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Risk, Responsibility, Resilience, Respect: COVID-19 and the Protection of Health Care Workers

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Risk, Responsibility, Resilience, Respect

COVID-19 and the Protection of Health Care Workers

William M. Sage and Victoria L. Tiase

I INTRODUCTION

The COVID-19 pandemic has shown us that the health care system we thought we had is not the health care system we actually have, crystallizing concerns (whether long-standing or emerging) over several aspects of health care financing, delivery, and governance. “Preparedness” calls for more than lip service when failures in public health surveillance and response cost over a million lives and threaten a decade of economic prosperity. “Solidarity” has deeper meaning when social divisions accentuated for political advantage undermine consensus behaviors that could prevent disease spread and accelerate immunization. “Innovation” seems more precious when saving lives and livelihoods depends on adaptive clinical methods, novel therapeutics, and rapid development and distribution of vaccines. “Health equity” is more compelling when poor communities of color are among the first to face illness and death but among the last to access treatment and vaccination. And “burnout” has greater salience when fulfillment from dedicated patient service competes with fear and exhaustion among health care professionals and other front-line workers.

Medicine and nursing have long professional traditions of altruism and self-sacrifice, including undertaking not only extreme stress but also personal risk in service of patient care. With exceptions for natural disasters, humanitarian missions, and military service, however, recent concerns about professional “burnout” often have had more to do with organizational tensions than with core clinical circumstances. The COVID-19 pandemic changed that – bringing front and center the close connections between the well-being of health care workers and the well-being of the patients they serve. This chapter describes the COVID-19 experience of health care workers in New York City (NYC) and environs during the spring of 2020, examining what happened, why things went wrong, and how it drew attention and generated responses. This chapter then steps back to consider the root causes of health professionals’ physical and psychological vulnerability during COVID-19, such as inequities within the health care system, professional hierarchies, safety system failures, and gaps in business and regulatory practices.

This concluding section also identifies potential improvements, ranging from ethics and advocacy to corporate governance and labor organization, workplace redesign, and regulatory and payment reform.

II PANDEMIC UNPREPAREDNESS AND THE HEALTH CARE WORKFORCE

Over one million Americans have died from COVID-19, with deaths and serious illnesses occurring at higher rates among individuals and communities identifying as Black, Indigenous, and persons of color. Before vaccination became widespread, health care workers accounted for about 6 percent of all US infections, with a distribution that similarly tracks social determinants and ethnic and racial disparities.¹ Infection rates and mortality have been much higher among nurses than among physicians; occupational exposure during patient care is apparently responsible for most cases in those professional categories. Aides and other assistive personnel have suffered from the highest infection rates overall, and have been involved in transmission within nursing homes and congregate care settings, but most of their exposure seems likely to be in their often-vulnerable communities rather than arising from patient care, and their hospitalization rates appear lower. According to a tracking website, over 3,600 US health care workers had died from COVID-19 by the end of April 2021 – a tragic outcome and a continuing source of stress and concern for those who remained at work.² In normal times, the health professions regard each patient they treat as the exclusive beneficiary of their attention, with tensions among different patients' interests finessed, interests of potential patients ignored, and outright patient–patient conflicts acknowledged only in specialized contexts (e.g., organ donors and organ transplant recipients). Outside of normal times – on the battlefield, during natural disasters, and certainly in the COVID-19 pandemic – shortages, timing, and other exigencies may require triage decisions, “crisis” (i.e., reduced) standards of care, and even so-called “tragic choices.”³ Depending on the circumstances, these conditions can reinforce professional pride and build teamwork, or can cause profound sadness and inflict moral injury.⁴ Health professionals

¹ Michelle M. Hughes et al., Update: Characteristics of Health Care Personnel with COVID-19 – United States, February 12–July 16, 2020, 69 *Morbidity & Mortality Wkly. Rep.* 1364 (Sept. 25, 2020), <http://dx.doi.org/10.15585/mmwr.mm6938a3>; Anita K. Kambhampati et al., COVID-19-Associated Hospitalizations Among Health Care Personnel – COVID-NET, 13 States, March 1–May 31, 2020, 69 *Morbidity & Mortality Wkly. Rep.* 1576 (Oct. 30, 2020), <http://dx.doi.org/10.15585/mmwr.mm6943e3>.

² See Jane Spencer, *The Guardian*, and Christina Jewett, Lost on the Frontline: 12 Months of Trauma: More Than 3,600 US Health Workers Died in Covid's First Year, Kaiser Health News (Apr. 8, 2021), <https://kffhealthnews.org/news/article/us-health-workers-deaths-covid-lost-on-the-frontline/> (last visited Apr. 9, 2023).

³ Inst. of Med., *Crisis Standards of Care: A Toolkit for Indicators and Triggers* (2013).

⁴ Sonya B. Norman et al., Moral Distress in Frontline Healthcare Workers in the Initial Epicenter of the COVID-19 Pandemic in the United States: Relationship to PTSD Symptoms, Burnout, and Psychosocial Functioning (July 2021), www.ncbi.nlm.nih.gov/pmc/articles/PMC8426909/.

are even less prepared to balance risks of harming patients with risks of harming themselves. Self-sacrifice remains under-developed in both ethical and operational terms. While attention to “burnout” has increased, much of the associated literature (beyond undeniably important concerns over mental health and substance use) has focused on the perceived loss of professional autonomy and control because of organizational, technological, and generational change.⁵ Connections to core patient care commitments and long-term clinical performance have been sporadic.⁶

The COVID-19 pandemic reminded the country of health professionals’ continued willingness to put themselves in harm’s way for the benefit of their patients. Many younger professionals initially embraced self-sacrifice, telling researchers unequivocally that: “We signed up for this!”⁷ But in a sustained and serious pandemic, a heroism-based ethical paradigm for accepting personal risk is as misleading as the myth of professional perfection has been for avoiding medical errors. Supportive teams, organizations, families, and communities are essential.

Medical ethics has seldom focused on these issues, generally charging physicians and nurses with furthering the patient’s interest even at some personal risk. Because many examples of self-sacrifice reach back in history to infectious diseases that became preventable by the middle of the twentieth century, the point at which professionals may ethically distance themselves from hazardous care is seldom mapped. Recent high-risk exposure has been voluntary, such as traveling to Africa to care for Ebola patients, or hypothetical, such as potential bioterrorism or novel influenza strains that did not ultimately prove that dangerous. COVID-19 presents a very different situation, with high volumes of sick and likely infectious patients across geographies, uncertain prognoses for exposed health care workers, and for many months, neither an effective therapy nor a proven vaccine.

There is little enforceable law to reinforce or guide professional ethics. With only a few exceptions (e.g., duties of nonabandonment, care in emergency departments under the federal Emergency Medical Treatment & Labor Act, various contractual agreements), health professionals are not legally obligated to render care to patients in medical need.⁸ This is true even during emergencies, although Section 608(a) of the Model Emergency Powers Act, drafted after the 9/11 attacks, would authorize governors to conscript physicians into service as a condition of professional licensure.⁹ A few states have enacted the provision,

⁵ Nat’l Acad. of Scis., Eng’g, & Med., *Taking Action Against Clinician Burnout: A Systems Approach to Professional Well-Being* (2019).

⁶ Daniel E. Shapiro et al., *Beyond Burnout: A Physician Wellness Hierarchy Designed to Prioritize Interventions at the Systems Level*, 132 *Am. J. Med.* 556 (2019).

⁷ Thomas H. Gallagher & Anneliese M. Schleyer, “We Signed Up for This!” – Student and Trainee Responses to the COVID-19 Pandemic, 382 *New Eng. J. Med.* e96 (2020).

⁸ Judith C. Ahronheim, *Service by Health Care Providers in a Public Health Emergency: The Physician’s Duty and the Law*, 12 *J. Health Care L. Pol’y* 195 (2009).

⁹ Lawrence O. Gostin et al., *The Model State Emergency Health Powers Act: Planning for and Response to Bioterrorism and Naturally Occurring Infectious Diseases*, 288 *JAMA* 622 (2002).

but no governor or state official has exercised or requested that authority during the COVID-19 pandemic.

The most developed law and ethics of physician obligation despite personal medical risk relates to the HIV/AIDS epidemic of the 1980s, before patterns of transmission were well established and antiretroviral treatment became routine in developed countries. The American Medical Association issued Ethical Opinion 9.131 in 1992, requiring qualified physicians to treat HIV-positive patients, and courts interpreted the Americans with Disabilities Act of 1990 to prohibit the exclusion of those patients from dental offices and other health care settings.¹⁰ These obligations to care for HIV-positive patients were motivated by concerns about stigma as well as about access to care; HIV cases clustered among groups, such as gay men, who had previously been subject to discrimination. Discrimination also results in disparities during the current pandemic, but the injustices of COVID-19 reflect structural and institutional inequities more than explicit bias.

Tensions between COVID-19 patient care and the well-being of health professionals also reflect the peculiarities of the lavishly funded but only partially industrialized health care system in the United States. The US health care workforce is overwhelmingly deployed in private settings, even though much of its cost is supported by public sources of funding. Each category of licensed health professional is subject to oversight by a dedicated, state-specific licensing board, with little uniformity or coordination. The hospital sector is highly consolidated, and now employs roughly 40 percent of American physicians. Yet physicians retain norms and, in many states, legal rights of self-governance even when they practice within hospitals, are paid from health insurance revenue streams different from those that support health facilities, and may be exempt from the occupational health and safety laws that govern ordinary workplaces. Chronic and long-term care facilities, which also faced a high risk of COVID-19 spread and serious illness, lack the funding, physician and nurse leadership, and public visibility of the hospital sector.

III PROFESSIONAL VULNERABILITY: THE NYC COVID-19 EXPERIENCE

We begin with the experience of NYC hospitals facing a sudden and vicious outbreak of disease in spring 2020, during the first phase of the pandemic in the United States. On March 7, 2020, the governor of New York declared a state of emergency due to the coronavirus pandemic and, by March 20, a stay-at-home order. By the end of March, NYC had become the epicenter of COVID-19, and hospitals were struggling to keep up with the demands placed on them by the pandemic. Immigrant communities in Queens, Brooklyn, and the Bronx were especially afflicted, so much

¹⁰ *Bragdon v. Abbott*, 524 U.S. 624 (1998).

so that the conditions at NYC Health and Hospital's Elmhurst Hospital in Queens were described as "apocalyptic."¹¹

As the crisis advanced, NYC hospitals were faced with an enormous challenge: expanding critical care capacity, increasing critical care staffing, securing supplies and equipment and, most importantly, protecting their front-line workforce.¹² Hospitals with a 300-bed potential intensive care unit (ICU) capacity at baseline had to create space for more than 1,000 ICU patients.¹³ Given NYC's preexisting space constraints, hospital administrators used existing infrastructure creatively, converting conference rooms, lobbies, and cafeterias into patient rooms. Procedural areas, such as operating rooms, were used as ICU spaces, with each room supporting two to four patients. Tents were constructed in parking lots and city parks to evaluate lower-acuity patients and decant traditional hospital spaces.

The volume of COVID-19 patients admitted to NYC hospitals, and the speed at which they arrived, placed a significant strain on ICU staffing. This strain was compounded by the number of hospital workers who tested positive for COVID-19, called in sick to care for ill family members, or were hospitalized themselves. At one point, Elmhurst Hospital reported that 8 percent of its workforce had been out sick.

Although the suspension of ambulatory care and elective surgeries freed up some existing staff for COVID-19-related patient care, many remained idle because NYC hospitals recruited critical care staff from other locations rather than retrain local personnel. ICU-trained nurses across the country left jobs in smaller, sometimes rural hospitals to travel to NYC, where they could earn as much as \$10,000 per week.¹⁴ Hospitals that were able to afford it therefore supplemented their workforces, while hospitals without as many resources were unable to offer their overworked nursing staff much-needed relief. Over time, this created a shift in nurses to more affluent areas of NYC.

It turned out that not all additional staff had been trained at the necessary level. Reports of improper treatments and overlooked patients dying alone added training of new staff to the burden on existing ICU staff. Non-ICU staff also received

¹¹ Michael Rothfeld, Somini Sengupta, Joseph Goldstein, & Brian M. Rosenthal. 13 Deaths in a Day: An "Apocalyptic" Coronavirus Surge at an N.Y.C. Hospital, NY Times (Mar. 25, 2020) (updated Apr. 14, 2020). www.nytimes.com/2020/03/25/nyregion/nyc-coronavirus-hospitals.html.

¹² Chris Keeley et al., Staffing Up for the Surge: Expanding the New York City Public Hospital Workforce During the COVID-19 Pandemic, 39 *Health Affs.* 1426 (2020).

¹³ Amit Uppal et al., Critical Care and Emergency Department Response at the Epicenter of the COVID-19 Pandemic, 39 *Health Affs.* 1443 (2020).

¹⁴ Hannah Sampson, Travel Nurses Usually See the Country. During the Last Year, Many Saw the Worst of the Pandemic, Wash. Post (Mar. 8, 2021), www.washingtonpost.com/travel/2021/03/08/travel-nurse-covid-pandemic/; Lenny Bernstein, As COVID Persists, Nurses are Leaving Staff Jobs – And Tripling Their Salaries as Travelers, Wash. Post (Dec. 6, 2021), www.washingtonpost.com/health/covid-travel-nurses/2021/12/05/550b15fc-4c71-11ec-a1b9-9f12bd39487a_story.html.

successful training on essential tasks, notably service on manual “proning” teams – those skilled in placing critically ill COVID-19 patients in a downward-facing position to improve gas exchange in the lungs.¹⁵ With proning teams in place, anesthesiologists were redeployed to emergency departments to perform intubations, and pediatric nurses transitioned to adult patient care areas. Tiered staffing structures with a “head” ICU nurse leading non-ICU providers were used to expand capacity, upskilling existing staff in a supervised fashion.¹⁶ Still, some non-ICU nurses reported feelings of inadequacy because they did not know enough to provide independent care, and feared being furloughed.

Having managed inventory for years on a “just-in-time” basis, hospitals facing pandemic caseloads found themselves short of supplies and equipment and were unprepared to acquire them quickly. Delivering the volume of critical care needed by COVID-19 patients at the height of the surge depended on having almost five times the accustomed ICU inventory of ventilators to help patients breathe, infusion pumps for medications, and dialysis machines to treat kidney failure. Disposable supplies such as ventilator tubing, intravenous tubing, dressings, and personal protective equipment (PPE) were also at critically low levels.

With many hospitals competing for the same supplies, systems for tracking, accessing, and distributing supplies and equipment became a paramount need. Given the respiratory nature of COVID-19, the asset management of ventilators was a primary concern. Even hospitals with real-time location tracking systems relied on respiratory therapists to keep count or leveraged patient care data from the electronic health record. Neither workaround was perfect. Busy health care workers had difficulty noting when equipment went out of service or when new equipment was entered into inventory. Electronic health record data were limited by the temporary suspension of charting requirements and delays in documenting ventilator orders by staff who were busy delivering patient care.

Within days of the first reported case in NYC, hospital leaders recognized that front-line staff were exhibiting distress and that protecting them was essential. The suffering took many forms and had many causes. Health care workers feared for their physical safety not only because they might contract COVID-19, but also because they faced targeted discrimination and related stigma. After ending an overnight shift, nurses at one hospital found twenty-two of their vehicles with tires slashed. When some politicians labeled COVID-19 the “China Virus,” health care workers of Asian descent were forced to contend with xenophobia, abuse, harassment, and hate crimes. In early April 2020, officials from the World Health

¹⁵ Deepa Kumaraiah et al., *Innovative ICU Physician Care Models: COVID-19 Pandemic at NewYork-Presbyterian*, 1 *NEJM Catalyst Innovations in Care Delivery* (Apr. 28, 2020), [catalyst.nejm.org/doi/full/10.1056/CAT.20.0158](https://doi.org/10.1056/CAT.20.0158).

¹⁶ Neil A. Halpern & Kay See Tan, *United States Resource Availability for COVID-19*, *Society of Critical Care Medicine* (2020), www.sccm.org/Blog/March-2020/United-States-Resource-Availability-for-COVID-19.

Organization called for a zero-tolerance approach and established measures to protect health care workers.¹⁷

Staff were also endangered by supply chain issues involving PPE such as masks, gowns, gloves, and face shields, with many hospitals initiating mandatory conservation measures. Some physicians reused disposable face masks and nurses wore plastic garbage bags instead of gowns.¹⁸ The physical and psychological effects of PPE shortages were worsened by a high degree of uncertainty in the early stages of the pandemic. The Centers for Disease Control and Prevention wavered on when to use single-use N95 respirators versus surgical masks, and on whether COVID-19 required droplet precautions.¹⁹ This confused and misled health care workers.

Psychological pressure took many forms.²⁰ Health care workers feared that they might bring COVID-19 home to their families or friends. Many stayed in hotels or other isolated residences for months – initially at their own expense but over time as part of additional benefits funded by hospitals (including transportation and child-care). Such isolation, often self-imposed, added to the mental anguish. Some health care workers saw more deaths in a few weeks than they had seen during thirty-year careers. Others held the hands of patients in their final moments because family members were not allowed to visit. In some cases, health care workers made bedside decisions when needed supplies and equipment were not available, raising practical, ethical, and legal questions. But front-line workers wanted to save lives, and they were willing to put themselves in harm's way to do so.

Longer hours at a faster pace, lack of sleep, and emotional exhaustion pushed front-line workers to the breaking point. Although all health care workers were affected, one large study in NYC reported that nurses paid the greatest psychological price.²¹ Nurses working double shifts were unable to get groceries for their families, do laundry, or tend to household needs. While many health care workers found solace and respite in healthful activity, the social isolation and other strictures required to contain the pandemic led others down dangerous paths. For some, the price of selflessness was beyond measure. Dr. Lorna Breen, a respected NYC emergency

¹⁷ Stephanie Nebehay, Nurses Must Be Protected from Abuse During Coronavirus Pandemic: WHO, Nursing Groups, Reuters (Apr. 6, 2020), www.reuters.com/article/us-health-coronavirus-nurses/nurses-must-be-protected-from-abuse-during-coronavirus-pandemic-who-nursing-groups-idUSKBN21O317.

¹⁸ Sarah Al-Arshani, Nurse Dies in New York Hospital Where Workers Are Reduced to Using Trash Bags as Protective Medical Gear, Bus. Insider (Mar. 26, 2020), www.businessinsider.com/kious-kelly-hospital-nurse-dies-trash-bags-2020-3#:~:text=A%20nurse%20at%20Mount%20Sinai%20Hospital%20in%20New,bags%20instead%2C%20according%20to%20photos%20on%20social%20media.

¹⁹ James G. Adams & Ron M. Walls, Supporting the Health Care Workforce During the COVID-19 Global Epidemic, 323 *JAMA* 1439 (2020).

²⁰ For an extensive qualitative survey of nurses, see Allison Squires et al., "Should I Stay or Should I Go?" Nurses' Perspectives about Working during the COVID-19 Pandemic's First Wave in the United States: A Summative Content Analysis Combined with Topic Modeling, *Int'l J. Nursing Stud.* (July 2022), www.sciencedirect.com/science/article/pii/S0020748922000852#!.

²¹ Ari Shechter et al., Psychological Distress, Coping Behaviors, and Preferences for Support Among New York Healthcare Workers During the COVID-19 Pandemic, 66 *Gen. Hosp. Psychiatry* 1 (2020).

room physician and clinical leader, died by suicide after treating patients during the surge and then experiencing symptoms of COVID-19 herself. Other suicides and self-inflicted harms have been reported.²²

Government uncertainty impacted organizational responses. State and city officials held daily briefings, but sent mixed messages about when health care workers needed to be tested, when exposed staff should return to work, and how to handle reentry for staff recovering from COVID-19. Hospital staff looked to their employers for guidance and protection, not professional associations, not the local government. Although many hospital leaders communicated daily with staff, the shifting guidance was interpreted as a lack of transparency.

Information dissemination also proved challenging: staff were not always working on their usual unit, were sometimes isolated, and left work immediately after shifts. With fewer hospital leaders physically on site, front-line staff also struggled with communicating complaints, articulating needs, and providing feedback on pandemic-related issues. While many hospitals offered financial incentives and free meals to express appreciation for staff, front-line workers indicated a preference for clear communication over extra pay, and some staff reported feeling belittled by bonus payments. At times, staff reported that they were making decisions on-the-fly and running their own units – saying that “anything goes.”

IV PRINCIPAL LESSONS AND RECOMMENDATIONS

The COVID-19 pandemic has played out during the unhappy conjunction of the greatest public health threat since 1918 and (with the important exception of vaccine development) the most dysfunctional federal government response to a major social need since the onset of the Great Depression. Yet hospitals and other critical systems of medical care have bent but have not broken – thanks in part to the dedication of millions of health professionals and other essential workers. It is tempting to think that today’s performative politics of division is an aberration, that policymaking and public response will return to being based on facts and science, and that the next test of health professional resilience will be milder or more localized. Even so, the COVID-19 experience highlights several aspects of the health care system that bear reexamination and improvement, for the mutual benefit of health care workers and patients.

A Structural Unfairness

A first lesson is the profound inequity that characterizes not only the underlying health of communities but also the medical infrastructure available to them. During

²² Charlene Dewey et al., Supporting Clinicians During the COVID-19 Pandemic, 172 *Ann. Intern. Med.* 752 (2020). For a comprehensive description of the mental health effects on nursing from COVID-19, see Brittney Riedel et al., Mental Health Disorders in Nurses During the COVID-19 Pandemic: Implications and Coping Strategies, 9 *Frontiers Publ. Health* 707358 (2021).

the harsh coronavirus spring of 2020, nationally famous facilities – Mount Sinai Hospital, NewYork-Presbyterian Hospital, NYU Langone Health – were undoubtedly stressed. But as was true of prominent health systems elsewhere, they had the cash reserves, influential physicians, wealthy trustees, and scientific connections to hire staff, maintain supply chains, and even fabricate materials not available commercially. By contrast, hospitals owned or operated by New York Health and Hospitals – public institutions typically located in less prosperous neighborhoods and serving mainly poorer persons of color – were overcrowded, understaffed, and short of critical supplies. Unsurprisingly, many patients at those facilities had poor clinical outcomes. These disparities among acute care hospitals were mirrored in the long-term care sector, where facilities serving private-pay, generally White residents and employing a better-compensated workforce with less turnover or moonlighting fared better at preventing coronavirus infection and transmission than facilities with fewer resources serving mainly minority communities.

The governmental response to the pandemic widened rather than narrowed the gap between “have” and “have-not” hospitals, imposing even greater staff burdens at the latter facilities. Federal interventions in domestic policy tend to come mainly as financial support, and the cumulative investment in COVID-19 relief, including economic stimulus, exceeds \$10 trillion.²³ The Trump Administration’s subsidy programs, including the April 2020 Coronavirus Aid, Relief, and Economic Security Act (which enjoyed broad bipartisan support in Congress), favored larger and wealthier recipients, including among hospitals and other health care enterprises.²⁴ Even federal emergency management funds were directed more generously at the hospitals that arguably least needed relief.²⁵ Moreover, state and local governments (which fund most health care programs for the poor and uninsured) were entirely shut out of the relief authorized by Congress during the Trump Administration.

Systemic improvements in health equity may be slow in coming, but measures to stem the inequalities that harmed patients and workers during pandemic surges are possible. An important first step is for hospitals that have consolidated in recent decades – probably raising prices in the process – to act like the systems they purport to be by sharing staff and supplies in an organized and equitable manner. This may

²³ COVID Money Tracker, Comm. for a Responsible Fed. Budget, www.covidmoneytracker.org/ (last visited June 25, 2022).

²⁴ See Karyn Schwartz & Anthony Damico, Distribution of CARES Act Funding Among Hospitals, Kaiser Fam. Found. (May 13, 2020) (“The hospitals in the top 10% based on share of private insurance revenue received \$44,321 per hospital bed, more than double the \$20,710 per hospital bed for those in the bottom 10% of private insurance revenue”); see also Ben Casselman & Jim Tankersley, \$500 Billion in Aid to Small Businesses: How Much Did It Help?, NY Times (Feb. 1, 2021), www.nytimes.com/2021/02/01/business/economy/ppp-jobs-small-business.html. (describing expert consensus that federal Payroll Protection Program funds were received mainly by the businesses that needed them least).

²⁵ Chad Terhune, Wealthy Hospitals Rake in US Disaster Aid for COVID-19 Costs, Reuters (Dec. 29, 2020), www.aol.com/news/wealthy-hospitals-rake-u-disaster-120452690-125159444.html.

be challenging in hospital systems with both unionized and non-unionized facilities because union rules forbid such shifts. The role of unionization among health care workers merits further study, including with respect to pandemic performance for both patients and personnel. Collective bargaining protects nursing jobs, ensures competitive wages, and enforces whistleblower protections for nurses speaking up against unsafe conditions.²⁶ However, personnel decisions in a union hospital typically are based on seniority, not job performance, which can dampen patient care innovation and impede workforce flexibility.

Collaboration and collective investment should happen at the community level as well. Throughout the pandemic, core public health functions involving disease detection and response were almost accidentally “outsourced” to private health care providers, even when new waves of infection were readily anticipated. Lack of attention to diagnostics as part of biopreparedness, for example, caused tragic delays in coronavirus testing until the private sector was finally brought in deliberately and productively.²⁷ This frustrating pattern continues decades-long trends of underinvestment in explicitly public infrastructure for community health. Rebuilding that capacity in connection with preparedness for future pandemics and similar emergencies – reinforcing supply chains, providing for surge capacity, and training and employing critical personnel – will also moderate the adverse consequences of the stark inequities among hospitals that COVID-19 revealed.

B *The Limitations of “Professionalism”*

A second lesson is that professionalism was simultaneously a strength and a weakness in terms of workforce well-being and patient care performance. Even with the recent movement toward interprofessional education and team-based care, the health professions remain individualistic, hierarchical, and generationally deferential, with senior physicians both role models and the principal decision-makers. There is also a broader tension between maintaining traditional but often casual professional control over health care delivery and promoting more structured and rigorous public accountability through direct regulatory oversight of industrial processes.

Directing attention to the collective dedication and resilience of health care workers – particularly to generate material and psychological support through measures such as the “Heroes Act” – was beneficial in the COVID-19 pandemic as rapid

²⁶ Nurses’ unions have lobbied to expand workers’ compensation programs to encompass COVID-19 infection and have supported a greater role in health care worker safety for the federal Occupational Safety and Health Administration (OSHA). See, for example, Isabel van Brugen, Nurses Union Slams ‘Return to Work’ COVID Guidelines in California, *Newsweek* (Jan. 10, 2022), www.newsweek.com/california-covid-return-work-guidelines-nurses-union-1667356.

²⁷ Carrie Arnold, Why the US Coronavirus Testing Failures Were Inevitable, *Nat. Geographic* (Mar. 20, 2020), www.nationalgeographic.com/science/article/why-united-states-coronavirus-testing-failures-were-inevitable.

upswings in disease burden bred fear and risked violence against those perceived to be potential carriers of deadly disease. NYC's briefly famous 7 PM "clappy hours," celebrating health care workers and first responders with applause and clattering kitchenware, were also general affirmations of solidarity that helped counter the pervasive reminders of pandemic-induced social isolation as urban life slowed to a silent crawl. But expecting "heroism" of each individual health professional is inviting exhaustion and self-doubt that can become burnout or worse. More generally, perfection in health care is a myth, one that often excuses deception, undervalues collaboration and adaptability, creates a predisposition to error, and fuels backlash.

In general, physicians and nurses and other health care workers pulled together in NYC during spring 2020, avoiding the rivalry and rancor that differences in professional and institutional authority can produce. Even so, those sounding the call to heroism could be tone deaf. In what was probably intended to be a "St. Crispin's Day" call for shared sacrifice as the pandemic exploded, the physician leader of one prominent hospital proclaimed his expectations that essential employees (typically nurses and aides) were expected to do their professional duty in caring personally for COVID-19 patients. It was received very differently, because it was widely recognized among front-line workers that much of his executive team and most senior physicians would be doing their jobs, if at all, from the safety of their suburban or vacation homes. Where physician leadership was absent or invisible – notably in long-term care facilities and other high-risk congregate care settings – chains of communication and accountability were even harder to identify and monitor.

There is also a tension between professionalization and accountability. Government relies on professions such as medicine to self-regulate, exerting far less direct control and applying far fewer performance metrics than it would with respect to any other activity on which lives depend and in which public resources are so massively invested. The American medical profession indeed possesses both expertise and ethics, but delegating public authority to decentralized decision-makers has impeded coordination in cases of collective need and has left personal biases unexamined and consequent health disparities unrepaired. Interventions that must occur prophylactically at the community level – which describes most aspects of pandemic surveillance and control – are also poorly suited to a health care system that looks for leadership to physicians in private practice who by and large are remote, disconnected, and reactive. In domains of health justice, moreover, professional processes continue to neglect the structural and institutional racism that continues to burden communities, patients, and health care workers of color.

COVID-19 therefore is a clarion call to reduce "siloeing" in health professional oversight and ethics, building connections among sectors and promoting new forms of collective engagement. One neglected area is collaboration between leaders of health care organizations, who create and sustain the environments in which health professionals practice, and the licensing boards and medical societies that constitute the backbone of the professional regulatory and self-regulatory establishment.

Organizational leadership might also embrace an advocacy role on behalf of the health care workforce when engaging state and federal policymakers, such as the lobbying efforts in behalf of the Dr. Lorna Breen Health Care Provider Protection Act.²⁸ At the professional level, both educational and practice leaders might build on recent ethical commitments to health equity and health justice to instill and support a broader approach to social engagement and advocacy, encompassing issues such as mass incarceration and climate change.²⁹ This would offer health professionals opportunities to make collective contributions to the humane values that further community health and social progress, in addition to demonstrating their devotion to individual patient care.

C Institutional Accountability and Workplace Redesign

A third lesson for workforce well-being is that over-reliance on professionalism may be accompanied by under-developed institutional authorities and accountability. Employers have both legal duties and moral obligations to prevent workforce harm through open communication, access to PPE, and reasonable duty hours, and to treat harm through practical and emotional support. The physical and psychological effects of COVID-19 are inextricably linked,³⁰ and sustained COVID-19-related psychological distress is expected to impact health care workers' physical health.³¹ Successful intervention requires cultural adaptation: the expectation that health care providers have superhuman qualities – with no pain, no fear, and no need for rest – must change.

Legal duties and associated incentives may derive from state health department oversight, conditions of participation in Medicare and Medicaid, federal and state occupational safety and health regulation, collective bargaining agreements, and workers' compensation insurance requirements.³² Early in the pandemic, however, PPE shortages were dire and emergencies were declared at multiple levels. Each declaration of emergency altered the legal landscape in ways that challenged both compliance and enforcement in the health care ecosystem, ranging from crisis standards of care to a variety of exemptions, waivers, and legal immunities. As a result, it

²⁸ S. 4349, 116th Cong. (2020)

²⁹ Donald M. Berwick, *The Moral Determinants of Health*, 324 *JAMA* 225 (2020).

³⁰ Anaëlle Caillet et al., *Psychological Impact of COVID-19 on ICU Caregivers*, 39 *Anaesth. Crit. Care Pain Med.* 717 (2020).

³¹ See, for example, Riedel et al., *supra* note 21.

³² In early 2022, the Supreme Court narrowly upheld regulations by the Department of Health and Human Services requiring vaccination or testing of health care workers in hospitals paid through Medicare. *Biden v. Missouri*, 142 S. Ct. 647 (2022). Simultaneously, the Court stayed the enforcement of federal occupational safety and health regulations requiring vaccination or testing in general workplaces, with the majority concluding that COVID-19 was not a workplace hazard within the meaning of the Occupational Safety and Health Act. *Nat'l Fed'n of Indep. Bus. v. Dep't of Lab., Occupational Safety & Health Admin.*, 142 S. Ct. 661 (2022).

is not clear what recourse, if any, existed or exists for hospital workers to enforce the obligations of their organizations to protect them. Legal protections are even weaker for long-term care and home health workers.

Staffing and supplies were immediate institutional concerns among NYC hospitals. Nurses struggled to balance compassion toward dying patients and grieving family with necessary practices for infection control, and fears of critical care shortages provoked serious debate over how to allocate ventilators and other potentially life-saving resources. Although NYC hospitals developed innovative approaches to staff and family support, no systematic or lasting connections seem to have been made to the established institutional safety infrastructure.³³ “Communication and resolution” approaches to medical errors and other adverse clinical outcomes, for example, emphasize that what patient safety experts call “Just Culture” consoles and coaches unless behavior has been reckless, and those processes emphasize care for the caregiver even while recognizing that the primary injury remains that of the patient.³⁴

Consider lessons from aviation safety, where non-punitive debriefing is a routine, valued practice following an adverse event or near miss. Within twenty-four hours of the miraculous 2009 landing of US Airways Flight 1549 in New York’s Hudson River, there was a coordinated, supportive debriefing for crew members and family to prepare them for the emotions they might experience. An air traffic controller needed time off for a month; a flight crew member with thirty-eight years of experience never returned to work. By contrast, usual health care practice involves an explicit or implicit expectation to “go right back in,” rather than seek or receive help, which leaves many health care workers feeling psychologically unsafe and fails to measure longer-term staff and patient outcomes. As a medical interviewer of the heroic Captain “Sully” Sullenberger wrote in connecting aviation to health care experience, “[t]he well-being of physicians is tied directly to the well-being of their patients.”³⁵

Health care organizations should take particular account of workers’ COVID-19-related personal circumstances, which may constitute risk factors for distress. The best way to glean this information is to ask, then listen.³⁶ Risk factors include

³³ Eric Wei et al., *Coping with Trauma, Celebrating Life: Reinventing Patient and Staff Support During the COVID-19 Pandemic*, 39 *Health Affs.* 1597e (2020); Lorri Zipperer, *COVID-19: Team and Human Factors to Improve Safety*, AHRQ PSNet Patient Safety Primer (July 2020), psnet.ahrq.gov/primer/covid-19-team-and-human-factors-improve-safety.

³⁴ William M. Sage, Madelene Ottosen, & T. Benjamin Coopwood, *A Quiet Revolution: Communicating and Resolving Patient Harm*, in *Surgical Patient Care: Improving Safety, Quality, and Value* 649 (Juan A. Sanchez, Paul Barach, Julie K. Johnson, & Jeffrey P. Jacobs eds., 2017); David Marx, *Patient Safety and the “Just Culture”: A Primer for Health Care Executives* (2001).

³⁵ Marjorie P. Stiegler, *What I Learned About Adverse Events from Captain Sully: It’s Not What You Think*, 313 *JAMA* 361, 361 (2015).

³⁶ Tait Shanafelt, Jonathan Ripp, & Mickey Trockel, *Understanding and Addressing Sources of Anxiety Among Health Care Professionals During the COVID-19 Pandemic*, 323 *JAMA* 2133 (2020).

staff who are inexperienced, parents of dependent children, in quarantine or with an infected family member, or lack other resources.³⁷ As the pandemic recedes, monitoring for ongoing mental health needs should include those returning to their “home” units after being called into critical service during the surge, as their supervisors and colleagues may be unaware of their COVID-19-related experiences.

Financial uncertainty has hindered institutional responses, to the detriment of the health care workforce. To preserve critical care capacity in the spring 2020 surges, especially space and supplies, and to prevent viral spread from non-essential activities, many state governments declared moratoria on elective surgeries and other medical procedures. This had the undesired effect of depriving hospitals and other health care facilities of major payment streams and put already stressed health care workers in peril of furlough or layoff. The underlying causes are structural: hospital business strategies emphasize revenue generation over cost control and negotiate much more lucrative reimbursement rates from private insurers than from government programs. Hospitals doing exactly what they should do in the COVID-19 pandemic – caring for severely ill patients, who are less likely to be privately insured and more likely to be covered by Medicare (the elderly) or Medicaid (the poor) – risked financial collapse. It may take years for health care providers to recover lost revenues, in part because economic distress has shifted patients away from employment-based private coverage.³⁸ The only lasting solution may be payment reform that reduces the influence of payer mix on provider finances, although in the near term it is likely that the threat of inducing provider insolvency will take many cost-cutting proposals off the table politically.

Workplace redesign that benefits both staff and patients will require cultural change and budgetary flexibility. In addition to support programs, the COVID-19 experience has induced innovation in information systems, workflow, supply chain management, facility design, and space utilization. Unfortunately, NYC hospitals already show signs of returning to old habits and practices. For example, pandemic exigencies yielded long-overdue efficiencies in documentation, such as the ability to omit plan of cares, patient teaching, and other “check the box” requirements with little clinical utility. Almost all have reverted to pre-COVID-19 practice, missing an opportunity to rethink data usability and reduce the continuing burden on clinicians. Instead of building on innovations in virtual visits to make them more accessible to and effective for underserved populations, hospitals are moving back to in-person appointments.³⁹ While not always perfect, communication from hospital

³⁷ Steve Kisely et al., Occurrence, Prevention, and Management of the Psychological Effects of Emerging Virus Outbreaks on Healthcare Workers: Rapid Review and Meta-Analysis, 369 *BMJ* m1642 (May 5, 2020), www.ncbi.nlm.nih.gov/pmc/articles/PMC7199468/.

³⁸ Tatyana Deryugina, Jonathan Gruber, & Adrienne Sabety, Natural Disasters and Elective Medical Services: How Big Is the Bounce-Back? (Nat'l Bureau of Econ. Rsch., Working Paper No. 27505, 2020).

³⁹ See, for example, Ruth Reader, The Telehealth Bubble Has Burst. Time to Figure Out What's Next (Jan. 3, 2022), www.fastcompany.com/90706243/telehealth-in-2021-and-beyond.

leadership to staff reached an unprecedented level of regularity and transparency during pandemic spikes; now, it is again sporadic and limited to when there are “problems.”

To help prevent backsliding as the pandemic eases, attention to the corporate, labor, and regulatory environment is required.⁴⁰ A high priority for hospital governance is to preserve and eventually reinvent middle management in clinical administration, for whom exhaustion and moral injury are not as readily apparent as among bedside caregivers but who are facing high degrees of burnout and attrition.⁴¹ The urgency of this is heightened by a mass exit of the most senior clinical nurses, often leaving inexperienced recent graduates to train and supervise one another.⁴² These staffing failures heighten the risk to patients of medical errors.⁴³ During COVID-19, mid-level nursing leaders felt squeezed between managing down and managing up, as they tried to cope with being asked constantly to do more with less. Given the pandemic’s effect on finances, continuing to use five-year budget cycles that protect senior executive bonuses has had a pernicious effect on mid-level staffing and morale. In addition to more meaningful support for the broader caregiving workforce than “free pizza and free meals,” hospitals should assist more senior nurses – many of whom have been leaving the bedside because of COVID-19-induced trauma – in pursuing educational opportunities and transitioning to other valuable roles within health care organizations.⁴⁴

The post-COVID-19 regulatory landscape for hospitals should attempt to bridge health care-specific entities, such as the Joint Commission, to more general governmental mechanisms for workforce safety and support.⁴⁵ It should maintain “emergency” authorities under state law that reduced paperwork requirements and empowered health care professionals to work more flexibly. It should also re-examine the self-regulatory privileges that perpetuated professional hierarchies in clinical authority and earning capacity, while also artificially separating professional from institutional oversight in health care.

⁴⁰ For a systematic discussion of workplace adaptation, see Bernadette Melnyk et al., Associations Among Nurses’ Mental/Physical Health, Lifestyle Behaviors, Shift Length, and Workplace Wellness Support During COVID-19: Important Implications for Health Care Systems, 46 *Nursing Admin. Q.* 5 (2022).

⁴¹ Rosanne Raso, Nurse Leader Wellness: What’s Changed in 3 Years?: Results of the Second Nursing Management Wellness Survey, 52 *Nursing Mgmt.* 26 (2021).

⁴² See Meredith Kells & Karen J. Mathis, Influence of COVID-19 on the Next Generation of Nurses in the United States, *J. Clin. Nursing* (2022).

⁴³ Stephanie A. Andel et al., Safety Implications of Different Forms of Understaffing Among Nurses During the COVID-19 Pandemic, 78 *J. Adv. Nursing* 121 (2022).

⁴⁴ ANA Enter., Pulse on the Nation’s Nurses COVID-19 Survey Series: Mental Health and Wellness, www.nursingworld.org/practice-policy/work-environment/health-safety/disaster-preparedness/coronavirus/what-you-need-to-know/mental-health-and-wellness-survey-2/ (last visited Mar. 6, 2021).

⁴⁵ Deloitte & Joint Commission Resources, COVID-19 Lessons Learned: A Resource for Recovery (Sept. 18, 2020), www.jcrinc.com/products-and-services/covid-19-lessons-learned-a-resource-for-recovery/.

V CONCLUSION

The COVID-19 pandemic has demonstrated the resilience of the health care workforce but has also exposed its vulnerabilities and has energized efforts to improve the practice and service environment.⁴⁶ Some lessons have been learned; for example, NYC hospitals coped far better with record case numbers from the Omicron variant than they had with the smaller initial waves of COVID-19 infection.⁴⁷ With careful design and implementation, including research evaluation and as much insulation from partisan politics as possible, these efforts can put meat on the bones of what is often called the “Quadruple Aim.” In 2015, leaders at the Institute for Healthcare Improvement added “joy and meaning in the work of health care” to the Institute’s path-breaking “Triple Aim” of improving the patient experience of care, improving the health of populations, and reducing per capita health care costs.⁴⁸ The core insight of the Triple Aim was its acknowledgment that current health care practice is far from optimal. Rather than accept tradeoffs among cost, access, and quality as unavoidable, self-examination and incremental innovation could yield simultaneous sustained improvement in all three prongs of the Aim. The pandemic experience confirms that patient experience, population health, and cost are all dependent as well on the fourth prong: an engaged and supported health care workforce.

⁴⁶ For a structured analysis of health workforce effects in several nations, see Apinya Koontalay et al., *Healthcare Workers’ Burdens During the COVID-19 Pandemic: A Qualitative Systematic Review*, 14 *J. Multidiscip. Healthc.* 3015 (2021).

⁴⁷ Sharon Otterman & Joseph Goldstein, *How New York City’s Hospitals Withstood the Omicron Surge*, NY Times (Feb. 5, 2022), www.nytimes.com/2022/02/05/nyregion/omicron-nyc-hospitals.html.

⁴⁸ Rishi Sikka, Julianne M. Morath, & Lucian Leape, *The Quadruple Aim: Care, Health, Cost and Meaning in Work*, 24 *BMJ Qual. Saf.* 608 (2015).