



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Implications of the COVID-19 Pandemic for the Well-Being of the ICU Workforce Considerations for the ICU Interprofessional Team

Michelle E. Kho, PhD

Julie C. Reid, PhD

Hamilton, ON, Canada



To examine the well-being of frontline intensivists following hospitals' emergency response to the COVID-19 pandemic, Vranas and colleagues¹ report a multicenter qualitative study in this issue of *CHEST*. The research team conducted semistructured interviews between August and November 2020 with 33 intensivists from 13 hospitals (seven academic, six community) in six states that experienced surges early in the pandemic. The "four S" framework of emergency preparedness (space, staff, stuff, and system) informed the interview guides. The authors identified four themes of physician well-being: moral distress, burnout symptoms, long-term impacts of the pandemic, and interventions to address physician well-being. This study has many strengths, including a timely, important, and relevant global issue, use of qualitative research methods, transparent reporting, and inclusion of tertiary and community sites. Of note, the authors completed this important work during the pandemic and amidst clinical duties, and no doubt personal impacts of the pandemic. Below, we highlight three concepts for further reflection:

FOR RELATED ARTICLE, SEE PAGE 331

AFFILIATIONS: From the School of Rehabilitation Science, Faculty of Health Sciences, McMaster University, and the Mohawk-McMaster Institute for Applied Health Sciences.

CORRESPONDENCE TO: Michelle E. Kho, PhD; email: khome@mcmaster.ca

Copyright © 2022 American College of Chest Physicians. Published by Elsevier Inc. All rights reserved.

DOI: <https://doi.org/10.1016/j.chest.2022.06.009>

visitation policies, burnout, and considerations for the well-being of the interprofessional critical care team.

Visitation Policies

The authors reported that restrictive visitor policies contributed to moral distress affecting patients, families, and staff. Consequences of the restrictive policies affected patient outcomes (eg, delirium), impaired communication (eg, patient's condition across their ICU stay, end-of-life care), and provoked staff actions (eg, policy violations). Over the course of the pandemic, visitor policies varied by institution, changed over time, and required individualized approaches to implementation across the continuum of a patient's stay.^{2,3} Some institutions allowed exceptions at end of life, others did not. Whereas virtual visits facilitated communication for some, these technological adaptations magnified disparities for those with physical or cognitive impairments and those with limited internet or electronic device access. Studies of visitation policies, supporting evidence, and consequences in different settings quickly emerged during the pandemic.⁴ The pandemic reinforced the critical role of patients' loved ones as essential partners in health care.

Burnout

Burnout is recognized by the World Health Organization as an occupational phenomenon resulting from chronic and cumulative workplace stress.⁵ Three components of burnout are emotional exhaustion, depersonalization, and decreased sense of accomplishment at work.⁶ Although it is important to understand what burnout is, it is equally important to understand what burnout is not. First, burnout is not complaining, an individual frailty, or workers who are not resilient enough. Occupational burnout is not an individual problem, it is an organizational one.^{7,8} Burnout is not the same as a typical reaction to usual stress, nor does it equate to depression; it cannot be solved with self-care alone.⁷ Finally, burnout is not a binary outcome; it exists on a spectrum.⁷

Some contributing factors to burnout during the pandemic are obvious, such as exposure to pathogens, shift overload, and reduced autonomy,⁹ but others also warrant consideration. During the pandemic, health care workers

TABLE 1] Number of Health Care Workers Employed in Disciplines That Commonly Provide Care to Critically Ill Patients^a

Health Care Profession ¹²	Number ¹²	Ratio of Physicians to Other Health Care Professionals ¹¹	Ratio of Nurses to Other Health Care Professionals ¹²
Respiratory therapists	133,410	7.0	22.8
Physical therapists	225,350	4.2	13.5
Occupational therapists	127,830	7.3	23.8
Speech-language pathologists	147,470	6.4	20.7
Pharmacists	312,550	3.0	9.8
Physician assistants	132,940	7.1	22.9
Social workers	173,860	5.4	17.5
Dietitians and nutritionists	66,690	14.1	45.7
Total: 1,320,100		0.7^b	2.3^b

^aEach row represents a health care profession. The ratio of physicians and nurses to each profession was based on 938,966 active physicians¹¹ and 3,047,530 registered nurses.¹² To interpret this table, for example, there are seven physicians for every respiratory therapist in the United States.

^bRelative to the total number of other health care professionals (1,320,100).

experienced staff redeployment, rapidly changing policies and procedures, scarcity of personal protective equipment and other supplies necessary to do our jobs, moral distress, and propagation of mis- and disinformation. We felt a sense of betrayal when people in the communities outside the hospital seemed like they were no longer doing their part to limit the spread of COVID-19. Finally, the health care heroes' narrative set a dangerous precedent that we are superhuman. And although we may indeed be super, we are still human, and it is important to remember that everything that has affected us as health care providers has affected us as people too.

The consequences of burnout are uniformly detrimental with far-reaching impacts on health systems, individual providers, and patients.¹⁰ And it is too prevalent to ignore. Prepandemic research estimated that 20% to 40% of health care providers experienced severe burnout; since the pandemic, those estimates are upward of 70%.¹⁰ Existing burnout research, however, focuses mostly on physicians and nurses, and we must also consider the other health care providers, such as respiratory therapists, physical therapists, and pharmacists, delivering care in the ICU.

The Interprofessional Critical Care Team

Together, physicians and nurses far outnumber other health care team members. In the United States, there were about 939,000 active physicians in 2019¹¹ and 3 million registered nurses in 2021.¹² In contrast, some of

the common team members who also contribute to ICU care constituted about 1.3 million people,¹² or 43% of the combined physician and nursing workforce. **Table 1** demonstrates some of the other critical care health care workers and the numbers by profession. We also contribute vitally to the care of our critically ill patients. And as we work shoulder to shoulder with our physician and nursing colleagues, the visitation policies and burnout also affect us. We must consider the well-being of the wider health care workforce as we work through the pandemic and beyond.

In conclusion, this work by Vranas and colleagues highlights the imperative to reflect on the impact of the pandemic on the personal and professional lives of all our critical care colleagues. This important study prompts wider consideration of the well-being of our diverse interprofessional critical care team.

Acknowledgments

Financial/nonfinancial disclosures: The authors have reported to *CHEST* the following: M. E. K. is funded by a Canada Research Chair in Critical Care Rehabilitation and Knowledge Translation. J. C. R. is funded by a Canadian Institutes of Health Research Health System Impact Fellowship. M. E. K. has coauthored papers on restricted visitation policies. The authors have no other financial conflicts to disclose.

References

1. Vranas KC, Golden SE, Nugent S, et al. The influence of the COVID-19 pandemic on intensivists' well-being: a qualitative study. *Chest*. 2022;162(2):331-345.
2. Fiest KM, Krewulak KD, Hiploylee C, et al. An environmental scan of visitation policies in Canadian intensive care units during the first wave of the COVID-19 pandemic. *Can J Anaesth*. 2021;68(10):1474-1484.

3. Valley TS, Schutz A, Nagle MT, et al. Changes to visitation policies and communication practices in Michigan ICUs during the COVID-19 pandemic. *Am J Respir Crit Care Med.* 2020;202(6):883-885.
4. Hugelius K, Harada N, Marutani M. Consequences of visiting restrictions during the COVID-19 pandemic: an integrative review. *Int J Nurs Stud.* 2021;121:104000.
5. World Health Organization. Burn-Out an “Occupational Phenomenon”: International Classification of Diseases. 2019. Accessed May 31, 2022. https://www.who.int/mental_health/evidence/burn-out/en/
6. Maslach C, Leiter MP. Understanding the burnout experience: recent research and its implications for psychiatry. *World Psychiatry.* 2016;15(2):103-111.
7. Summers RF. The elephant in the room: what burnout is and what it is not. *Am J Psychiatry.* 2020;177(10):898-899.
8. Moss J. Burnout Is About Your Workplace, Not Your People. 2019. Accessed June 14, 2022. <https://hbr.org/2019/12/burnout-is-about-your-workplace-not-your-people>
9. Leo CG, Sabina S, Tumolo MR, et al. Burnout among healthcare workers in the COVID 19 era: a review of the existing literature. *Front Public Health.* 2021;9:750529.
10. Maunder RG, Heeneey ND, Strudwick G, et al; Ontario COVID-19 Science Advisory Table and Mental Health Working Group. Burnout in Hospital-Based Healthcare Workers During COVID-19. 2021. Accessed May 31, 2022. <https://covid19-sciencetable.ca/sciencebrief/burnout-in-hospital-based-healthcare-workers-during-covid-19/>
11. Association of American Medical Colleges. Physician Specialty Data Report: Active Physicians With a U.S. Doctor of Medicine (U.S. MD) Degree by Specialty, 2019. 2020. Accessed May 24, 2022. <https://www.aamc.org/data-reports/workforce/interactive-data/active-physicians-us-doctor-medicine-us-md-degree-specialty-2019>
12. U.S. Bureau of Labor Statistics. Occupational Employment and Wage Statistics: May 2021 National Occupational Employment and Wage Estimates United States. 2021. Accessed May 24, 2022. https://www.bls.gov/oes/current/oes_nat.htm#29-0000