



Impact of the COVID-19 Pandemic on the Hospital and Outpatient Clinician Workforce

Challenges and policy responses

KEY POINTS

- The COVID-19 pandemic has put extreme stress on the health care workforce in the United States, leading to workforce shortages as well as increased health care worker burnout, exhaustion, and trauma. These pandemic-related challenges have taken place in a context of significant pre-existing workforce shortages and maldistribution, as well as in a workforce where burnout, stress, and mental health problems (including an ongoing risk of post-traumatic stress disorder) were already significant problems.
- Many health care workers who were not directly caring for COVID-19 patients faced being furloughed or having their hours reduced, particularly early in the pandemic. In May 2020, approximately 15 percent of hospital workers reported being unable to work at some time in the past 4 weeks because their employer closed or lost business due to the pandemic, compared to 23 percent of non-hospital health care workers. These numbers declined to 1-2 percent by the end of 2020.
- Total employment in the health care industry declined during the early months of the pandemic but has gradually recovered since summer 2020. The relative decline in employment was substantially larger for ambulatory care employees compared to hospital employees.
- Many hospitals have reported critical staffing shortages over the course of the pandemic, particularly when case numbers were high. During the Omicron surge in January and February 2022, the 7-day average of hospitals reporting critical staffing shortages peaked at 22 percent during mid-January 2022.
- Federal, state, and local governments took significant action to address the need for prevention and treatment services that arose from COVID-19 as well as the disruptions in health care delivery and finances that resulted from the pandemic through supplemental funding from federal relief legislation and easing many regulatory requirements.
- Even after the pandemic, many of the effects the pandemic has had on the health care workforce will likely persist. Addressing these impacts as well as the underlying challenges that pre-dated the pandemic can help build a stronger and more resilient health care system for the future.

INTRODUCTION

At different times over the past two years, many areas of the United States have faced health care workforce shortages tied to COVID-19 surges. Along with rising case rates there has been concern about the impact the pandemic has had on health care worker burnout, exhaustion, and trauma as well as the effect on the physical

and mental health of health care providers. Significant actions by federal, state and local authorities as well as by health systems and individual providers have attempted to address these disruptions. However, these pandemic-related disruptions and workforce shortages have taken place within the context of significant pre-pandemic shortages in some geographic areas, many of which have been exacerbated by the uneven and extended duration of the pandemic, as well as pre-existing concerns about high levels of burnout and mental health challenges for many health care workers. While case numbers and hospitalization rates are declining as of March 1, 2022 and the most acute workforce challenges may be easing for the time being, many of the impacts the pandemic has had on the workforce are cumulative and may not resolve quickly. In addition, the longer-term workforce challenges remain and addressing the underlying factors contributing to these challenges can help build a more resilient health care system moving forward.

This report combines a survey of the literature and primary analysis of data from the Census Bureau, Bureau of Labor Statistics, and other sources, in order to describe:

- Health care workforce shortages both prior to and during the pandemic;
- COVID-19 impacts on the mental health of the health care workforce, related burnout, and physical health issues;
- An overview of federal interventions to support the health care workforce during the pandemic;
- Highlights of workforce investments in the U.S. Department of Health and Human Services (HHS) FY 2022 appropriation and FY 2023 Congressional justification.

The report primarily focuses on the hospital and outpatient clinician workforce. The impact of the pandemic on the long-term care and direct care workforce was substantial, including disproportionate mortality from COVID-19, and the public health workforce was also disproportionately impacted, including public health officials.¹ While there are numerous important policy challenges in these areas, they are not the focus of this particular report;² other ASPE publications have examined some of these issues.*

WORKFORCE SHORTAGES AND MALDISTRIBUTION

Shortages and maldistribution before the pandemic

Shortages and maldistribution of health care workers, particularly of certain types of providers (primary care providers, dentists, psychiatrists, and behavioral health providers, for instance) as well as in certain areas, were a major concern even before the pandemic. For instance, one analysis done in 2016 estimated that there will be a national shortage of more than 150,000 registered nurses by 2020 and more than 500,000 by 2030. In addition, the analysis estimates that the South and West of the United States will have worse shortages than the Northeast or the Midwest.³ There are also numerous projections that have been done on potential physician shortages, including for certain fields such as primary care and general surgery. The Health Resources and Services Administration's (HRSA's) Bureau of Health Workforce (BHW) estimates, for instance, that by 2025, 37 states are projected to have a shortage of primary care physicians. HRSA's BHW releases reports that project the supply and demand for various types of health care providers as well as describing the great variation in supply and demand by state, although their estimates assume that the health care system is static and do not account for potential changes in how care may be provided over time (these types of assumptions are necessary but limit the ability of predictive modeling to generate accurate long-term workforce capacity projections).⁴ In addition to finding substantial variability by provider type and state, their

* Examples of these reports on the impact of the pandemic on long-term care and direct-care workers can be found here: <https://aspe.hhs.gov/sites/default/files/private/aspe-files/265686/homecarecovid.pdf> and https://aspe.hhs.gov/sites/default/files/migrated_legacy_files/196851/COVIDNH.pdf

projections also demonstrate how the availability of care varies widely by rurality, with more rural areas often having worse availability and access to many types of care.*⁵

Contributing factors

One contributing factor in the projected shortage of nurses in the future is that the nursing workforce is aging. Close to half of RNs, for instance, are now over 50, and nearly half (44 percent) of physicians in 2019 were 55 or older.^{6,7} These percentages are higher compared to the U.S. labor force as a whole, where in 2020 roughly 24 percent were 55 or older.⁸

Another limitation in meeting the need for health care workers now and projected into the future is the availability of training. This is particularly true in nursing. The American Association of Colleges of Nursing, for instance, reported that in 2020, more than 80,000 qualified applicants were not accepted at nursing schools, reflecting shortages in clinical sites and faculty. This includes nearly 13,000 applicants who were turned away from graduate programs, which may potentially extend the challenge of shortages of nursing faculty.⁹ In terms of physicians, the 17th annual Association of American Medical Colleges survey (conducted between November 2020 and January 2021) reported no change in projected enrollment in medical schools in the 2020-2021 academic year due to COVID-19. Some longstanding concerns remained, however, including the availability of graduate medical education residencies and the availability of qualified primary care preceptors. Half of MD-granting schools responding to the survey also reported that limited capacity at training sites due to the pandemic had affected their enrollment.¹⁰

The composition of the health care workforce also has implications for health equity. An important pre-pandemic health care workforce concern has been that some groups are under-represented among physicians, nurses, and other health professions. In 2019, despite recent pipeline gains, Black, Latino, and Native Americans were significantly underrepresented among health professions.¹¹ One study of 125,717 health care workers found that those from these groups had persistently high turnover rates during the pandemic and were experiencing a slow recovery.¹²

Research has shown that a physician's race and ethnicity are strong predictors of specialty choice and of whether a physician serves patients enrolled in Medicaid and uninsured patients.^{13,14} Moreover, enhancing diversity of the health care workforce is also an important policy objective, because having a provider population that is reflective of the racial and ethnic composition of patients can help with providing culturally congruent care, which contributes to improving the patient experience.¹⁵ In contrast to the clinical workforce, Black and Latino workers are over-represented in the direct care workforce.¹⁶ Particularly in the context of the current pandemic, depending on their particular role (e.g., community health workers), these individuals can serve as trusted messengers within their communities to encourage confidence in vaccines and build confidence in the health care system more generally, while assisting with care coordination. However, these positions are also lower paying jobs relative to more highly trained clinical positions. It is important to promote diversity across the health care workforce from both a health and social equity perspective.

Shortages and maldistribution of providers during the pandemic

Since early 2020, COVID-19 has put increased demands on the health care workforce in terms of messaging, immunizations, testing, and inpatient and outpatient care while often limiting the supply of health care workers able to respond. These supply and demand dynamics have played out against changing aspects of the disease and its shifting geographic distribution as well as pre-pandemic maldistributions. There are several reasons for these workforce shortages and maldistribution. In the early stages of the pandemic between

* These types of estimates are available on the HRSA BHW website here for many other types of providers: <https://bhw.hrsa.gov/data-research/projecting-health-workforce-supply-demand/primary-health>

March and June 2020, COVID-19 spread primarily in large urban areas. COVID-19 was a novel disease at that time and the public health and health care communities were still learning how best to prevent and treat the virus. There was also uncertainty about how many cases there might be and what the severity of those cases might look like. As it became apparent that local health care systems in early-affected areas could be quickly overwhelmed, additional resources including health care workers were brought into these areas to increase the system capacity. Even though urban areas like New York City had relatively more health care resources than other parts of the country,¹⁷ their ability to respond to a rapidly spreading pandemic on the scale of COVID-19 that had severe consequences for a sizable number of those contracting the disease was limited. It was also becoming clear that the risk of infection and for severe disease was higher for certain individuals, such as people of color and people living in lower-income households, as well as for those living in neighborhoods experiencing higher rates of poverty and lack of health insurance.^{18,19,20}

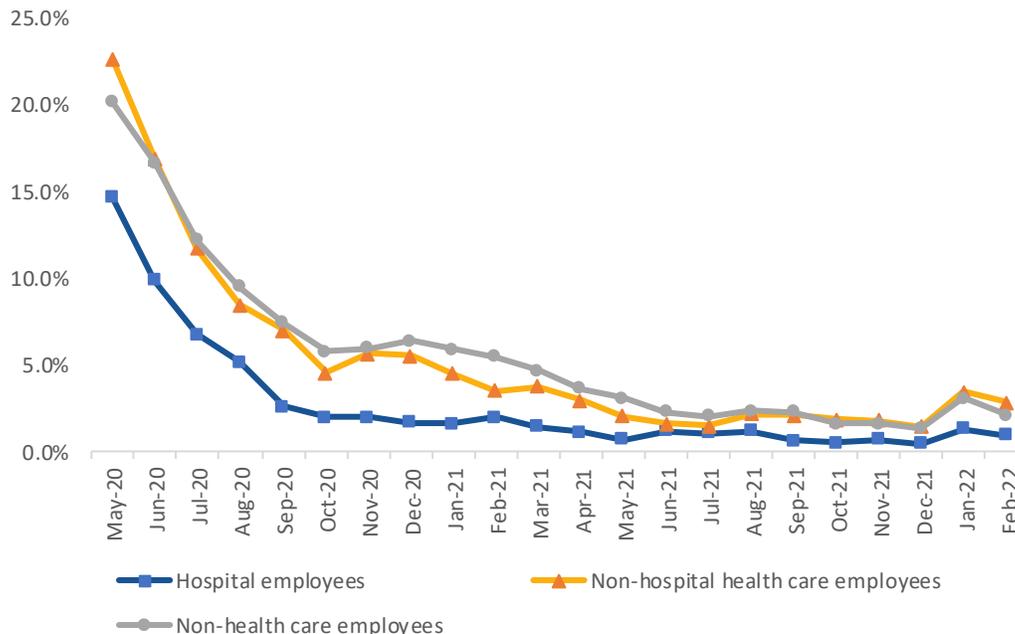
As the disease continued to spread to other parts of the country including rural areas, medical communities' knowledge of how best to treat the infection increased. However, many rural hospitals and other emergency care providers such as ambulance services faced the challenge of addressing the needs of a substantial number of COVID-19 patients while facing staffing and other resource challenges, including variations in local availability of personal protective equipment and ventilators. Over time, the local situations continued to evolve as new treatments such as remdesivir and monoclonal antibodies became available, followed by vaccines providing protection against the most severe consequences of the disease, including from new variants of the virus that emerged, and new oral antivirals. Variation in the uptake of mitigation measures as well as in the availability of treatments and uptake of vaccination across localities affected the progression of the pandemic in different areas, with implications for the capacity of local health care systems.

While some health care workers were stretched in the early phase of the pandemic and in subsequent surges trying to address the needs of COVID-19 patients, other health care workers not involved in the response were being furloughed or having their hours reduced, as facilities temporarily closed or limited elective procedures and people avoided contact with the health care system. There was concern that some of these health care workers might simply retire early or find other types of employment, particularly those workers who were lower-income or entry-level. Many hospitals and health systems suspended certain types of care and procedures in early months of the pandemic, forcing them to furlough workers to minimize revenue loss.²¹ Many primary care physicians also reported being financially stressed during the pandemic, leading in some cases to insufficient staffing or even closures of practices, with potential implications for access to primary care and for vaccination efforts later in the pandemic.²²

Figure 1 shows the percent of employed persons in the health care industry (split into hospital employees and non-hospital employees) that reported they were unable to work at some point in the past four weeks over the course of the pandemic because their employer closed or lost business due to COVID-19. Those numbers were highest in May 2020, the first month data were available in the Current Population Survey, when approximately 15 percent of hospital workers answered "yes" to this question, in addition to 23 percent of non-hospital health care workers (compared to 20 percent of non-health care workers). These figures declined dramatically by late 2020 and hovered around 1-2 percent for most of 2021 before increasing slightly in January 2022. These findings are corroborated in a study that found sudden large health care employment declines in the second quarter of 2020 falling from 22.2 million in 2019 to 21.1 million, with the greatest declines among dentists and skilled nursing facilities. By the second quarter of 2021 total health care employment was approaching pre-pandemic levels, at 21.8 million.²³

A survey of physician assistants (PAs) in the first few months of the pandemic suggested that 22 percent had been furloughed, 4 percent had been terminated, 59 percent had had their work hours reduced, and 31 percent had had their base pay reduced.²⁴

Figure 1: Percentage of Employees Unable to Work in the Past 4 Weeks Because Employer Closed or Lost Business Due to the Pandemic (May 2020 – February 2022)



Note: These data are labor force statistics from the Current Population Survey’s supplemental data measuring the effects of the coronavirus (COVID-19) pandemic on the labor market. The Current Population Survey includes a number of subcategories under “non-hospital health care employees,” including but not limited to offices of various types of practitioners, outpatient care, home health care, nursing care facilities, and residential care facilities. These categorizations are based on the 2017 North American Industry Classification (NAIC) system. Details on these categorizations is available here: <https://www.bls.gov/cps/documentation.htm#oi>. The supplemental COVID-19 questions were asked beginning in May 2020 and are available here: <https://www.bls.gov/cps/effects-of-the-coronavirus-covid-19-pandemic.htm#concepts>

Given the large numbers of health care workers who have been infected with COVID-19 (discussed in more depth below in the section on the physical health impacts of the pandemic), another potential challenge to future staffing (and a challenge for health care workers and their health) is the impact of long COVID (also known as post-acute sequelae of COVID-19). Long COVID is still poorly understood and is beginning to be studied, but economists and others have already suggested that long COVID may be contributing to overall labor shortages in the United States. Existing studies suggest, for instance, that between 27 percent and 33 percent of COVID patients are still reporting symptoms months after they were infected, and other studies suggest that approximately a quarter of long COVID patients were out of work due to their persistent symptoms at the time of the studies.²⁵ Another study suggests that, in addition to the people not able to work, a study of long COVID patients from 56 countries suggests approximately 46 percent were reducing work hours due to their condition.²⁶ Most of these studies do not focus on health care workers in particular, and have to rely on data that’s not always well-suited to describing long COVID.²⁷ One study from the United Kingdom showed that of the sectors they looked at, health care workers were the second most likely to report having long COVID, after social work workers, followed closely by teachers and educators.^{*28} Tracking COVID sequelae, the extent to which they affect the need for health care services, and their impact on health care workers’ ability to work all require tracking, particularly as new variants emerge. Given that health care

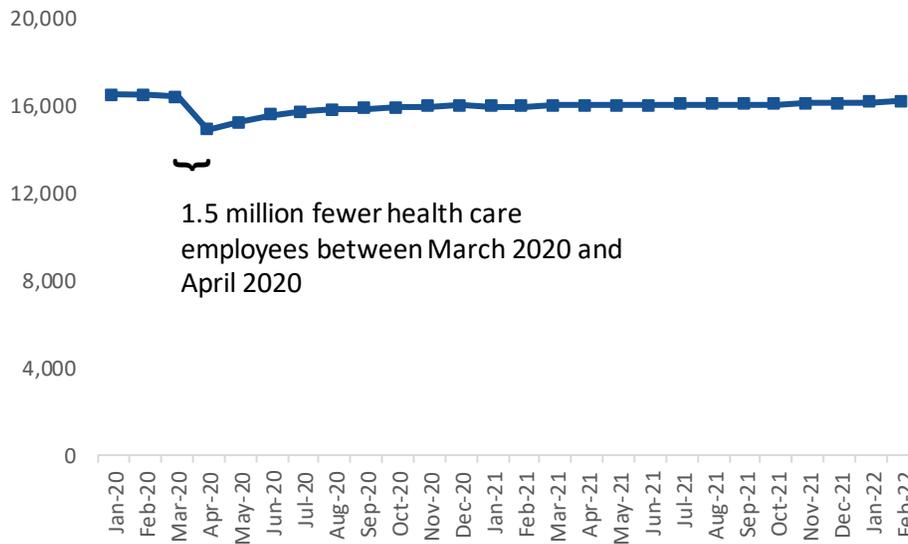
* The underlying data as well as the news bulletins for the figures is being updated frequently. These data also include other characteristics of individuals with long COVID and about their symptoms. This is all available here: <https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/conditionsanddiseases/bulletins/prevalenceofongoingsymptomsfollowingcoronaviruscovid19infectionintheuk/3february2022>

workers have been much more likely to be infected with COVID-19, long COVID is a potential factor exacerbating health care workforce shortages in the future.^{29,30} In addition, there may be an ongoing challenge for health care workers and the health care system in terms of learning to diagnose and treat long COVID, particularly if patients need multidisciplinary care. There is mixed evidence to date on whether the pandemic has deterred people from entering health care fields. A 2021 OIG report, for instance, stated that hospitals reported being concerned that staffing and recruitment challenges that existed prior to the pandemic were going to be worse in the future as people were deterred from entering health care by the pandemic. Hospitals also expressed concern that newly graduated providers, such as nurses, may not have gained sufficient experience in care for things other than COVID-19.³¹ More optimistically, there is some evidence that despite, or perhaps in part due to the pandemic, the number of applicants to medical schools dramatically increased in 2020 and 2021, according to the Association of American Medical Colleges. In most years, the number of applicants increases by 2-3 percent, whereas it increased by 17 percent in 2021 compared to 2019. The total number of students accepted increased in both 2020 and 2021 compared to the previous year (by 1.8 percent and 2.6 percent, respectively).³² Also, among the 22,000-plus students who began medical school this fall, those self-identified as Black or African American rose by 21.0% from 2020-21, followed by increases of 8.3% among Asian students and 7.1% among those of Hispanic, Latino, or Spanish origin³³. The American Association of Colleges of Nursing reported that in 2020, enrollment increased in baccalaureate, master's, and doctoral nursing programs. Enrollment in baccalaureate programs in 2020, for instance, increased by 5.6 percent over the previous year, while enrollment in master's programs increased by 4.1 percent, and enrollment in Doctor of Nursing Practice programs increased by 8.9 percent.³⁴

The impact of the pandemic on staffing shortages can differ by type of health care worker as well as by setting. One challenge is that it is still early to examine pandemic-related effects from many of the data sources typically used to measure changes in employment and job openings by industry, although some data and surveys on shortages in various settings are available. A Morning Consult survey conducted in September 2021, for instance, found that 79 percent of health care workers reported that shortages of medical staff had affected them and their place of work during the pandemic.³⁵

Seasonally adjusted employment in the health care industry from the Bureau of Labor Statistics (BLS) between January 2020 and February 2022 is shown in Figure 2. There was a large decline during the early months of the pandemic, followed by a rapid uptick in employment moving into summer 2020, with a more gradual, yet steady, recovery occurring since summer 2020. According to these numbers, while overall employment in the health care industry increased by 63,300 between December 2020 and December 2021, there was significant variation by sector. This overall number includes an increase of 241,800 employees in ambulatory health care services, as well as a decline of 32,900 employees in hospital employment and a decline of 145,600 employees in nursing and residential care facilities.³⁶

Figure 2: Employees in Health Care (Thousands), from January 2020 – February 2022

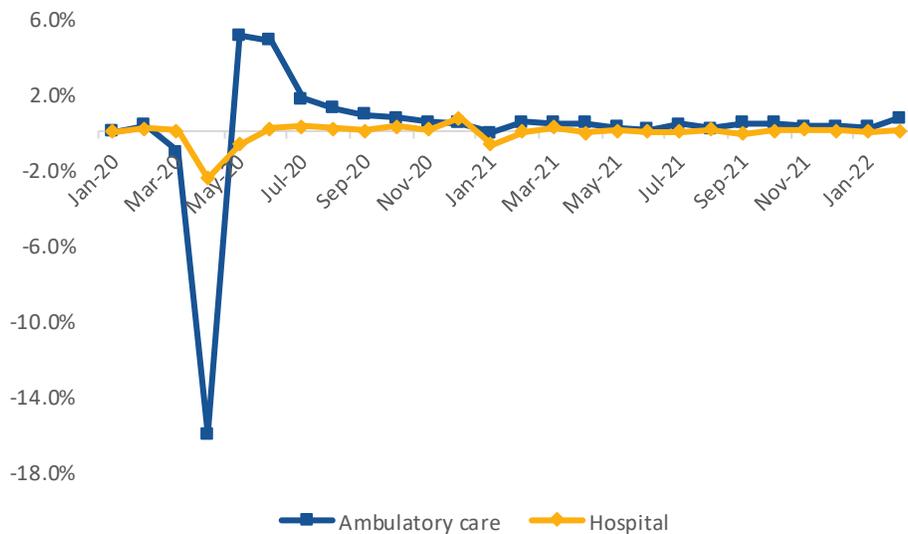


Source: Bureau of Labor Statistics (BLS) Current Employment Statistics (CES) Table B.1. The CES, like the Current Population Survey used in Figure 1, employees the 2017 NAIC for its industry classification. More details are available here: <https://www.bls.gov/ces/naics/> The data used in this figure are available here: <https://www.bls.gov/ces/data/employment-situation-table-download.htm>

Note: Employment numbers for January and February 2022 are preliminary.

Figure 3 shows the overall percent change in hospital and ambulatory care employment from January 2020 to early 2022. There was initially a much larger percent decline in employment in ambulatory care than in hospitals, followed by a large relative recovery in ambulatory care employment by summer 2020. For both sectors, employment returned to relatively close to pre-pandemic numbers and stayed there by early 2021.

Figure 3: Change in Employment in Ambulatory Care and Hospitals, January 2020 – February 2022



Source: Bureau of Labor Statistics (BLS) Current Employment Statistics (CES) Table B.1, available here: <https://www.bls.gov/ces/data/employment-situation-table-download.htm>

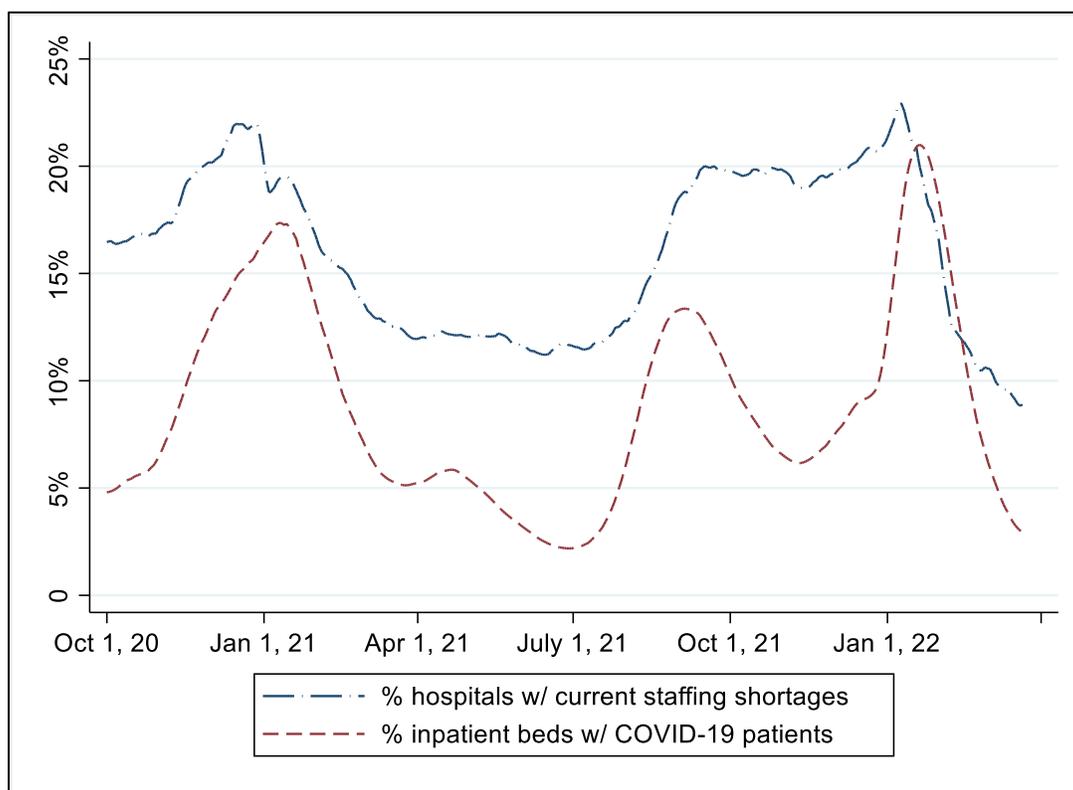
Note: Employment numbers for January and February 2022 are preliminary. The omitted category (to cover all health care employment) is nursing and residential care facilities.

Shortages of hospital staff during the pandemic

The challenges of treating COVID-19 patients as the pandemic has continued caused acute staffing shortages in many hospitals. Figure 4 below shows the 7-day moving average of the percent of hospitals reporting that they currently have a critical staffing shortage, compared to the 7-day moving average of the percent of their inpatient beds being used by COVID-19 patients. The data indicate that more hospitals reported having staffing shortages and a higher percentage of their beds dedicated to COVID-19 patients at times when there were surges of COVID-19 cases. For instance, during the Omicron surge, the 7-day moving average of hospitals reporting they were experiencing critical staffing shortages peaked at nearly 22 percent during the second week of January 2022, while the 7-day moving average of inpatient beds being used by COVID-19 patients peaked 1-2 weeks later at roughly 21 percent. By mid-February 2022, the 7-day moving averages of both measures had fallen to approximately 11 percent, and by mid-March 2022 the 7-day average of critical staffing shortages was approximately 9 percent and the 7-day average of inpatient beds being used by COVID-19 patients was approximately 3 percent.³⁷ One caveat with these data is that not every facility reports in each time period, so for the purposes of our analysis we report the number of facilities who report a staffing shortage divided by the total number of facilities reporting either yes or no on having a staffing shortage (missing values are treated as missing). The direction of any potential bias this introduces is unclear, given that hospitals who are not experiencing a staffing shortage may feel less compelled to report, but it may also be the case that smaller hospitals or hospitals that are overwhelmed may not always have the capacity to report in a given period. Appendix Figure 1 shows that if we treated missing values as “no critical staffing shortage,” we see a very similar overall pattern but an overall shift down. It also shows how the percent of non-reporting changes over time.*

* These data are a combination of three main sources: 1) HHS TeleTracking, 2) HHS Protect, and 3) National Health care Safety Network. There are missing values for a number of reported fields, and facilities which did not report for a given date were omitted (therefore, these graphs show the percent of reporting hospitals). In addition, facilities were asked to identify staffing shortages based on the needs and internal policies for staffing ratios. More information is available here <https://www.hhs.gov/sites/default/files/covid-19-faqs-hospitals-hospital-laboratory-acute-care-facility-data-reporting.pdf> and here <https://healthdata.gov/Hospital/COVID-19-Reported-Patient-Impact-and-Hospital-Capa/g62h-sveh>.

Figure 4: Percent of Hospitals Reporting Critical Staffing Shortages and Percent of Inpatient Beds Being Used by COVID-19 Patients (7-day Moving Average, October 1, 2020 – March 21, 2022)

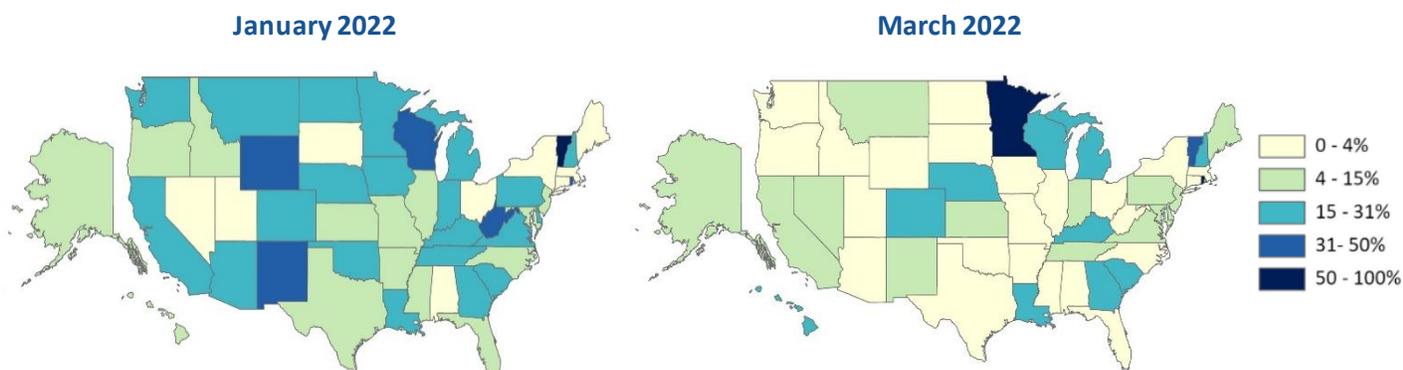


Source: COVID-19 Reported Patient Impact and Hospital Capacity by State data, available here: <https://healthdata.gov/Hospital/COVID-19-Reported-Patient-Impact-and-Hospital-Capa/g62h-syeh>

The 2021 OIG report found that hospitals generally reported having challenges with staffing shortages (particularly among nurses) and that these shortages were affecting patient care and the mental health of their staff (particularly through exhaustion and trauma). They also reported that staffing challenges were exacerbated by higher than normal turnover during the pandemic. Rural hospitals in particular reported that the pandemic had worsened existing challenges with staffing and with their finances. This is particularly alarming given pre-existing concerns about rural hospital closures and implications for health care access in rural areas. Hospital closures over the past 10-15 years have tended to be clustered among hospitals in worse financial standing, and rural hospitals on average were in more precarious financial positions compared to rural hospitals.³⁸

Figure 5 shows how much the portion of hospitals reporting critical staff shortages varies by state and also how quickly things changed over time as the pandemic also changed, comparing mid-January 2022 (during the Omicron peak surge) to mid-March 2022 (after rates began to decline nationally). Although the national average of hospitals reporting staffing shortages improved noticeably over those months, changes varied significantly by state. New Mexico, West Virginia, and Wyoming are a few of the states that had the largest decline in the percentage of their hospitals reporting shortages, for instance, while the percent of hospitals that reported critical staffing shortages went up in other states such as Rhode Island, Minnesota, and Nevada. Hospitals also reported that it was particularly challenging for clinicians to care for complex COVID-19 patients because they often lacked access to specialists such as infectious disease specialists, respiratory therapists, and other staff to care for complex patients. Shortages of specialists has long been an issue, and hospitals worried that the prevalence of COVID-19 patients experiencing long COVID, in addition to an increase in the number of patients with behavioral health needs, would make this situation worse.³⁹

Figure 5: Percentage of Hospitals Reporting Critical Staffing Shortages



Source: COVID-19 Reported Patient Impact and Hospital Capacity by State data, available here: <https://healthdata.gov/Hospital/COVID-19-Reported-Patient-Impact-and-Hospital-Capa/g62h-syeh>

Hospital responses to shortages

There have been reports of hospitals and other facilities utilizing short-term deployments from federal or state emergency resources (including, for instance, the use of federal military or U.S. Public Health Service personnel and state national guard) or moving staff within hospitals to deal with acute shortages in emergency departments and intensive care units. A survey of PAs from May 2020 reported, for instance, that 10 percent had changed practice settings and 6 percent had changed specialties, echoing other anecdotal reports of allied health care workers being redeployed as well to try and fill shortages.^{*40} A number of hospitals and other providers also reported, like many other provider types, using telehealth to try to expand the reach of their available staff, although this is only possible with certain types of care and for some types of providers. In the 2021 OIG report, some hospitals reported dealing with shortages by recruiting new graduates with less experience than was typical as well as recruiting international nurses.⁴¹ During the Omicron surge and following updated CDC guidance in late December 2021 shortening the time some health care workers had to quarantine and isolate after an infection,[†] there were numerous media reports and anecdotes about short-staffed hospitals calling infected health care workers back to work, even while they may still have been symptomatic. These media stories also often quote health care workers themselves, who cited these policies as having a negative effect on their mental and physical health, in addition to the concerns about the potential impact on patients.^{42,43}

There has been a particular concern about the increase in the use of travel nurses during the pandemic. Travel nurses are registered nurses who work in short-term positions at hospitals and other types of health care facilities.⁴⁴ Generally, travel nurses are employed by independent staffing agencies and have been used for many decades by hospitals, typically to relieve temporary staffing shortages. However, their use increased by 35 percent in 2020 compared to 2019, largely due to the pandemic and this trend is projected to continue.⁴⁵

One of the concerns presented by the increased use of travel nurses is that they tend to make significantly more money than staff nurses. Wages for travel nurses rose 25 percent during the early months of the pandemic. Prior to the start of the pandemic, staff nurses at hospitals earned approximately \$1,400 a week on average, while travel nurses during the pandemic can make between \$5,000 and \$20,000 a week. In addition to increased wages, travel nurses also have increased schedule flexibility.⁴⁶ Hospitals responding to the 2021

* There is not one agreed upon definition for “allied health care worker” although they are generally thought of as trained health care professionals with a certificate or degree but excluding doctors, nurses, and dentists. More information is available here: <https://familymedicine.uw.edu/chws/hwrc/allied-health/>

† The updated CDC guidance for health care personnel with COVID-19 infection are available here: <https://www.cdc.gov/coronavirus/2019-ncov/hcp/guidance-risk-assessment-hcp.html> and <https://www.cdc.gov/media/releases/2021/s1227-isolation-quarantine-guidance.html>

OIG survey reported facing increased labor market competition from staffing agencies, particularly for nurses, and that they were unable to compete with the salaries being provided through staffing agencies. Small and rural hospitals also reported that it was challenging for them to compete with larger and urban hospitals for staff, and although this has been a longstanding concern for them, they reported that the situation had gotten more challenging during the pandemic.⁴⁷ The use of travel nurses may also negatively affect the morale of staff nurses who may have differing levels of compensation and/or feel frustrated with travel nurses who are brought on temporarily and need to be brought up to speed on how a unit operates, including the technology it uses, potentially contributing to other issues of burnout or feeling overworked and underappreciated.

BURNOUT AND MENTAL HEALTH

Even before the pandemic, burnout, exhaustion, moral injury,^{*} and mental health concerns (including ongoing risk of developing post-traumatic stress disorder, or PTSD) were known to be significant problems for many health care workers at rates much higher than for the general public. There are many possible contributing factors, including but not limited to work that can be stressful, given long hours and the emotional toll of caring for patients, as well as systemic factors such as the regulatory and policy context, payer requirements, and the introduction and use of new technologies.⁴⁸ Numerous studies and surveys from before the pandemic suggested that rates of burnout as well as rates of mental health conditions such as depression and suicide appeared to be high among physicians, medical students, and nurses, although these rates varied significantly by specialty and by setting.^{49,50,51} More than half of physicians in one survey reported symptoms of burnout, which was more than twice the rate among professionals in other fields, and the rates among nurses are similarly high.⁵² A survey of family medicine physicians conducted December 2019 to January 2020 found loneliness, burnout, and depressive symptoms were reported by greater than 40 percent of survey respondents.⁵³ Evidence for burnout and mental health conditions among other types of health care workers is less widely available, although there is limited evidence of high rates of burnout among physician assistants. Burnout tends to be associated with other mental health problems and harmful behaviors. Among physicians, burnout is positively associated with increased odds of alcohol misuse and suicidal ideation. Among medical students, it is associated with suicidal ideation and depression. Suicide rates among male physicians are 40 percent higher than males in the general population, while suicide rates among female physicians is 130 percent higher than among females in the general population.⁵⁴

State medical licensing boards frequently ask questions about past or current mental health histories, and physicians often cite fear of negative consequences for licensing as a barrier to seeking mental health treatment and care.⁵⁵ In 2018, the Federation of State Medical Boards (FSMB) published recommendations relating to physician wellness and burnout, some of which are relevant to this issue. Their first recommendation is that state medical boards reconsider whether applications need to include questions on mental health, addiction, or substance use at all. They go on to make a series of recommendations in cases where state medical boards feel it is necessary to ask questions on these issues. For instance, they recommended that if mental health questions are asked on licensing applications, they are limited to conditions resulting in impairment, are limited to current conditions (within the past two years), that safe haven nonreporting is offered (physicians do not have to report if they are receiving appropriate treatment), and that they use normalizing language.⁵⁶ A 2020 analysis of initial state medical license applications found 31 percent asked no questions on mental health conditions, 72 percent either asked no questions or included “only if impaired language,” 76 percent asked no questions or asked only about current conditions, and 46 percent asked no questions or offered safe haven non-reporting. While there is variation in consistency with the FSMB recommendations, overall there seems to have been improvement since a report done in 2017.⁵⁷

^{*} Moral injury is the mental and emotional distress in response to situations and events that violate an individual’s ethical or moral code. There have been a number of studies and anecdotes on how caring for patients during the pandemic could contribute to moral injury, see here for an example: [https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366\(21\)00113-9/fulltext#:~:text=Moral%20injury%20is%20understood%20to,person's%20moral%20or%20ethical%20code](https://www.thelancet.com/journals/lanpsy/article/PIIS2215-0366(21)00113-9/fulltext#:~:text=Moral%20injury%20is%20understood%20to,person's%20moral%20or%20ethical%20code)

Numerous surveys as well as anecdotes and media stories suggest that the pandemic may have worsened mental health and increased burnout and exhaustion among health care workers.^{58,59,60} One factor is simply the number of COVID-19 patients overwhelming existing available staff and resources through multiple waves of the pandemic. A survey conducted by the HHS Office of the Inspector General (OIG) in February 2021 found that increased work hours, in combination with the stress of the pandemic, had resulted in high levels of staff exhaustion as well as some reports of trauma and PTSD. Many of these hospitals reported that their staff has been working longer hours, extra shifts, and sometimes mandatory overtime. Hospitals also reported a significant challenge from staff being asked to treat more complex patients than they typically do or to be responsible for more roles than they usually fill. Some hospitals reported pulling staff from normal duties or other parts of the hospital to help with COVID-19 treatment and response.⁶¹

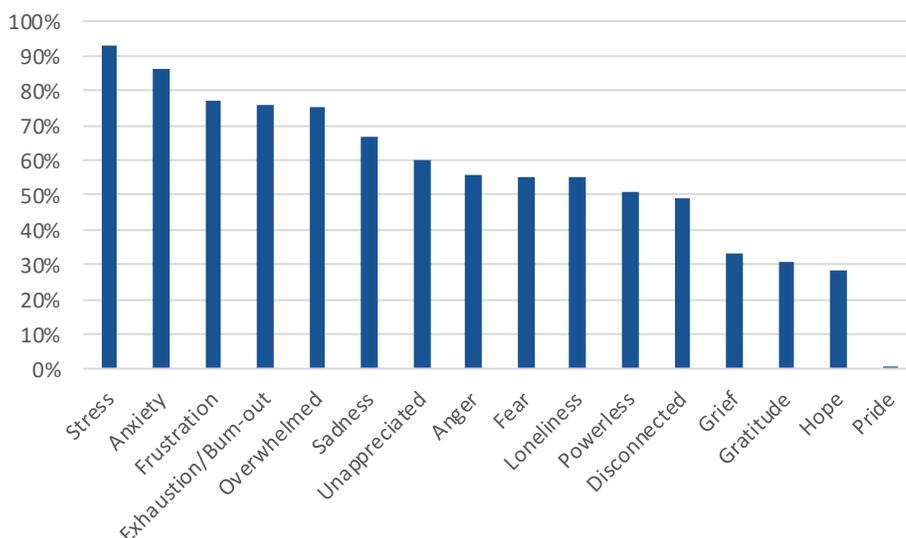
In addition to the impact of a greater volume of patients, treating COVID-19 patients and witnessing their coworkers get sick and sometimes die likely also contributed to increased stress among health care workers, at first in the early months of the pandemic before vaccines and COVID-19 treatments had been developed but enduring as the pandemic continued. One survey of U.S. physicians found that greater portions of the day spent treating COVID-19 patients was associated with depression, anxiety, and higher PTSD scores.⁶² Another concern that may have contributed to the mental health impacts of the pandemic for health care workers, particularly those who treat COVID-19 patients, was fear for themselves as well for their families and communities if they were to become infected, although the development and widespread availability of COVID-19 vaccines has likely helped ease such concerns. In the 2020 survey by Mental Health America, 76 percent of respondents with children said they were worried about exposing them, nearly half reported being worried about exposing a partner, and a similar number were worried about exposing older family members.⁶³

Violence in the workplace has been a growing problem for health care workers in the recent past, so much so that in 2018 health care and social service workers were five times more likely to experience workplace violence than all other workers, prompting the Joint Commission to put in place in January 2022 revised workplace violence prevention standards to apply to all Joint Commission-accredited hospitals and critical access hospitals.⁶⁴ Recent research, survey data, and the trade press suggest that incidents of violence and verbal abuse have increased during the COVID-19 pandemic, further contributing to health workforce stress.^{65, 66,67}

Taken together, there are a number of reasons that the pandemic may have adversely affected the mental health of health care workers. Mental Health America hosted a survey of health care workers from June-September 2020 in which they asked health care workers to report feelings they had been having regularly over the previous three months (results shown in Figure 6). They reported that that 93 percent of respondents were experiencing stress, 86 percent were experiencing anxiety, 76 percent reported exhaustion or burnout, and 75 percent reported being overwhelmed. When asked about changes in how they felt over the previous three months, 82 percent reported emotional exhaustion, 70 percent reported trouble sleeping, and 63 percent reported work-related dread. When asked if they felt they were getting sufficient emotional support, only 39 percent of health care workers overall said they felt they were getting such support.⁶⁸ A survey by Morning Consult conducted in September 2021 reported that 51 percent of health care workers said their mental health has gotten worse during the pandemic, which is an increase from January 2021 when 46 percent so reported.⁶⁹ One survey conducted from May to October 2020 constructed a summary stress score (which included measures of fear of exposure, anxiety and depression, and work overload), which was higher for many allied health professionals compared to clinicians, as well as for Black and Latino workers compared to White workers.⁷⁰ A survey of emergency and hospital personnel conducted in the early months of the pandemic found between 15 percent and 30 percent of respondents reported depression, traumatic stress, anxiety, insomnia, and alcohol use, with respondents who were themselves immunocompromised reporting higher rates of traumatic stress, depression, and anxiety, and respondents with an immunocompromised

family member reporting higher rates of insomnia and anxiety. Previous literature has suggested that emergency personnel are generally at higher risk for many mental health conditions than the general public, but the rates found in this study were higher than most estimates of baseline rates (for most outcomes, the authors suggests that these rates are 5-15 percentage points higher than what has been found in previous studies of emergency personnel and firefighters) and were more comparable to rates seen in studies of emergency personnel during disasters such as Hurricane Katrina.⁷¹

Figure 6: Percentage of Health Care Workers Reporting Feelings from June - September 2020



Note: Data are from Mental Health America and reflect health care workers’ answers to the following question about June through September 2020 – “In the last three months, which of the following feelings have you been experiencing regularly? Check all that apply.” The number of respondents who chose “hope” is so small as to be essentially zero. More details are available here: <https://mhanational.org/mental-health-healthcare-workers-covid-19>.

There is also concern that the pandemic pushed people to reduce their hours (or they had their hours reduced), leave their professions altogether, or retire because of burnout, trauma, family obligations, or from getting sick from COVID-19 themselves. Studies have shown, even prior to the pandemic, job dissatisfaction and burnout among physicians and nurses was associated with plans to leave their practice or the field.⁷² A McKinsey survey conducted of front-line nurses in early 2021 suggested 22 percent were considering leaving their positions in the next year, and 60 percent of those said they were more likely to do so due to the pandemic. Over half said they were planning on seeking another career, a non-direct care position, or retiring/leaving the workforce. The top three reasons given were insufficient staffing, workload, and the emotional toll of the pandemic.^{73,74} A Morning Consult survey of health care workers conducted in September 2021 found that 18 percent had quit a job during the pandemic, and among those who have stayed in their job, 19 percent had considered leaving both their job and the health care industry. The top reasons given were the pandemic, insufficient pay or opportunities, and burnout.⁷⁵ A 2021 survey of 6,000 critical and acute care nurses by the American Association of Critical-Care Nurses found that 92 percent said the pandemic had “depleted” nurses at their hospital and will lead to their careers being shorter than expected and 66 percent said their pandemic experience caused them to consider leaving nursing.^{76,77} A survey conducted of primary care physicians in early 2022 found that nearly two-thirds personally knew of clinicians who had retired early or quit during the pandemic and 25 percent expected to leave primary care in the next three years.⁷⁸

PHYSICAL HEALTH

In addition to mental health concerns, many health care workers were at greater physical risk from a COVID-19 infection, either because of chronic conditions or because of age. One study using 2018 National Health Interview Survey (NHIS) data estimated that 26.6 percent of health care workers with patient contact were at high risk from a COVID-19 infection due to pre-existing conditions or age, 6.2 percent lacked health insurance, and 28.6 percent lacked paid sick leave.⁷⁹ Some health care sectors and provider types also tend to have older workers, who are at higher risk from COVID-19 infection. For instance, close to half of registered nurses (RNs) are now over 50.⁸⁰

As of April 2021, an estimated 3,607 health care workers in the United States had died from COVID-19, and health care workers were more than three times as likely to become infected with COVID-19 compared to the general public, likely driven in part by shortages of personal protective equipment early in the pandemic. Support staff and nurses were significantly more likely to die of COVID-19 compared to physicians, and of the health care worker deaths, almost two thirds were non-White or Hispanic and more than a third were among workers born outside the United States. These statistics reflect the fact that the health care workers who provide front-line patient care, including and those who work in paraprofessional positions such as aides or personal care workers, are more likely to be people of color and to have lower incomes, and were therefore at higher risk.^{81,82,83} One survey of PAs from May 2020 showed 39 percent of those who had treated COVID-19 patients had gone without personal protective equipment and nearly 4 percent reported having been infected with COVID-19.⁸⁴

In addition to the risk to physical health of COVID-19 infection, months of working in a stressful, exhausting situation may be contributing to physical health problems for health care workers as well. The survey by Mental Health America found that when asked about the previous three months of the pandemic, 68 percent reported physical exhaustion, 57 percent reported changes in appetite, and 57 percent reported physical symptoms such as headache or stomachache.⁸⁵ In the survey by Morning Consult in September 2021, 33 percent of health care workers responding said their physical health had declined during the pandemic.⁸⁶

FEDERAL EFFORTS TO SUPPORT THE HEALTH CARE WORKFORCE DURING THE PANDEMIC

Initiatives from the Department of Health and Human Services

Over the two years of the public health emergency (PHE), HHS has acted to support the health care workforce and its facilities using funding authorized by COVID-19 relief legislation. First enacted in 2020 and then 2021, this support addressed health care related expenses associated with caring for individuals with COVID-19 and lost revenues resulting from the pandemic. The intent of much of this spending has been to stabilize the health care delivery system, giving the health care system and individual providers as stable a financing environment as possible during a time when many patients refrained from seeking health care services in the early stages of the pandemic and as costs have increased at various points as a result of activities related to treating and preventing COVID-19.

Workforce support has been both direct and indirect. Some actions were new efforts addressing specific costs associated with testing for, immunization against, and treatment of COVID-19. Others were enhancements to existing programs that allowed them to better meet the challenges arising from the pandemic, such as expansions of the National Health Service Corps. There were also workforce activities not specifically tied to COVID-19. For example, at the close of 2020, 1,000 new Medicare Graduate Medical Education slots (200/year over five years, beginning in FY 2022) were authorized, the first major increase in Medicare supported residency slots in over twenty years.⁸⁷ At least 10 percent of these slots must be placed in hospitals in each of these categories: hospitals that are located in rural areas, are training residents over their Medicare GME cap,

are located in states with new medical schools or branch campuses that have opened since 1999 or serving designated Health Professional Shortage Areas.

HHS, primarily acting through CMS, used its authority to ease many of its regulatory requirements that affect health facilities and the health care workforce and the Medicare, Medicaid and CHIP programs. The HHS Secretary also wrote governors in March 2020 asking them to waive similar state legal restrictions on licensure, scope of practice, certification, and recertification/relicensure. States complied, although many of these state-level flexibilities ended when states' emergency declarations expired.

Specific provider federal financial relief mechanisms and regulatory flexibilities are discussed below.

Provider Relief Fund

The most significant source of HHS support for health care providers during the pandemic has been the Provider Relief Fund (PRF). A total of \$178 billion was appropriated to the PRF. The Coronavirus Aid, Relief and Economic Security (CARES Act) of March 2020 established the fund with \$100 billion. An additional \$75 billion was appropriated in the Paycheck Protection Program and Health Care Enhancement Act in April 2020, and the Consolidated Appropriations Act, 2021 added \$3 billion.

The purpose of the fund is to reimburse eligible health care providers for expenses and lost revenue related to COVID-19. HRSA administers the fund and has sought applications for its resources in a series of four general distributions (totaling \$93.5 billion) and distributions targeted to providers in high impact areas, safety net hospitals, acute care hospitals, children's hospitals, rural hospitals, skilled nursing facilities, nursing home infection control/quality, and Indian Health Service and tribal facilities (totaling about \$57.6 billion). Funds from the PRF can be used for a range of workforce purposes, including direct and indirect costs associated with staff recruiting, incentive pay, hiring or retention bonuses and supplemental benefits such as childcare assistance, temporary housing, and mental health supports.

HRSA also used PRF funds to create a \$10 billion pool to reimburse providers for COVID-19 testing, treatment, and vaccination of the uninsured and under-insured.* However, HRSA has announced that as of March 23, 2022, the program stopped accepting claims for COVID-19 testing and treatment due to lack of sufficient funds and as of April 6, 2022, the HRSA COVID-19 Uninsured Program and COVID-19 Coverage Assistance Fund has stopped accepting vaccination claims due to a lack of sufficient funds.

Additional HHS Support for the Hospital and Ambulatory Care Workforce[†]

Over the course of 2020 and 2021 the CARES Act, the Consolidated Appropriations Act, 2021 and the ARP, together with use of CMS regulatory authority, provided enhanced support for hospitals and ambulatory care providers and flexibility in how they delivered care during the pandemic. Major actions include:

Provider Financial Support and CMS Flexibilities

- **CMS Accelerated and Advance Payments:** In the earliest days of the public health emergency, CMS announced a program of advance loans to Medicare providers and suppliers to offset cashflow problems resulting from the pandemic. CMS successfully paid more than 22,000 Part A providers,

* Note: Entries do not sum to \$178 billion. Ten billion dollars was reallocated to vaccine development and another almost \$7 billion was reallocated in January to buy vaccines and therapeutics; some funds remain unallocated and there were costs associated with administering the fund.

[†] This list focuses on major CMS actions and HRSA supplemental funding. However, there are additional actions in CMS, HRSA and throughout the Department that have implications for the hospital and primary care workforces. Also, this list does not take into account the many CMS flexibilities and supplemental funding over the past two years addressing the long-term care workforce.

totaling more than \$98 billion in accelerated payments, including payments to Part A providers for Part B items and services they furnished. In addition, more than 28,000 Part B suppliers, including doctors, non-physician practitioners, and durable medical equipment (DME) suppliers, received advance payments totaling more than \$8.5 billion.^{88,*} Unlike the PRF, these were loans, not grants, that require repayment. As of November 30, 2021, about \$57 million in these loans remains outstanding.⁸⁹

- CMS workforce-related flexibilities: Among the many modifications CMS made to expand the workforce during the pandemic, CMS took steps to increase hospital capacity by expanding locations where hospital services can be provided to include ambulatory surgical centers, allowing safe hospital-level care to be delivered in the home through the Acute Hospital Care at Home Initiative. CMS temporarily removed barriers to rapid hiring of health personnel and modified staffing and supervision requirements at FQHCs and Critical Access Hospitals.
- ARP support for health centers: The ARP provided \$6 billion in additional support to these primary care providers, allowing expansion of their operational capacity and growth of their workforce.
- Scholarship and loan repayment programs: COVID-19-related legislation provided historically high levels of support for HRSA's National Health Service Corps and Nurse Corps. These programs provide scholarships and educational loan forgiveness in exchange for service in an underserved area or a facility with a critical shortage of nurses. A new loan repayment program, Substance Use Disorder Treatment and Recovery, was also established. Cumulatively, these programs support 22,700 providers working in high need areas and represent over \$1 billion in supplemental funding.[†] Loan repayment programs help high-need areas recruit and retain needed staff. These scholarship and loan repayment programs also play an important role in encouraging diversity in the health care workforce as well as building interest in health careers in minority youth. For example, while Black and Hispanic/Latino Americans account for 31 percent of the nation's total population, they represent only 7 percent of the Nation's physicians. However, over 25 percent of physicians serving through the National Health Service Corps identify as Black or Hispanic/Latino.⁹⁰
- Over the course of the public health emergency, the Indian Health Service (IHS) has received more than \$9 billion in supplemental funding to support IHS Federally operated facilities and Tribal Health Programs as well as Urban Indian Organizations. Funds were used to support vaccine-related activities, contact tracing, and mitigation; to offset revenues lost due to the pandemic; and to increase funding for referred care. \$240 million in American Rescue Plan funds were explicitly allocated to supporting the workforce in Federal, Tribal and Urban Indian facilities. Of this amount \$225 million was awarded as proportionate increases to Federally-operated and Tribal Health Programs and \$10 million to Urban Indian Organizations. Remaining funds are being used to offset recruitment costs and improve related tools.[‡]
- SAMHSA received a total of \$4.25 billion in supplemental funding from the Consolidated Appropriations Act, 2021 and the Coronavirus Response and Relief Supplement Appropriations Act, 2021. It also received over \$3.5 billion in American Rescue Plan funds. It has used these funds primarily to supplement the Community Mental Health Services Block Grant and the Substance Abuse Prevention and Treatment Block Grant Program grants to states and territories, where funds explicitly devoted to workforce support cannot be easily determined. It also has used these funds to supplement their ongoing efforts in areas such as suicide prevention, child traumatic stress, and

* <https://www.cms.gov/newsroom/press-releases/cms-announces-new-repayment-terms-medicare-loans-made-providers-during-covid-19>

† <https://www.hrsa.gov/sites/default/files/hrsa/about/hrsa-health-workforce-fact-sheet.pdf>

‡ https://www.ihs.gov/sites/coronavirus/themes/responsive2017/display_objects/documents/FY-2020-2021-COVID19-ARPA-Funding-Summary.pdf

community treatment. SAMHSA also established a program of emergency grants to address mental and substance use disorders during COVID-19.

- The Assistant Secretary for Preparedness and Response (ASPR) maintains the National Disaster Medical System (NDMS), a nationwide partnership of health care and emergency response professionals that support state and local health and health care facilities during natural and man-made disasters by deploying trained medical teams and incident management personnel. In response to the COVID-19 pandemic, ASPR increased its intermittent employee workforce to address the evolving needs of state and local communities. The intermittent employees onboarded during the COVID-19 response have augmented critical medical surge and vaccination support services in areas of need across the country. NDMS teams made up of intermittent federal employees contain physicians, nurses, advance practice health care providers, and others. In 2021, NDMS supported 214 COVID-19-related missions, deploying 1,904 personnel to 31 states and territories.⁹¹ ASPR's responsibilities also include the civilian Medical Reserve Corps (MRC), a national network of locally organized groups of approximately 200,000 volunteers organized into more than 750 local community-based units bolster community preparedness and emergency response. In 2021 these units provided over 2.7 million hours of service to their communities.⁹² ASPR also maintains a toolkit of resources for health care workforce decisionmakers on COVID-19 workforce flexibilities and resources. The toolkit addresses issues such as licensure, workforce surge planning, training resources and workforce physical safety.⁹³
- The Commissioned Corps of the Public Health Service also provided support to communities hard hit by COVID-19. As of March 1, 2022, the Corps had deployed two-thirds of all its nearly 6,000 officers in support of COVID-19 relief, the highest historic deployment of officers ever.⁹⁴

Provider Safety and Resilience

- Vaccine mandates: To better protect patients and staff, including 10.4 million health care workers at 76,000 facilities, COVID-19 immunization is required for CMS reimbursement in Medicare and Medicaid, with exceptions limited to those who have been granted exemptions from the COVID-19 vaccine or for those staff for whom the COVID-19 vaccination must be temporarily delayed, as recommended by CDC. A challenge to this regulatory requirement was denied by the Supreme Court.*
- Addressing burnout: In January 2022, HRSA announced \$103 million in grants over a three-year period to address burnout and address mental health wellness in the health care workforce, funded through ARP.[†]
- Telehealth: For the duration of the PHE, CMS has paid for a broadened array of Medicare services delivered through telehealth⁸ under an expanded set of circumstances, allowing for telehealth services to be provided outside rural areas and in a patient's home, and expanding services to additional providers. These flexibilities also allow for parity in payment for services provided by telehealth with those provided in person, audio-only services, and provision of telehealth services to new patients without an initial in-person visit. These flexibilities enabled providers to continue providing care, particularly during the early phases of the pandemic, when in office visits declined in part to prevent the spread of infection.⁹⁵

Eighty-three percent of those surveyed in a 2021 McKinsey Physician Survey reported offering virtual services, compared with only 13 percent in 2019.⁹⁶ Also, virtually all federally-funded Health Centers provide some services through telehealth.⁹⁷ Telehealth has provided a safe means for practitioners to provide care to their patients during the public health emergency, alleviating some sources of stress

* https://www.supremecourt.gov/opinions/21pdf/21a240_d18e.pdf

† <https://bhw.hrsa.gov/funding/health-workforce-resiliency-awards>

but introducing pressure to adapt to a new delivery mode. As more is learned about best practices in its use and technology evolves to potentially become easier to use, telehealth may become a useful tool in addressing provider burnout under some circumstances.

Federal Support from the Federal Emergency Management Agency

Since the beginning of March 2020, under the authority of Title 32 of the United States Code, the federal government provided reimbursement (which has ranged from 75 percent to 100 percent) through FEMA to states and territories for the COVID-19 emergency response costs of their National Guard. * Governors retain authority over their respective National Guard troops. As of mid-January 2022, 48 states and 3 territories had taken advantage of this option to expand the workforce during the pandemic and FEMA reported \$2.7 billion had been obligated. In December, 18,000 troops had been deployed under this authority, but the number is expected to decrease with the decrease in COVID-19 cases. The current authority which calls for 100 percent reimbursement was scheduled to expire April 1, 2022 but has now been extended through July 1, 2022. Deployed National Guard personnel have been used to fill critical shortages in health care personnel and hospital support personnel during COVID-19 surges.

Fiscal Year (FY) 2022 and FY 2023 HHS Budget Requests

The Consolidated Appropriations Act, 2022, signed into law on March 15, 2022, provided \$5 million in funding for the first time for a pediatric sub-specialty loan repayment program. (See Appendix Table 1 for appropriation levels). The Act also extends certain pandemic-related telehealth flexibilities for 151 days beyond the end of the public health emergency, including the removal of geographic restrictions and the expansion of originating sites.†

HRSA's budget request for FY 2023 provides a total of \$2.1 billion for HRSA workforce programs—including \$430 million in mandatory and other sources of funding—an increase of \$324 million above FY 2022 enacted. The most notable item in workforce programming in the request is the proposed \$397 million in behavioral health programs which more than doubles these programs' FY 2022 level. Also within the workforce total is a request for \$50 million to fund a new round of provider resiliency grants through the Preventing Burnout in the Health Workforce programs originally funded through ARP.

GOING FORWARD – FUTURE OPPORTUNITIES

Actions taken in 2020 and 2021 kept the nation's primary care and hospital workforces functioning during a time of crisis and have yielded important lessons for future epidemics and for workforce policy generally. Some of these lessons, focusing on workforce challenges and opportunities exacerbated or highlighted by the COVID-19 pandemic, particularly as they affect those providing hospital and primary care, include:

- Apply sustained public policy attention to underlying geographic and other maldistribution of workforce assets, through regulations, proposed legislation, and funding. This includes removing barriers to practicing to the top of one's license/certification, support for evidence-based telehealth, retention of COVID-19 flexibilities as appropriate, and funding for service-obligated scholarships and loan repayment.
- Assure a reliable pipeline for personal protective equipment and other needed supplies and equipment

* Initially reimbursement was at 100 percent

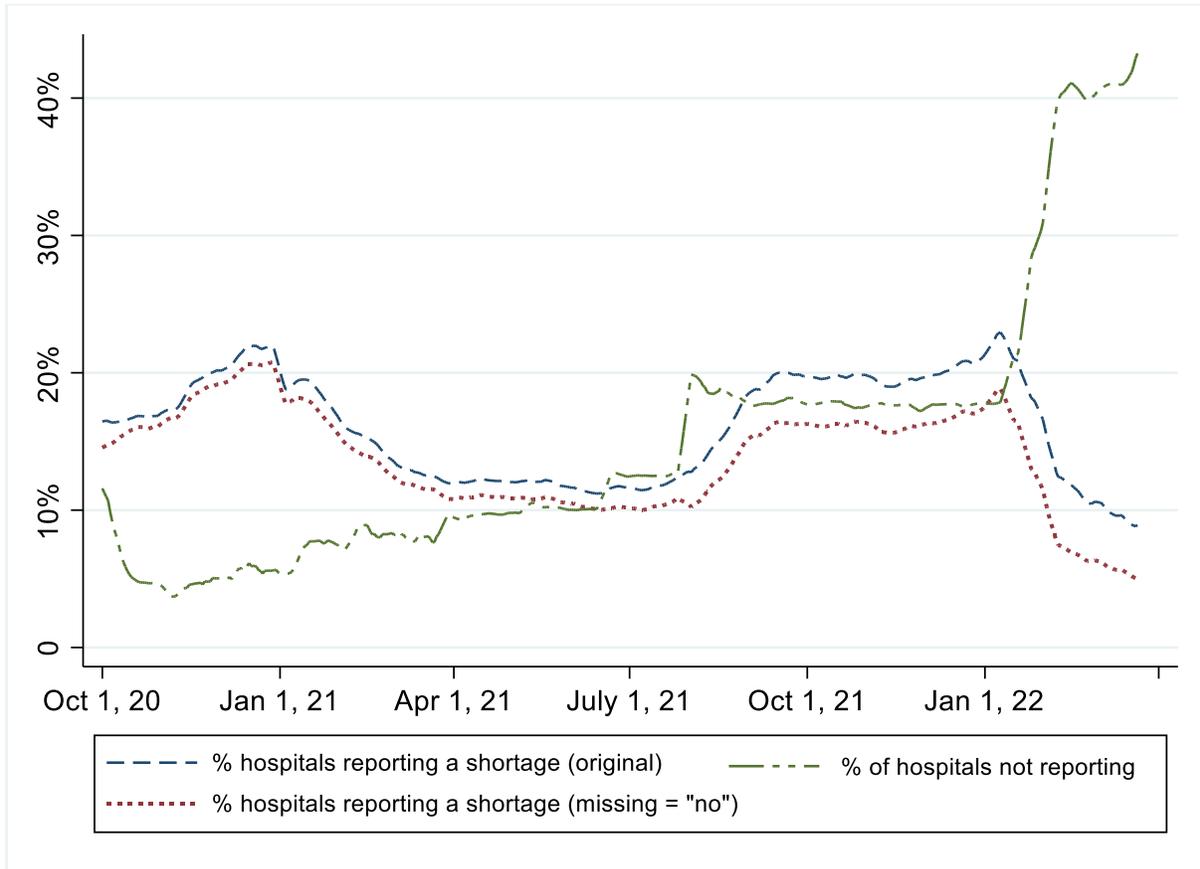
† See Consolidated Appropriations Act, 2022, Division P, <https://www.congress.gov/bill/117th-congress/house-bill/2471/text>

- Focus increased policy attention on the paraprofessional workforce (e.g., community health workers, substance use peer support specialists, direct care personal assistants).^{*} Although workers in this group were not the primary focus of this report, evidence shows they are more likely to be racial or ethnic minorities and lower-income, populations that faced greater risk of COVID-19 infection and mortality.⁹⁸ The pandemic has drawn attention to these workers including nursing home and home health aides,⁹⁹ the work-related difficulties they face, and their personal challenges tied to low incomes, demanding working conditions, and unclear career paths. Sustained support for reasonable work hours, staffing patterns, and wages and benefits. In general, the focus has been on long-term care and home health workers, but their contributions in hospitals and ambulatory care are also noteworthy and should be enhanced.
- Optimize existing workforce development programs to support diversity in the health professional workforce and further support the development of a diverse workforce through pipeline programs.
- Provide training in graduate and continuing medical education programs on self-help strategies and ways to avoid burnout.
- Assess how COVID-19 funds were specifically used to support the hospital and ambulatory care workforce to identify best public health emergency practices.
- Support research that investigates long-term workforce trends arising from the pandemic and how they can be addressed including entry and departure issues, impact on facility staffing, and factors associated with health worker morale.

^{*} There is not a universally accepted definition of which positions belong to the “paraprofessional workforce,” and this group of workers is sometimes also referred to by other names including “entry-level.” Generally, these positions are those for which some training or certification may be required but less than a bachelor’s degree. A further discussion of these workers and the work they do can be found here: https://www.aspe.hhs.gov/sites/default/files/migrated_legacy_files/200076/strengthening-the-EHCW-Report.pdf?_ga=2.62194921.478485357.1650889757-1815245345.1618407143

APPENDIX

Appendix Figure 1: Percent of Hospitals Reporting Critical Staffing Shortages and Percent of Non-Reporting Hospitals (7-day Moving Average, October 1, 2020 – March 21, 2022)



Source: COVID-19 Reported Patient Impact and Hospital Capacity by State data, available here: <https://healthdata.gov/Hospital/COVID-19-Reported-Patient-Impact-and-Hospital-Capa/g62h-sveh>

Appendix Table 1: HRSA Health workforce budget items (\$1,000s)

	FY 2021 enacted	FY 2022 request	Final bill	FY 2023 request
National Health Service Corps				
Discretionary	120,000	185,000	121,600	210,000
Mandatory	310,000	292,330	292,330	292,330
Training for Diversity	91,371	99,491	94,112	109,491
Primary Care Training and Enhancement	48,924	48,924	48,924	53,924
Oral Health Training	40,673	40,673	40,673	40,673
Interdisciplinary Community-Based Linkages				
Behavioral Health Programs	149,916	224,874	162,053	397,374
Other Interdisciplinary Community-Based Linkages	85,987	89,787	90,245	89,787
Workforce Assessment	5,663	5,663	5,663	5,663
Public Health and Preventive Medicine Programs	17,000	18,000	17,000	18,000
Nursing Programs				
Nurse Corps Scholarship and Loan Repayment Program	88,635	88,635	88,635	88,635
Other Nursing Programs	175,837	179,337	191,837	206,337
Children's Hospitals Graduate Medical Education	350,000	350,000	375,000	350,000
Medical Student Education	50,000	50,000	55,000	---
Pediatric Subspecialty Loan Repayment Program	---	---	5,000	---
Teaching Health Center Graduate Medical Education	126,500	119,290	119,290	119,290
Preventing Burnout in the Health Workforce	---	---	---	50,000
Total, Health Workforce (discretionary)	1,224,006	1,380,384	1,295,742	1,569,884
Total, Health Workforce (discretionary+ mandatory)	1,660,506	1,792,004	1,707,362	1,981,504

Note: Training for Diversity includes Centers of Excellence, Health Careers Opportunity Program, Faculty Loan Repayment, and Scholarships for Disadvantaged Students. Behavioral Health Programs includes Mental and Behavioral Health and Behavioral Health Workforce Education and Training. Other Interdisciplinary Community-Based Linkages includes Area Health Education Centers and Geriatric Programs. Other Nursing Programs includes Advanced Education Nursing; Nurse Education, Practice, and Retention; Nurse Practitioner Optional Fellowship Program; Nursing Workforce Diversity; and Nursing Faculty Loan Program.

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