

Where to Begin? Healthcare Provider Stressors and Behavioral/Mental Health Needs Associated with COVID-19

Deborah J. Kenny, PhD, RN, FAAN

Professor

University of Colorado, Colorado Springs

1420 Austin Bluffs Parkway

University Hall 159

Colorado Springs, CO 80918

Tel: (719) 255-5170

Email: dkenny@uccs.edu

Author Note

The opinions of this review are those of the author alone and do not represent the views of the Helen and Arthur E. Johnson Beth-El College of Nursing and Health Sciences at the University of Colorado, Colorado Springs, or other institutions or organizations the author may serve. The author has no financial conflicts of interest.

Abstract

During the SARS-CoV-2 (COVID-19) pandemic, healthcare providers have been asked and required to provide care in ways they never anticipated. They have assumed personal and family risks greater than usual. They have been stretched thin, and they have been asked to perform duties that may have been contrary to their professional code of ethics. It has been reported that healthcare providers are beginning to suffer the effects of the stress they have been under and that their needs will be long-term. The already stretched health professions can ill afford to lose more professionals to the stress and burnout caused by the pandemic. This article will cover some of the reasons for provider mental stress and provide recommendations to mitigate stress. It will begin with some lessons from past pandemics, followed by the ethical framework used to address needs during the pandemic. The scope of the ethical issues and mental health stressors are too far-reaching to be adequately addressed in a single article. Therefore, only the most critical issues will be discussed.

Keywords: COVID-19, moral injury, behavioral health, mental health, ethics, crisis

Introduction

“Our nation’s health care professionals are currently working in the midst of a ‘pandemic within a pandemic.’ The extreme stress and isolation of the COVID-19 pandemic, with its associated patient load, suffering, and death, as well as limited supplies and incomplete understanding of this disease, is a significant burden on its own. However, the pandemic has been layered on top of already dangerously high levels of clinician burnout throughout the health care system. In other words, we are experiencing concurrent public health emergencies.”

--Feist, Feist, & Cipriano, p.2

In late 2019 and early 2020, the world began to experience a new respiratory illness that was subsequently named COVID-19. Beginning in Wuhan, China, it quickly spread around the world, continuing to leave large numbers of cases and death in its wake. COVID-19 caught media attention because of the severity of the illness and subsequent death rate, especially among older adults. At first, not much was known about the disease, how it spread, and how it affected the respiratory system or other organ systems as well.

The virus spread from China to Europe and the United States in a month. It was apparent how contagious and deadly the disease was and how easily it spread. Messaging about the disease was mixed and sometimes misleading. For the first time, social media weighed heavily in the spread of misinformation during a pandemic. Both social networking and news media outlets sent out conflicting reports. As well, some messaging was actively suppressed, especially early on. This succeeded only in creating public mistrust in any news about the virus (Bicheno, 2020; Mchamgama, & McLaughlin, 2020; Stringer, 2020). The science of the disease continually changed as we learned new things about the virus, and even scientists could not agree on treatments or strategies for managing the disease (Feldman, 2020). For example, protection was needed; protection was not needed.

Meanwhile, people continued to become sick and to die. The world faced quarantine and a lockdown. Stores sold out of supplies as panicked people hoarded them, anticipating supply chain disruptions, or worse. Isolation, fed by social media misinformation, caused people to act badly as emotional distress levels and expectations for normality increased. Just as in earlier pandemics, measures of quarantine and travel stoppages resulted in discrimination and social stigma (Tognotti, 2013; Fairchild, Gostin, & Bayer, 2020). As technology and media coverage increased, so did alarm and panic. Calls to mental health hotlines exploded (Levine, 2020).

As the pandemic progressed, illness and death rates began to rise, and there quickly came a harsh realization the healthcare system was not going to be able to keep up with both physical resources and personnel needs. At this point, nations, states, and cities began to plan for contingencies and resource allocation. The surge in cases and deaths was compared to a wartime or mass casualty event. In many places, the healthcare system was overwhelmed, care had to be prioritized, visitors were prevented from being with sick and dying family members, and scarce supplies had to be allocated carefully. The combination of scarce resources, too many patients, fatigued and overwhelmed providers (from pre-hospital through hospital and palliative care) created a type of mental stress that today's providers had not previously experienced. The term healthcare providers include physicians, nurses at all levels, first responders, and personal care workers.

Lessons from Previous Pandemics

When considering COVID-19, most will reference the influenza pandemic of 1918-1919 or the SARS epidemic of 2003 insofar as lessons that should have been learned and applied to COVID-19. These include quarantine/isolation measures, sanitation and hygiene, closures, and resource allocation. There are numerous lessons from additional other pandemics throughout history that can contribute to a current understanding of methods to manage disease outbreaks. Tognotti (2013) provides a comprehensive review of the history of quarantine, beginning with the plague epidemic where sanitary cordons were set up to cut off trade routes and city access points. The paper described how camps were used to contain the sick. Though success was limited, and in some cases, non-effective, these measures were considered to be the best that could be offered at the time. Some methods, such as quarantine, were adopted by North America in an effort to control yellow fever and smallpox outbreaks in the 1600s and 1700s. In the 1800s, they were used again to control cholera and tuberculosis. During the 1918-1919 influenza pandemic, measures were only haphazardly applied, in part because World War I was going on at the same time (Tognotti, 2013). This scenario would be repeated in 1968-1969 with troops returning from Vietnam infected with Influenza A, and again during the 2003 appearance of SARS from the increased globalization of air travel. It was during the latter half of the 1800s and early 1900s that public health programs such as better sanitation and immunization began to be effective in decreasing the numbers of different diseases such as tuberculosis (Daniel, 2006), smallpox (Branswell, 2020), polio (Baicus, 2012), measles, and chickenpox (Conis, 2019).

COVID-19 has followed most of the paths expected of a pandemic, but what was not recorded in previous pandemics or epidemics were the levels of distress, either to the public or to healthcare providers, caused by the diseases. Assuredly, previous pandemics caused distress on many levels, but this one gained awareness, presumably because of the media attention it has garnered. Even as people were told to stay at home or distance themselves, they stayed connected through social media. Because people also used social media solely for their news and information, true or false, this only added to the confusion and polarity seen with COVID-19. The playbook could not have predicted this situation.

Ethics Framework

To determine an appropriate ethics framework suitable for pandemics, one must begin by thinking broadly about theories at first, then focusing down to constructs that would frame actions in a pandemic. A pandemic presents a situation in which society is unprepared for many of the situations unfolding. In the United States, the COVID-19 response was complicated by a highly political situation, general unpreparedness, shortages, and divided public response.

On the surface, it seems that a simple utilitarian approach to the pandemic would be the most sensible. Utilitarianism ascribes to the notion that "we ought always to produce the maximal balance of positive value over disvalue--or the least possible disvalue" (Beauchamp & Childress, 2013, p. 355). In simple terms, it means providing the greatest good for the greatest number. This approach has been used in most of the crisis standards of practice developed in the United States either before or during the pandemic (Laventhal et al., 2020). It has driven the potential allocation of resources, especially ventilators and Extra Corporeal Membrane Oxygenation (ECMO). However, a large study by Najavas, Heduan, Garbulsky, Tagliazucchi,

Articles

Ariely, & Sigman (2020) showed that utilitarian thinking about the pandemic could be distilled down to instrumental harm (life expectancy) and impartial beneficence (equitable public health), based on various moral and personality variables. Furthermore, they found that those who tended toward impartial beneficence were more distressed when making utilitarian conclusions.

There are numerous other ethics frameworks from which the current pandemic can be viewed. One includes duty-based ethics, important because it forms the basis for many of the various healthcare professional codes of ethics. This deontological view values the fact that individuals are duty-bound to do the right thing. For example, Provision 2 of the American Nurses states, "The nurse's primary commitment is to the patient, whether an individual, family, group, community, or population." ANA, 2015, p. 5). This includes evaluating competing professional and personal interests in favor of preserving professionalism. During COVID-19, this framework has caused significant distress among healthcare workers as they have had to weigh their obligations to their patients and employers to those of their families. News article after news article described the angst of providers as they wrestled with this.

Another framework is principlism upon which current medical bioethics is largely based. Principlism provides a framework for the identification and resolution of moral issues often encountered in medicine. It includes the four principles of respect for autonomy, beneficence, non-maleficence, and justice. Individual autonomy is generally considered the cornerstone of medical bioethics, though the others are given equal consideration in theory (Callahan, 2003). Respect for autonomy is complex but implies that medical professionals act to encourage their patients' autonomous decisions by providing clear information, ensuring understanding, and maintaining the voluntariness of their decisions (Beauchamp & Childress, 2013). However, in a pandemic situation, individual autonomy may necessarily be eclipsed by societal needs. In this case, communitarianism, which espouses a connection between individuals and their communities, highlights the interplay between the individual and the common good (Etzioni, 2015).

In this pandemic, all the above frameworks can be applied situationally, so it is all but impossible to assign one framework to an everchanging state of affairs. They are incomplete in their application in a pandemic that has essentially upended society. Therefore, a public health framework is necessary when considering all the perspectives inherent in COVID-19 and its threats to the well-being of today's society. During the AIDS epidemic in the 1980s, epidemiologists began to examine the need for a public health framework (Bayer and Fairchild, 2004). According to Kass (2001), our societal pluralism allows for multiple viewpoints where ethics are concerned. Because of this, it became important to consider an ethics framework where moral issues raised in public health work was recognized. Public health ethics frameworks focus more on the population or community than the individual, recognizing that individual liberties must sometimes be surrendered to the needs of the community (Swain, Burns, & Etkind, 2008). This is along the lines of utilitarianism, but there must be a balance between the common good and individual liberties (Kass, 2001). Thus, the most common public health ethical principles include fairness, duty to care, the duty to steward resources, transparency, consistency, proportionality, and accountability (Hick, Hanfling, Wynia, & Pavia, 2020).

Public Health Emergencies

Planning for public health emergencies takes on the added dimensions that they are high-stakes situations, there may be little time to plan, and essential services may be disrupted

(Thomas, MacDonald, & Wenink, 2009). Often public health emergencies present ethical issues that may not have been considered in the planning phases. Alternatively, plans fail to consider all contingencies, as happened with COVID-19. Public health agencies were ill staffed even before the COVID-19 pandemic, as spending dropped, and the staff was cut over numerous years by the government. Essentially, these agencies found themselves unable to protect the health of our nation's citizens when it was most needed (KHN, 2020a). This failure resulted in the demonization of the public health system. Numerous news reports detailed how public health officials were burning out as they worked long hours. Others reported that officials quit or were fired, and some received threats (Vestal & Ollove, 2020). In essence, both the federal and state governments contributed to the erosion of the trust of the public health system. With trust at an all-time low, less than one-third of Americans indicated they trust the information provided by public health officials (Khullar, 2018).

Much of this mistrust was fueled by a real-time unfolding of new information as it was learned by scientists and practitioners. Just as true information was put out, so too was false information. This and the federal politicism of the pandemic left the public health, acute, and long-term care systems ill-equipped to handle the fluid situational dynamics of the pandemic. Many states got caught without plans that considered the failure of the system to be able to handle the numbers of patients presenting themselves.

As well, some measures taken at the beginning of the pandemic would disproportionately affect vulnerable members of society and exacerbate disparities. For example, those without insurance might not be given the same priority for treatment as those who could afford care. The aged were told to consider end-of-life documents because they might be triaged out of the opportunity for a scarce ventilator. Long-term care facilities were not able to contain the spread of the virus within their facilities due to PPE shortages for staff and the vulnerabilities of their patients. The difficulty of continuing to work under the stresses of little staffing, little support, and little trust only compounded the stressors providers were already experiencing.

Professionalism and Ethical Issues

All healthcare professionals are held to high standards through their profession. For example, nurses have a code of ethics by which they are obligated to practice (ANA, 2015). The very first provision in the Nurses' code of ethics states, "The nurse practices with compassion and respect for the inherent dignity, worth, and unique attributes of every person." (p. 1). The ANA interprets this as every person has equal worth in treatment throughout the life continuum, from preventive measures to palliative care at the end of life. Additionally, it states that support extends from the patient to their family and others with whom they are involved. Other professions have similar ethical standards. It also implies all are deserving of the same treatment regardless of demographic background. COVID-19 has challenged not only the professional standards of healthcare providers but their core values as well. There has been an endless stream of ethical issues with the pandemic. These included choosing between patient care and family, to whom and how to allocate anticipated scarce resources, use and re-use of very limited supplies of Personal Protective Equipment (PPE), exacerbated disparities in care, issues in long-term care, handling of the dead. O'Halloran (2020) described that the largest measure of distress in the nurses was non-supportive leadership, that nurses were told that everyone was distressed, and they should just deal with it. Providers began to experience the same mental distress as that described in the military literature as moral injury.

Moral Injury

Moral injury has been a term that has until very recently been connected with war and wartime scenarios. There is a large body of literature on moral injury during wartime but a clear definition remains elusive. However, one concept that appears numerous times in the literature is "betrayal" (Gilligan, 2014; Blinks & Harris, 2016; Jordan, Eisen, Bolton, Nash, & Litz, 2017; Wortmann et al., 2017; Currier et al. 2019). This betrayal is based on threats for which action potentially violates moral values, as opposed to threats that pose fear or immediate physical danger. Because threats to the person differ, they also affect one differently as well (Litz, Stein, Delaney, Lebowitz, Nash, Silva, & Maguen, 2009).

Nursing has recognized moral distress for decades, but it is not until recently that it has been used in other providers of healthcare as well. Moral distress was originally conceptualized by Andrew Jameton (1984) as "... when one knows the right thing to do, but institutional constraints make it nearly impossible to pursue the right course of action." (p.6). Again, a clear definition within the health professions has been elusive; this creates confusion of terms. Many believe moral injury equates to compassion fatigue. Though the two may overlap, there are important differences. Moral distress arises from the actions of oneself or others that violate deeply ingrained moral values. Carse and Rushton (2018) expand this further to include situations in which there is a mere uneasiness about anticipated events. This was apparent when considering the potential situation where there would not be enough ventilators to treat very sick COVID patients, based on stories and experiences of healthcare providers in other countries. Compassion fatigue is brought about by interacting and caring for individuals who have been traumatized. Figley (1995) describes compassion fatigue as a result of caring for others who are in distress. Nevertheless, moral distress and moral conflict, as described in the nursing and medical literature, differ from those seen in war veterans. Perhaps differences may be due to the degree and type of moral conflict, but the symptoms can be the same.

The moral distress that has been described in the civilian healthcare world has been made much more complex by the unique ethical challenges presented by COVID-19. The pandemic has necessitated fundamental changes, not just to the healthcare systems, but to society in general. As scientists' knowledge of the virus deepens with its contagion and differing courses of disease, it is clear that healthcare professionals have willingly accepted the risks inherent in caring for patients with COVID-19. Rapidly changing contingency planning has resulted in numerous circumstances that have challenged the status quo. Even while there is a current shortage of providers, they are being furloughed at unprecedented rates. The need for rapid and changing contingency planning, real or perceived shortages in protective equipment, resource shortages and potential allocation of resources, direct abuse by angry families, patients, and even the public (Gilroy, 2020), the inability to provide the ethical caring called for by the professional code of ethics has placed healthcare providers in what is described as a "war zone" (Dishman, 2020).

All the above situations run counter to both personal and professional values. Each time a provider experiences an insult to their moral and professional values, they suffer moral distress. Given that many providers experience some of these situations numerous times, this stress can accumulate, and the providers experience moral suffering. Their ability to provide the levels of care they aspire towards diminishes. The sudden and unprecedented similarities between civilian healthcare and military scenarios have resulted in distress and potential moral injuries at a rate never experienced in the civilian sector. There is a high correlation between moral

injury and suicide (Wortmann et al. 2017; Yan, 2016; Levi-Belz & Zerach, 2018). We have begun to see suicide among front-line healthcare providers (Elwafaii, 2020; Watkins, Rothfeld, Rashbaum, & Rosenthal, 2020). While the motives for these suicides cannot be determined, it can be speculated that the cause might be due to factors related to caring during COVID-19. Just as the courses and outcomes of the virus have evolved and been unpredictable, it has also been very difficult to predict the course of mental health needs of providers, but it is known is that there are needs both in the short-term and in the long-term.

There are many similarities between mass casualties in war and this pandemic. Beginning in China, hospitals were quickly overrun with patients who were in serious condition or those whose conditions worsened quickly. Next, in Europe, as the disease began to spread exponentially, resources, both human and supplies, were in short supply. We heard stories and saw poignant pictures of intensive care unit staff who were overwhelmed and fell apart while on the job. We heard of gut-wrenching decisions physicians made not to treat those who were not likely to survive. By the time the disease began to spread in the United States, we had heard of a severe shortage of PPE.

Primary COVID-19 Issues Causing Emotional Distress

There were numerous universal issues for healthcare providers during the COVID-19 pandemic, no matter where in the world they occurred. Those of us who served in the military remember the personal conflicts, if not in actual war zones, in drills whereby resources were quickly used, where long hours were the norm, and triage decisions had to be made, some of them painful. Because of its scope, COVID-19 is the closest many have come to an actual war zone.

Inadequate PPE

The first issue that seemed to arise was that hospitals could not provide the required amount of PPE. Several things contributed to the shortage. Because it was not known definitively how the disease was spread, any provider having the potential of coming into contact with a suspected COVID-19 patient was required to use masks, face shields, gloves, and gowns. They were changed often, and supply could not keep pace with demand. Dysfunctional supply chains and lack of adequate stockpiles have contributed to short supplies. This called for unconventional solutions, such as rationing, re-use, repurposing other items as improvised PPE, and reduced nonessential services (Livingston, Desai, & Berkwitz, 2020). Providers were forced to re-use what little they had, and even to resort to social media to try to get PPE (Ranney, Griffith, & Jha, 2020). Ethically, providers knew they should be wearing the N95 respirator masks along with other PPE, and they knew it should be changed often. However, because of system constraints, they were prevented from doing what they knew as the right thing. They were forced to re-use PPE or use substandard homemade PPE, thereby increasing their own risk of contracting the disease. Many of them did. In Italy, there were 16,991 total positive cases of COVID-19 in healthcare workers. Of those, there were 182 deaths, which also included two suicides because of work pressure (Lapolla, Mingoli, & Lee, 2020). The United Kingdom had 157 confirmed deaths of health care workers by May 3, 2020 (Kursumovic, Lennane, & Cook, 2020). As of the end of July, 878 healthcare workers in the U.S. were thought to have died of COVID-19 (KHN, 2020b).

As the fear of the virus spread and there were beginning rumors of lockdowns and quarantines, people began to hoard supplies. While we could see and hear stories of toilet

paper and grocery supply hoarding, another type of hoarding was taking place. For the first time, hospitals were forced to lock up and account for PPE like controlled drugs, because both providers and patients' family members, facing bare drugstore shelves and personal risk, were hoarding PPE and hand sanitizer. Hand sanitizer was held behind nurses' stations.

Making Work Choices

Just as a soldier willingly goes into battle, fully knowing risks and the oaths they made to their fellow citizens, healthcare personnel continued to go to work to care for COVID-19 patients, knowing they risked contracting the disease themselves, or worse, spread it to family members.

COVID-19 presented abnormal working conditions. Some providers worked long shifts caring for patients with COVID-19, as some of their colleagues in specialty and outpatient areas were furloughed or laid off. While some were having their hours decreased, others were pressed into service, caring for seriously ill COVID-19 patients without the necessary training (O'Halloran, 2020). This caused high levels of stress in providers as they feared both for their jobs and of making mistakes.

Nguyen, et al. (2020) investigated risk perception by front line providers. They asked groups of community members to tell them their perceptions of how much risk EMTs and paramedics are expected to assume before they deem working itself is too much risk. The investigators had the community members develop categories of times when it is acceptable for these front-line workers to place limitations on their professional responsibility. These circumstances included issues with physical health, issues with mental health, and other competing obligations.

Risk itself stresses providers. Long shifts stress them. Watching patients deteriorate right before their eyes stresses them. Then they have to go home. Says one physician, "Times like this can leave physicians [nurses] stranded between our commitment to the community and responsibility to our families--a no man's land where a colleague's spare bed may be the closest we can find (Rose, 2020, p. 1685).

Resource Allocation

By the end of March 2020, the virus threatened to overwhelm U.S. hospital systems more quickly than anticipated. It had already done this in Europe. Hospital administrators and policymakers found themselves either having to develop or to revisit emergency contingency planning. Chopra, Toner, Waldhorn, and Washer (2020) offered a template containing the essentials for COVID-19 preparedness plans. Interestingly, their recommendations for a task force did not include ethicists, but their first suggestion was to protect healthcare workers from disease transmission. One of the plans incorporated by many states was the Minnesota Department of Health Crisis Standards of Care (2019), based on the National Academies of Medicine (Hanfling, Altevogt, Viswanathan, & Gostin, 2012), primarily because this plan was done just before the pandemic arrived. Allocation of resources, such as ventilators and ECMO, were based on a sound ethics foundation that included a utilitarian and a public health ethics principles approach of maximizing benefits to society as a whole. Most plans called for a triage team, to include an ethicist, not involved in specific patient care to decide on whom to allocate these physical resources, to remove the front-line workers from having to make the decisions.

However, political scientist Julia Lynch has noted that the operational instruction on how to set up such triage teams in a hospital is either missing or not followed (Levins, 2020), thus often leaving allocation decisions to treating physicians and hospitalists. If left to make triage decisions, providers are placed in the especially burdensome position to ethically and rationally justify that decision (Farrell et al., 2020). Ethically, removal of any patient from a ventilator to reallocate to another can only be justified if it would threaten the goal of maximizing survival to the public (White & Lo, 2020).

As the pandemic began to threaten systems with shortages, and more crisis plans were put into place, advocacy groups representing those who may be triaged out of care (those over the age of 65, disability, and without health insurance) questioned the ethical soundness of the plans. Farrell et al. (2020) suggested that creating an age disparity in resource allocation would most certainly exacerbate gender, race, and other disparities in healthcare, which was already happening. Fortunately, in most circumstances, there was an adequate number of ventilators for patients needing them. In New York, it was stated that there were enough ventilators because people on them died quickly, so there was high turnover (Personal communication, March 30, 2020). Whether the trend of having sufficient ventilators will hold through any future surges of the virus remains to be seen.

End of Life Issues

One of the concerns raised by ethicists during COVID-19 is that providers need to discuss end-of-life issues with patients before they get into the position of having to make quick, unthoughtful decisions for themselves or someone who may not know a patient's wishes. Discussing end-of-life decisions with patients is uncomfortable for most providers. Making advanced directives is difficult for most people. However, since the start of COVID in the United States, there has also been a surge in the numbers of people making wills and advanced directives (CNBC, 2020).

Since the mid-1990s, there has been a push for patients to have advanced medical directives and durable medical power of attorney. The biggest barrier to discussing end-of-life issues is that neither patients nor providers know how to start the conversation. In a literature review examining physician attitudes toward advanced directives, Coleman (2012) found that many physicians believed making an informed choice of end-of-life care required more knowledge of medical procedures than most patients have. He also concluded that the medical bioethical model of principlism might not be adequate to explain the multitude of ethical theories that might be used to discuss end-of-life wishes with patients from multiple cultures and in multiple circumstances.

Another significant stressor for both providers and patient families caused by COVID-19 has been the visiting restrictions imposed on family members who have loved ones in the hospital. This has been especially stressful for nurses and physicians working in intensive care units, as they had to tend to patients who were dying, unable to be surrounded by loved ones, and with their having to divide time between increased patient loads. Wakam, Montgomery, Biesterveld, and Brown (2020) describe this scenario as becoming increasingly common and a space that is unknown to today's providers. They further state that it has become up to providers to provide the compassion and support needed for this final act. However, this does not come without a cost to the providers, as they assume the burden of the patient and the family.

Some Lessons Learned

What are some of the lessons learned from this pandemic? The first seems to be that no situation can be predicted accurately. No one could have foreseen the rapidity and seriousness of the spread of COVID-19. The more that is learned from the SARS-CoV-2 virus, the more it seems to affect different populations differently. Both the SARS and the MERS epidemics were able to be contained relatively quickly and did not threaten to overwhelm the healthcare system as COVID-19 has.

Secondly, poor planning by state public health organizations as well as hospital systems has caused unnecessary stress in healthcare providers. Many state crisis plans have prioritized health care providers to receive care and physical resources should they become ill, but only so that they can remain on or go back to the front lines. However, the plans have not addressed when front line providers may set aside their professional obligations to care for the health of themselves and their families. They did not address the layoffs and furloughs created when hospitals and various clinics found their patient numbers down because the public was afraid to expose themselves to the disease. They did not address the consequences of having to make decisions as to who gets the life support resources. They did not address the consequences of having to care for more dying patients, and those whose families were not allowed to be with them. They did not address the mental health consequences for providers and the stigma attached to asking for help. These are important issues that should be considered and incorporated into all crisis plans, then followed through with by supportive leadership.

Thirdly, the enormous numbers of cases and deaths in and of themselves have caused immense stress in our providers. Nurses described being more stressed than ever. They talked about how quickly things turned badly for patients, and they discussed how upsetting it was for them to try to facilitate communication between isolated patients and families. Said one nurse in an email, "At the stage we are in, emotions distract too much. I'm sure they'll come crashing in when I'm on my off days sitting alone at home." (M. Solskaya, personal communication, March, 30, 2020).

Lastly, the emergence of a disease in which healthcare workers faced the prospect of making allocation decisions has caused everyone to have to think about what they might want for themselves should they get the virus and need to be hospitalized or placed on a ventilator with little chance of recovery.

The virus seemed to bring out both the best and the worst in people. On the positive side, many people began to recognize the difficulties faced by healthcare providers. The fact that they were dealing with personal risk, long hours, increased death, and even layoffs elevated their status in most of the public eye. The public responded by beginning grassroots movements to make washable cloth facemasks for them. Meals for them were crowd-funded and dropped off at hospitals. Factories were repurposed to make the now scarce PPE and hand sanitizers. On the negative side, the virus brought to the forefront the healthcare disparities already present in our healthcare system. People began to panic buy, started hoarding, and see opportunities to

make money off scarce resources. Those working in the public health sector were demonized and received threats against life and property because of the restrictions placed on people. In a country where individualism is prized, sacrificing this for the public good was met with resistance. This created numerous social media memes and even public service announcements regarding community responsibility to others during a difficult situation. This was not made easier by the politicization of the virus and the attendant problems it created. A nation, deeply divided, became even more so.

Recommendations

Throughout the available literature and its analysis, numerous recommendations can be made. Hospital-based crisis plans should be coordinated with the state plans and include a clear articulation of professional responsibilities during a pandemic. Mental health support for healthcare workers should be made widely available through employer health plans early on in a pandemic, from those who transport patients to the hospital, through those who work in the hardest hit long-term care facilities. The stigma associated with help-seeking by providers and the associated fear of licensing and future work issues should be removed from workplaces and addressed. This would include hospital system effective early support for providers and their families and include interventions aimed at reducing the stigma of reporting difficulties, programs aimed at reducing stress such as mindfulness (Mealer, Hodapp, Conrad, Dimidjian, Rothbaum, & Moss, 2017; Zeller & Levin, 2013). State-based hotlines could be set up specifically for provider mental health. Most importantly, hospital systems and public health agencies must conduct post-crisis reviews of events to identify staff who should be supported with treatment for moral distress and/or moral injury (Greenberg, Docherty, Gnanapragasam, Wessely, 2020).

Conclusion

The primary question becomes, "How do healthcare workers maintain their professional and ethical obligations in the face of a pandemic, while at the same time preserving their own mental health?" As pointed out, expectations of professional responsibility during a pandemic must be clearly articulated before and not during a pandemic. Leadership should provide clear, transparent, and consistent messaging of expectations of provider responsibilities. Many of the pandemic crisis plans developed for this pandemic, and the table-top exercises developed beforehand, did not address issues, nor could they be predicted. While plans addressed patient needs, they failed to address provider needs. It may be late to acutely address the consequences of stressors shown at the beginning of this pandemic, but it is not too late to address the mental health issues and long-term downstream consequences that will be faced by many front-line providers. If no interventions are taken, they face not only the symptoms of moral injury, such as shame and guilt, but also symptoms of burnout and PTSD, such as insomnia, depression, and anxiety. It is vital to provide prompt treatment for mental distress to prevent further decimation to professions that are already short-handed.

References

- American Nurses Association. (2015). *Code of ethics for nurses with interpretive statements*. Silver Spring, MD: American Nurses Association.
- Baicus, A. (2012). History of polio vaccination. *World Journal of Virology*, 1(4), 108-114. doi: 10.5501/wjv.vq.i4.108
- Bayer, R., & Fairchild, A. L. (2004). The genesis of public health ethics. *Bioethics*, 18, 473-492.
- Beauchamp, T. L., & Childress, J. F. (2013). *Principles of medical bioethics*. New York: Oxford University Press.
- Bicheno, S. (2020, March 30). *Social media censorship in the time of coronavirus*. Retrieved from <https://telecoms.com/503401/social-media-censorship-in-the-time-of-coronavirus/>
- Blinka, D., & Harris, H. W. (2016). Moral injury in warriors and veterans: The challenge to social work. *Social Work & Christianity*, 43(3), 7-26.
- Branswell, H. (2020, May 8). What the world learned in eradicating smallpox: Unity mattered. *STAT*. Retrieved from <https://www.statnews.com/2020/05/08/what-the-world-learned-in-eradicating-smallpox-unity-mattered/>
- Callahan, D. (2003). Principlism and communitarianism. *Journal of Medical Ethics*, 29, 287-291.
- Carse, A., & Rushton, C. H. (2018). Moral Distress: Context, Sources, and Consequences. In C. H. Rushton (Ed.), *Moral resilience: Transforming moral suffering in healthcare*. New York: Oxford University Press.
- Chopra, V., Toner, E., Waldorn, R., & Washer, L. (2020). How should U.S. hospitals prepare for Coronavirus disease 2019 (COVID-19)? *Annals of Internal Medicine*, 172, 621-622. Retrieved from <https://doi.org/10.7326/M20-0907>
- CNBC. (2020, March 25). *Americans rush to make online wills in the face of the coronavirus pandemic*. Retrieved from <https://www.cnn.com/2020/03/25/coronavirus-pandemic-triggers-rush-by-americans-to-make-online-wills.html>
- Coleman, A. M. E. (2012). Physician attitudes toward advanced directives: A literature review of variables impacting on physicians' attitude toward advance directives. *American Journal of Hospice and Palliative Medicine*, 30, 696-706. doi: 10.1177/104990911246544
- Conis, E. (2019). Measles and the modern history of vaccination. *Public Health Reports*, 134(2), 118-125. Retrieved from <https://doi.org/10.1177/0033354919826558>
- Daniel, T. (2006). The history of tuberculosis. *Respiratory Medicine*, 100, 1862-1870. doi:10.1016/j.rmed.2006.08.006

- Dishman, L. (2020, April 20). Describing a coronavirus 'war zone,' nurses sue New York and two hospitals over safety issues. *Fast Company*. Retrieved from <https://www.fastcompany.com/90496358/see-the-26-world-changing-ideas-awards-winners-that-are-building-a-better-world>
- Elwafaii, O. (2020, April 29). Why are COVID-19 doctors committing suicide? *CGTN*. Retrieved from <https://newsus.cgtn.com/news/2020-04-29/Why-are-COVID-19-doctors-committing-suicide--Q4yi8yhYB2/index.html>
- Etzioni, A. (2015). Communitarianism. In *The encyclopedia of political thought* (1st ed.). doi: 10.1002/9781118474396.wbept0184
- Fairchild, A., Gostin, L., & Bayer, R. (2020). Vexing, veiled, and inequitable: Social distancing and the "Rights" divide in the age of COVID-19. *The American Journal of Bioethics*, 20(7), 55-6. doi: 10.1080/15265161.2020.1764142
- Farrell, T. W., Francis, L., Brown, T., Ferrante, L. E., Widera, E., Rhodes, R., Rosen, T., Hwang, U., et al. (2020). Rationing limited healthcare resources in the COVID-19 era and beyond: Ethical Considerations regarding older adults. *Journal of the American Geriatrics Society*, 68, 1143-1149. Retrieved from <https://onlinelibrary-wiley-com.libproxy.uccs.edu/doi/full/10.1111/jgs.16539>
- Feist, J. B., Feist, J. C., & Cipriano, P. (2020). Stigma compounds the consequences of clinician burnout during COVID-19: A call to action to break the culture of silence. *NAM Perspectives Commentary*, National Academy of Medicine, Washington, DC. Retrieved from <https://doi.org/10.31478/202008b>
- Feldman, N. (2020, August 4). When green means stop: How safety messages got so muddled. *Kaiser Health News*. Retrieved from <https://khn.org/news/when-green-means-stop-how-safety-messages-got-so-muddled/>
- Figley, C.R. (1995). *Compassion fatigue: Coping with secondary traumatic stress disorder in those who treat the traumatized*. (C. R. Figley, Ed.). New York: Taylor & Francis Group.
- Gilligan, C. (2014). Moral injury and the ethic of care: Reframing the conversation about differences. *Journal of Social Philosophy*, 45(1), 89-106.
- Gilroy, R. (2020, March 20) Nurses on coronavirus front-line facing 'abhorrent' abuse from public. *Nursing Times*. Retrieved from <https://www.nursingtimes.net/news/coronavirus/nurses-fighting-coronavirus-facing-abhorrent-abuse-from-public-20-03-2020/>
- Greenberg, N., Docherty, M., Gnanapragasam, S., & Wessely, S. (2020). Managing mental health challenges faced by healthcare workers during COVID-19 pandemic. *BMJ*, 368, m1211. doi: <http://dx.doi.org/10.1136/bmj.m1211>

Articles

- Hanfling, D., Altevogt, B. M., Kristin Viswanathan, K., & Gostin, L. O. (2012). (Editors) Committee on Guidance for Establishing Crisis Standards of Care for Use in Disaster Situations; Institute of Medicine. "Volume 1: Crisis Standards of Care: A Systems Framework for Catastrophic Disaster Response"
- Hick, J. L., Hanfling, D., Wynia, M. K., & Pavia, A. T. (2020). Duty to plan: Health care, crisis standards of care, and novel coronavirus SARS-CoV-2. *NAM Perspectives*. Discussion paper. National Academy of Medicine. Washington, DC. Retrieved from <https://doi.org/10.31478/202003b>
- Jameton, A. (1984). *Nursing practice: The ethical issues*. Englewood Cliffs: Prentice-Hall.
- Jordan, A. H., Eisen, E., Bolton, E., Nash, W. P., & Litz, B. T. (2017). Distinguishing war-related PTSD resulting from perpetration- and betrayal-based morally injurious events. *Psychological Trauma: Theory, Research, Practice, and Policy*, 9, 627-634.
- Kass, N. E. (2001). An ethics framework for public health. *American Journal of Public Health*, 91, 1776-1782. Retrieved from <https://ajph.aphapublications.org/doi/epub/10.2105/AJPH.91.11.1776>
- KHN. (2020a, July 1). Hollowed-out public health system faces more cuts amid virus. Retrieved from <https://khn.org/news/us-public-health-system-underfunded-under-threat-faces-more-cuts-amid-covid-pandemic/>
- KHN. (2020b, July 29). COVID-19: Lost on the front-line. Retrieved from <https://khn.org/news/lost-on-the-frontline-health-care-worker-death-toll-covid19-coronavirus/>
- Khullar, D. (2018, January 23). Do you trust the medical profession?: A growing distrust could be dangerous to public health and safety. *New York Times*. Retrieved from <https://www.nytimes.com/2018/01/23/upshot/do-you-trust-the-medical-profession.html>
- Kursumovic, E., Lennane, S., & Cook, T. M. (2020). Deaths in healthcare workers due to COVID-19: The need for robust data and analysis (Editorial). *Anaesthesia* 2020, 75, 989-992.
- Lapolla, P., Mingoli, A., & Lee, R. (2020). Deaths from COVID-19 in healthcare workers in Italy – What can we learn (Editorial). *Infection Control & Hospital Epidemiology*, Open Access, 1-2. Retrieved from <https://doi.org/10.1017/ice.2020.241>
- Laventhal, N., Basak, R., Dell, M. L., Diekema, D., Elster, N., Geis, G., Mercurio, M., Opel, D., et al. (2020). The ethics of creating a resource allocation strategy during the COVID-19 pandemic. *Pediatrics*, 146, 1-11. doi: 10.1542/peds.2020-1243
- Levi-Belz Y., & Zerach G. (2018). Moral injury, suicide ideation, and behavior among combat veterans: The mediating roles of entrapment and depression. *Psychiatry Research*, 269, 508-516.
- Levine, M. (2020, April 7). Calls to U.S. helpline jump 891%, as White House is warned of mental health crisis. *ABC News*. Retrieved from <https://abcnews.go.com/Politics/calls-us-helpline-jump-891-white-house-warned/story?id=70010113>

- Levins, H. (2020). How can hospitals address scarce resources during Covid-19? *University of Pennsylvania Leonard Davis Institute of Health Economics*. Retrieved from <https://ldi.upenn.edu/news/how-can-hospitals-address-scarce-resources-during-covid-19>
- Litz, B. T., Stein, N., Delaney, E., Lebowitz, L., Nash, W. P., Silva, C., & Maguen S. (2009). Moral injury and moral repair in war veterans: A preliminary model and intervention strategy. *Clinical Psychology Review, 29*, 695-706.
- Livingston, E., Desai, A., & Berkwitz, M. (2020). Sourcing personal protective equipment during the COVID-19 pandemic. *Journal of the American Medical Association, 323*, 1912-1914. doi: 10-1001/jama.2020.5217
- Mchanama, J., & McLaughlin, S. (2020, April 1). Coronavirus has started a censorship pandemic Retrieved from <https://foreignpolicy.com/2020/04/01/coronavirus-censorship-pandemic-disinformation-fake-news-speech-freedom/>
- Mealer, M., Hodapp, R., Conrad, D., Dimidjian, S., Rothbaum, B. O., & Moss, M. (2017). Designing a resilience program for critical care nurses. *AACN Advanced Critical Care, 29*, 359-365.
- Minnesota Department of Health. (2019). *Crisis standards of care: An overview of catastrophic planning in Minnesota*. St. Paul, MN: Minnesota Department of Health.
- Navajas, J., Heduan, F. Á., Garbulsky, G., Tagliazucchi, E., Ariely, D., & Sigman, M. (2020, August 13). Utilitarian reasoning about moral problems of the COVID-19 crisis. Retrieved from <https://doi.org/10.31219/osf.io/ktv6z>
- Nguyen, L. H., Drew, D. A., Graham, M. S., Joshi, A. D., Guo, C., Ma, W., ...Chant, A. T. (2020). Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study. *The Lancet.com/Public-Health, 5*, e475-e483. Retrieved from [https://doi.org/10.1016/S2468-2667\(20\)30164-x](https://doi.org/10.1016/S2468-2667(20)30164-x)
- O'Halloran, J. (2020, May 6). I'm a nurse in a Covid-19 unit. My hospital's leaders frighten me more than the virus, *Statnews*. Retrieved from <https://www.statnews.com/2020/05/06/nurse-frightened-hospital-administrators-more-than-covid-19/>
- Ranney, M. L., Griffith, V., & Jha, A.K. (2020). Critical supply shortages—the need for ventilators and personal protective equipment during the Covid-19 pandemic. *New England Journal of Medicine, 382*(18), e41. doi: 10.1056/NEJMp2006141
- Rose, C. (2020). Am I part of the cure or am I part of the disease? Keeping coronavirus out when a doctor comes home. *The New England Journal of Medicine, 382*, 1684-1685. doi:10.1056/NEJMp2004768
- Stringer, M. (2020, July 29). Doctors with coronavirus treatment face Orwellian suppression. Retrieved from <https://texasscorecard.com/federal/doctors-with-coronavirus-treatment-face-orwellian-suppression/>

Articles

- Thomas, J. C., MacDonald, P. D. M., & Wenink, E. (2009). Ethical decision making in a crisis: A case study of ethics in public health emergencies. *Journal of Public Health Management & Practice, 15*(2), e16-e21. doi: 10.1097/01.PHH.0000346021.06803.76
- Tognotti, E. (2013). Lessons from the history of quarantine, from plague to influenza A. *Emerging Infectious Diseases, 19*, 254-259. doi: <http://dx.doi.org/10.3201/eid1902.120312>
- Vestal, C., & Ollove, M. (2020, June 18). Politicians shunt aside public health officials. *Pew Trusts*. Retrieved from <https://www.pewtrusts.org/en/research-and-analysis/blogs/stateline/2020/06/18/politicians-shunt-aside-public-health-officials>
- Wakam, G. K., Montgomery, J. R., Biesterveld, B. E., & Brown, C. S. (2020). Not dying alone: Modern compassionate care in the Covid-19 pandemic. *New England Journal of Medicine, 382*, e88. doi: 10.1056/NEJMp2007781
- Watkins, A., Rothfeld, M., Rashbaum, W. K., & Rosenthal, B. M. (2020, April 27). Top ER. Doctor who treated virus patients dies by suicide. *The New York Times*. Retrieved from <https://www.nytimes.com/2020/04/27/nyregion/new-york-city-doctor-suicide-coronavirus.html>
- White, D. B., & Lo, B. (2020). A framework for rationing ventilators and critical care beds during the COVID-19 pandemic. *JAMA, 323*, 1773-1774. doi:10.1001/jama.2020.5046
- Wortmann, J. H., Eisen, E., Hundert, C., Jordan, A. H., Smith, M. W., Nash, W. P., & Litz, B. T. (2017). Spiritual features of war-related moral injury: A primer for clinicians. *Spirituality in Clinical Practice, 4*, 249-261.
- Yan, G. (2016). The invisible wound: Moral injury and its impact on the health of Operation Enduring Freedom/Operation Iraqi Freedom veterans. *Military Medicine, 181*, 451-458.
- Zeller, J. M., & Levin, P. F. (2013). Mindfulness interventions to reduce stress among nursing personnel: An occupational health perspective. *Workplace Health & Safety, 61*, 85-89.