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CHEST

Learning Systems as a Path to Improve ICU Staff Wellbeing

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Editor's Note: The following editorial was intended to accompany an article in the June 2022 issue. We are publishing it this month to provide full access to our readers.

The COVID-19 pandemic has had a profound impact on the safe and effective delivery of critical care services. In many areas internationally, demands on critical care services have overwhelmed existing hospital capacity, resulting in dramatic changes to staffing models and care provision.[1] This distorted balance between effective service delivery and excessive demand has had a negative impact on patients, families, clinicians, and the health care system.[2] Unsurprisingly, these consequences have not been distributed equally; geographic areas with limited resources and hospitals residing in areas of socioeconomic deprivation have been affected disproportionately and, unfortunately, unrepresented in the literature.[3]

In *CHEST* (June 2022), Lobo et al[4] moved away from describing and quantifying burnout and clinician wellbeing in isolation and uniquely focused on its relationship with services demands and perceived care quality in Brazilian ICUs during the COVID-19 pandemic. With the use of a structured electronic survey issued through the Brazilian Intensive Care Medicine Association, data were collected from ICU multidisciplinary team members across the two Brazilian "surge" periods (June 2020 and March 2021).

FOR RELATED ARTICLE, SEE CHEST 2022; 161(6):1526-1542

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DOI: https://doi.org/10.1016/j.chest.2022.03.017

Across the two periods, 2,336 completed surveys were collected from 1,985 unique respondents. A greater number of respondents reported resource shortages during the second surge in 2021, with a lower rate of skilled staff available, that resulted in the need for non-intensive care trained nurses and medical staff to care for critically ill patients. These shortages were most notable in areas of rurality and economic deprivation. Respondents also described an association between reduced family input in end-of-life care decisions with resource shortages such as a lack of ICU beds, ventilators, and personal protective equipment. Burnout was described in two-thirds of participants and was associated with witnessing colleagues contracting COVID-19, alongside staff shortages.

Many of the findings of this study are not unique to the COVID-19 pandemic or indeed the ICU environment. Patient safety, clinician wellbeing, and patient experience have a long-standing relationship with staff wellbeing.[5] Recent data have also shown the relationship between emotional distress in clinicians and a lack of family presence when providing end-of-life care during the pandemic.[6] As such, this timely research adds to this ever-growing body of observational data that confirms that the critical care workforce often encounters deep moral injury in everyday practice.

Several professional organizations have produced guidelines around possible remedial actions that can be undertaken by health care systems to support clinicians. These recommendations include the provision of a safe working environment and, in the context of the pandemic, appropriate personal protection equipment. Other recommendations include the implementation of policies that focus on safe working patterns, alongside the enablement of policies that support clinician wellbeing.[7]

We suggest it may be time to go further and combine the "patient quality" and "staff burnout" agendas by (1) the

creation of effective learning systems at an organizational level and (2) the benchmarking of staff experience and wellbeing alongside other hospital-wide quality indicators.

Learning systems are structures in which evidence and culture work in parallel with the aim of facilitating continuous improvement and innovation.[8] Effective learning systems often use local health care data, ideally by those who provide the care, to adapt and produce rapid changes in processes, with the aim of enabling greater quality and safety. How then does the creation of learning system support clinician wellbeing and vice versa? By empowering clinicians with the skills, discretion, and tools to make real-time improvements to care, staff will have a sense of control over their professional practice and will be better equipped to use resources effectively. This has the potential to improve patient care (particularly in a dynamic situation where centralized control will often be late or not adapted to local variations in conditions), to give clinicians a sense of control over their working environment, and potentially to prevent burnout.

As demonstrated in this study by Lobo et al,[4] the implementation of learning systems may be even more important for low- and middle-income countries, where the provision of consistent and reliable care is a major challenge.[9] Research undertaken during the pandemic confirmed that increasing the availability of ICU beds and ventilators in isolation was not enough to improve outcomes in Brazil.[10] Conversely, evidence demonstrates that, by improving staffing patterns and allowing the delivery of care to be directed by local clinicians, systems become more efficient and significant reductions in mortality can be achieved in these settings.[11] This combination would suggest that effective learning systems may be an ideal approach to create the conditions necessary to improve quality and safety.

If we are right that there is a tridirectional and mutually causal relationship between care quality, resources, and staff mental health, then this has implications for how we monitor health systems. It implies that, as part of any effective health learning system, staff experience and wellbeing should be benchmarked in a similar fashion to other well-rehearsed quality indicators, such as hospital-acquired infections. Safe, effective, and sustainable innovation potentially can mitigate clinician burnout by creating shared ownership between organizations, policy makers, and staff members. A more engaged and healthy staff group may then have the creativity and motivation to solve problems, act with discretion, and accept the responsibility that high reliability organizations suggest should be delegated to frontline providers.

The Brazilian data are presented by the authors as a cautionary tale, and they should indeed be read that way. But there is an old political aphorism about never wasting a crisis. The Brazilian system is not the only one in crisis, nor are COVID-19 surges the only time health systems are in crisis. We ask this: Can this moment be used to rethink our system goals? By recognizing and placing a deliberate and equal emphasis on clinician wellbeing, resource use, and patient experience, we offer the hypothesis that we can create resilient health care systems that can flourish and adapt, even in times of high demand and crisis. Moreover, giving clinicians the tools that they need to provide excellent care should be considered a first-line response to staff burnout, in contrast to strategies that focus primarily on individual staff psychology and coping skills.

Acknowledgments

Funding/support: J. M. is funded by a Fellowship from The Institute of Healthcare Improvement Studies (University of Cambridge) PD-2019-02-16.

Financial/nonfinancial disclosures: None declared.

Role of sponsors: The sponsor had no role in the design of the study, the collection and analysis of the data, or the preparation of the manuscript.

Disclaimer: This work does not necessarily represent the views of the U.S. Government or Department of Veterans Affairs.

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