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Hospitals Reported That the COVID-19 Pandemic Has Significantly Strained Health Care Delivery

Results of a National Pulse Survey
February 22–26, 2021

Christi A. Grimm
Principal Deputy Inspector General
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Scope of the Review

This review provides a national snapshot, from the perspective of front-line hospital administrators, on how responding to the COVID-19 pandemic has affected their capacity to care for patients, staff, and communities. This is not a review of the HHS response to the COVID-19 pandemic. These hospital perspectives reflect a specific point in time—February 22–26, 2021—provided during a “pulse survey” (brief interviews) that OIG conducted with 320 hospitals nationwide. The timing was nearly a year after the World Health Organization declared COVID-19 to be a pandemic on March 11, 2020.

First Pulse Survey—March 2020

We conducted our first pulse survey of challenges that hospitals reported facing in response to COVID-19 during the early weeks of the pandemic. At that time, hospitals reported that they were largely focused on enhancing their capacity to respond to the pandemic. Hospitals reported challenges such as significant shortages in personal protective equipment (PPE), ventilators, and other supplies as demand increased across the country and around the globe. Hospitals also spoke of the challenge of needing to rapidly expand facility and staffing capacity. Finally, hospitals reported that, at the time, the lack of testing capability to detect which patients had COVID-19 negatively impacted hospital operations as they tried to prevent outbreaks among hospital patients and staff.

Since March 2020, the pandemic has continued to evolve. This snapshot from 2021 provides HHS and other decisionmakers with updated information on hospital perspectives. Specifically, this pulse survey offers hospital administrators’ perspectives on the most significant strains that the response to COVID-19 has exerted on hospitals, as well as their perspectives on the longer-term implications of these strains.

Hospitals Reported That the COVID-19 Pandemic Has Significantly Strained Health Care Delivery

Key Takeaways

In February 2021, hospitals reported that operating in “survival mode” for an extended period of time has created new and different problems than experienced earlier in the pandemic and exacerbated longstanding challenges in health care delivery, access, and health outcomes.

Hospital-Reported Challenges. Hospitals described difficulty balancing the complex and resource-intensive care needed for COVID-19 patients with efforts to resume routine hospital care. They reported that staffing shortages have affected patient care, and that exhaustion and trauma have taken a toll on staff’s mental health. Administrators detailed challenges associated with vaccine distribution efforts and concerns about vaccine hesitancy among staff and members of their communities. Hospitals also raised concerns that the pandemic has exacerbated existing disparities in access to care and health outcomes. Additionally, many hospitals reported experiencing financial instability because of increased expenses associated with responding to a pandemic and lower revenues from decreased use of other hospital services. Hospitals indicated that many of the challenges were more severe for rural hospitals.

Addressing Hospital Challenges. Hospitals reported a range of strategies to address their challenges and identified areas in which further government support could help as they continue responding to the pandemic. Broadly, the areas of government support included enhancing knowledge and guidance on the prevention and treatment of COVID-19, including safe means to discharge patients with COVID-19; helping to fill gaps in hospital staffing, especially for nurses and certain specialists; continuing financial relief, especially to increase care to rural and underserved communities; and, encouraging widespread vaccinations to reduce the circulation of the virus.

Looking Forward. Beyond the immediate needs in responding to COVID-19, the pulse survey documents hospitals’ perspectives about longer-term opportunities for improvement to address challenges that existed before, and were exacerbated by, the pandemic. These include reducing disparities in access to health care and in health outcomes; building and maintaining a more robust health care workforce; and strengthening the resiliency of our health care system to respond to pandemics and other public health emergencies and disasters.

Report in Brief continued

Report No. OEI-09-21-00140

Limitations

The hospitals' front-line perspectives provide an important voice, among many, for HHS and other decisionmakers to consider as they grapple with the challenges presented or worsened by the pandemic. However, it is the perspective of hospital administrators at a point in time, February 22–26, 2021. OIG has not independently assessed the merits, costs, or effectiveness of the strategies or areas for government support identified by hospitals. As such, OIG is not endorsing the suggestions made by the hospital administrators.

Further, we recognize that HHS, Congress, and other government entities across the Federal, State, local, and Tribal levels are taking substantial actions on a continual basis to support hospitals in responding to COVID-19. For example, the recently passed American Rescue Plan Act of 2021 provides additional support and funding that could help to address some of the challenges that hospitals identified.

How OIG Did This Review

This report is based on a pulse survey conducted during February 22–26, 2021, with hospital administrators from 320 hospitals across 45 States, the District of Columbia, and Puerto Rico. Interviews focused on three key questions:

- 1. What are your most difficult challenges in responding to the COVID-19 pandemic right now, and what strategies have you been using to address the challenges?**
- 2. What are your organization's greatest concerns going forward?**
- 3. How can government best support hospitals?**

Respondent hospitals included special pathogen centers, critical access hospitals, and a range of hospitals nationwide of various sizes and characteristics. We spoke with representatives from 320 hospitals that were part of our random sample of 397 hospitals, for an 81-percent rate of contact. (See Methodology on page 38 for additional information about how we conducted this pulse survey.)

HOSPITAL CHALLENGES: HIGHLIGHTS

Health Care Delivery

Meeting the Health Care Needs of COVID-19 Patients

Hospitals emphasized the significant clinical challenges in treating COVID-19 patients, some of whom are very ill, and patients with longer-term effects after recovering from acute illness. Hospitals also reported difficulty in balancing the care needed for COVID-19 patients with efforts to resume routine hospital care and challenges in discharging patients to post-acute settings during their recovery, which strained hospital capacity.

Delays in Care Resulting in Patients With More Serious Conditions

Hospitals reported that patients have delayed or forgone routine health care as a result of the COVID-19 pandemic, which has led to worsening of patient conditions. Administrators predicted that widespread delayed care could result in higher hospitalization rates and need for more complex hospital care in the future.

Increased Needs for Mental and Behavioral Health Care

Administrators voiced concern that the pandemic has led to greater mental and behavioral health needs among patients. Administrators anticipated that the needs for mental and behavioral health services at their hospitals would continue to grow and reported concern about meeting these needs.

Worsening of Longstanding Challenges at Rural Hospitals

Rural hospitals reported particular difficulty responding to the COVID-19 pandemic and that the pandemic had worsened longstanding challenges in staffing, limited capacity, and finances. Hospitals explained that strategies employed by other hospitals, such as sharing clinicians across systems and providing telehealth services, may not work for rural hospitals due to remote locations and lack of access to technology.

Concerns about Exacerbation of Health Care Disparities

Hospitals raised concerns that the COVID-19 pandemic has exacerbated existing disparities in access to care and health outcomes.

Benefits and Challenges of Expanded Telehealth Use

Hospitals reported that telehealth has become an important care delivery model during the COVID-19 pandemic. Administrators also reported some challenges in delivering care with telehealth. These challenges are that telehealth, by its very nature, cannot cover all aspects of health care delivery. They also reported that some patients, particularly those in underserved communities, do not have the devices or internet access to conduct video calls.

Staffing

Staff Burnout and Trauma

Hospitals reported that increased hours and responsibilities, along with other stressors caused by the COVID-19 pandemic, resulted in staff being exhausted, mentally fatigued, and sometimes experiencing possible post-traumatic stress disorder (PTSD). Several hospitals reported that witnessing COVID-19-related deaths especially weighed on staffs' mental health.

Staffing Shortages Due to High Turnover and Competition

Many hospitals reported that they were experiencing concerning staff shortages, particularly among nurses, raising concerns for hospitals about patient safety and quality of care. Hospitals also expressed concerns about the future of the health care workforce as the recruitment pool for nurses and other health care workers has continued to shrink.

Vaccinations

Diversion of Limited Resources to Vaccine Efforts

Although hospitals viewed their vaccination efforts as a positive step toward pandemic recovery, several hospitals noted that these efforts come at a cost—further stretching limited clinical staff and straining hospital finances. Hospitals reported that differences in government guidance on vaccine eligibility made it more complicated for them to determine who is eligible, requiring additional effort for hospitals.

Vaccine Hesitancy Among Hospital Staff and the Community

Some hospitals reported that some staff and members of the community were hesitant to take the COVID-19 vaccine or declined to get vaccinated due in part to safety concerns. Hospitals reported that some staff distrusted the rapid vaccine development and approval process and had concerns that the vaccines may not be effective or may pose risks.

Ensuring Vaccination Access for Rural and Other Underserved Populations

Hospitals reported that vaccinating rural communities presented unique challenges that made it difficult to ensure vaccination access for residents. Hospitals also reported needing to take extra steps to ensure access to vaccinations for some senior and low-income populations, such as those who do not have internet access or the technology skills to navigate online scheduling.

Finances

Financial Instability From Higher Costs and Lower Revenues

Many hospitals reported concerns about their financial stability as the COVID-19 pandemic had increased costs and decreased revenues. They explained that their higher costs were associated with patient care, staffing, PPE, and COVID-19 testing and vaccinations; lower revenues stemmed from fewer routine and elective services and reimbursement rates that, according to the hospitals, did not keep up with increasing costs of care for some COVID-19 patients.

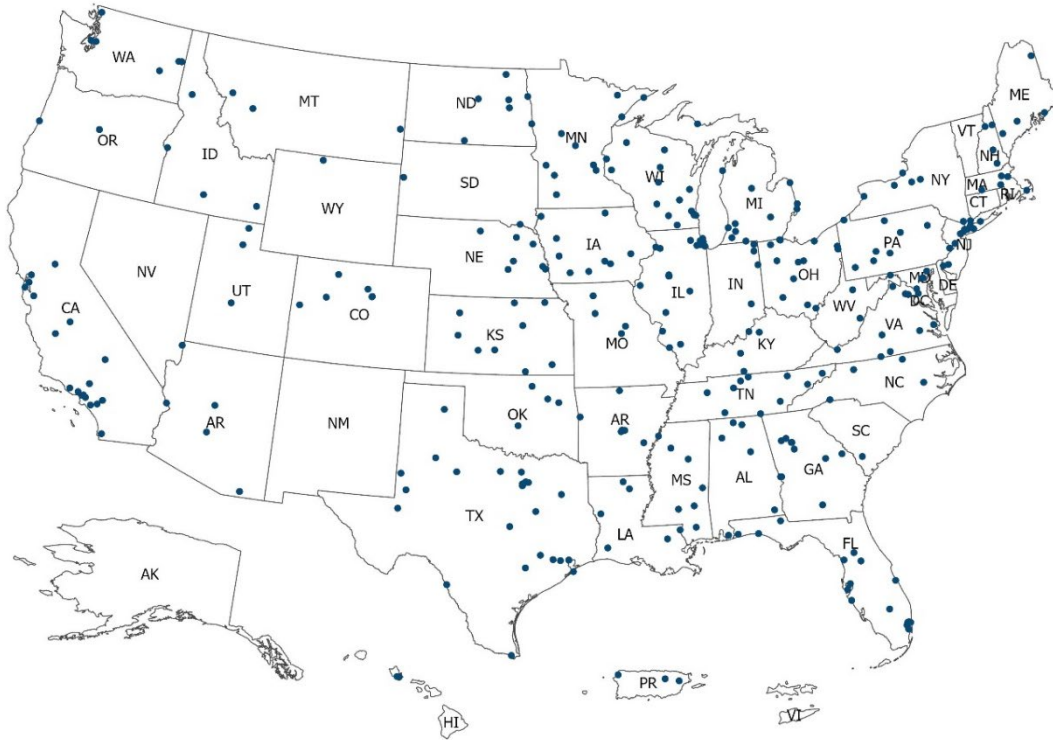
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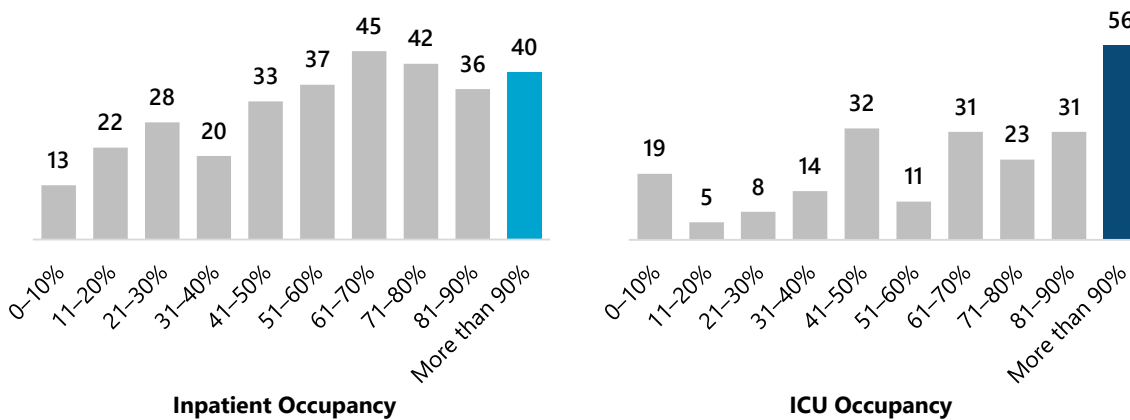
HOSPITAL LOCATION AND OCCUPANCY

Exhibit 1: The 320 responding hospitals were located in 45 States, the District of Columbia, and Puerto Rico.



Source: OIG analysis of 320 responding hospitals using the address listed for their provider number, March 2021.

Exhibit 2: Some responding hospitals were operating at an over 90-percent adult inpatient occupancy and/or an over 90-percent adult intensive care unit (ICU) occupancy.



Source: OIG analysis of HHS Protect data for February 17, 2021.

Note: For adult inpatient occupancy, the total equals 316 responding hospitals because not all hospitals reported data in HHS Protect. For adult ICU occupancy, the total equals 230 because we excluded 86 hospitals that reported not having any ICU beds.

FINDINGS

HEALTH CARE DELIVERY

Hospitals reported significant challenges in meeting the needs of COVID-19 patients and uncertainty about future COVID-19 caseloads

Hospitals are at the forefront of health care delivery during the COVID-19 pandemic, and hospital administrators described the strain the pandemic has placed on patient care. In some cases, hospitals reported that underlying problems with health care delivery were exacerbated, such as challenges providing care for underserved patients and challenges for rural hospitals with limited resources.

The volume of COVID-19 patients and the complexity of their immediate and long-term needs significantly strained patient care and hospital operations

Hospitals reported being overwhelmed by the volume of patients, especially during surges in COVID-19 infections. They explained that this put a severe strain on their bed capacity. Some hospitals reported that they operated at over 100-percent capacity during surges, and high occupancy continues for some hospitals. At the time of our survey, 40 responding hospitals had over 90-percent inpatient occupancy and 56 had over 90 percent of their ICU beds occupied. (See the Appendix on page 41 for more information about the capacity and other characteristics of responding hospitals.) One urban hospital, with a nearly full ICU the week before our survey, reported that it would do only urgent surgeries and discharged patients to their homes for recovery because of a shortage of recovery areas in the hospital.

Hospitals emphasized the great clinical challenges in treating COVID-19 patients, particularly those with severe illness and comorbidities. Hospital clinicians have had to keep up with emerging treatment protocols, often without sufficient specialty staff, such as infectious disease specialists, pulmonologists, respiratory therapists, and clinical nurses trained in treating COVID-19.

COVID-19 patients with longer-term effects will also need complex specialty care. Hospitals reported seeing patients with serious post-COVID conditions, such as pulmonary issues, pneumonia, heart problems, and blood clots. One hospital described “a tsunami of people going forward” who they predicted would experience long-term effects from COVID-19.

Administrators reported challenges in balancing the complex and resource-intensive care needed for COVID-19 patients with efforts to resume routine hospital care. Hospitals reported having difficulty integrating COVID-19 care into normal operations, chiefly because of concerns about infection control. As hospitals reopened more services for patients after the early months of the pandemic, such as resuming elective surgeries, they experienced increased challenges in keeping infected COVID-19 patients separated from non-infected patients. Complicating this further, hospitals explained that a new patient's COVID-19 positivity status may not be immediately known.

Hospitals reported challenges in discharging COVID-19 patients during their recovery, which affected available bed space throughout the hospital

Hospitals reported difficulty in discharging COVID-19 patients following the acute stage of their illness, resulting in longer hospital stays. Administrators reported challenges in transferring patients to post-acute facilities such as nursing homes, rehabilitation hospitals, and hospice facilities. According to administrators, some post-acute facilities were either unwilling or unable to accept patients because the facilities were concerned about potential COVID-19 infections. Others did not have bed capacity or staff to care for the patients.

"We have patients in the acute-care setting that really do not belong here in terms of what they need clinically but can't move on because there is not an available option."

- Hospital administrator

Administrators reported that delays in discharge affected available bed space throughout the hospital and had other downstream effects. For example, hospitals reported that patient opportunities for specialized post-acute care (e.g., rehabilitation) were delayed. Hospitals also reported that longer stays created bottlenecks throughout hospitals, including in ICUs and emergency departments. As an example, one hospital reported that 13 of its 17 emergency treatment rooms were occupied by COVID-19 patients waiting to be admitted to the hospital.

Uncertainty about future COVID-19 caseloads and the implications of new virus variants adds to hospitals' challenges

Administrators expressed concern about emerging issues such as new variants of the virus and vaccine efficacy. Hospitals worried that the new variants could bring additional challenges and changes to treatment needs, infection control, and best care practices. Administrators also had questions about the long-term efficacy of vaccines and worried about the possibility of future COVID-19 surges. One hospital administrator asked, "Are we out of the woods or will it come back again?" Another

hospital expressed concern that COVID-19 may become a regular seasonal infection, like influenza, which could present serious ongoing preparedness challenges given that COVID-19 is both more infectious and more deadly than the flu.¹

**“We are going to have to learn to live with COVID;
COVID is not going away.”**

- Hospital administrator

Hospitals reported that continuing fluctuations in the number of patients with COVID-19 made it difficult to plan for the future. Hospitals were cautious about taking steps toward resuming normal operations. For example, one hospital not treating any COVID-19 patients the week before our survey reported that it was hesitant to repurpose its antibody infusion room or to fill rooms designated for isolation because of the risk of another wave of COVID-19 cases, despite other demands for this space.

Hospitals reported that the pandemic led to delayed care and feared that an erosion of trust in hospital safety would continue to keep patients from seeking needed care

Administrators raised concerns about the public not receiving needed health care during the pandemic due to patients delaying and forgoing care, as well as to hospitals suspending elective care due to COVID-19. They reported that lack of care and reduced use of hospitals have had significant ramifications for patients and the hospitals that treat them.

Hospitals reported that patients have delayed or forgone routine health care, which has led to worsening of patient conditions

Many hospitals chose, or were required, to suspend elective surgeries and other services at different points during the pandemic to preserve resources for emergencies and COVID-19 surges, but according to administrators, delayed care has persisted past these early suspensions. As causes of delaying and forgoing care, administrators cited patients' fear of contracting COVID-19 and practical concerns such as difficulty finding transportation during the pandemic. Hospitals described reduced patient volume across hospital departments and services, including emergency care, preventative care, chronic condition management, and surgeries. Delayed care included preventative and urgent care for serious conditions such as

heart attacks or strokes. One administrator attributed some emergency room deaths at their hospital to patients not following up on their prior care needs.

“Things that are elective, if not dealt with over time, are no longer elective.”

- Emergency preparedness director

Administrators predicted that such widespread delayed care would result in higher hospitalization rates and a need for more complex hospital care in the future. They explained that when patients miss routine exams and diagnostic tests, such as cancer screenings and cardiology tests, serious diagnoses may go unidentified. One administrator reported finding a sharp decline in cancer diagnoses during the pandemic, and that patients were not presenting for examination at the onset of symptoms. Another administrator described seeing patients for diabetes and cardiac management who were sicker and required more care after postponing prior appointments. One administrator reported, “My only concern is how sick our patients are. There was a long period of time where patients were not receiving primary care. We see the impact here almost daily with the symptoms patients are presenting with.”

Hospitals reported that public trust in hospital safety and credibility has eroded during the pandemic

Hospital administrators perceived that some in their communities appeared to newly question whether hospitals are safe and can keep patients safe. Administrators reported that patients continue to be concerned about contracting COVID-19 in the hospital despite the protective procedures that hospitals have put in place to mitigate exposure. Some administrators speculated that this could be in part because of confusion over evolving public health guidelines during the pandemic.

Hospitals voiced concern that some patients were less likely to trust hospital care recommendations as credible, possibly because the patients received confusing and changing messages about COVID-19 during the pandemic. Administrators worried that lack of trust could contribute to patients further delaying and forgoing care. One administrator said, “Unless we can get everyone on the same page to get routine health care, we shudder at the burden of disease that may occur.”

“My concern is with our health care image in the community. There are people who have lost trust in our health care system. Our concern is about re-establishing trust among the community.”

- Hospital CEO

Hospitals expressed concern about meeting the increased need for mental and behavioral health care that has emerged as an outgrowth of the pandemic

Administrators voiced concern that the pandemic has led to greater mental and behavioral health needs among patients. They explained that these added needs resulted from many factors, including lockdowns, social isolation, and burnout. Administrators anticipated that the needs for mental and behavioral health services at their hospitals would continue to grow. Administrators reported concern about meeting these needs, and about how mental health challenges can exacerbate other health problems. One hospital reported concern for seniors in particular, observing that the elderly may be among the most vulnerable to depression associated with the pandemic.

“In this pandemic, we talk about the death toll...but the morbidity that we are overlooking is mental health.”

-Administrator of two hospitals within a network

Some hospitals believe that they may not have the capacity or resources to meet the increased needs for mental and behavioral health care. For example, one hospital closed a psychiatric unit that focused on elderly patients because it needed the unit’s staff to help serve COVID-19 patients. In addition to inpatient care, hospitals often serve as a primary mental health provider in communities. Some administrators explained that their role includes conducting mental health screenings and treating mental and behavioral health issues as comorbidities to other medical conditions. Hospitals reported that there was a need for additional resources and specialists to provide this care before the pandemic, and that the pandemic increased the need further. Additionally, administrators reported that it can be more difficult to treat COVID-19 patients who suffer from mental illness or behavioral challenges.

Rural hospitals reported that longstanding operational challenges have worsened during the pandemic

Administrators reported that the COVID-19 pandemic has disproportionately hampered operations for rural hospitals. For example, they reported that the pandemic has worsened longstanding challenges in recruiting and retaining staff, limited bed capacity, lack of access to specialized services, and financial strain.

Some hospitals raised that strategies used by other hospitals to address resource challenges, such as sharing clinicians across systems, may not work for rural hospitals. One administrator reported that rural hospitals do not have access to back-up resources, observing, “As a rural community, we have a limited number of physicians. If one physician falls ill, we’re done.” A few rural hospitals reported attempts to provide more telehealth services to fill gaps in care, but their patients sometimes lacked access to the technology needed to use these services. They also reported that limited patient access to technology, such as broadband internet access, affected other aspects of care, such as hampering outreach about vaccines.

“We are essential...If we were not here, I don’t know where these patients would have gone.”

-Administrator, rural hospital

Further, administrators reported that a lack of available beds at many larger hospitals sometimes prevented them from transferring COVID-19 patients and other critically ill patients. Most rural hospitals are designed to provide urgent and routine care services for a wide geographic area and to transfer patients requiring specialty or intensive care to other hospitals. One rural hospital in Louisiana that does not have an ICU reported that it was contacting hospitals in neighboring States because they had the closest available ICU beds. Among our responding hospitals, 67 served rural communities and 28 of these hospitals operated fewer than 15 inpatient beds. (See the Appendix on page 41 for information on the communities served by the responding hospitals.)

Hospital administrators raised concerns that the COVID-19 pandemic has worsened existing disparities in access to care and health outcomes

Hospitals reported that the COVID-19 pandemic has exacerbated longstanding problems with access to care, particularly for rural communities and for low-income populations across geographic settings. Hospitals reported that many rural communities face health care provider shortages, transportation challenges that make it difficult to access hospitals that may be hours away, and lack of internet service to support using telehealth to reduce these barriers. Many low-income individuals face barriers to health care (even in non-rural settings), including lack of health insurance or transportation.² Hospitals also reported that low-income individuals may be unable to afford internet service or devices to support using telehealth to reduce these barriers.

In addition, hospitals raised concerns about disparities in health outcomes, including higher incidence rates and severity of COVID-19 infections in certain communities, concerns raised by the others in the health care community throughout the pandemic. According to the Centers for Disease Control and Prevention (CDC),

communities that have high levels of poverty, crowded housing, and other attributes associated with higher social vulnerability have been more likely to experience high rates of COVID-19.³ Among responding hospitals, 41 were located in counties where 20 percent or more of the population had household incomes below the Federal poverty level, and 113 hospitals serve communities with higher social vulnerability than the national average according to CDC’s Social Vulnerability Index. (See the Appendix on page 41 for information on the communities served by the responding hospitals.)

Administrators from hospitals in communities with higher social vulnerability reported deep concern about worse outcomes for many of their patients. Hospitals also reported clinical challenges in treating patients with certain comorbidities that disproportionately affect people of color, such as heart and lung ailments and chronic illnesses such as diabetes, and that patients with these comorbidities are at higher risk of severe illness from COVID-19.⁴ These patients may enter hospitals at a more severe stage of illness, and require a higher level of care. In some cases, hospitals explained that they lack this advanced care capacity or may lack the resources to treat a large number of vulnerable patients. Hospitals reported that patients who have low incomes are also less likely to have access to primary care that could prevent disease worsening.

Hospitals reported the adoption and use of telehealth was beneficial and a change they want to retain despite some challenges

Administrators reported that telehealth has become an important care delivery modality for their hospitals during the COVID-19 pandemic, increasing patient access to care while reducing risk and workload for hospital staff. Hospitals described a wide range of situations for which they implemented or expanded telehealth services, including connecting remote specialists to help severely ill patients in ICUs, conducting followup visits for patients recovering from COVID-19, conducting mental health services, and providing education for at-home care.

“The pandemic created a crisis for us to adopt this [telehealth] technology.”

- Hospital CEO

Although administrators were overwhelmingly positive about the benefits of telehealth, they reported three key challenges in delivering care with this method. First, telehealth cannot cover all aspects of health care delivery and by its very nature lacks the in-person interaction valued by some providers and patients. Second, technology created challenges for telehealth care delivery. Hospitals reported that some patients do not have the devices or internet access to conduct telehealth visits, particularly in underserved communities. One administrator worried that telehealth

visits do not work equally well for all communities. Although some patients are able to conduct video calls, others must rely on audio-only telephone calls, particularly the elderly and those in underserved communities. Third, some hospitals reported that they received lower payments for some services provided through telehealth than they would have received for in-person services, and they did not believe the payments reflected the value of those telehealth services.

STAFFING

Hospitals reported that increased workloads and the stress of treating seriously ill and dying COVID-19 patients have led to staff burnout and, in some cases, trauma

Hospitals reported that increased hours and responsibilities, and other stressors caused by the COVID-19 pandemic, resulted in staff being exhausted, mentally fatigued, and sometimes experiencing possible PTSD. Hospitals reported that for the past year, staff have worked longer hours, extra shifts, and mandatory overtime. In addition, some reported that caring for higher level and critically ill patients who might have been transferred to other facilities prior to the pandemic caused additional stress on staff who felt ill-equipped to handle such care on a continuing basis. Further, hospitals reported that staff were “wearing many hats”—balancing multiple clinical and administrative responsibilities to cover the staffing gaps. Other staff were pulled away from their normal duties to complete new COVID-19-related tasks. For example, hospitals reported dedicating staff to meet COVID-19 data entry and reporting requirements, with one administrator describing it as “very labor intensive.” Another hospital reported pulling staff from their regular duties to manage the thousands of incoming telephone calls when the community learned that the hospital had received vaccine doses.

Several hospitals reported that the COVID-19-related deaths that staff witnessed especially weighed on their mental health. One administrator observed that, with family unable to be present at patient bedsides, it has been heartbreaking for nurses to be the last person a dying patient sees. Further, administrators reported that hospital staff experienced COVID-19 deaths among their coworkers, which took a toll on those remaining and continuing the work. One representative from a hospital network described a monthly gathering for staff to mourn colleagues who passed

“Long-term solutions for staff fatigue, compassion fatigue, and possible PTSD will need to be identified so that we can help our staff be able to care for themselves, their families, and our patients.”

-Director of Nursing, hospital at 100% ICU occupancy

away from COVID-19. Adding to this emotional distress, hospitals explained that some staff have had to separate from their families for extended periods to protect their family members from infection.

Administrators at one major teaching hospital (where, the week before our survey, nearly 50 percent of ICU patients had COVID-19) reported that treating COVID-19 formerly involved everyone on staff but now involves only certain staff while others get to go back to “normal.” The administrators explained that staff still treating COVID-19 patients experienced more fatigue attributable to loss of the teamwork that existed in earlier months of the pandemic, and a strong desire to return to normalcy like some of their colleagues.

Hospitals reported that high turnover and competition for medical staff have created staffing shortages that in some cases affect patient care

Hospitals reported that they were experiencing higher than normal turnover among medical staff, resulting in concerning staffing shortages. Among our responding hospitals, 38 reported to HHS Protect that they faced a critical staffing shortage during the week before our pulse survey. Turnover was particularly high among nurses, according to the hospitals. One hospital in a high-poverty and socially vulnerable community in Texas (which was operating at 100-percent ICU occupancy the week before our survey) reported that its annual average for nurse turnover increased from 2 percent prior to the pandemic to 20 percent in 2020. Hospitals also reported losing other types of staff in the past year, including respiratory therapists, certified nursing assistants, phlebotomists, laboratory technicians, and other support staff vital to hospital operations.

Many hospitals attributed the increased turnover of staff to stress and burnout caused by COVID-19, leading some staff to retire early or seek jobs outside of health care. Hospitals also cited competition for health care workers and the opportunity to earn more money by leaving a hospital to join a staffing agency.

Some hospitals reported struggling with the unexpected increase in competition for medical staff

Administrators reported an increase in competition for medical staff, particularly nurses, among hospitals and staffing agencies. Many hospitals reported that they were unable to compete with staffing agency salaries, with one administrator describing the competition over health care workers as a “wage war.” Hospitals that lost nurses reported that they often experienced increased staffing costs from the higher hourly rates charged by staffing agencies.

“The cost [for agency nurses] has gone from \$60–\$70 to \$200 per hour now. To get them in here to help has become an impossibility.”

- CEO, hospital that reported critical staffing shortages

Smaller hospitals and rural hospitals reported that it was particularly hard for them to compete for staff with large urban hospitals, and that the inability to compete led to further shortages. An administrator from a critical access hospital stated that they always had a few nursing vacancies that they could not fill, even with offering bonuses. As another administrator explained, recruiting providers in a rural community is always difficult, but had gotten harder during the pandemic.

Hospitals reported that staffing shortages posed challenges in maintaining patient safety and quality of care

Hospitals raised concerns that the quality of care has suffered as a result of losing nursing staff. Several administrators reported that staffing shortages have forced them to assign substantially more patients per staff, such as one administrator who reported that their hospital had to cut its staff-to-patient ratio in half for some periods during the pandemic, to 1-to-12 from 1-to-6. Reduced staff-to-patient ratios can lead to mistakes when less attention is given to each patient. Hospitals also reported that staffing shortages have resulted in staff having to work longer hours, extra shifts, and mandatory overtime for the past year. Representatives from one hospital network reported that it had seen an increase in central line infections, which can be life-threatening. They attributed the increase in these infections to not having sufficient staff and reported that staff’s fatigue led to process failures. Another hospital reported that feedback scores from patients on communication and quality had decreased and attributed that to tired and frustrated staff.

Some hospital administrators reported quality of care concerns even when they bolstered staffing levels with traveling nurses, reporting that these nurses are not as familiar with the hospital’s particular processes as nurses with longer tenures. For example, one hospital attributed a rise in its hospital-acquired infections to the hiring of agency staff not trained in that hospital’s infection control processes.

Hospitals expressed concerns that a shrinking recruitment pool for nurses could continue to worsen staffing shortages

Hospitals raised concerns that nationwide shortages of nurses and other health care workers, already a concern before the COVID-19 pandemic, had worsened as a result of the pandemic. Administrators from several hospitals believed that the pandemic has deterred people from entering the medical profession, with fewer students seeking degrees in medical disciplines. As one hospital administrator said, “We can’t overstate the staffing gap that exists now that’s likely to get worse over the next few years.” An administrator from one teaching hospital reported that the hospital would typically recruit nurses who have completed training at the hospital, but this year only 100 nurses were expected to graduate and the hospital had 200 open nursing positions.

“This [pandemic] has really burnt out the health care industry... I am concerned about what we are going to do about making people want to go into health care as a profession.”

- Hospital president

Further, several hospitals expressed concern that, because of the pandemic, newly graduated nurses may not have gained sufficient clinical experience with other ailments, and that hospitals lacked resources to adequately train new nurses. One administrator explained that some nursing students have been unable to graduate because they could not complete their clinical training.

VACCINATIONS

Hospitals reported that vaccination efforts were positive steps toward pandemic recovery but exacerbated challenges with clinical staff shortages and hospital finances

Hospital staff were among the earliest to get vaccinations, which helped to reduce risk of infection to front-line health care workers and to limit the spread of COVID-19 within the hospital. Hospitals reported that they have set up the infrastructure necessary to administer COVID-19 vaccines to their communities. These efforts include creating mass vaccination sites and reallocating clinical staff to administer vaccines.

Many hospitals reported that they were ready to vaccinate on a large scale as soon as vaccine supply became more available. As one administrator explained, hospitals are well positioned to administer vaccines, given that they have the needed space, exam rooms, clinical expertise, and workflow processes. Hospitals viewed their vaccination

efforts as a positive step toward pandemic recovery. For example, one hospital noted that providing vaccinations was important to economic recovery.

“What the public doesn't see is that the same health care workers they rely on to provide care are the same ones being pulled to distribute vaccinations. They can't be everywhere at once.”

- Emergency manager

Some hospitals reported that vaccination efforts sometimes exacerbated existing challenges with clinical staff shortages and hospital finances. Some hospitals reported needing to divert clinical staff away from patient care to administer vaccines, which has “strained an already stressed system” as one administrator explained. Hospitals reported shifting nurses from other departments, including ICUs, operating rooms, emergency departments, and obstetrics, to administer vaccines, and sometimes at remote locations.

Hospitals reported that it takes a considerable amount of staff time to operate vaccination clinics. One administrator explained that it took 25 staff members working an 8-hour shift to distribute 600 vaccines. Hospitals also reported frustration with inefficiencies in required data reporting. For example, one hospital reported that to meet Federal, State, and local reporting requirements, it had to enter vaccine data into three separate systems. It characterized such data entry as “cumbersome” and “redundant,” noting that “none of the three systems are talking to each other, [despite the fact that] they are inputting the exact same data into each system.”

“[Vaccination] is an immense resource and we're happy to contribute because it decreases the rates of COVID, but it is significant the resource[s] that [go] into that.”

- Hospital president

Hospitals also reported that costs associated with vaccine administration have strained hospital financial resources. Beyond staffing, hospitals explained that costs include equipment for storing vaccines (e.g., freezers) and supplies to administer vaccines. Although a few hospitals reported using the Coronavirus Aid, Relief, and Economic Security (CARES) Act funding to offset the expense of vaccinating the community, others reported that this support did not cover all of the hospital expenses for operating vaccination sites.⁵ (Note that after our pulse survey, CMS increased the Medicare payment amount for administering the COVID-19 vaccine to offset costs associated with establishing or operating vaccination sites and hiring additional staff.)⁶

Differences in government guidelines regarding vaccine eligibility and prioritization created challenges for hospitals

Hospitals reported receiving varying information from different levels of government about who is eligible to receive the COVID-19 vaccine and when they are eligible. Federal, State, and local governments have prioritized different population groups to receive vaccines. CDC's Advisory Committee on Immunization Practices made recommendations that prioritized health care workers and long-term care facility residents, but States have discretion to adjust the guidelines based on their populations, vaccine supply, and capacity to vaccinate.⁷

Hospitals reported that differences in vaccination priorities across jurisdictions have made it more complicated to determine who is eligible, which can be time-consuming and resource-intensive for hospitals. For example, hospitals serving communities at State borders must vary their vaccination approach based on each State's priorities. One hospital explained, "We're near Indiana and Michigan, and depending on what side of [the] street you're on, it affects what rules apply." A further complication is that within States, counties and cities may determine their own priority populations that can vary across each jurisdiction. For example, one hospital network noted that "vaccine 1b eligibility criteria and allocation varies to a great extent across Illinois, Wisconsin, Cook County, and City of Chicago."

Hospitals reported that some hospital staff and members of the community were hesitant to get vaccinated

Hospitals noted that they were struggling to convince some staff of the importance and safety of the vaccine. Administrators from several hospitals reported more than a third of their staff had declined to be vaccinated as of the date of our survey. Administrators attributed this lack of willingness to take the COVID-19 vaccine to multiple causes. For example, they explained that some staff distrusted the rapid vaccine development and approval process and others had concerns that the vaccines may not be effective.

Hospitals also raised concerns about hesitancy among members of their communities and reported working to combat misinformation about the vaccine. Hospitals worried that fewer vaccinations would allow the virus to continue circulating longer than necessary. Some administrators reported that the public lacked complete information about vaccines, which appeared to increase hesitancy to be vaccinated. For example, one administrator reported hearing a variety of concerns, from questions about the long-term side effects of the vaccines to false assertions that vaccines carry microchips.

Hospitals reported challenges in ensuring access to vaccinations for rural, senior, and low-income populations

Administrators reported that vaccinating rural communities presented unique challenges in ensuring access. Hospitals in rural areas, including critical access hospitals, reported that rural areas often have few vaccination sites and lengthy travel between sites. For example, in some rural communities, the hospital may be the nearest vaccination site for patients who live hours away. Hospitals noted that this distance can make it difficult to vaccinate residents who do not have reliable transportation. Officials from one critical access hospital noted that many rural areas have a higher proportion of low-income residents, who may not have reliable transportation for long travel. Additionally, hospitals explained that those without a car have difficulty traveling to mass vaccination sites.

“We feel it’s important to do more than stand up a vaccination site. We provide education and access. Part of that access strategy is to go out to people.”

- Hospital president

Hospitals reported taking extra steps to ensure that senior and low-income populations could access vaccinations. Vaccination appointments have been commonly scheduled online, and hospitals reported that this creates barriers for individuals who lack internet service, devices, or capabilities needed to access and navigate online scheduling. For these patients, hospitals reported needing to use different scheduling options, such as calling elderly patients directly to schedule vaccination appointments. Some hospitals also reported going into the community to vaccinate, such as by setting up vaccine clinics in parking lots in certain neighborhoods.

Hospitals reported frustration with the unpredictable and insufficient supply of vaccines

Hospitals reported that the supply of vaccines they receive has been unpredictable, and they often get little advance notice about changes to shipment quantities. Administrators explained that quantities of vaccine shipped to hospitals varied from week to week and did not always match the amount they expected. Hospitals reported that this inconsistency led to inefficient use of resources and caused hospitals to cancel patient appointments at the last minute.

“There is far more capacity to vaccinate than there [are] available vaccine doses.”

- Emergency management director

Several administrators expressed frustration about building infrastructure and planning for mass vaccinations only to have that capacity be underutilized due to inconsistent supply. For example, one hospital reported that it has capacity to vaccinate 5,000 people a week but received only 2,000 doses a week. Another hospital reported creating three vaccine locations within its system and allocated staff to provide 6,000–8,000 vaccines a week but had no vaccines at the time of their survey on February 21, 2021. (Note: Since the time of the pulse survey conducted the week of February 22–26, 2021, the Food and Drug Administration (FDA) issued an emergency use authorization for a third vaccine for the prevention of COVID-19, helping to lead to an increase in daily vaccinations.)^{8, 9}

SUPPLIES

Hospitals reported difficulty maintaining a steady supply of affordable, high-quality PPE

Hospitals reported that they were no longer experiencing the extreme shortages of PPE that occurred at the beginning of the COVID-19 pandemic, but some still lacked dependable supply chains for PPE. Hospitals noted that supplies of surgical gloves and N95 masks were particularly unpredictable. One problem reported with gloves was that only large sizes could be purchased, often the wrong size for many hospital staff. During the week before the pulse survey, 19 of our responding hospitals reported to HHS Protect that they could not order and obtain N95 masks. Further, some hospitals reported sanitizing and reusing PPE to preserve supplies.

“We have been reusing masks and supplies, per CDC guidelines, in an effort to extend the life of the supplies and reduce costs.”

-Compliance officer

Many hospitals reported difficulty in identifying reputable vendors to provide a consistent supply of PPE. As one administrator described, “We are routinely changing vendors because we can’t get [PPE] from our normal manufacturers and vendors.” Some administrators expressed that it was inefficient for individual hospitals to be searching for vendors and that there should be more centralized supply chain management.

When hospitals must switch to N95 masks produced by different manufacturers, staff often must repeat mask fit-testing, which one administrator reported occurred for their hospital four or five times. Even when hospitals found PPE vendors, administrators reported inconsistent delivery, including orders that were cancelled, delayed, or incorrect. One hospital noted that it was difficult to anticipate when their orders would be backordered or cancelled. This made it challenging to build up supplies, and hospitals reported concerns about having enough PPE supplies for surges or waves of COVID-19 infections in the future.

"Hospitals our size with 300 beds looking for N95s was not an efficient use of our time."

- Hospital president

Some hospitals reported receiving poor-quality PPE and others reported inflated prices. For example, one hospital reported that when they purchased PPE made outside the United States, many of the supplies did not meet U.S. standards. A few hospitals described the PPE that they received as "counterfeit" or discovered the PPE was inadequate for use after testing it. Some hospitals also indicated that they experienced substantial price increases for PPE. One administrator said, "We used to pay about \$1 per [N95] mask. Now it's \$8 to \$9 per mask."

FINANCES

Hospitals reported that their operational costs have risen dramatically while their revenues have declined, threatening their financial stability

Many hospitals identified financial stability as a concern resulting from the COVID-19 pandemic. Administrators pointed to a variety of increased costs that their hospitals encountered during the pandemic, including higher costs associated with staffing and PPE, as well as COVID-19 patient care, testing, and vaccinations. Some hospitals also reported increased administrative costs associated with new data reporting requirements for COVID-19 cases, testing, and vaccinations. Some hospitals expressed that the combination of their higher costs coupled with declining revenues raised concerns about whether they would be able to remain in operation.

Hospitals that serve disproportionately under- and uninsured populations and rural communities reported being particularly concerned about financial instability. These hospitals also tend to serve more patients enrolled in Medicaid, which often reimburses at lower rates than private insurance. Several hospitals noted that they faced financial challenges prior to the pandemic and worried that it would be hard to recover financial stability after the pandemic ends. As an administrator of a hospital serving a community with high poverty rates described, “We were one of the [hospitals in] danger of disappearing...now we have to restart in a different world, and I don’t know if we can get it back.”

“Labor costs, supply costs, utility costs, insurance costs have all gone up. Everything on the expense side has gone up and the revenue side has not kept pace.”

- CEO, rural hospital

Hospitals reported a significant decline in revenue resulting from suspending elective procedures. In March 2020, the Centers for Medicare & Medicaid Services (CMS) recommended the suspension of elective surgeries and other procedures to help conserve PPE and other supplies needed to respond to the pandemic.¹⁰ The next month, in April 2020, CMS issued additional recommendations to guide practices as State, Tribal, and local health care entities considered safely resuming elective surgeries and other procedures.¹¹ However, hospitals reported that non-COVID-19-related services have remained low, with fewer patient visits for both routine and emergency care and fewer elective procedures (compared to before the pandemic). As a result of fewer patient visits, one administrator said their hospital was operating at a 25-percent reduction in revenue. As discussed earlier in the report, hospitals surmised that fear of contracting COVID-19 was a main cause of patients avoiding coming to the hospital, even for medically necessary treatment.

Some administrators expressed that, based on their experience, Medicare fee-for-service reimbursement did not always cover their costs associated with some COVID-19 patients. For example, one hospital estimated that it was potentially losing \$3,000 per COVID-19 patient. Medicare reimburses hospitals a predetermined amount based on the COVID-19 diagnosis and any other diagnoses for the patient, and provides additional payment increases to hospitals as part of the CARES Act.^{12, 13} However, administrators believed that these reimbursement amounts often did not cover their added staff and equipment costs associated with COVID-19 patients who have prolonged ICU hospital stays.

Medicare alternative payment models that base payment on value, risk, and outcomes presented a different set of financial challenges, according to hospital administrators. Although one administrator expressed satisfaction with payments under such models, other hospitals noted concerns that they could be penalized under alternative payment models, specifically in calculations of future incentive payments. For example, one hospital worried that caring for COVID-19 patients, who often have lengthy hospital stays and increased risk of hospital-acquired infections, could

negatively affect their quality metrics, potentially costing “hundreds of thousands of dollars” in missed incentive payments.¹⁴

Hospitals expressed uncertainty about rules on repayment of prior Federal loans

Several administrators expressed concern about whether they would have to repay the Federal financial assistance that they had already received. Hospitals noted that loans from the Medicare Accelerated and Advance Payment Programs were essential in facing cash flow disruptions during the early days of the pandemic. However, they anticipated problems repaying the loans when the first payments become due starting late March 2021.¹⁵ Some hospitals also said that guidance on CARES Act funds, such as Paycheck Protection Program (PPP) loans, seemed to have changed over time, leaving them uncertain about the current rules for repayment.

ADDRESSING HOSPITAL CHALLENGES

Hospitals reported implementing strategies to address challenges and described areas in which new and continued government support would be helpful

Hospitals described a range of strategies that they used to address the challenges arising from the COVID-19 pandemic. For example, to ensure that they could meet the needs of COVID-19 patients, hospitals reported bringing in expert consultants to share best practices for standards of care. To combat staffing shortages, hospitals reported reallocating staff from other departments and offering higher pay and bonuses to recruit and retain staff. In addition, to ensure the success of vaccination efforts, hospitals reported leveraging community resources and educating the public on the safety and importance of getting vaccinated. (See the Selected Hospital Strategies section on page 26 for more detail on some of the strategies that hospitals reported.) Hospitals expressed appreciation for the financial support and regulatory flexibilities that the government has extended to hospitals and noted that the assistance has been critical to their continued operations.

Hospitals also described areas in which new and continued types of government support would be helpful in responding to, and recovering from, the COVID-19 pandemic. The hospitals' front-line perspectives provide an important voice, among many, for HHS and other decisionmakers to consider as they grapple with the challenges presented or worsened by the pandemic. However, OIG has not independently assessed the merits, costs, or effectiveness of the areas for government support identified by hospitals, and as such, OIG is not endorsing them. Rather, these ideas are presented to provide information for decisionmakers. Some challenges identified by hospitals may not be within HHS's authority to address or may require legislation.

Further, we recognize that Congress, HHS, and its partners across government have already taken and continue to take action to alleviate hospital challenges. The hospital perspectives reflect a specific point in time—February 22–26, 2021. Since then, the American Rescue Plan Act of 2021 was signed into law on March 11, 2021, and provides HHS with additional funding to combat and respond to the COVID-19 pandemic, including programs that support hospitals.¹⁶ Further information about the American Rescue Plan Act can be found in the Background on page 31.

Enhancing knowledge and guidance on the prevention and treatment of COVID-19

Hospitals described opportunities for government support to help them treat patients with and without COVID-19. These included additional guidance on testing, treatment, and infection control that is consistent across government entities and is up-to-date with scientific understanding of the virus.

Hospitals indicated that it would be helpful for government to:

- Update recommendations for screening (e.g., temperature checks), testing, and quarantine procedures to accommodate ongoing developments. For example, how recommendations should be applied to people who are vaccinated.
- Provide additional clinical research and education efforts regarding the long-term health care impacts and service needs associated with post-acute COVID-19 care. The hospitals indicated that this should include clear guidance for patients recovering from COVID-19 who may have long-term complications.
- Provide public health updates to keep hospitals and the public informed on emerging variants and up-to-date clinical guidance on how to treat them.

Providing support to increase care to underserved communities

Hospitals described existing disparities in health care access and outcomes for underserved communities that COVID-19 has worsened.

Hospitals indicated that it would be helpful for government to:

- Address health care disparities and support hospitals' efforts to serve underserved communities, such as with funding and continuing Federal programs.
- Promote the use of telehealth for specialty services, such as pulmonology and intensive care, and sponsor infrastructure improvements to support expanded access to telehealth.
- Consider making policies in the public health emergency waivers permanent after the emergency declaration ends to take advantage of new forms of service delivery, for example, telehealth waivers that allow visits to originate in patients' homes, and the waiver allowing out-of-State practitioners to provide services in a State in which they are not licensed.¹⁷

Addressing hospital staffing needs and helping to support current staff

Hospitals described critical current staffing shortages, particularly among nursing staff, as well as burnout and trauma among staff from the COVID-19 pandemic.

Hospitals indicated that it would be helpful for government to:

- Assist hospitals in acquiring additional staff during emergency situations, including the vaccination effort. As one example of this type of program, one hospital noted that using the National Disaster Medical System helped some hospitals in rural areas with additional emergency personnel.
- Assist hospitals, especially rural hospitals, in recruiting professional health care staff. For example, the government could increase the Small Rural Hospital Improvement Grant Program, expand incentives for the National Health Service Corps to work in rural settings, and provide additional student loan reimbursement to attract providers to rural areas.
- Implement strategies to encourage more people to enter the health care workforce, particularly nurses and specialists such as respiratory therapists and mental health professionals. These strategies could include innovative programs between schools and hospitals; initiatives for better education and training; and financial support such as education grants and loan forgiveness.
- Support hospitals that want to hire international travel nurses by promoting faster and more efficient placement.
- Address excessive pricing among domestic medical staffing and travel nursing agencies.
- Assist hospitals in addressing the pressing need for more mental and behavioral health resources for the health care workforce. One suggestion included supporting hospitals to obtain expertise in helping hospital staff avoid burnout and address PTSD. Toward this end, the government could create an online platform of support tools for hospitals that focus on health care workers' mental health and well-being.

Developing education campaigns regarding vaccines and other public health issues

Hospitals expressed concerns about vaccine hesitancy and that the pandemic has led to an erosion of public trust in hospitals' safety and credibility during the pandemic.

Hospitals indicated that it would be helpful for government to:

- Broaden the public education campaign to promote vaccination, focusing on the safety and importance of getting vaccinated, ensuring that the messaging

is consistent across government entities and is up to date with the current scientific developments.

- Broaden educational campaigns relaying the importance of using masks and continuing social distancing measures, even after being vaccinated, until public health officials determine these measures can be eased.
- Assist hospitals in their efforts to publicly message that hospitals are safe venues to receive routine care (e.g., preventive screenings) and emergency care, and reinforce the importance of obtaining routine care to prevent poor health outcomes.

Providing ongoing support on financial issues

Hospitals expressed concerns about their financial stability as the COVID-19 pandemic had increased their costs and decreased their revenues.

Hospitals indicated that it would be helpful for government to:

- Allow hospitals more time to spend Federal relief funds to use the funds to complete ongoing projects, such as facility improvements and expansions.
- Provide additional guidance on the Medicare Accelerated and Advance Payment Program, Provider Relief Funds (PRF), and the Paycheck Protection Program (PPP) relating to how funds can be used and what documentation is needed to justify expenditures. Hospitals also asked for loan forgiveness or longer timelines for loan repayment.
- Continue financial support, as needed, especially for rural hospitals, critical access hospitals, and hospitals that serve underserved communities.
- Ensure that telehealth reimbursement policies account for the level of resources needed to provide telehealth services, including services for which there are provider shortages such as specialty care.

Leading a coordinated emergency response

Hospitals described opportunities for support from government related to emergency planning, preparedness, and response to COVID-19 and future public health emergencies.

Hospitals indicated that it would be helpful for government to:

- Establish expectations for regional coordination of response efforts (e.g., collaboration with neighboring health systems on resource availability) and institute regional centers for coordination.
- Foster improved management of interhospital transfers and discharge of patients to places where they will receive the best followup care, such as by

taking a greater role in facilitating connections between all parts of the health care system.

- Simplify COVID-19 data reporting across Federal, State, and local governments and eliminate any duplicative or non-essential reporting.
- Oversee national supply chains for medical supplies like PPE to combat price gouging and substandard products and to ensure greater efficiency and equity.
- Focus on the sufficiency, management, and quality of supplies in the National Stockpile in preparing for future spikes in demand for PPE and supplies, such as by supporting private sector domestic suppliers, vendors, or manufacturers to reduce reliance on imports.

LOOKING FORWARD

Addressing Urgent and Systemic Challenges Exacerbated by the COVID-19 Pandemic

This pulse survey offers insights from hospitals into the ways in which the COVID-19 pandemic has exerted significant strains on their capacity to care for patients, staff, and communities. In late February 2021, nearly 1 year into the pandemic, hospitals reported that operating in “survival mode” for an extended period of time has created new and different problems than experienced earlier in the pandemic and exacerbated longstanding challenges in health care delivery, access, and health outcomes. Hospitals detailed significant challenges related to health care delivery, staffing, vaccination efforts, supplies, and financial stability.

Hospitals, HHS, and other Federal, State, Tribal, and local entities have taken steps to address these challenges. Additionally, hospital administrators identified areas in which continued government support could help in responding to COVID-19. These included:

- enhancing knowledge and guidance on the prevention and treatment of COVID-19, including safe means to discharge COVID patients;
- addressing current staff shortages, as well as staff burnout and trauma;
- supporting vaccination efforts, including public messaging campaigns;
- assisting hospitals in managing their financial stability, especially to ensure care for underserved communities; and
- ensuring a coordinated emergency response to COVID-19.

At the same time, hospitals are grappling with many strains that emanate from systemic challenges that the COVID-19 pandemic has both drawn attention to and worsened. Better containment and management of COVID-19 alone will not resolve these systemic problems, which warrant further attention. These include:

- reducing disparities in access to health care and in health outcomes;
- building and maintaining a more robust health care workforce; and
- strengthening the resiliency of our health care system to respond to pandemics and other public health emergencies and disasters.

The hospitals’ front-line perspectives provide an important voice, among many, for HHS to consider as it leads and engages in national dialogues and policymaking to help solve these foundational challenges.

SELECTED HOSPITAL STRATEGIES

Hospitals described many strategies that they have employed to help deal with strains placed on them by the COVID-19 pandemic. The following list is not exhaustive of all strategies that hospitals reported but includes those that most directly address the challenges described previously in this report. These strategies are self-reported by the hospitals; OIG did not assess their effectiveness.

Health Care Delivery

Sharing best practices for patient care

Hospitals relied on staff training and medical specialists to share current best practices related to standards of care. For example, one hospital described hiring a pulmonology consultant to go on rounds with clinical teams and reinforce the latest care standards.

Facilitating patient transfer and discharge

Hospitals relied on resource networks and communication with other hospitals to facilitate transfer and discharge of patients. Hospitals that were part of networks or could access regional systems navigated capacity challenges by using these systems to identify open beds for patient transfers. Hospitals used a variety of methods to augment their ability to facilitate patient placements, including getting assistance from the professional staff at State emergency response centers and the National Disaster Medical System and developing relationships with a local hospital network with greater capacity.

Encouraging patients to resume routine medical care

Hospitals employed strategies to encourage patients to not delay medical care. These strategies included targeted outreach, such as hospital staff personally contacting higher-risk patients with underlying health conditions and prioritizing visits for those patients.

Rebuilding trust in hospitals

Hospitals took steps to rebuild the public's trust in hospitals as safe places to receive medical care and reduce fear of COVID-19 exposure in the hospitals. Hospitals reassured the public of hospitals' safety measures such as testing, isolation, and cleaning. Hospitals used newspapers, social media, radio, and meeting with community groups and leaders to communicate these messages.

Staffing

Addressing employee burnout

Hospitals reported establishing assistance programs and other social supports to help bolster employee morale and address burnout. These efforts included using new or existing employee assistance programs and mental health services to share coping strategies. Hospitals encouraged staff to share their experiences through support groups and in one-on-one conversations, such as with counselors or chaplains.

Maintaining sufficient staffing

Hospitals reported reallocating staff from different departments or supplementing their workforce with staff from other hospitals within their networks. Hospitals reported offering staff higher pay, overtime incentives, bonuses, and additional benefits. Hospitals also recruited new graduates with less experience and nurses from other countries to fill vacancies.

Vaccinations

Leveraging resources to provide vaccinations

Hospitals partnered with government entities, retired health care workers, and other health care providers to staff vaccination sites. One hospital partnered with area pharmacies to shift the burden away from the hospital. Another hospital collaborated with local homeless shelters and churches to increase access.

Encouraging vaccinations and overcoming vaccine hesitancy

Hospitals made concerted efforts to provide their communities with accurate, complete information about vaccines. These efforts included coordinating town hall meetings, physician-led talks, press releases and one-on-one communication to convey the safety and efficacy of the vaccine. One hospital reported that the direct calls from nurses to patients increased willingness to be vaccinated by 10 percent.

BACKGROUND

COVID-19 Emergence and Variants

COVID-19 is a highly contagious coronavirus that can be fatal in some cases.^{18, 19} Common symptoms include fever, cough, shortness of breath, fatigue, and new loss of taste or smell.²⁰ The first U.S. patient with COVID-19 was reported on January 20, 2020.²¹ In late February 2020, a hospital in California documented the first community-spread transmission of COVID-19 in the United States, meaning the illness was contracted through an unknown exposure in the community.²² On March 11, 2020, the World Health Organization declared COVID-19 to be a pandemic.²³ As of March 18, 2021, there have been over 29 million confirmed cases in the United States, with over 530,000 deaths.²⁴

According to CDC, viruses constantly change through mutation, and new variants of a virus are expected to occur over time.²⁵ Several new variants of the virus that causes COVID-19 were identified in fall 2020 and have since been documented in the United States, with the first being detected in December 2020.²⁶

Role of Hospitals in Emerging Infectious Disease Preparation and Response

The COVID-19 pandemic has created unprecedented challenges for the U.S. hospital system.^{27, 28} As front-line responders, hospitals have significant responsibilities identifying and treating patients with COVID-19. Hospitals also fill critical roles in the vaccination rollout nationwide. As the pandemic has continued and evolved, hospitals have employed both short-term solutions and long-term strategies to address the crisis.

Since 2010, the Office of the Assistant Secretary for Preparedness and Response (ASPR) has managed the Hospital Preparedness Program (HPP), which provides grants to States and localities to distribute to hospitals and health care coalitions (HCC) for improved emergency preparedness and response.²⁹ Under HPP, health care providers and public health entities are encouraged to form HCCs that are capable of preparing for, responding to, and recovering from emergencies.³⁰ During emergency response and recovery, HCCs support health care organizations during emergency response and recovery by facilitating information sharing, coordinating of incident response, and expediting resource-sharing arrangements.

Role of HHS in Emerging Infectious Disease Preparation and Response

HHS is the lead Federal agency responsible for medical support and coordination during public health emergencies, such as emerging infectious disease (EID) outbreaks.³¹ HHS operating and staff divisions involved in the Federal response to EIDs, including the current COVID-19 response, include the ASPR, CDC, the National Institutes of Health (NIH), CMS, FDA, Office of the Assistant Secretary for Health (OASH), and the Office of the Surgeon General (OSG).^{32, 33, 34, 35} HHS also began collaborating with the Department of Defense (DOD) in May 2020 to coordinate and accelerate the development, manufacturing, and distribution of COVID-19 medical countermeasures under a public-private partnership called Operation Warp Speed.³⁶

ASPR, in addition to managing HPP, coordinates HHS's response to public health emergencies and collaborates with hospitals, health care coalitions, State and local governments, and other partners to improve readiness and response capabilities.^{37, 38, 39} HHS collaborates with ASPR and CDC, and in coordination with the Secretary of Homeland Security, to maintain the Strategic National Stockpile, a reserve of drugs, vaccines and other biological products, medical devices, and other supplies to ensure the emergency health security of the United States in the event of a public health emergency.⁴⁰

In response to COVID-19, ASPR is working with its partners to develop medical countermeasures and to provide resources to support the U.S. health care system's response. Following the declaration of a national public health emergency on January 31, 2020, ASPR's Biomedical Advanced Research and Development Authority invested more than \$20 billion in 2020 to developing or procuring medical countermeasure products to combat the pandemic.⁴¹

Following the Ebola outbreak in 2014, ASPR designated 10 health departments and associated partner hospitals as Regional Ebola and other special pathogen treatment centers (special pathogen centers) for patients with highly infectious diseases.⁴² These centers are required to maintain capability to accept patients with suspected or diagnosed illness from special pathogens within 8 hours of notification and to conduct quarterly exercises to prepare for an EID outbreak.⁴³ In 2020, ASPR provided \$350 million to support the National Special Pathogen System, a nationwide systems-based network approach that builds on the Ebola-specific treatment network to address the needs of hospitals, health systems, and health care workers on the front lines of the COVID-19 pandemic.⁴⁴ The National Special Pathogen System includes the 10 special pathogen centers, the National Emergency Special Pathogens Training and Education Center, 62 HPP cooperative agreement recipients and their State or jurisdiction special pathogen treatment centers, and 53 hospital associations.⁴⁵

CDC monitors and responds to public health emergencies, such as EIDs, conducts research, and provides guidance to health care providers, government entities, and

the public.^{46, 47} On January 21, 2020, CDC launched an agencywide response to COVID-19. Since then, CDC has published more than 180 guidance documents to advise health care providers on topics such as hospital preparedness assessments, supply planning, and patient evaluation and testing.^{48, 49} For example, in February 2021, CDC updated its infection control guidance for health care facilities, including hospitals, that details a hierarchy of strategies that health care personnel can use when PPE are in short supply or unavailable.^{50, 51}

CMS oversees hospitals participating in Medicare and Medicaid by requiring them to meet Conditions of Participation, a set of minimum health and safety standards.^{52, 53} To help address challenges presented by COVID-19, CMS has waived some requirements under the emergency authority set forth in Section 1135 of the Social Security Act.⁵⁴ For example, CMS has issued several blanket waivers that grant regulatory flexibility to health care providers, including flexibility in providing access to telehealth services.⁵⁵

In support of vaccine distribution efforts, CMS has updated their Medicare payment rates for administering the COVID-19 vaccine. On March 15, 2021, the rate for a vaccine requiring two doses changed from approximately \$45 to \$80, reflecting updated information about the cost of administering the COVID-19 vaccine for different types of providers and suppliers. CMS is also updating its set of toolkits for providers, states, and insurers regarding the new rates so that the health care system can quickly administer the vaccines.^{56, 57}

FDA is responsible for protecting public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, and medical devices; and by ensuring the safety of the Nation's food supply, cosmetics, and products that emit radiation.⁵⁸ FDA is working with hospitals and the medical industry to develop vaccines, therapies, diagnostic tests, and other medical devices while monitoring the medical supply chain during the COVID-19 outbreak.⁵⁹ FDA has also issued several EUAs for ventilators, testing products, therapies, vaccines, and other medical products.^{60, 61}

NIH, within its National Institute of Allergy and Infectious Diseases (NIAID), conducts and supports research to better understand, treat, and ultimately prevent infectious, immunologic, and allergic diseases.⁶² As part of the U.S. Government's response to the COVID-19 pandemic, NIAID is conducting and supporting clinical research, including clinical trials evaluating therapeutics and vaccine candidates, as well as studies of people who have recovered from infection.⁶³

OASH oversees HHS's key public health offices, including the OSG and the Office of Disease Prevention and Health Promotion.⁶⁴ OASH also oversees a number of Presidential and Secretarial advisory committees and 10 regional health offices across the United States.⁶⁵ As part of its COVID-19 response, OASH reviewed individual State testing plans and offered technical assistance to help States enhance COVID-19 testing capacity.^{66, 67}

OSG acts as the Nation's doctor and oversees the U.S. Public Health Service Commissioned Corps, a group of uniformed officers working throughout the Federal Government to protect, promote, and advance the Nation's public health.⁶⁸ The Surgeon General communicates scientific information and recommendations about a variety of health topics, including emerging public health threats, directly to the public through advisories, calls to action, and reports.^{69, 70, 71} For example, in December 2020, the Surgeon General encouraged people who have recovered from COVID-19 to donate COVID-19 convalescent plasma, which may help infected patients suppress the virus using antibodies.⁷²

Federal Financial Relief

At the beginning of the pandemic Congress passed the CARES Act, which provided grants to hospitals to help offset losses due to the pandemic.^{73, 74} In addition to these grants, the CARES Act included key hospital and health care system provisions that affect Medicare and Medicaid, post-acute care, telehealth, vaccine efforts, and other areas of emergency preparedness related to COVID-19.⁷⁵

Congress, through the CARES Act, and CMS expanded the Medicare Accelerated and Advance Payment Programs to assist hospitals and other provider types in minimizing the effects of revenue shortfalls. The Medicare Accelerated and Advance Payment Programs, which existed before the pandemic, are designed to provide emergency funding to hospitals and other providers facing cash flow disruptions from circumstances beyond their control.^{76, 77} Medicare typically recovers the amounts paid under these programs by withholding payments for subsequent claims from providers.⁷⁸

Through the CARES Act and the PPP and Healthcare Enhancement Act, the Federal Government allocated \$178 billion in payments to be distributed through the PRF.⁷⁹ Qualified hospitals received PRF payments for health care-related expenses or lost revenue due to COVID-19. These distributions do not need to be repaid to the U.S. Government, assuming that hospitals comply with the terms and conditions.⁸⁰

Some hospitals were eligible for loan programs included in the CARES Act, such as the PPP.⁸¹ Under the PPP, loans are forgiven if employers do not lay off workers and meet other criteria.⁸² In addition to PPP loans, the CARES Act appropriated \$454 billion for loans to qualifying larger businesses, including hospitals and other large health care entities.⁸³

The American Rescue Plan Act of 2021

Signed into law on March 11, 2021, the American Rescue Plan Act of 2021 (the Act) provides additional support for health care organizations, including hospitals, in their COVID-19 response.⁸⁴

The Act provides funding for several COVID-19 supply chains. The bill provides \$6.05 billion for the research, development, manufacturing, production, and purchase of vaccines, therapeutics, and ancillary other medical products and supplies used in the COVID-19 response.⁸⁵ Specific to investing in public health, the bill also provides \$7.6 billion to qualified community health centers to support their COVID-19 response, including distribution of COVID-19 vaccines and purchasing equipment to conduct mobile vaccinations, particularly in medically underserved areas.⁸⁶

To support rural communities, the bill provides \$8.5 billion toward payments to eligible rural health care providers for related expenses and lost revenues as a result of COVID-19. These include expenses such as purchasing medical supplies and equipment, providing for an increased workforce and their training, and providing for surge capacity.⁸⁷

The bill supports the enhancement of the workforce that is involved in the COVID-19 response. In particular, the Act provides \$7.66 billion to State, local, and territorial public health departments that may be used to cover areas such as wages, recruitment, personal protective equipment, and necessary administrative costs and activities.⁸⁸ To address the nursing workforce specifically, the bill also appropriates \$200 million to support scholarship and loan repayment for nursing students and nurses.⁸⁹

The Act also provides financial support for mental health and substance use concerns in the health care workforce. The bill provides \$80 million in grants that support health care providers planning, developing, operating, and participating in training activities to reduce and address suicide, burnout, mental health conditions, and substance use disorders among health care professionals.⁹⁰ Additionally, the bill provides \$20 million to support a national campaign for healthy work conditions and the use of mental health and substance use disorder services by health care professionals, and \$40 million toward grants for health care providers to establish, enhance, or expand programs and protocols promoting mental health among their health professional workforce.⁹¹

Vaccine Development and Access

Operation Warp Speed was designed to produce and deliver safe and effective COVID-19 vaccines as quickly as possible.^{92, 93} As of March 1, 2021, the Federal Government had awarded more than \$19 billion for several vaccine candidates and ancillary vaccine supplies.⁹⁴ FDA issued EUAs for two COVID-19 vaccines, developed by Pfizer-BioNTech and Moderna, in December 2020 and issued an EUA for a third vaccine developed by Johnson & Johnson on February 27, 2021.^{95, 96} As of March 19, 2021, more than 154 million doses of COVID-19 vaccines have been delivered in the United States, and more than 118 million doses have been administered.⁹⁷

The CDC Advisory Committee on Immunization Practices (ACIP) recommended that Federal, State, and local governments prioritize vaccinating health care personnel and

residents of long-term care facilities in the first phase of vaccine allocation (Phase 1a). ACIP recommended that vaccines should next be offered to front-line essential workers and people aged 75 years and older (Phase 1b), followed by people aged 65 to 74 years, people aged 16 to 64 years with underlying medical conditions, and other essential workers (Phase 1c).⁹⁸ States, Territories, and other local authorities developed individual vaccine prioritization and timelines, some of which differed from ACIP's recommendations.^{99, 100, 101} However, all States included hospital personnel in Phase 1a of their prioritization plans, and many States allocated and distributed some of their initial vaccine doses to hospitals to administer to health care workers.^{102, 103, 104} In vaccinating their personnel, hospitals across the United States therefore became some of the first providers to administer COVID-19 vaccines.^{105, 106}

Related Work

OIG has undertaken extensive oversight work related to COVID-19. See the [OIG COVID-19 Portal](#) for more information.

In the April 2020 report, [Hospital Experiences Responding to the COVID-19 Pandemic: Results of a National Pulse Survey March 23–27, 2020](#), we outlined challenges that hospitals reported facing in response to COVID-19 during the early weeks of the pandemic. At that time, hospitals reported that they were largely focused on enhancing their capacity to respond to the pandemic. Hospitals reported challenges such as significant shortages in PPE, ventilators, and other supplies as demand increased across the country and around the globe. Hospitals also spoke of the challenge of needing to rapidly expand facility and staffing capacity. Finally, hospitals reported that, at the time, the lack of testing capability to detect which patients had COVID-19 negatively impacted hospital operations as they tried to prevent outbreaks among hospital patients and staff.¹⁰⁷

In August 2020, we issued a toolkit, [Insights for Health Care Facility From OIG's Historical Work on Emergency Response](#), which contained lessons from OIG reports published from 2002 to 2020 about health care facility emergency response.¹⁰⁸ A related toolkit published in August 2020 compiled [Insights for Communities from OIG's Historical Work on Emergency Response](#).¹⁰⁹

In January 2021, OIG contributed to the report [Federal COVID-19 Testing Report: Data Insights from Six Federal Health Care Programs](#). The report, which was issued by the Health Care Subgroup of the Pandemic Response Accountability Committee (PRAC), examines COVID-19 testing efforts for six Federal health care programs during the first 7 months following the declaration of a public health emergency.¹¹⁰

GLOSSARY OF KEY TERMS

Behavioral health: The promotion of mental health, resilience, and wellbeing; the treatment of mental and substance use disorders; and the support of those who experience and/or are in recovery from these conditions, along with their families and communities.¹¹¹

Centers for Disease Control and Prevention (CDC): The HHS operating division that is tasked with protecting the public health and safety through addressing emerging health threats, disability, and disease.

Centers for Medicare & Medicaid Services (CMS): The HHS operating division that administers the Medicare program and works in partnership with State governments to administer Medicaid, the Children's Health Insurance Program, and health insurance portability standards.

Community spread: Spread of an illness for which the source of the infection is unknown.¹¹²

Coronavirus disease 2019 (COVID-19): An illness of the respiratory tract that is highly contagious and can be fatal in some cases. Symptoms include a cough, a headache, a fever, new loss of taste or smell, shortness of breath, and other symptoms.¹¹³ Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) is the virus that causes COVID-19 and is often called the COVID-19 virus; its prior name was the 2019 novel coronavirus (2019-nCoV).

Critical access hospital (CAH): A rural hospital that provides outpatient and inpatient hospital services to people in rural areas. CAHs are designated by CMS, and to qualify these facilities must meet certain conditions such as: furnishing 24-hour emergency care services 7 days a week, having no more than 25 inpatient beds, and having an average length of stay of 4 days or less per patient for acute-care services. Until the end of the emergency declaration, CMS is waiving requirements that CAHs limit the number of beds to 25 and length of stay of 4 days.

Emergency use authorization (EUA): A mechanism used by FDA to allow the use of unapproved medical products, or unapproved uses of approved medical products, in an emergency to diagnose, treat, or prevent serious or life-threatening diseases or conditions. EUAs are used when certain statutory criteria are met, including when there are no adequate, approved, and available alternatives.¹¹⁴

Emerging infectious disease (EID): Infections that have recently appeared within a population or those whose incidence or geographic range is rapidly increasing or threatens to increase in the near future.

Federal Emergency Management Agency (FEMA): Federal agency under the Department of Homeland Security that coordinates responses to natural disasters with State and local governments and provides Federal assistance.

Food and Drug Administration (FDA): the HHS operating division that is responsible for protecting the public health by ensuring the safety, efficacy, and security of human and veterinary drugs, biological products, medical devices, our Nation's food supply, cosmetics, and products that emit radiation.

Health care coalition: A group of local health care and other public health organizations that work together to prepare for, respond to, and recover from emergencies.

HHS Protect: On April 10, 2020, the HHS Office of Chief Information Officer (OCIO), in partnership with CDC and contractors, launched this new platform to collect health care information to better inform the ongoing COVID-19 response.^{115, 116} In July, HHS announced new guidance for hospitals to report requested hospital data to HHS Protect.¹¹⁷ Along with data reported by hospitals report, HHS Protect integrates over 200 datasets from State, Federal, and private partners, which includes data on hospital utilization, government and industry supply chain, and other information relevant to the current pandemic.¹¹⁸

Intensive care unit (ICU): A specialized hospital or facility department that provides critical care and life support for acutely ill and injured patients.

Medical countermeasures: FDA-regulated products that may be used in potential public health emergencies, including a naturally occurring emerging disease.¹¹⁹

Medicare Accelerated and Advance Payment Programs: Programs that allow CMS to provide temporary relief through advanced or accelerated payment to providers and suppliers when they face cash flow challenges due to specified circumstances out of their control. Medicare typically recovers the amounts paid under these programs by withholding payments for subsequent claims from providers¹²⁰

Mental health: CDC defines mental health as emotional, psychological, and social well-being. A person can experience poor mental health and not be diagnosed with a mental illness.¹²¹

N95 respirator mask: Respiratory protective device designed to achieve a very close facial fit and very efficient filtration of airborne particles. The “N95” designation means that when subjected to careful testing, the respirator blocks at least 95 percent of very small (0.3 micron) test particles. If properly fitted, the filtration capabilities of N95 respirators exceed those of face masks.

National Health Service Corps (NHSC): Administered by the Health Resources and Services Administration (HRSA), NHSC provides support to health care providers working in areas of the United States with limited access to care. In 2019, HHS announced that it would provide additional money in scholarship and loan repayment awards for clinicians and students through the NHSC.¹²² The NHSC Rural Community Loan Repayment Program was designed for providers working to combat the opioid epidemic in the Nation's rural communities. In exchange for loan repayment, award recipients must commit to 3-year loan repayment contracts. The NHSC provides information on how those who have already been approved in the program can receive flexibility due to COVID-19.¹²³

Negative pressure room: A room in a hospital or facility that is used to contain airborne contaminants within the room.

Office of the Assistant Secretary for Preparedness and Response (ASPR): The HHS staff division that leads the Nation's medical and public health preparedness for, response to, and recovery from disasters and public health emergencies.

Pandemic: An epidemic that has spread over several countries or continents, usually affecting a large number of people.

Paycheck Protection Program (PPP): A program that provides loans to assist eligible borrowers to pay certain payroll and operating costs.¹²⁴ Borrowers may be eligible to have their PPP loan forgiven if they meet several criteria, including maintaining employee and compensation levels. The program is run by the Small Business Administration.^{125, 126}

Personal protective equipment (PPE): Protective clothing, helmets, goggles, or other garments or equipment designed to protect the wearer's body from injury or infection. PPE respirators and face masks.

People of color: A collective term used as an inclusive and unifying frame across different racial groups that do not identify as White.¹²⁷

Provider Relief Fund (PRF): A fund established by Congress to reimburse, through grants or other mechanisms, eligible health care providers for health care-related expenses or lost revenues that are attributed to the coronavirus.¹²⁸

Pulse survey: A type of short feedback survey, (e.g., quick, point-in-time questions) that are typically narrow in scope.

Quarantine: The separation and restriction of movement of people who were exposed to a contagious disease. Quarantine is used to keep an individual who may have been exposed to COVID-19 away from others.

Regional Ebola and other special pathogen treatment centers (special pathogen centers): Ten hospitals designated by ASPR following the Ebola outbreak in 2015 to maintain capability to accept patients ill from special pathogens. They receive annual assessments from the National Ebola Training and Education Center, a consortium of several health care facilities that is funded by and directly coordinates with ASPR and CDC.

Respirator: Masklike device that covers the nose and mouth to prevent the inhalation of noxious substances. There are two main types: air-purifying respirators, which remove contaminants from the air, and air-supplying respirators, which provide a clean source of air. (Also see N95 respirators)

Social distancing: Increasing the physical space between people to avoid spreading illness. Recommended measures can include keeping 6 feet away from others, avoiding social gatherings, and following guidance from local public health authorities for where a person lives.

CDC Social Vulnerability Index (CDC SVI): An index of 15 U.S. Census variables that can be used by local health officials to identify communities that may need support before, during, and after disasters.¹²⁹

Special Pathogen: A highly infectious agent capable of causing severe disease in humans.

Small Rural Hospital Improvement Program (SHIP): HRSA's Federal Office of Rural Health Policy administers the Small Rural Hospital Improvement Program. The purpose of this program is to help small rural hospitals with 49 beds or less implement quality and operational improvement efforts to align with value-based care. The Federal Office of Rural Health Policy administers the SHIP award through the State Offices of Rural Health (SORH). Each SORH submits an application to HRSA on behalf

of eligible hospital applicants in its State. The SORH is the official award recipient of record and serves as fiscal intermediary for all eligible hospitals within the State. The maximum funding per hospital for June 1, 2019, through May 31, 2023, is \$12,000 per year, subject to the availability of appropriated funds.¹³⁰

Staffed Beds: Physical beds in a health care facility for which staff are available to attend to the patient occupying the bed.¹³¹

Strategic National Stockpile: Supplements State and local stocks of devices, medicines, and supplies for public health emergencies.

Telehealth: Use of electronic information and telecommunications technologies to support long-distance clinical health care, patient and professional health-related education, public health, and health administration.

Traveling nurse: Nurses employed on a short-term or periodic basis. They include temporary staff, independent contractors, and seasonal hires.¹³²

Underserved communities: Communities that have historically experienced health care disparities, including limited access to health care and worse health outcomes than other communities. Communities may be underserved due to geographic conditions, socioeconomic conditions, or a combination of both.

World Health Organization (WHO): An international organization that partners with countries, the United Nations system, research institutions, and other entities to direct and coordinate health work. WHO has delegates from member countries and an Executive Board that is composed of health experts.

METHODOLOGY

Scope of Inspection

For this evaluation we conducted a “pulse survey” (i.e., quick, point-in-time questions) by telephone with administrators from a stratified random sample of Medicare-certified hospitals nationwide. These conversations focused on three key issues regarding their COVID-19 response: (1) current challenges in responding to the COVID-19 pandemic, (2) their greatest concerns going forward, and (3) areas for government support. We analyzed hospital responses to identify common and compelling challenges, concerns, and areas for government support.

We conducted the interviews during February 22–26, 2021. We spoke with administrators who are familiar with the hospital’s COVID-19 response. The positions of these hospital administrators were typically the Chief Executive Officer, Chief Medical Officer, or representatives from teams and departments dedicated to emergency preparedness or incident command. In some cases, leadership from the relevant hospital networks participated in the interviews alongside hospital administrators or on the hospitals’ behalf.

Hospital Selection and Response

We had previously selected a stratified random sample of 410 hospitals for an October 2018 report examining hospital preparedness for emerging infectious diseases.¹³³ We randomly selected the 410 hospitals from 4,489 Medicare-certified hospitals with emergency departments in 2016. The 410 selected hospitals were in 47 States, the District of Columbia, and Puerto Rico. The sample was composed of two strata: (1) all 10 ASPR-designated Special Pathogen Centers and (2) 400 other hospitals with emergency departments.

For this review, we used the same sample of 410 hospitals but removed 13 hospitals that were no longer in operation or no longer providing inpatient care. This left a total sample of 397 eligible hospitals that we attempted to contact. We received responses from 320 of these 397 hospitals, for an 81-percent rate of contact. Among the 77 hospitals that did not respond, 5 chose not to participate, 20 were unable to provide the necessary staff to schedule interviews during the 5-day data collection period, and 52 could not be reached after a minimum of 3 attempts to contact them.

Most interview responses were provided directly by an administrator for a single hospital. However, for 51 sampled hospitals, we spoke with administrators from their parent corporations. We considered the interviews with the administrators from the parent companies to be responses for each of the hospitals in our sample that were

owned by those companies. These 51 hospitals were spread across 16 hospital networks.

HHS Protect Data

To supplement the pulse survey responses, we analyzed data from HHS Protect that hospitals reported for the Wednesday before our interviews (February 17, 2021). We chose this date because we wanted data as close to our survey week as possible, and because certain data are reported only for Wednesdays. For each responding hospital, we identified or calculated the following:

- number of staffed adult inpatient beds,
- whether the hospital was treating any patients with COVID-19,
- adult inpatient occupancy rate,
- adult ICU occupancy rate,
- whether the hospital was able to order and obtain N95 masks, and
- whether the hospital anticipated a critical staffing shortage within a week.¹³⁴

See the Appendix on page 41 for the data presentation of this information.

To complete this analysis, we analyzed HHS Protect data from both the Hospital Unified Prioritized Timeseries and Hospital Denominator datasets. We defined each hospital using the CMS Certification Number as reported in HHS Protect. Our analysis is reflective of what hospitals had reported to HHS Protect as of February 25, 2021. We did not determine whether hospitals provided updated data after this date. Four responding hospitals had not reported to HHS Protect for February 17, 2021; thus, this analysis includes 316 of the 320 responding hospitals.

CDC and U.S. Census Bureau Data

We also obtained community-level socioeconomic and demographic data from the CDC's 2018 Social Vulnerability Index database and U.S. Census Bureau's 2019 American Community Survey and the 2010 decennial census. These data allowed us to examine the community characteristics within a 30-minute drive of each responding hospitals or within the hospital's county.

We examined three geospatial variables:

- urban, mid-size, or rural designation;
- a social vulnerability index; and
- the proportion of the population, by county, that had household incomes below the Federal poverty level.

See the Appendix on page 41 for the data presentation of this information.

Limitations

This study has two limitations: (1) hospital responses reflect a point in time (February 22–26, 2021)—since our interviews, some hospital challenges may have worsened and others may have improved; and (2) we did not independently verify the information reported by hospitals to HHS Protect or to OIG during the interviews, nor have we independently assessed the merits, costs, or effectiveness of the strategies or areas for government support identified by hospitals. As such, OIG is not endorsing the suggestions made by the hospital administrators.

Standards

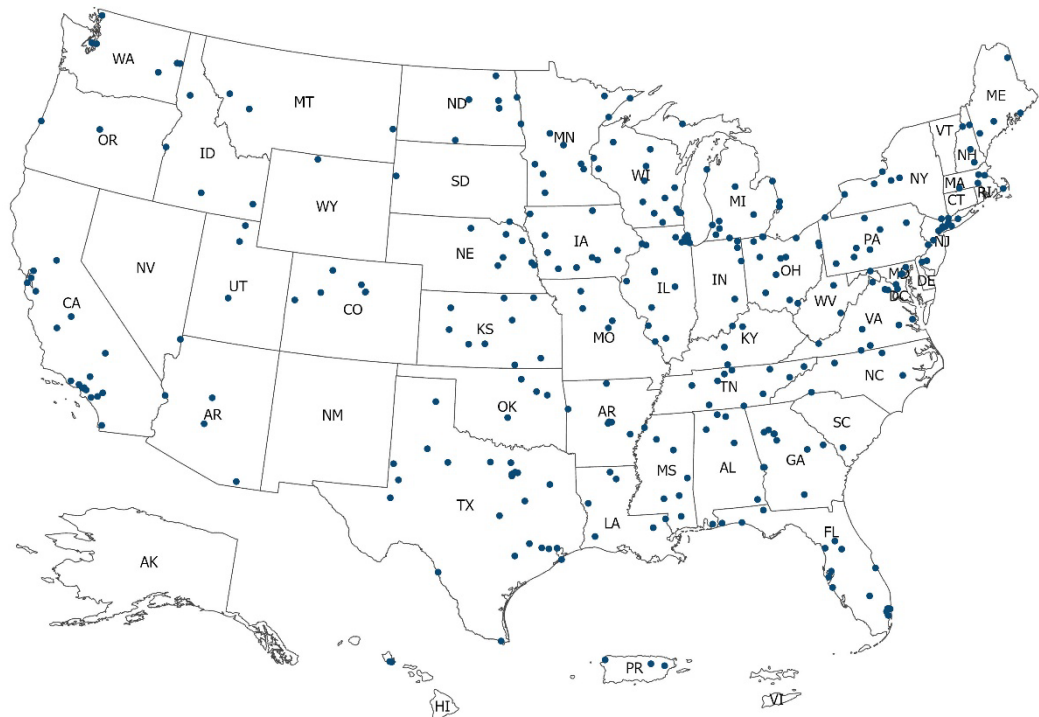
We conducted this study in accordance with the Quality Standards for Inspection and Evaluation issued by the Council of the Inspectors General on Integrity and Efficiency.

APPENDIX

Characteristics of Responding Hospitals and Their Communities

This appendix describes the 320 hospitals that we surveyed, as well as the communities surrounding the responding hospitals. Please refer to the methodology section for an explanation of the data collected and analyzed for this appendix.

Exhibit A-1: The 320 responding hospitals were located in 45 States, the District of Columbia, and Puerto Rico.



Source: OIG analysis of 320 responding hospitals using the address listed for their provider number, March 2021.

Exhibit A-2: Among the responding hospitals, some were designated as specialized hospitals.

Special pathogen centers are designated to treat patients with infectious diseases. We talked to 9.

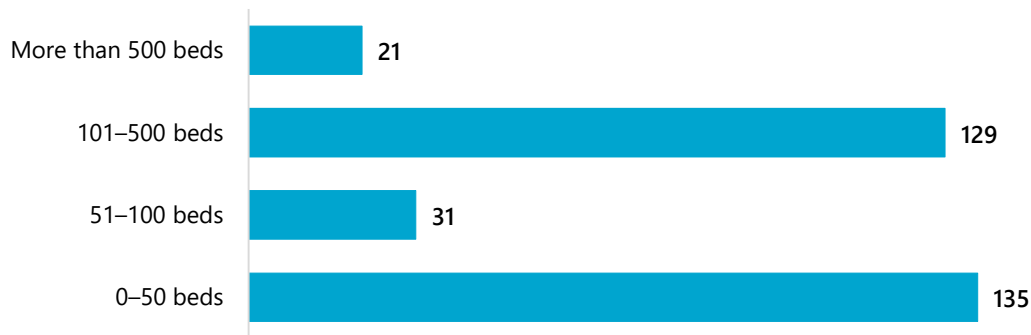
Major teaching hospitals are affiliated with medical schools. We talked to 24.

Critical access hospitals are smaller hospitals typically in rural communities. We talked to 95.

Source: OIG analysis of CMS's Certification and Survey Provider Enhanced Reports data associated with a sample of Medicare-certified hospitals as well as data obtained from <https://www.phe.gov/Preparedness/planning/hpp/Pages/hpp-pathogens.aspx>, March 2021.

Note: We did not include any of the special pathogen centers in the count of major teaching hospitals.

Exhibit A-3: Responding hospitals had a range of bed counts.



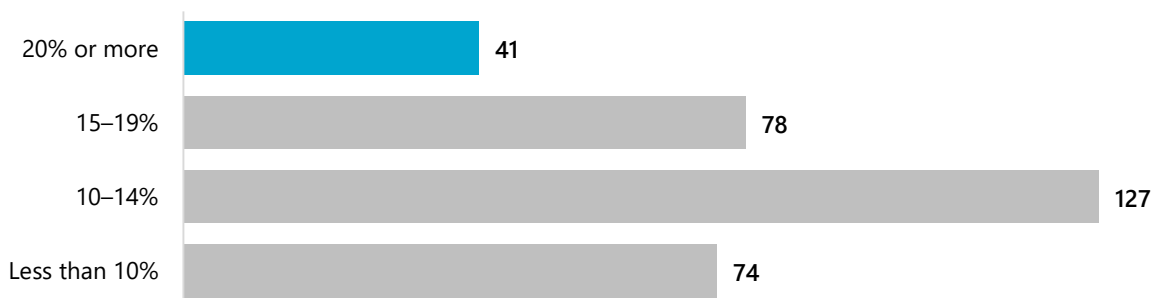
Source: OIG analysis of HHS Protect data for staffed, inpatient beds for adults, March 2021.
 Note: Total equals 316 responding hospitals because not all hospitals reported data in HHS Protect.

Exhibit A-4: About half of responding hospitals were located in urban areas.



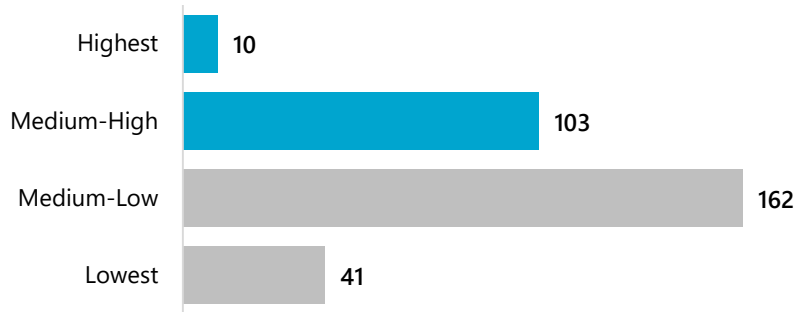
Source: OIG analysis of 2010 U.S. Census Bureau data for the 320 responding hospitals using the address listed for their provider number, March 2021.
 Note: One dot is equivalent to 10 hospitals.

Exhibit A-5: Among responding hospitals, 41 were located in counties where 20 percent or more of the population had household incomes below the Federal poverty level.



Source: OIG analysis of 2019 U.S. Census Bureau data for 320 responding hospitals, March 2021.
 Note: Nationally, by county, the average percentage of the population with household income below the Federal poverty level was 12.3 percent. See U.S. Census Bureau, “Small Area Income and Poverty Estimates: 2019.” Accessed at <https://www.census.gov/content/dam/Census/library/publications/2020/demo/p30-08.pdf> on March 15, 2021.

Exhibit A-6: More than one-third of responding hospitals (113) were in communities with higher social vulnerability than the national average.



Source: OIG analysis of 2018 CDC data for 316 responding hospitals, March 2021.

Note: The social vulnerability score uses CDC’s social vulnerability index of the community and we calculated this score within a 30-minute drive from each hospital. The index ranges from 0 to 1.0, with 0.5 being the midpoint. Highest are those above 0.75, medium-high are >0.50 to 0.75, medium-low are >0.25 to 0.50, and lowest are those less than or equal to 0.25. For more information about CDC’s Index, see <https://www.atsdr.cdc.gov/placeandhealth/svi/index.html>.

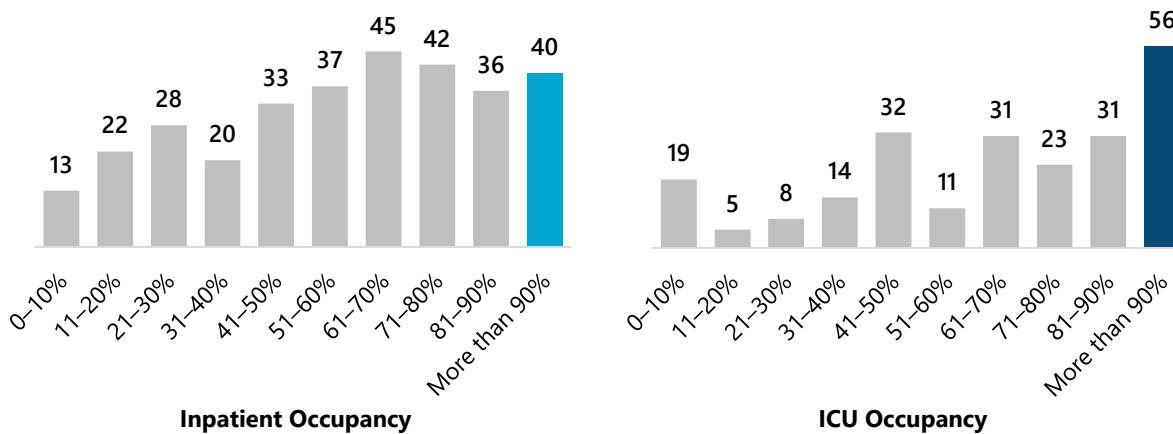
Exhibit A-7: The majority of responding hospitals were treating adult inpatients with confirmed or suspected cases of COVID-19 a week before our data collection.



Source: OIG analysis of HHS Protect data, March 2021.

Note: Total equals 316 responding hospitals because not all hospitals reported data in HHS Protect.

Exhibit A-8: Some responding hospitals were operating at over 90-percent adult inpatient occupancy and/or over 90-percent adult ICU occupancy a week before our survey.



Source: OIG analysis of HHS Protect data for February 17, 2021.

Note: For adult inpatient occupancy, the total equals 316 responding hospitals because not all hospitals reported data in HHS Protect. For adult ICU occupancy, the total equals 230 because we excluded 86 hospitals that reported having no staffed ICU beds for adults.

Exhibit A-9: Number of Responding Hospitals That Reported Experiencing Staffing Shortages and Difficulties Obtaining Supplies

Indicator	Number of Hospitals
Staffing Shortages	
Reported that they faced a critical staffing shortage as of February 17, 2021	38
Reported that they anticipated facing a critical staffing shortage within a week	49
Difficulty Obtaining Supplies	
Reported that they were unable to order or obtain N-95 masks	19

Source: OIG analysis of HHS Protect data, March 2021.

Note: For experiencing staffing shortages, 296 respondent hospitals reported data. For difficulties in obtaining N-95 masks, 316 responding hospitals reported data.

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Rosemary Rawlins Bartholomew and Ivy Ngo served as the team leaders for this study. Key contributors included Ariel Arguelles, Emily Borgelt, Anna Brown, Charis Burger, Kristen Calille, Tanaz Dutia, Ben Gaddis, Kevin Golladay, Jennifer Hagen, Eunji Kim, Sarah Lee, Demetrius Martinez, Kasey Memphis, Sabrina Morello, Petra Nealy, Chelsea Samuel, Karl Mari Santos, Anthony Soto McGrath, Savanna Thielbar, Jesse Valente, and John Van Der Schans.

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This report was prepared under the direction of Blaine Collins and Ruth Ann Dorrill, Regional Inspectors General for Evaluation and Inspections, and Abby Amoroso and Amy Ashcraft, Deputy Regional Inspectors General.

Contact

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Office of Inspector General
U.S. Department of Health and Human Services
330 Independence Avenue, SW
Washington, DC 20201

ABOUT THE OFFICE OF INSPECTOR GENERAL

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ENDNOTES

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