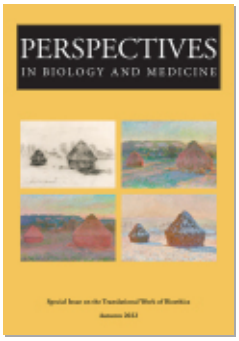
Protecting Practitioners in Stressed Systems: Translational Bioethics and the COVID-19 Pandemic



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Protecting Practitioners in Stressed Systems

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ABSTRACT COVID-19 revealed health-care systems in crisis. Intersecting crises of stress, overwork, and poor working conditions have led to workforce strain, understaffing, and high rates of job turnover. Bioethics researchers have responded to these conditions by investigating the ethical challenges of pandemic response for individuals, institutions, and health systems. This essay draws on pandemic findings to explore how empirical bioethics can inform post-pandemic translational bioethics. Borrowing from the concept of translational science in medicine, this essay proposes that translational bioethics should communicate knowledge about ethical challenges in health-care work to support health systems change. The authors draw from their experience with the Study to Examine Physicians' Pandemic Stress (STEPPS), an interdisciplinary research project that investigates physicians' experiences at the front lines of the COVID-19 pandemic. Using STEPPS as an example of empirical bioethics with potential for translation, the authors review their research and discuss the ongoing process for translating

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their findings, focusing on how bioethics research and practice can contribute to supporting the health-care workforce.

COVID-19 revealed health-care systems in crisis. Intersecting occupational crises of stress, overwork, and poor working conditions have led to workforce strain, understaffing, and high rates of job turnover (Butler et al. 2020, 2021; Martinez et al. 2022; Prasad et al. 2021; Price, Seligson, and Hollister 2021; Rao et al. 2021; Sheather and Slattery 2021). Bioethicists responded by helping to develop guidance for patient care under nonstandard conditions, contributing to public health education in their communities, and providing support for a depleted, often demoralized workforce. Bioethics researchers have also responded by investigating the ethical challenges of pandemic response for individuals, institutions, and health systems, asking what systems owe to their practitioners, under crisis as well as under usual conditions; what we can learn from the experiences of practitioners during the pandemic; and how empirical bioethics can translate pandemic findings and lessons to inform feasible and lasting change in health systems.

This essay draws on pandemic findings to explore the potential of empirical bioethics—the use of empirical methods to understand normative challenges—to inform post-pandemic translational bioethics. We borrow from the concept of translational science in medicine, which represents the idea of translating scientific findings from "bench" to "bedside"—that is, from the laboratory to patient care. Here, we propose that translational bioethics should communicate knowledge about ethical challenges in health-care work beyond bioethics audiences, such as clinical practitioners, ethics educators, and scholars, to other clinical, organizational, and health policy audiences, with the goal of supporting change in health systems. We argue that empirical bioethics has a special role to play in translational bioethics by leveraging the strengths of "thick description" and social theory to provide empirical weight and nuance to normative recommendations. With its iterative processes of description, analysis, and integration, empirical bioethics can also reframe existing debates and direct attention to new areas of inquiry (Buchbinder 2018; Buchbinder and De Vries 2020). As researchers situated in health-care systems, studying problems encountered in health-care work, we want our findings to be useful, to help practitioners flourish under difficult conditions. To do this, part of our translational task has been to study the system itself, in order to learn who else was working on some aspect of our problem.

We draw from our experience and lessons learned with the Study to Examine Physicians' Pandemic Stress (STEPPS 2022), an interdisciplinary research project that investigates physicians' experiences working at the front lines of the COVID-19 pandemic. Using STEPPS as an example of empirical bioethics with potential for translation, we briefly review our primary research findings and discuss our ongoing process for translating our findings for application by selected audiences.

Research Background

Our STEPPS collaboration was conceived in spring 2020, as social scientists and bioethicists began to study how the surging pandemic was affecting physicians' emotional and moral responses to their work. Our premise was that the pandemic constituted a crisis not only for public health, but for health-care worker well-being, understood as the capacity to find meaning and purpose in one's work and to feel supported in doing good work. We wanted to know how an already stressed workforce was being affected by new challenges and responsibilities during the pandemic.

STEPPS includes two distinct yet related studies. The first study, funded by the Greenwall Foundation, aims to identify sources of moral stress in physicians and offer recommendations for improvements targeting upstream systems change. Here, we draw on philosopher Alan Cribb's (2011) concept of moral stress in health-care work; Cribb has also contributed to the articulation of empirical bioethics. Cribb maintains that work in complex systems is inherently stressful, and that stress in health-care work has a moral component because of the encounter with human suffering. For Cribb, then, moral stress is built into health-care work. This view of moral stress as a chronic condition for health-care practitioners is more wide-ranging and less situation-driven than classic accounts of acute moral distress in health care (Jameton 1984), which tend to involve strong perceptions of wrongness and powerlessness.

The second study, funded by the National Institute for Occupational Safety and Health (NIOSH), focuses on physicians' occupational well-being during the pandemic and aims to generate evidence-based recommendations to protect physicians' occupational health and well-being. We chose to focus on physicians for reasons of scope: we anticipated that it would be difficult to meaningfully compare the experiences of physicians to those of other health-care workers within a two-year research project due to differences in professional cultures and work routines.

We conceptualized STEPPS in critical dialogue with research, interventions, and media coverage concerning the rising prevalence of burnout in clinical settings. The World Health Organization (WHO) defines burnout as an occupational syndrome defined by fatigue or exhaustion, feelings of negativity toward one's job, and a reduced sense of professional efficacy (WHO 2019). Along with health-care leaders (Dzau, Kirch, and Nasca 2020), we were deeply concerned about the problem of burnout in health care. However, an underlying premise of STEPPS is that the dominant approach in the literature on burnout is ethically problematic.

This literature frames clinician burnout primarily as a problem to be solved by affected individuals, through interventions such as deep breathing, yoga, and meditation (Kalani et al. 2018). This "heal thyself" expectation obscures the complex structural factors that shape burnout and associated phenomena (Buchbinder

and Jenkins 2022). STEPPS acknowledges that burnout is a pressing problem for contemporary health systems, that it is multifactorial, and that managing burnout caused in part by the conditions of work in health-care systems should not be a problem that workers are expected to solve for themselves.

Consequently, our reasons for focusing on moral stress and occupational well-being were twofold. First, we aimed to draw attention to stressors and potential solutions produced by the system itself, beyond the individual clinician. Second, we aimed to acknowledge a wider range of experiences than those captured by the relatively narrow definition of and responses to burnout we found in the literature.

Our approach across the two studies was guided by a socio-ecological model adapted from the model proposed by a National Academies of Medicine (NAM) consensus study on clinician well-being (NAM 2019). We propose that front-line care delivery, health-care organization, and the external environment together influence each other and the work systems factors that shape professional well-being. We adopted a comparative design, recruiting physicians from four cities (New York City, New Orleans, Los Angeles, and Miami), four specialties (emergency medicine, hospital medicine, critical care pulmonology, and palliative care), and various hospital types (academic, community, and public) to investigate how differences at multiple levels of analysis shaped physicians' experiences and responses to the pandemic. Altogether, we have interviewed 145 physicians from 44 primary hospital worksites.

What We Learned from Physicians

Findings from our comparative project revealed important differences in physicians' experiences across institutions and cities. Participants reported that a stressed work environment compounds an individual's experience of stress; when units or entire institutions adapted smoothly to changing working conditions, practitioners felt more supported and less stressed. Preexisting disparities between hospitals exacerbated resource constraints and affected hospitals' ability to weather the crisis, with consequences for patient outcomes. These consequences had implications for physicians' moral stress and occupational well-being. Physicians from public hospitals decried the disproportionate, cascading impacts of COVID-19 on low-income and racial and ethnic minority communities served by the most under-resourced hospitals, as these hospitals were flooded with patients during surges. Many reported that resource scarcity early in the pandemic destabilized their sense of professional competence and self-efficacy—that is, the confidence that one is able to do their work effectively. In turn, these constraints compromised their professional integrity because they knew they were providing substandard care.

One important STEPPS finding is that physicians' stress was intensified by factors outside of the immediate health-care environment. Participants in New

York and New Orleans, which were among the earliest cities in the US to experience surge conditions, spoke about how the weak federal response to the initial crisis left them feeling abandoned. Some physicians in New Orleans and Miami, who were interviewed after vaccines had become widely available, talked about how demoralizing it was to take care of patients who mistrusted science and questioned the reality of the very disease that practitioners were working tirelessly to treat. These findings highlight how societal and local contexts matter for physicians' experiences, with effects cascading down to the individual level.

Participants' reflections on their institutions' responses to the pandemic revealed that they wanted frequent, transparent communications from institutional leadership and to know that their frontline concerns were being heard, not dismissed. During the early days of the pandemic, participants in some large systems perceived a disconnect between the public messaging of hospital leaders and the harsh realities of work in the COVID wards. They resented the norms of corporate culture that prevented hospital leaders from demonstrating understanding and support for the workforce.

The picture painted by STEPPS participants was not all negative, however. Many participants found meaning in their professional identities during a time when their skills, knowledge, and judgment were urgently needed. In general, physicians who described more positive workplace cultures and good relations with colleagues were happier and more fulfilled. Clichéd depictions of widespread burnout and demoralization may fail to capture how some physicians and other practitioners experienced a sense of purpose even under highly stressed working conditions and amid large numbers of patient deaths. Participants also reported satisfaction from the creative experiences of clinical problem-solving and devising workarounds. These pragmatic aspects of pandemic response can yield insights into ways to improve patient care and physician well-being going forward.

Translating Findings for Real-World Impact

What do we do with these findings? It has been clear to us from the beginning of our research that if empirical knowledge from physicians is to be useful to physicians, we must look beyond traditional bioethics audiences and outlets for scholarly products. Our research objectives for both of our STEPPS studies include translating our findings into recommendations for actionable change with the help of an interdisciplinary expert advisory board that includes frontline practitioners. In advance of these recommendations, we offer some preliminary thoughts about translational bioethics after COVID-19, focusing on how bioethics research and practice can contribute to supporting the health-care workforce.

Think in terms of systems. Perspectives from 145 physicians working in frontline specialties during the COVID-19 pandemic reinforce that changing individual-level outcomes in health care, whether for patients or for practitioners, re-

quires systems thinking. Bioethics scholars have long contributed to the analysis of health-care systems as complex systems. Properties of complex systems include continuous adaptation to change, the emergence of new properties (picture how shift changes cause new teams to emerge in the care of the same patient), and built-in resilience, understood as the capacity of the system itself to withstand shocks and recover from failures (Berlinger 2016). Complex systems run even when they are broken; this is both a strength and a hazard. Continuous quality improvement in health care, including the ethical dimensions of improving quality, is premised on the complexity of health-care systems, which cannot be interrupted for repairs (Cribb, Mitchell, and Entwistle 2020; Faden et al. 2013; Jennings et al. 2007; Lynn et al. 2007). Improving clinicians' occupational health and well-being given these conditions means offering ways to relieve the individual's feelings of stress—and also working to reduced sources of stress produced by the very systems in which clinicians are embedded. Our conceptual model for STEPPS consists of a series of nested, concentric rings in which the individual physician is surrounded by multiple layers representing institutional-level factors (such as hospital resources), professional-level factors (cultural norms, practices, and knowledge), and societal-level factors (state and local public health response); each of these factors affects the individual's experience of stress or well-being.

Using the systems lens requires critical attention to dominant approaches to studying and responding to clinician burnout, which, as noted, focus almost exclusively on the individual. From a systems perspective, outcomes such as clinician burnout should not be understood purely in terms of individual psychology—or as a failure to be "resilient"—but rather as dynamic interactions between individuals and their work environments, which may include multiple nested layers (for example, team, unit, division, department, institution, health system). Offering only downstream individual-level interventions is a partial fix and can be unjust, by suggesting that nothing can be done upstream and that workers must defend themselves as best they can.

Partner with researchers who study systems and their effects on peoples. Social scientists who study health-care work environments and occupational health scientists who study the health effects of these environments are key partners for bioethics researchers, bringing knowledge of relevant social scientific methods and of existing approaches to workplace health and safety. In studying physicians under pandemic response conditions, we have found productive intellectual synergies between bioethical accounts of moral stress and moral distress and models of well-being from occupational health (Blake et al. 2020; Delgado et al. 2021; Donkers et al. 2021; McLellan 2016; Sorensen et al. 2016; Tamers et al. 2019). NIOSH, a STEPPS sponsor, is an institute of the Centers for Disease Control and Prevention (CDC) that aims to develop new knowledge regarding occupational safety and health and to translate that knowledge into practice (NIOSH 2018). Yet the language and perspectives of occupational health are uncommon in bioethics research and practice (and vice versa), even though concepts such as moral

distress and moral injury, as ways to describe emotions arising from work conditions, are likely to be familiar to bioethicists who work in health-care settings. Including an occupational health scientist on our research team has helped to ensure that our analysis is engaged with concepts such as "total worker health" that offers a holistic, systems-oriented perspective on worker well-being (IOM 2014).

As noted, STEPPS also includes an interdisciplinary expert advisory board that contains experts in physician wellness, social epidemiology, infectious diseases, workplace stress, nursing, medical journalism, clinical ethics, health services research, implementation science, stakeholder engagement, and quality improvement, in addition to multiple medical and nursing specialties. Before data collection began, we met with the advisory board to solicit their perspectives on the pandemic and obtain feedback on our recruitment strategy and domains of interview questions. Following data collection, we will leverage their expertise to develop evidence-based recommendations to improve physicians' occupational health and well-being.

Identify your audiences and find out how they learn. Engaging stakeholders early in research can help to identify forums for sharing the eventual practical outputs of empirical bioethics work. Translational bioethics must think well beyond scholarly conferences and journals, and ask for whom we are translating our work, and into what languages. The evolving translational plan for STEPPS findings includes presentations at forums and conferences for chief wellness officers and at meetings of occupational health scientists and program staff. Within health-care systems, these audiences are the most likely change agents for our recommendations. General ideas about "informing policy" or "changing systems" must be refined, again and again, so that recommendations connect with and are persuasive to the people who have the authority to act on them.

Conclusion

Doing bioethics in 2022 requires systems thinking and multidisciplinary collaboration to address the multidimensional and intersectional problems in our contemporary world. Empirical bioethics is well positioned to take on this challenge: its strength has always been its capacity to mobilize social theory and data to reframe intractable public debates. What distinguishes the form of translational bioethics we describe here from traditional empirical bioethics is a commitment to practical action that is built into the research plan. This theory of social change anticipates the application of findings by specific change agents.

Translational bioethics requires us to think deeply and more strategically about those activities that are often relegated in grant proposals to a truncated "dissemination" section. The point of such research is not just to generate knowledge for other bioethicists, practitioners, and policymakers to take up in future endeavors, but rather to work actively to initiate change as part of the research itself. In this sense, "making a difference" (the name of the Greenwall Foundation's grant

mechanism) is baked into the research process—and, critically, into its funding mechanisms. Developing methods and processes for these translational activities will ensure bioethics' public relevance in grappling with the urgent challenges of the post-pandemic era.

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