mental health self-management.
4. Design and deployment of health information technology (IT), including electronic health records, using human-centered design and human factors and systems engineering approaches to ensure the effectiveness, efficiency, usability, safety, and ensure resilience during technology downtimes.<sup>[3,4,5]</sup>
5. Recommendations for improving healthcare systems' resiliency and performance during an ongoing pandemic.<sup>[6]</sup>
6. Guidelines to establish remote monitoring and telehealth services to enable peer-support and occupational counseling.
7. Recommendations for reducing clinicians' workload through effective integration of new technologies with current workflows and addressing technology downtime.

Human factors and ergonomics experts are currently at work across the healthcare system, and are available to support state health organizations and the Centers for Disease Control as they confront this crisis.

### **About HFES**

With over 4,600 members, HFES is the world's largest nonprofit association for human factors and ergonomics (HF/E) professionals. HFES members include psychologists and other scientists, designers, and engineers, including researchers, practitioners, and federal agency officials, all of whom have a common interest in working to develop safe, effective, and practical human use of technology, particularly in challenging settings. HFES has a particularly strong expertise pertaining to the safe and effective use of medical technology, in order to ensure the safety of patients and healthcare workers.

## References

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