Patient Safety and Physician Well-Being: Impact of COVID-19

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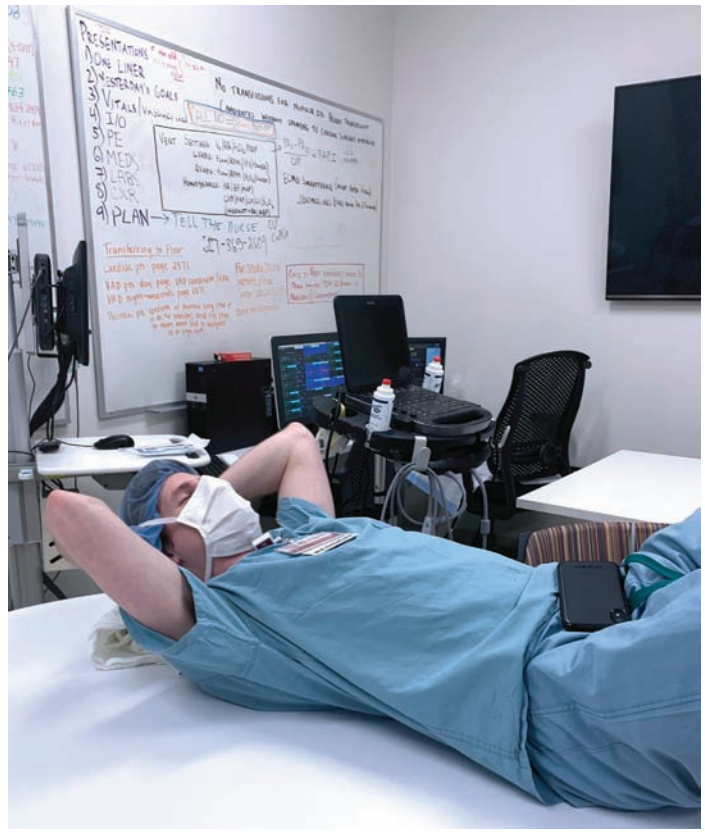
It has been postulated that burnout is a disease of organizations that manifests its symptoms in the workers of dysfunctional and toxic healthcare systems (*BMJ* 2019;366:l4774). Anesthesiologists are on the front lines of care in the OR, ICUs, and other locations throughout the hospital, placing them at risk for burnout. *Burnout syndrome* is defined as mental and physical exhaustion, depersonalization, a lack of self-worth, and disconnection from work or colleagues. Burnout can cause potentially devastating consequences for anesthesiologists and their families, including mental and physical illness, loss of income, and more. The very nature of the anesthesiologist's role in health care, including long work hours in a stressful environment, places them at high risk of burnout and impaired mental health. Anesthesiologists are also highly educated and have high expectations for their clinical work, which further increases their risk of burnout. Anesthesiologist intensivists have been reported to have a burnout rate of up to 74% (*Anesth Analg* July 2020), while the burnout rate of anesthesiology residents and first-year graduates has been reported to be 50% (*Anesthesiology* 2019;131:668-77). Burnout syndrome can impair physical health as well as mental health. It has been associated with a chronic inflammatory state that increases the risk of type 2 diabetes mellitus and cardiovascular disease, among other threats to physical health (*Eur J Endocrinol* 2019;180:R147-58).

There is growing concern that burnout poses a threat to the safety of patients as well as health care workers (HCWs). However appealing the common-sense link of burnout to medical errors, evidence of proof has been questioned due to a shortfall of well-designed and conclusive studies (*Med Care* 2018;56:976-84). Nevertheless, a growing number of studies have found relationships between the psychological health of medical professionals and patient safety outcomes that are affected by teamwork and communication failures (*Int Emerg Nurs* 2013;21:168-72; *BMJ Qual Saf* 2012;21:84-8; *Intensive Crit Care Nurs* 2016;36:26-34). For example, one study concluded that symptoms of depression were an independent risk factor for medical errors (*Intensive Care Med* 2015;41:273-84). In a study in neonatal ICUs, authors reported that units with higher rates of burnout had lower



safety climate, job satisfaction, teamwork, and working conditions (*BMJ Qual Saf* 2014;23:806-13). In yet another study, nurses reported that those with burnout were less likely to report near-miss events (*West J Nurs Res* 2008;30:560-77). Stressed and dissatisfied doctors have a higher probability of errors and suboptimal patient care (*Health Care Manage Rev* 2007;32:203-12). Exhausted workers may cause harm to patients or the team, and patient safety projects are less likely to be successful when HCWs are emotionally exhausted (*Crit Care* 2016;20:110). Others have pointed out the important contributions of high workload and lack of organizational support causing stress, burnout, and negative impacts on patient safety (*Rev Bras Enferm* 2017;70:1083-8; *Res Social Adm Pharm* 2010;6:293-306). In a 2019 meta-analysis, Garcia et al. (*Medicina (Kaunas)* 2019;55:553) provided evidence for an association between burnout and patient safety and that a positive safety culture is associated with an absence of burnout. The authors emphasized that strategies for patient safety improvement should include improved work hours, workload, and attention to professional exhaustion.

The COVID-19 pandemic is placing significant psychological stress on a health care workforce that has been struggling with burnout. Studies examining the psychological impact of pandemics on HCWs show a high prevalence of mental stress, anxiety, insomnia, and depression symptoms that may lead to long-term mental illness, including worsening of pre-existing conditions, burnout, and post-traumatic stress disorder (*Int J Public Health* 2020;65:1205-16). Sources of mental stress for HCWs during pandemics include fear of infection for self and for loved ones, especially when caring for infected patients, anxiety when faced with changing clinical roles and responsibilities, financial insecurities despite often increased work demands, anger regarding lack of personal protective equipment and training, grief for patients and loved ones lost to the virus, and social isolation from their loved ones and social support system (*JAMA* 2020;323:2133-4). The social isolation measures implemented to combat the pandemic are particularly harmful for the mental health of HCWs and the public and may prevent individuals from accessing social and professional support networks critical for maintaining individual mental health (*Lancet* 2020;395:912-20; *Psychiatry Res* 2020;293:113441). The deleterious effects of the COVID-19 pandemic on HCWs have been amplified by its unprecedented duration and compounded by inaccurate or inconsistent infection prevention guidelines from government officials.

The "worklife" model posits that burnout occurs when there is a mismatch or lack of "fit" between the worker and the workplace (*BMJ* 2019;366:l4774). There are six critical areas of worker-workplace fit: workload, control, reward, community, fairness, and values (*BMJ* 2019;366:l4774). Failure in one or more of these areas can lead to burnout, and the risk of burnout increases with each additional area of mismatch. The COVID-19 pandemic poses a significant threat to all six of the above critical areas for most, if not all, health care organizations. For most organizations, the six "worklife" areas were strained prior to the pandemic and are now in a critical state.

The COVID-19 pandemic is creating psychological, financial, and patient care challenges for the health care system. The psychological stress imposed by this pandemic may lead to a second pandemic: one of mental health crises among HCWs. The longer the pandemic lingers, the more imperative it will be that we consider the health and mental well-being of ourselves and colleagues and effects on patient safety outcomes. The well-being of our health care work force and the health care system is critical for maintaining safe patient care. We don't know the ultimate trajectory of this crisis, but we do know that we must recognize the challenges and respond in proactive ways. We must expect to see magnified cracks in an already stressed system. We must learn and adapt in ways that strengthen our purpose and our adaptability. We must promote alignment of government goals and expectations with the needs of patients and the workforce. We must approach burnout as a disease of the entire health care system. Burnout prevention and treatment efforts must begin at the systems and organizational levels while simultaneously supporting the individuals who are suffering. We must address the mental health of our health care workforce or we will face a pandemic that may compromise the entire system. ■

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