NOTES FROM THE ASSOCIATION OF
MEDICAL SCHOOL PEDIATRIC DEPARTMENT CHAIRS, INC.

Professional Obligations of Clinicians and Institutions in Pediatric Care Settings during a Public Health Crisis: A Review

Naomi T. Laventhal, MD, MA[1], Ratna B. Basak, MD, FRCPCH[2], Mary Lynn Dell, MD, DMin[3], Nanette Elster, JD, MPH[4], Gina Geis, MD, MS[5], Robert C. Macauley, MD[6], Mark R. Mercurio, MD, MA[7], Douglas J. Opel, MD, MPH[8], David I. Shalowitz, MD, MSHP[9], Mindy B. Statter, MD, MBE[10], and Douglas S. Diekema, MD, MPH[8]

Since March of 2020, pediatric clinicians have faced unprecedented disruption in the care of children due to the public health crisis caused by the coronavirus disease 2019 (COVID-19) pandemic, previously named 2019 novel coronavirus and abbreviated 2019-nCoV.[1] Although serious illness after infection in children is rare, limitations in testing capability, unique symptomatology, and rapidly changing public health conditions have constrained our ability to fully grasp the direct impact of COVID-19 on child health. Both healthy and chronically ill children have been impacted in innumerable ways, including recent identification of multisystem inflammatory syndrome in children after infection in some cases.[2-7] As COVID-19 has swept across the US, preventive and problem-oriented care for children has been profoundly disrupted, requiring that thousands of appointments be cancelled or converted to virtual visits.[8,9] The tidal wave of critically ill adults has strained hospitals and health systems, including those that care for children, potentially placing children and adults in competition for the same resources. Although the pandemic has thus far generally not required children and adults to be placed in direct competition for resources, institutions have taken significant measures to develop surge strategies and rationing algorithms should the demand exceed the supply.

The pandemic has raised a multitude of ethical issues. In the early stages of the pandemic, the most urgent questions surrounded scarce resource allocation, particularly amidst the fear that there would not be enough ventilators, ICU beds, trained professionals, and medications, and concern by many stakeholder groups that age, disability and other factors would bring out bias and discrimination inherent in triage protocols.[10-16] The question of how the medical needs of children should be addressed in a setting of resource scarcity is addressed by this author group in a separate publication.[17] The abrupt conversion to crisis standards of care, in which usual approaches to and standards of clinical care must be altered in the face of catastrophe, has been largely unfamiliar to many practicing pediatricians at the time that COVID-19 reached the U.S.; consequently, many these changes were likely disorienting and stressful, and introduced unfamiliar moral dilemmas. In this review, we provide an ethical framework for consideration of personal accountability to the profession, basic expectations for institutions to support pediatric healthcare workers, and strategies to prevent and mitigate the potentially harmful psychological toll of a public health disaster on healthcare professionals.[18]

COVID-19	Coronavirus disease 2019
PPE	Personal protective equipment
SARS	Severe acute respiratory distress syndrome

Professional Obligations to Care for Patients during a Public Health Crisis

In the last 25 years, infectious disease epidemics—including HIV, SARS, and Ebola—have provoked repeated reflection regarding clinicians' obligations to treat the sick despite a heightened risk to their own personal health.[19-21] These reflections have revealed several areas of common ground. One area of consensus is that clinicians have a duty to treat and should not abandon their patients. As stated in the American Medical Association Code of Ethics, there is an "imperative to care for patients and to alleviate suffering" and "place patients' welfare above the physician's own self-interest or obligations to others."[22] This imperative is rooted in the specialized skills and knowledge clinicians have acquired to heal and provide relief from the burdens of disease. It also helps to preserve the trust that is fundamental to a relationship in which the patient is in a position of vulnerability.

This duty to treat, however, is not unlimited. It is now widely appreciated that clinicians' duty to treat is tempered by "the rights of providers to receive appropriate training and resources to protect themselves."[21] In the context of the COVID-19 pandemic, the supply of adequate personal protective equipment (PPE) has been limited at many institutions, and infection among insufficiently protected healthcare workers has been observed in this pandemic and previous public health crises.[23-30] There is no universally

From the [1]University of Michigan Medical School, Ann Arbor, Michigan; [2]Brookdale University Hospital Medical Center, Brooklyn, New York; [3]The Ohio State University College of Medicine, Columbus, Ohio; [4]Loyola University Stritch School of Medicine, Chicago, Illinois; [5]Albany Medical College, Albany, New York; [6]Oregon Health and Science University, Portland, Oregon; [7]Yale University School of Medicine, New Haven, Connecticut; [8]University of Washington School of Medicine, Seattle, Washington; [9]Wake Forest School of Medicine, Winston-Salem, North Carolina; and [10]Children's Hospital at Montefiore, Bronx, New York

M.D. has publishing contracts with American Psychiatric Publishing and Oxford University Press. The other authors declare no conflicts of interest.

https://doi.org/10.1016/j.jpeds.2020.06.054

applicable guidance for how clinicians should balance their obligations to patient care and their own interest in personal safety.

In the "Physicians' Responsibilities in Disaster Response & Preparedness," the American Medical Association roots the balance of personal safety and obligation to serve in the scope of professional responsibility: "when providing care in a disaster with its inherent dangers, physicians also have an obligation to evaluate the risks of providing care to individual patients vs the need to be available to provide care in the future."[31] Consequently, the decision to provide care to high-risk patients without adequate PPE should be individualized by healthcare providers after careful consideration of their own moral priorities and competing obligations, as well as the proportional risks to the clinician and benefit for the patient.[25,30,32] At a minimum, institutions should have a clearly defined process for clinicians seeking to be excused from their duties due to inadequate PPE, and avoid placing employees seeking redress at risk for discipline or termination if the standard of safe PPE has not been met.[33]

Even with appropriate training and resources, however, additional precautions for healthcare workers in particularly high-risk groups might be justifiable. These measures may include exempting certain workers from caring for COVID-positive patients or from direct patient care altogether.[34,35] Groups of clinicians that may be exempted include clinicians who are 65 years or older, immunocompromised, or with significant comorbidities.[36] As evidence improves regarding the magnitude and nature of the risks to clinicians in these groups, the appropriateness of these exemptions may change. In addition, if patient care demands surge and the pool of available clinicians dwindles owing to exemptions and illness, additional factors may be added to discussions about work force determinations. Many states have legislation that gives state leaders broad authority to alter licensure requirements, allow retired healthcare professionals to return to active duty, and allow physicians to practice outside their specialty.[37,38]

Considering how to balance clinicians' competing obligations amid a pandemic like COVID-19 is also important. Clinicians have an ethical obligation to also care for their own families and protect them from harm. Notably, this obligation is interconnected with the duty to treat, because assumption of personal risk by fulfilling one's duty to treat increases the likelihood of acquiring and transmitting disease to family members when returning home.

Balancing family and professional obligations during this pandemic in part depends on a personal assessment of the acceptability of risks. Clinicians may find themselves asking questions like, "When would I decide to isolate myself from my family in order to protect them? When the risk of my transmitting the disease to them exceeds 1%, 5%, or 10%? How long would I tolerate such a separation?"[20] Yet, there may be ways to minimize personal risks, avoid adding significant burden to colleagues, and still fulfill family obligations and the duty to treat. For instance, high-risk clinicians may be able to transition to conducting health supervision visits (instead of visits for acute care) or only doing telemedicine.

Healthcare institutions and the state also have a duty to help clinicians manage competing obligations. Because clinicians are critical to saving lives during a pandemic, healthcare institutions and the state have a reciprocal obligation to ensure clinician well-being.[39] This obligation may require institutions and the state to assist clinicians in managing competing family obligations, including access to childcare, the provision of adequate PPE, and other measures that minimize the likelihood of acquiring COVID-19 in the workplace.[40,41]

Clinicians may experience moral distress and professional frustration when asked to care for patients who have chosen to disregard public health advisories designed to decrease the risk of viral transmission (ignoring "stay-at-home" orders, refusing to wear masks in public, gathering in groups). They may question whether their obligations to care for sick patients with COVID-19 infection extend to those who did not take steps to protect themselves and others, particularly in the face of highly publicized examples of large gatherings without appropriate distancing or mask use.[42,43] Although some have argued that a patient's conscious choice to jeopardize their health might be an appropriate reason to exclude them from some scarce resources on moral (rather than prognostic) grounds, retaliatory exclusion from care on the basis of unwise health decisions and behaviors is both morally and practically problematic.[44] Among other issues, identifying those who made informed and voluntary choices to ignore public health orders and advice among those presenting with COVID-19 infection is nearly impossible and not within the realm of the professional's role. Rather, the focus should be on supporting clinicians who experience distress.

Redeployment of Pediatricians

As crisis standards of care are implemented, pediatricians may also be asked to take on responsibilities and clinical care that would otherwise be considered outside their scope of practice. Pediatricians, for example, have been among those asked to treat adult COVID-19 patients to address shortages of adult medical providers in some hospitals.[45-48] Laws and regulations in some states are being adapted to allow this redeployment.[49] Additionally, some states prospectively granted immunity from civil liability for healthcare workers if they are providing care to someone with COVID-19 who is injured or dies so long as they have not acted with gross negligence.[50]

From a utilitarian perspective, such a reassignment of duties may be ethical in that it supports the greatest good for the greatest number. This is only the case, however, if the physician is able to provide more benefit than harm. Therefore, redeployment should be done carefully. Physicians with recent experience treating adults, albeit in different clinical settings (adult specialists), should be prioritized over

pediatricians in redeployment to adult care settings. In addition, redeployment of pediatricians should occur in a tiered manner, first being redeployed to treating adults up to age 25 years old, given the relative similarity of this group of patients to the patients 18-21 years of age that pediatricians are accustomed to treating. Only if no other option remains should it become appropriate to redeploy pediatricians to treating older adults.

An additional factor to consider in redeployment calculations is whether taking a physician away from their usual duties will create gaps in care. A careful assessment of needs and resources must thus be undertaken to ensure that the health of children will not suffer as a result. To ensure that the needs of all patients are met, clinical staff should be involved in the process of planning and implementing crisis protocols.

Clinician Workforce Well-being and Safety

The overarching ethical imperative of healthcare institutions during a pandemic is to provide the safest possible environment and resources for patient care. This duty applies to many types of institutions including, but not limited to, hospitals, outpatient facilities, organizations engaged in medical education, other organizations with administrative oversight of medical care, and comprehensive medical centers providing medical services and education across the full continuum of care. Institutional obligations can be divided into the provision and maintenance of facilities, space, equipment, perishable supplies, policies, and accreditations required for patient care; and services, policies, and administrative leadership attentive and responsive to the professional and personal well-being of clinicians. Guaranteeing adequate space, ensuring an adequate supply of necessary equipment, and providing and maintaining safe conditions in the medical workplace fosters the best possible patient care and minimizes clinician stress and anxiety. Institutions have the obligation to continuously review and revise policies and procedures to improve patient care and system operations, even in the midst of pandemic conditions. Institutional obligations to healthcare providers include delivery of thorough, relevant, and concise information to healthcare providers in a timely matter. This includes basic medical information about COVID-19 and its management, and policy and procedural updates specific to the practice sites; provision of adequate supplies of PPE, laboratory testing supplies, bedside medical equipment, and anticipated medications; plans for alternative workload assignments, schedules, flexing of job descriptions, and appropriate training if indicated or beneficial to the organization's missions; good faith efforts to adhere to and remain up-to-date with recommendations by the Centers for Disease Control and Prevention, and compliance with US Department of Labor Occupational Health and Safety Administration regulations, in addition to state and local ordinances.[51-55]

In addition to stable work conditions and provision of sufficient resources to fulfill obligations to patient care, institutions have ethical obligations to safeguard the physical and mental health and well-being of all workers. Such attention to well-being minimizes stress, moral injury, and compassion fatigue, thereby supporting and enhancing patient care in pandemics and other disasters. Institutions should monitor and support clinician needs in the following areas: adequate opportunities to maintain hydration, nourishment, and personal hygiene; strategies to identify and mitigate fatigue; maintain and honor contractual obligations regarding salary and benefits; and provide support for staff in their roles as parents, children of older parents, and in other relationships vital to well-being. Such support may include regular breaks for communications during work shifts, maintenance of benefits for dependents, access to trained counselors and support staff; providing for and supporting debriefing sessions and other opportunities to discuss experiences with peers and colleagues, independent of professional supervisory or mental health counseling opportunities; provision of mental health support services through regular Employee Assistance Program channels, or other added services tailored especially for clinician mental health needs; provision of spiritual or religious support; and training on compassionate, empathic leadership skills for managers and supervisors so they can anticipate and address the potential needs of employees during pandemics and other disasters.[35,56,57]

Psychological and Moral Identities of Clinicians during a Public Health Crisis

The term *moral distress*, introduced in 1984, refers to clinicians' experiences of powerlessness or helplessness to "do the right thing" or bring about good treatment outcomes despite believing they know the proper course of action.[58] The concept of *moral injury* has evolved into an umbrella term to capture not just single or multiple events of moral distress, but also qualities of clinician post-traumatic stress disorder, and lasting assaults to the psychological, physical, spiritual, and culturally influenced aspects of providers' professional, personal, and moral identities.[59,60]

The substantial literature on moral distress in pediatric intensive care units and neonatal intensive care units is potentially relevant to COVID-19. Studies of distress include a preponderance of nurses and allied health professionals who typically reported frustration, powerlessness, guilt, anguish, sleep disturbance, sadness, and isolation when they believed the proper treatment decisions were not implemented.[61-63] The terms moral distress and burnout are often conflated, although moral distress may be one of many key drivers of burnout. Burnout has been described as "a syndrome of emotional exhaustion, depersonalization, and reduced personal accomplishment and refers specifically to one's relationship with work" and is commonly associated with heavy workloads, excessive hours per day, and accrued years of work.[64] General job disillusionment and burnout are often unrelated to moral dilemmas or injury.[65,66]

Pediatricians may also learn about psychological responses and moral injury of clinicians from other pandemics. In the

2003 SARS epidemic in Toronto, staff reported anxiety, insomnia, fear of contagion, and significant stress from caring for peers and colleagues as patients.[67] Uncertainty about the length and outcome of the pandemic added to their moral distress. Helpful management strategies included emotional and material support and resources for affected caregivers, multidisciplinary collaboration, recognition that individuals respond to stress in a variety of ways, and authoritative hospital leadership who communicated clearly.[67] In the 2009 H1N1 pandemic in Japan, providers cited that trust between them and their hospitals, local, and national governments was vital to their willingness to work and essential to minimizing fear and moral distress.[68] Early studies of psychological effects of COVID-19 in the general population of China reveal that approximately one-half of those responding report moderate to severe levels of depression, anxiety, and/or stress. Hand washing, wearing a mask, and having specific, up-to-date information mitigated these reactions.[69] Healthcare workers caring for COVID-19 patients, especially nurses and other front-line clinicians, also reported depression, anxiety, and distress, plus insomnia.[70] Providers redeployed to adult COVID-19 units who care for extremely ill patients with a very high mortality rate, particularly among patients who progress to respiratory and kidney failure may specifically experience a sense of hopelessness and futility.[71,72]

As the COVID-19 pandemic continues, pediatricians will be at risk for moral distress and injury if they are required to care for patients, and know how to do so effectively, but do not have sufficient medical resources or a large enough workforce to support their efforts. Redeployment into roles for which they feel ill-prepared is another risk factor, especially if they feel responsible for suboptimal outcomes in their assigned positions. In addition, all clinicians bring their own individual psychological vulnerabilities and resiliencies to their medical work during pandemics. The combination of continued, disciplined self-care and professionalism, peer support and multidisciplinary teamwork, support from medical institutions, and access to mental health and spiritual care are essential. Finally, healthcare professionals want to have confidence that their voice and expertise are heard and valued as leaders and governing bodies develop emergency preparedness strategies.[73]

Conclusion

The implementation of crisis standards of care during the COVID-19 pandemic, including the enactment of scarce resource allocation, the deployment of triage teams, the mass redirection of clinical resources, and an inadequate and uncertain supply chain for PPE in the setting of a highly transmissible disease, poses challenges to our sense of professional identity, and forces us to reconsider our moral obligations as healthcare providers. Although we cannot resolve every moral ambiguity in this unprecedented time, ethics literature, previous epidemics, and emerging data from countries that have already endured the peak of disease burden to help inform our ethical analysis and, we hope, offer guidance to pediatricians for this pandemic. ■

Reprint requests: Naomi T. Laventhal, MD, MA, 8-621 C.S. Mott Children's Hospital, 1540 E. Hospital Dr, SPC 4254, Ann Arbor, MI, 48109-4254. E-mail: naomilav@med.umich.edu

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