



March 2022

INDIAN HEALTH SERVICE

Relief Funding and Agency Response to COVID-19 Pandemic

GAO Highlights

Highlights of [GAO-22-104360](#), a report to congressional addressees.

Why GAO Did This Study

IHS provides care to about 2.6 million American Indians and Alaska Natives (AI/AN), directly through federally operated IHS facilities (including 24 hospitals) or indirectly through facilities operated by tribal or urban Indian organizations. Regional oversight is provided through 12 area offices.

As the COVID-19 pandemic progressed, tribal lands became hotspots for rapid spread, with infection rates in some areas, such as the Navajo Nation, among the highest in the country. With higher prevalence of certain diseases, such as diabetes and heart conditions, AI/ANs may be particularly vulnerable to COVID-19. At the same time, outdated facilities and equipment, high provider vacancy rates, and few inpatient beds could make an effective response by IHS potentially more challenging.

The CARES Act includes a provision for GAO to report on the federal response to the pandemic. This report describes, among other things, COVID-19 relief funding for IHS, tribal, and urban Indian health facilities; and steps IHS took to address challenges that IHS hospitals faced in responding to the pandemic.

GAO surveyed all 24 federally run IHS hospitals; reviewed IHS documents; interviewed officials from three IHS area offices selected for variation in geography, incidence of COVID-19, and other factors; and met with national stakeholder organizations.

GAO provided a draft of this report to the Department of Health and Human Services (HHS), including IHS. HHS provided technical comments, which GAO incorporated as appropriate.

View [GAO-22-104360](#). For more information, contact Jessica Farb at (202) 512-7114 or farbj@gao.gov.

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What GAO Found

The Indian Health Service (IHS) received more than \$9 billion in COVID-19 relief funding, an amount 50 percent greater than its fiscal year 2020 total budget authority. These funds have been used to address both immediate and longstanding needs. IHS allocated funds across the IHS system—including to federal, tribal, and urban Indian organization facilities—for health care services, protective equipment, testing supplies, and vaccine-related costs, among other purposes. Funding is also being used to address certain longstanding, systemwide needs, including replacing an obsolete electronic health records system, implementing a clinical video telehealth system, and funding dozens of sanitation and potable water projects. Overall, 62 percent of these funds were obligated and 57 percent were expended as of September 30, 2021.

IHS took steps to mitigate workforce, supply, and facility challenges to its COVID-19 response through coordination with partners, policy changes, and adjustments to care delivery. To help address workforce challenges, IHS implemented a new critical care response team, coordinated with other federal agencies (such as the Veterans Health Administration) to meet staffing needs, and implemented payment and hiring flexibilities to retain and more quickly hire staff. To help address supply challenges, IHS coordinated with federal partners while area offices developed new processes for tracking supply levels and needs. To help address facility challenges related to outdated infrastructure and space limitations, IHS hospitals reported implementing care adjustments such as offsite and drive-through testing and using medical tents for testing and treatment.

A Drive-Through Outdoor COVID-19 Testing Site at Whiteriver Indian Hospital on the Fort Apache Indian Reservation



Source: Indian Health Service. | GAO-22-104360

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Abbreviations

AI/AN	American Indian/Alaska Native
ARPA	American Rescue Plan Act of 2021
CDC	Centers for Disease Control and Prevention
COVID-19	Coronavirus disease 2019
CPRSAA	Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020
CRRSAA	Coronavirus Response and Relief Supplemental Appropriations Act, 2021
HHS	Department of Health and Human Services
FFCRA	Families First Coronavirus Response Act
ICS	Incident Command Structure
IHS	Indian Health Service
PPE	personal protective equipment
PPPHCEA	Paycheck Protection Program and Health Care Enhancement Act
RPMS	Resource and Patient Management System
UIO	urban Indian organization
VHA	Veterans Health Administration

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March 31, 2022

Congressional Addressees

The Indian Health Service (IHS), an agency within the Department of Health and Human Services (HHS), provides health care to about 2.6 million American Indian and Alaska Native (AI/AN) people directly through federally operated IHS facilities or indirectly through facilities operated by tribal or urban Indian organizations (UIO). As the primary provider of health care services for members or descendants of federally recognized tribes, IHS is among the agencies at the center of the federal response to the COVID-19 pandemic.¹

IHS facilities, and the communities in which they are located, have faced a particularly daunting challenge in response to COVID-19. As the pandemic progressed, tribal lands became hotspots for rapid spread, with infection rates in some areas, such as the Navajo Nation, among the highest in the country. With higher prevalence of certain diseases, such as diabetes and heart conditions, AI/ANs may be particularly vulnerable to COVID-19. At the same time, outdated facilities and equipment, high provider vacancy rates, and few inpatient beds could make an effective response to the pandemic potentially more challenging.

To help address IHS's needs, Congress provided it with supplemental resources across several COVID-19 relief laws. One of these laws—the CARES Act—includes a provision for GAO to report on its ongoing monitoring and oversight efforts related to the COVID-19 pandemic.² This report describes

1. COVID-19 relief funding for IHS, tribal, and urban Indian organization health facilities;
2. IHS's initial response to COVID-19; and

¹The World Health Organization declared COVID-19 a pandemic on March 11, 2020.

²Pub. L. No. 116-136, § 19010(b), 134 Stat. 281, 580 (2020). In addition to this report, we regularly issue government-wide reports on the federal response to COVID-19. For the latest report, see GAO, *COVID-19: Significant Improvements Are Needed for Overseeing Relief Funds and Leading Responses to Public Health Emergencies*, [GAO-21-105291](#) (Washington, D.C.: January 27, 2022).

3. steps IHS took to address challenges IHS hospitals faced responding to the pandemic.

To describe COVID-19 relief funding for the IHS system, we examined six COVID-19 relief laws enacted between March 2020 and March 2021 that included funding for IHS and its pandemic response. We obtained documentation and information from IHS about its funding allocations and funding methodologies—that is, the purposes for which federal funds would be applied and the methods for determining funding amounts. We also interviewed officials from IHS headquarters and three selected IHS area offices, and representatives of national stakeholder groups.³ We also reviewed written responses to questions we submitted to IHS headquarters.

To describe IHS’s initial response to COVID-19, challenges faced by IHS hospitals, and how IHS hospitals addressed those challenges, we prepared and analyzed results from a survey we administered to all 24 federally operated IHS hospitals. (See app. I for survey summary tables.) The survey, administered between April 6 and May 13, 2021, covered topics including funding, supplies and equipment, guidance, care delivery, vaccine administration, and hospital infrastructure. In several sections of the survey, to gain an understanding of the status of challenges hospitals faced, the survey asked about how long they had experienced challenges, whether they were currently experiencing the challenges, and for hospital officials’ level of confidence in the resolution of challenges in the immediate future. The survey also included open-ended questions about challenges faced by IHS hospitals, strategies to address those challenges, and an opportunity to provide general feedback. All 24 IHS hospitals surveyed responded to the survey. While the survey results represent the universe of IHS hospitals, they reflect a single point in time. In addition to our survey, we reviewed agency documents, including IHS testimony before Congress, interviewed IHS officials from three IHS area offices, and reviewed written responses to questions we submitted to IHS headquarters.

We conducted this performance audit from May 2020 through March 2022 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to

³The three area offices (Great Plains, Navajo, Phoenix) were chosen for variation in geography, incidence of COVID-19 infections within the area, and other factors.

The stakeholder groups we interviewed included the National Indian Health Board, National Congress of American Indians, and National Council of Urban Indian Health.

obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

Background

IHS was established within the Public Health Service in 1955 to provide health care services to members or descendants of federally recognized tribes.⁴ IHS provides these services either directly through a system of federally operated IHS facilities or indirectly through facilities operated by tribal organizations or UIOs. As of July 2020, IHS, tribes, and tribal organizations operated 46 hospitals, 24 of which were federally operated by IHS.⁵ Federally operated IHS hospitals range in size from four to 133 beds, and are open 24 hours a day for urgent care needs.

IHS oversees its health care facilities through a decentralized system of area offices, which are led by area directors and located in 12 geographic areas. Seven of these 12 IHS areas have federally operated IHS hospitals: Albuquerque, Bemidji, Billings, Great Plains, Navajo, Oklahoma City, and Phoenix.⁶

According to IHS, the headquarters office is responsible for setting health care policy, ensuring the delivery of quality comprehensive health services, and advocating for the health needs and concerns of AI/AN people. The IHS area offices are responsible for distributing funds to the facilities in their areas, monitoring their operation, and providing guidance and technical assistance. IHS areas are divided into service units, which

⁴At the time of this report there were 574 tribal organizations recognized by the federal government. See 87 Fed. Reg. 4636 (Jan. 28, 2022). Based on the needs of their communities, tribes and tribal organizations can choose to receive health care administered and operated by IHS, or assume responsibility for providing all or some health care services formerly administered and operated by IHS. Under the Indian Self-Determination and Education Assistance Act, as amended, federally recognized Indian tribes can enter into self-determination contracts or self-governance compacts with the Director of IHS to take over administration of IHS programs for Indians previously administered by IHS on their behalf. See generally 25 U.S.C. §§ 1661, 5301-5332, 5381-5399. IHS also funds UIOs, which are nonprofit organizations that serve AI/AN people living in urban areas. See 25 U.S.C. § 1653.

⁵Additionally, the Indian health system includes 330 health centers and 103 health stations (the majority of which are operated by tribes or tribal organizations), 59 Alaska village clinics, and 41 urban Indian organizations.

⁶The Alaska, California, Nashville, Portland, and Tucson areas do not have any federally operated IHS hospitals.

are responsible for planning and managing IHS programs at the local level.

IHS Funding

Like most federal agencies, IHS receives funding through annual appropriations, which it uses to fund federally operated and tribally operated facilities and UIOs throughout the country. The IHS budget includes separate line items for services, such as hospital and clinic services, and facilities, such as for maintenance and improvements. Funding is distributed through IHS's 12 area offices. In addition, IHS is authorized to collect and retain reimbursements, referred to as third-party collections, from Medicaid, Medicare, the Department of Veterans Affairs, and private insurance for services provided at IHS facilities.⁷ We previously reported that IHS has not been able to pay for all eligible health care services; and while the resources available to IHS facilities had grown in recent years due to increased third-party collections, a decrease in non-COVID-19 care has affected those revenues, according to IHS officials.⁸

IHS's total budget authority for fiscal year 2020 was about \$6.0 billion. As with other federal agencies, Congress provided IHS with additional resources to address the COVID-19 pandemic. From March 2020 through March 2021, six COVID-19 relief laws provided funds to address the health care and public health needs of AI/ANs, with funds directed to IHS facilities, tribal facilities, and UIOs.

IHS Infrastructure

According to data from IHS, the average IHS health care facility is nearly four times older than its private sector counterpart (37 years compared to 10 years). As of October 2020, IHS reported having a backlog of nearly \$1 billion in deferred maintenance within its facilities. In addition, according to IHS, medical and laboratory equipment, which has an average useful life of 6 years, generally is used at least twice that long in IHS facilities. In recent years, some IHS hospitals have risked losing Medicare certification because of inadequate care, in part, due to aging infrastructure and equipment.

IHS Provider Vacancies

In 2018 we reported that IHS data demonstrated large percentages of vacancies for providers in the areas in which IHS had substantial direct

⁷42 U.S.C. §§ 1396j, 1395qq; 25 U.S.C. §§ 1621e(a), 1621f(a).

⁸See GAO, *Indian Health Service: Actions Needed to Improve Oversight of Facilities' Decision-Making About the Use of Funds*, [GAO-21-20](#) (Washington, D.C.: Nov. 12, 2020).

care responsibilities. Specifically, we reported an overall vacancy rate for IHS providers—physicians, nurses, nurse practitioners, certified registered nurse anesthetists, certified nurse midwives, physician assistants, dentists, and pharmacists—of 25 percent, ranging from 13 to 31 percent across the eight areas we analyzed.⁹ Contributing factors included facilities’ rural location, insufficient housing available for providers, and lack of competitive pay. Additionally, IHS’s relatively low inpatient volume means that providers have fewer training opportunities, which can affect provider recruitment and retention, as well as quality of care. These and other longstanding issues led us to add federal management of programs that serve Indian tribes and their members to our High Risk List.¹⁰

IHS Received \$9 Billion in Federal COVID-19 Relief Funds to Address both Immediate and Longstanding Health Care and Public Health Needs

Our review of COVID-19 relief laws and IHS documentation shows that the agency received about \$9 billion in relief funds for IHS, tribal, and UIO health care facilities to respond to the COVID-19 pandemic and address supply, testing, and other immediate needs, while centrally managing certain funds for systemwide and longstanding needs.

IHS Allocated Funds to IHS, Tribal, and UIO Health Facilities to Respond to the COVID-19 Pandemic and Address Other Immediate Needs

From March 2020 to March 2021, IHS received slightly more than \$9 billion from six federal COVID-19 relief laws to address the health care and public health needs of AI/AN people. (See table 1.) This amount, which is nearly 50 percent larger than IHS’s fiscal year 2020 budget authority of about \$6 billion, included funds appropriated directly to IHS and funds transferred to IHS from other agencies. As of September 30, 2021, IHS reported that the majority of these funds have been obligated (62 percent) and expended (57 percent).

⁹See GAO, *Indian Health Service: Agency Faces Ongoing Challenges Filling Provider Vacancies*, [GAO-18-580](#) (Washington, D.C.: Aug. 15, 2018).

¹⁰See GAO, *High-Risk Series: Progress on Many High-Risk Areas, While Substantial Efforts Needed on Others*, [GAO-17-317](#) (Washington, D.C.: Feb. 15, 2017).

Table 1: Indian Health Service (IHS) Reported Allocation of COVID-19 Relief Funding for IHS COVID-19 Response, by Statute, as of September 30, 2021

Statute	Date of enactment	Amount (dollars in millions)		
		Total	Obligated	Expended
Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 ^a	March 6, 2020	70	48	39
Families First Coronavirus Response Act ^b	March 18, 2020	64	59	55
CARES Act ^c	March 27, 2020	1,032	1,023	864
Paycheck Protection Program and Health Care Enhancement Act ^d	April 24, 2020	750	492	440
Coronavirus Response and Relief Supplemental Appropriations Act, 2021 ^e	December 27, 2020	1,000	566	90
American Rescue Plan Act of 2021 ^f	March 11, 2021	6,094	3,430	3,249
Total		9,010	5,618	5,138

Source: GAO analysis of six COVID-19 relief laws and information from IHS. | GAO-22-104360

Note: For the purpose of this table, the term allocation includes direct appropriations and transfers to IHS for its COVID-19 response and does not include COVID-19 relief funds specifically appropriated for tribes, tribal organizations, and urban Indian organizations.

^aCPRSAA, Pub. L. No. 116-123, 134 Stat. 146, 149-50 (2020). These funds were appropriated to the Department of Health and Human Services (HHS) Public Health and Social Services Emergency Fund and transferred to IHS, and are available until September 30, 2024.

^bFFCRA, Pub. L. No. 116-127, 134 Stat. 178, 181 (2020). These funds are available until September 30, 2022.

^cCARES Act, Pub. L. No. 116-136, Div. B, tit. VII, 134 Stat. 281, 550-51 (2020). These funds are available until September 30, 2021.

^dPPPHCEA, Pub. L. No. 116-139, 134 Stat. 620, 624 (2020). These funds, which were appropriated to the HHS Public Health and Social Services Emergency Fund and transferred to IHS, are available until expended.

^eCRRSAA, Pub. L. No. 116-260, Div. M, tit. III, 134 Stat. 1182, 1911, 1918-19 (2020). These funds for IHS were appropriated in part to the HHS Public Health and Social Services Emergency Fund (\$790 million) and in part to the Centers for Disease Control and Prevention (\$210 million). Funds transferred from the Public Health and Social Services Emergency Fund are available until September 30, 2022. Funds transferred from the Centers for Disease Control and Prevention are available until September 30, 2024.

^fARPA, Pub. L. No. 117-2, Tit. X, § 11001, 135 Stat. 4, 240 (2021). These funds are available until expended.

IHS Hospitals' Views on Funding Allocation and Guidance

Of the 24 Indian Health Service (IHS) hospitals we surveyed, most (4 of 24) completely or somewhat agreed that the hospital was given an opportunity to provide input to IHS management regarding funding, resources, and workforce needs prior to final allocation decisions. One third of hospitals (eight of 24) somewhat or completely disagreed with that statement, and two were neutral. Only one of the 24 hospitals responded that it somewhat disagreed that IHS management provided clear and timely guidance on the permissible use of COVID-19 relief funds allocated to their hospitals (22 of 24 completely or somewhat agreed).

Source: GAO survey of officials from 24 IHS hospitals administered April-May, 2021. | GAO-22-104360

IHS allocated funds to address a range of immediate needs related to COVID-19, including, for example, health care services delivered by IHS, tribal, and UIO facilities to treat COVID-19 patients; procurement and distribution of personal protective equipment (PPE) and testing supplies through IHS's National Service Supply Center; losses in third-party collections; and later in the pandemic, vaccines and vaccine related costs.¹¹

To help guide its allocation strategy, IHS conducted rapid consultation sessions with tribes and tribal organizations, and "confer" sessions with UIOs, to seek input in its funding allocation decisions for each of the COVID-19 relief laws, typically within one week of enactment.¹² Additionally, IHS officials said that agency leadership and subject matter experts within the agency's Incident Command Structure (ICS) considered input from tribes, tribal organizations, and UIOs when assessing system resources and priority needs. Based on input received through these meetings, IHS elected to distribute funds to IHS and tribal health programs using existing funding distribution methodologies, according to IHS officials.¹³ Specifically, IHS used its standard distribution methodology for allocating funding increases for certain budget line items to determine the funding amounts for each program.¹⁴ Funding for UIOs was distributed as a one-time base amount for each UIO plus an additional amount based on each organization's number of users.

¹¹IHS's National Supply Service Center coordinates and manages the purchase and distribution of health care supplies for IHS, tribal, and UIO providers.

¹²IHS is statutorily required to promote consultation on matters relating to Indian health with federally recognized tribes and tribal organizations. See 25 U.S.C. § 1661(a)(4)(B). Additionally, IHS is statutorily required to confer, to the maximum extent possible, with urban Indian organizations to ensure that the health care needs of the urban Indian population are considered when implementing and carrying out an Indian health program. See 25 U.S.C. § 1660d(b).

¹³According to IHS's summary of the calls, tribal leaders said they wanted the funds to be distributed in a manner that reflects three principles: (1) to allocate resources using existing distribution and tribal shares methodologies, including distribution to tribal health programs and UIOs through funding mechanisms authorized by the Indian Self-Determination and Education Assistance Act and the Indian Health Care Improvement Act; (2) to fund all levels of the Indian health system—IHS, tribal, urban—immediately; and (3) with maximum flexibility to allow each tribal community to respond to their unique COVID-19 response needs, and not through grant mechanisms.

¹⁴According to IHS officials, the agency determined the allocation of funds for IHS and tribal health programs using its existing distribution formulas for the following budget line items: Hospitals and Health Clinics, Purchased and Referred Care, Alcohol and Substance Abuse, and Mental Health Services.

While some funds were retained by IHS to be centrally managed for systemwide needs, the vast majority of the funding—nearly \$8.3 billion (92 percent)—was allocated directly to facilities in the Indian health system. Federal IHS health programs, tribal health programs, and UIOs received multiple distributions for COVID-19 response activities, including funds for health care services, testing and related expenses, medical equipment, maintenance and improvements, and vaccines and related expenses.

Table 2: Indian Health Service (IHS) Reported Allocation of COVID-19 Relief Funding for its COVID-19 Response, by Type of Facility, as of September 30, 2021

Statute	Amount (dollars in millions)		
	Federal HIS facilities	Tribal health programs	Urban Indian organizations
Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 ^a	30	—	—
Families First Coronavirus Response Act ^b	20	41	3
CARES Act ^c	288	491	51
Paycheck Protection Program and Health Care Enhancement Act ^d	224	326	50
Coronavirus Response and Relief Supplemental Appropriations Act, 2021 ^e	273	467	60
American Rescue Plan Act of 2021 ^f	2,363	3,286	316
Total funding	3,197	4,611	480
Obligated	696	4,357	278
Expended	442	4,290	209

Source: GAO analysis of six COVID-19 relief laws and information from IHS. | GAO-22-104360

Note: For the purpose of this table, the term allocation includes direct appropriations and transfers to IHS for its COVID-19 response and does not include COVID-19 relief funds specifically appropriated for tribes, tribal organizations, and urban Indian organizations.

^aCPRSAA, Pub. L. No. 116-123, 134 Stat. 146, 149-50 (2020). These funds were appropriated to the Department of Health and Human Services (HHS) Public Health and Social Services Emergency Fund and transferred to IHS, and are available until September 30, 2024.

^bFFCRA, Pub. L. No. 116-127, 134 Stat. 178, 181 (2020). These funds are available until September 30, 2022.

^cCARES Act, Pub. L. No. 116-136, Div. B, tit. VII, 134 Stat. 281, 550-51 (2020). These funds are available until September 30, 2021.

^dPPPHCEA, Pub. L. No. 116-139, 134 Stat. 620, 624 (2020). These funds, which were appropriated to the HHS Public Health and Social Services Emergency Fund and transferred to IHS, are available until expended.

^eCRRSAA, Pub. L. No. 116-260, Div. M, tit. III, 134 Stat. 1182, 1911, 1918-19 (2020). These funds for IHS were appropriated in part to the HHS Public Health and Social Services Emergency Fund (\$790 million) and in part to the Centers for Disease Control and Prevention (\$210 million). Funds transferred from the Public Health and Social Services Emergency Fund are available until September 30, 2022. Funds transferred from the Centers for Disease Control and Prevention are available until September 30, 2024.

¹ARPA, Pub. L. No. 117-2, Tit. X, § 11001, 135 Stat. 4, 240 (2021). These are available until expended.

Each of the six COVID-19 relief laws included funds that were appropriated for, or that IHS allocated to, Indian health facilities for both general and specific purposes:

- Of the \$70 million from the Coronavirus Preparedness and Response Supplemental Appropriations Act, 2020 (CPRSAA), IHS allocated \$30 million to IHS operated facilities to prevent, prepare for, and respond to the spread of COVID-19.
- The entire \$64 million provided to IHS through the Families First Coronavirus Response Act (FFCRA) was appropriated for COVID-19 testing and related items and services, which IHS allocated to all three types of facilities (IHS, tribal, and UIO facilities).
- Of the \$1.032 billion from the CARES Act, IHS allocated funds to IHS, tribal, and UIO facilities for a range of purposes: from general COVID-19 response activities (\$566 million) and funds for purchased and referred care (\$149 million), to amounts for medical equipment (\$74 million) and maintenance and improvements (\$41 million).
- Of the \$750 million from the Paycheck Protection Program and Health Care Enhancement Act (PPPHCEA) for testing and testing-related activities, IHS allocated \$600 million to IHS, tribal, and UIO facilities.
- Of the \$1 billion from the Coronavirus Response and Relief Supplemental Appropriations Act, 2021 (CRRSAA), IHS allocated \$600 million to IHS, tribal, and UIO facilities for testing and testing-related activities, as well as \$200 million for vaccine-related costs.
- Of the \$6.094 billion from the American Rescue Plan Act of 2021 (ARPA), IHS allocated funds to IHS, tribal, and UIO facilities for a range of purposes, including purchased and referred care (\$500 million); information technology and telehealth infrastructure (\$70 million); vaccine-related costs (\$550 million); testing, contact tracing, mitigation, and related activities (\$1.5 billion); mental health and substance abuse prevention and treatment (\$420 million); and facilities-related costs (\$600 million).

In addition to funds for COVID-19 response activities, funds were designated under ARPA to address facilities' losses in third-party collections. Specifically, IHS received \$2 billion under ARPA to distribute to Indian health facilities to lessen the financial effect of significant losses in reimbursements from payers such as Medicaid, Medicare, the Department of Veterans Affairs, and private insurance. Agency officials

have testified that IHS providers have faced significant decreases in these sources of operating revenue due to fewer non-COVID-19 patient visits. For example, the number of monthly outpatient visits dropped by 23 percent between January 2020 (prior to the declaration of a pandemic) and January 2021, based on IHS data. Consequently, IHS data also show that revenue from third-party payers declined during this period; by January 2021, total monthly revenue from Medicaid, Medicare, the Department of Veterans Affairs, and private insurance was still nearly 10 percent below 2020 levels.¹⁵

IHS Also Used COVID-19 Relief Funding to Address Certain Systemwide and Longstanding Needs

IHS retained a portion of the funding from all but one of the COVID-19 relief laws (FFCRA)—\$722 million (8 percent) in total—to be centrally managed for certain systemwide or longstanding needs. Systemwide COVID-19 response needs for which IHS allocated funding include the purchase and distribution of PPE, testing supplies, and public health support activities. For example:

- With funds from CPRSAA, IHS allocated \$40 million for PPE and medical supplies distributed to Indian health providers through the National Service Supply Center.
- With funds from the CARES Act, IHS allocated \$26 million for Tribal Epidemiology Centers and national surveillance coordination, and \$11 million for public health support activities.
- With funds from PPPHCEA, IHS allocated \$100 million for PPE and testing supplies distributed to providers through the National Service Supply Center, and \$50 million for coordination of epidemiological, surveillance, and public health support activities.
- With funds from CRRSAA, IHS allocated \$190 million for testing supplies, therapeutics, and PPE distributed to providers through the National Supply Service Center, and \$10 million for national public health support activities.
- With funds from ARPA, IHS allocated \$550 million to IHS, tribal, and UIOs for vaccine related activities, while also retaining \$50 million to be centrally managed for vaccine tracking systems and related public health activities.

IHS also used a portion of the COVID-19 relief funds it retained to address certain longstanding needs. For example, COVID-19 relief

¹⁵For more information see GAO, *Indian Health Service: Information on Third-Party Collections and Processes to Procure Supplies and Services*, [GAO-22-104742](#) (Washington, D.C.: March 10, 2022).

funding has provided IHS with additional resources to continue implementing its long-term goal of replacing its current electronic health records system, expand telehealth services through a new clinical video telehealth system, and implement sanitation and potable water projects in AI/AN communities.

Electronic health records. IHS's electronic health records and practice management system, the Resource and Patient Management System (RPMS), is a legacy system used since 1984 that is based on the Department of Veterans Affairs' outgoing system. RPMS is a decentralized system that requires in-person configuration across hundreds of sites when making modifications, which complicated IHS's pandemic response, according to IHS headquarters officials. Other limitations of the system include an outdated laboratory module and lack of an inventory component for managing hospital resources.¹⁶ RPMS, like the system it is based on, has become obsolete, and the Department of Veterans Affairs is in the process of implementing a new electronic health records system. The CARES Act made up to \$65 million available for electronic health records modernization and IHS allocated an additional \$70 million in ARPA funds for electronic health records.

According to agency officials, IHS is applying these funds to its Health Information Technology Modernization Initiative, a multi-year project to replace RPMS. In light of the impact the replacement will have on all IHS facilities, the agency is coordinating its planning, acquisition, system build, training, implementation, and support processes in tandem with an outreach strategy to engage its stakeholders, including tribes, UIOs, and providers, according to IHS headquarters officials. IHS expects to release its solicitation and award the contract in fiscal year 2022, with a launch date before the end of fiscal year 2023.

Telehealth. Telehealth—health care services provided remotely via technology—can help to ensure the delivery of necessary care to patients while minimizing the risk of COVID-19 exposure for providers and patients. IHS allocated more than \$140 million in funding from two COVID-19 relief laws to further its telehealth expansion plans: nearly \$72

¹⁶IHS officials reported the agency had to implement additional system programming to support COVID-19 testing and results reporting for the on-premises testing devices distributed to IHS facilities, but that Resource and Patient Management System's inability to recognize coding and terminology from non-IHS laboratories created significant challenges to IHS's ability to collect and understand their results. Officials also described how the lack of an inventory component resulted in the need for manual tracking of certain data, such as ventilator usage and expanded ICU occupancy.

million in CARES Act funding and \$70 million in ARPA funding. As of September 30, 2021, IHS had obligated nearly all and expended most (\$59 million) of its CARES Act allocation. Also by September 30, 2021, IHS had obligated \$48 million and expended \$42 million of its ARPA allocation on telehealth expansion. Remaining funds will be used to support nationwide outreach, education, training, technical assistance, contract management, coordination, and program and policy development activities, according to IHS officials. IHS released its request for proposal in February 2021 for the creation of a cloud-based clinical video telehealth system.

Sanitation and potable water. IHS allocated \$10 million in CARES Act funds provided for transfer to the Indian Health Facilities appropriation account for sanitation and potable water projects, through which it has funded 70 projects across the 12 IHS areas that address AI/AN need for clean water sources. As of May 2021, 29 projects have been completed, according to IHS data. The remaining 41 projects were at various stages of completion. Projects range in size and scope, with most (53) costing under \$100,000. The most expensive project cost \$5.4 million and addressed water access on the Navajo reservation. An additional \$10 million earmark for potable water delivery under ARPA had yet to be expended by IHS as of September 30, 2021.

IHS Established Emergency Management Structures, Modified Operations, Worked with Partners, and Supported Public Health during Pandemic Response

In response to the pandemic, IHS established emergency management structures, modified operations, worked with partners, and supported public health activities, according to our review of agency documents, interviews with agency officials, and congressional testimony. IHS's actions involved the development of entirely new structures, groups, processes, and systems to facilitate its response to COVID-19.

Established emergency management structures. At the start of the pandemic, IHS headquarters and area offices established emergency management structures to support the agency's COVID-19 response. On March 6, 2020, IHS activated its Incident Command Structure, which prescribes the ICS components, participant roles, and their responsibilities. For example, under the ICS, a Field Operations Coordination Group is responsible for ensuring (1) coordination of response activities; (2) communication across IHS's area offices; and (3) area office compliance with reporting requirements, such as daily situation reports including supply needs. This group also serves as a liaison between IHS and area Incident Command Structures, and is responsible for helping area offices gain access to resources needed for COVID-19 response.

ICS initially held daily calls with IHS area office directors and other stakeholders on preparedness activities; hospital capacity; COVID-19 cases and testing; coordination with tribes, UIOs, states, and other organizations; and vaccine efforts, according to IHS officials. IHS officials reported that the calls allowed ICS to bring attention to critical issues within AI/AN communities and facilitated their resolution. According to officials from the three selected area offices, these calls helped ensure the adequacy of PPE and other supplies. All 12 area offices also organized emergency management structures to perform similar functions in their jurisdictions, according to IHS headquarters officials.

In September 2020, ICS established a vaccine task force, which developed a strategy to guide the agency's vaccine-related activities. Task force membership included clinical representatives from IHS headquarters, area offices and service units, with support from IHS's National Supply Service Center, according to IHS officials, who also said the task force initially met weekly with area vaccine points of contact—staff designated by area offices to coordinate all vaccine-related information, including data collection, in coordination with IHS, tribes, and UIOs and the National Supply Service Center.

Modified operations. In April 2020, IHS released an operational plan to guide agency response to the pandemic and modified operations to support COVID-19 response activities. For example, IHS developed a supply request tracking system and worked with the Strategic National Stockpile and National Supply Service Center to streamline the process IHS service units and facilities use to request supplies and services. IHS also began implementing new flexibilities; for example, to implement telehealth expansion and hazard pay at IHS health care facilities.

Coordinated and communicated with partners. IHS coordinated various aspects of its COVID-19 response with other federal agencies and tribal partners. IHS participated in the HHS Secretary's Operation Center, a forum for coordinating HHS's preparedness, response, recovery, and mitigation efforts. In coordination with the Veterans Health Administration (VHA), IHS referred and transferred IHS beneficiaries to Department of Veterans Affairs' medical facilities during the COVID-19 emergency period, according to IHS officials. IHS coordinated with the Centers for Disease Control and Prevention (CDC) to support public health efforts, such as COVID-19 vaccine implementation planning, mobile testing, school reopening strategies, and ventilation improvements. IHS also worked with CDC to provide infection control assessments through a virtual Infection Control Assessment and

Response (ICAR) project, according to IHS officials. These “teleICARs” provide guidance, assessment, and remedial resources for infection control practices and related topics. As of September 2021, IHS completed 76 teleICARs at IHS and tribal facilities.

Area offices also collaborated with tribes to prepare for potential COVID-19 outbreaks, according to IHS officials. For example, officials in the Navajo area office worked with tribal officials to plan for contingencies for various scenarios, including placing patients in need of critical care outside the IHS system if needed. In collaboration with the Navajo Nation, IHS identified access to clean water as critical to mitigating COVID-19 transmission. IHS’s field operations section coordinated with the tribe, Navajo area office, and CDC to provide temporary clean water sources.

Communication with IHS partners was also part of the agency’s initial COVID-19 response. Early in the pandemic, IHS developed and launched a COVID-19 website, established communication protocols, and shared guidance. The website, launched in March 2020, provides health information to IHS staff, patients, stakeholders, and the general public. IHS worked with HHS to send out weekly written communications to AI/AN communities containing the latest information on resources and guidance available from across the federal government, according to IHS officials. Throughout the pandemic, IHS distributed guidance that covered a variety of topics including infection control and PPE access and optimization; medical equipment access; telehealth use and flexibilities; testing; medication; and coding and billing. For example, according to IHS officials, the agency shared announcements about waivers approved by the Centers for Medicare & Medicaid Services that provide a range of flexibilities aimed at providing access to health care via telehealth or temporary triage sites.

Supported public health activities. IHS’s pandemic response included organizing and supporting public health activities, including COVID-19 testing, surveillance, and contact tracing.

- **Testing.** According to IHS officials, the agency developed a strategic testing plan in consultation with area office directors and chief medical officers, and with input provided by a lab strategy workgroup. IHS provided facilities with information on how to prepare to use COVID-19 testing machines in advance of their receipt, and distributed hundreds of machines and hundreds of thousands of tests to federal, tribal, and UIO sites.

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- **Surveillance.** IHS officials told us they developed a disease surveillance system into which area office, service unit, or facility staff can input testing and testing result data and other information, such as hospitals' intensive care unit bed availability. To facilitate its use, IHS developed training materials for hospitals on use of the surveillance system portal.
 - **Contact tracing.** IHS officials told us they used CDC guidance as a foundation to develop a contact tracing protocol. The protocol provides guidance, sample procedures, and training for communities setting up contact tracing programs. According to IHS officials, the agency also offered training through a centralized platform, and further supported contact tracing using CARES Act funding for tribal epidemiology centers.

IHS Took Steps to Mitigate Workforce, Supply, and Facility Challenges through Coordination with Partners, Policy Changes, and Adjustments to Care Delivery

IHS took steps to address a variety of workforce, supply, and infrastructure challenges that affected the agency's response to the COVID-19 pandemic. For example, IHS implemented authorities to promote recruitment and retention, and increased staff capacity to provide COVID-19 care through additional training. IHS also developed guidance and processes to support supply procurement; and supported adaptations to health care delivery.

IHS Mitigated Hospitals' Workforce Shortages through Personnel Deployment and Training

IHS headquarters and selected area office officials, as well as IHS hospital officials responding to our survey administered April through May of 2021, described workforce shortages at IHS facilities, some of which have been longstanding, which officials said challenged IHS's response to the pandemic. IHS mitigated workforce shortages at its facilities through recruitment and retention efforts, staff training, and coordination with federal agencies and other organizations.

When surveyed about their most difficult challenges in responding to COVID, IHS hospital officials described in their survey responses workforce challenges more often than any other type of challenge. For example, the officials reported staffing vacancies and difficulty hiring staff,

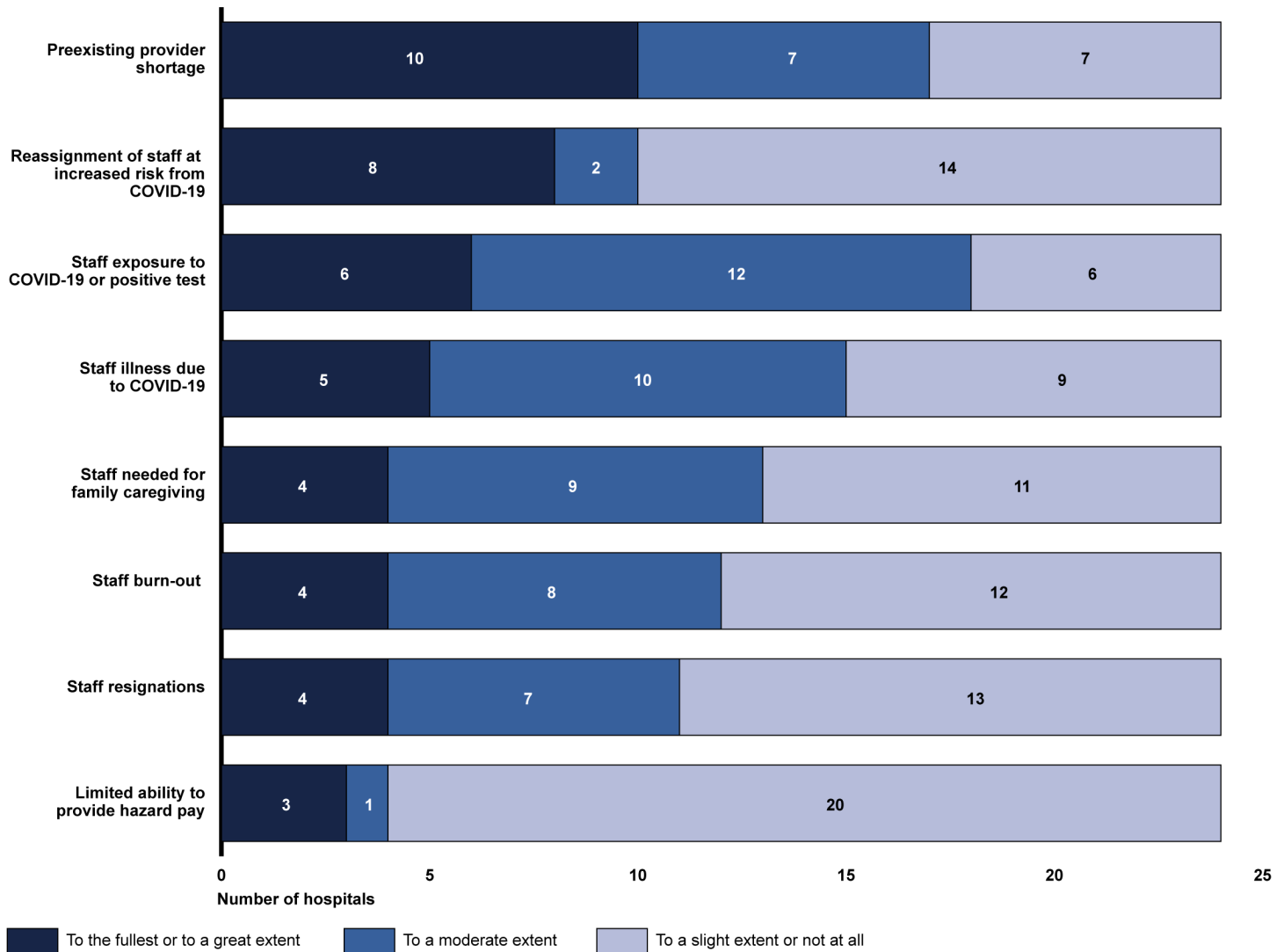
“The COVID-19 response presented numerous complex challenges including significant modifications to normal operations to accommodate COVID-19 infection control practices, augmenting inpatient capacity with additional negative pressure rooms, building testing, contact tracing, and case-management systems from scratch, acquiring sufficient personal protective equipment, and maintaining availability of non-COVID health care services.”

Source: GAO survey of officials from 24 IHS hospitals administered April-May, 2021. | GAO-22-104360

because of rural location, reallocation and reassignment of staff, and staff burnout.

Preexisting staff shortages contributed to staffing challenges during the pandemic. In its 2021 budget justification, IHS reported that, as of February 2020, it had over 1,400 health profession vacancies. In our survey, IHS hospital officials reported provider vacancies, which predated the pandemic, as the largest contributor to staff shortages during the pandemic. Survey respondents also reported that reassignment of staff at increased risk of COVID-19, staff exposure to COVID-19 or a positive COVID-19 test, and staff experiencing illness due to COVID-19, were large contributors to staff shortages during the pandemic. (See fig. 1.)

Figure 1: Reported Factors Affecting Indian Health Service Hospital Staff Shortages

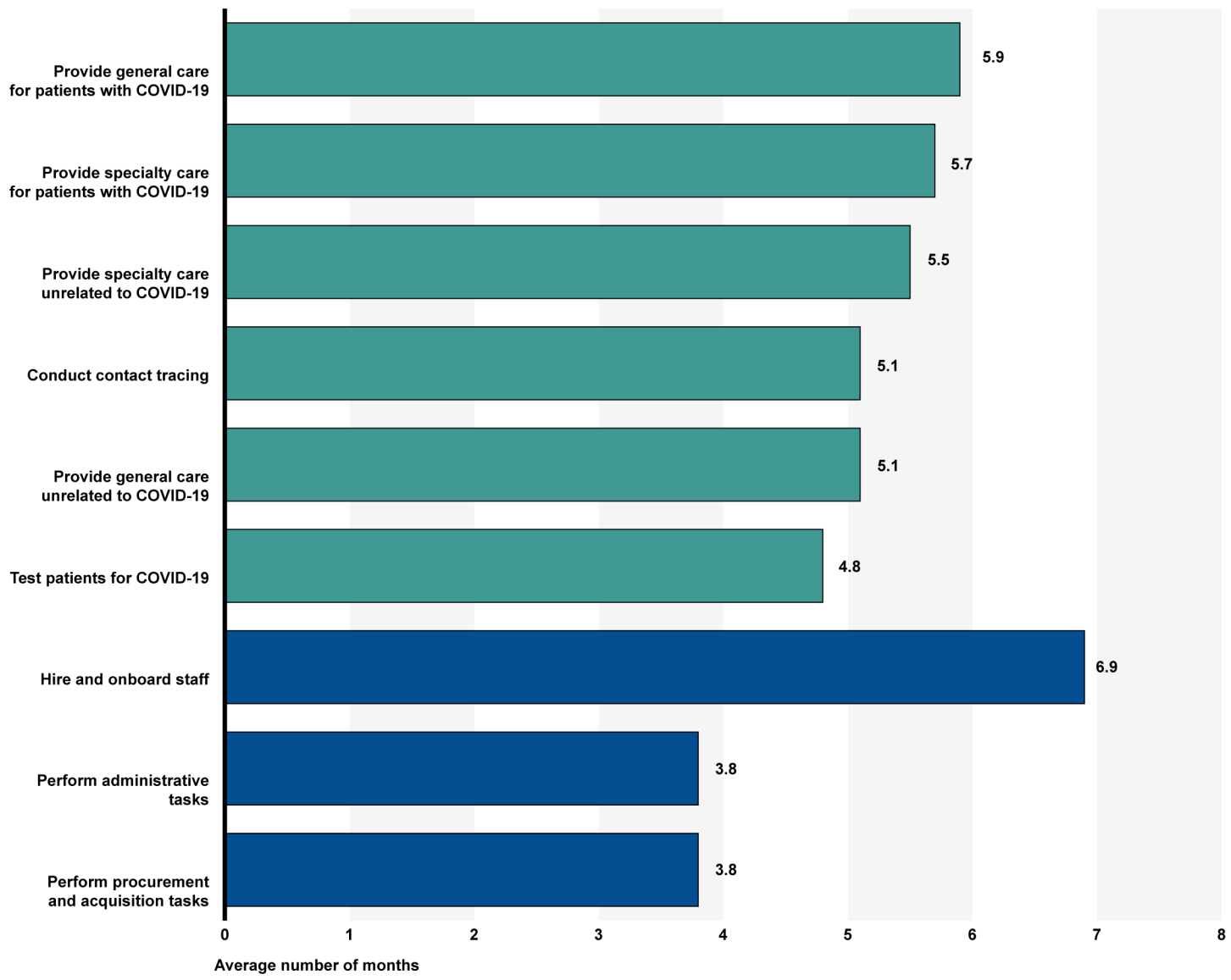


Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

In our survey, IHS hospitals also reported challenges adequately staffing clinical and administrative roles. At the time of our survey—administered 14 months into the pandemic—hospitals, on average, reported that they had been challenged to fill clinical roles for an average of 5 or 6 months. (See fig. 2.) One of the clinical roles that was a persistent challenge to fill was staff who provide specialty care for patients with COVID-19. At the time, four hospitals indicated they had struggled to fill these positions

since the beginning of the pandemic. In our survey, IHS hospitals also reported challenges adequately staffing administrative services. Specifically, hospitals reported difficulty filling positions responsible for hiring and onboarding new staff to assist with the COVID-19 response for an average of nearly 7 months.

Figure 2: Duration of Reported Clinical and Administrative Staffing Challenges at Indian Health Service Hospitals



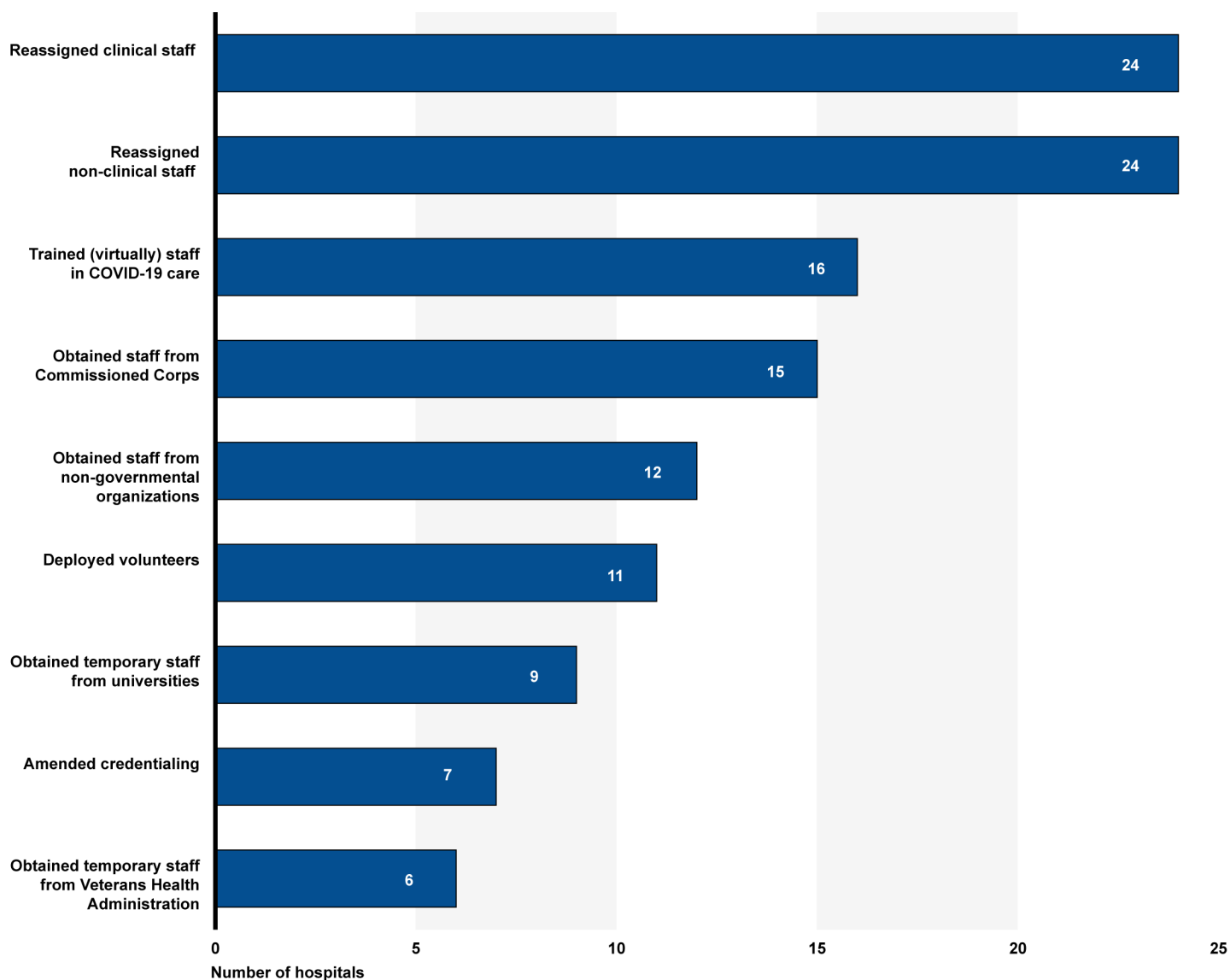
█ Clinical services
 █ Support services to assist with COVID-19 response

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

To help mitigate facilities’ workforce shortages, our review of IHS information and hospital survey data shows that IHS supported staff recruitment and retention efforts, coordinated with federal agencies and other organizations, established critical care response teams, reassigned

staff, and supported additional training for employees. IHS hospital officials reported using a variety of strategies in our survey. (See fig. 3.)

Figure 3: Reported Strategies Used to Address Staffing Challenges at Indian Health Service Hospitals



Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360.

IHS supported staff recruitment and retention efforts. Our review of agency information shows that, to address workforce shortages, IHS headquarters, through its ICS, obtained and implemented new hiring,

"I think Phoenix Area did everything they could to support us, primarily through CDC and VHA deployments, streamlined acquisitions processes, and facilitating support with other HHS OpDivs, i.e., CDC.

GAO survey of officials from 24 IHS hospitals administered April-May, 2021. | GAO-22-104360

compensation, and leave authorities and flexibilities to support the COVID-19 response. Specifically, IHS received authorities from the Office of Personnel Management and used them to help retain its existing work force and to hire staff more quickly than would otherwise be possible. For example, to address workforce needs at IHS facilities during the pandemic, IHS officials said they used COVID-19 Excepted Service Hiring Authority to make temporary appointments through a non-competitive process.¹⁷ In addition, IHS supported the use of pay increases, including hazard duty pay and the use of premium pay flexibilities, and paid sick leave to improve compensation for personnel working during the pandemic. According to IHS headquarters officials, these efforts were needed to assist with retention. Officials stated that without them, the recruitment and retention of health care workers and other staff would have been negatively affected.

IHS coordinated with federal agencies and other organizations to secure additional staff and volunteers, developed contracts to deploy mobile teams, and trained IHS staff to build clinical capacity, according to IHS headquarters officials. Specifically, IHS deployed personnel from the U.S. Public Health Service Commissioned Corps, the Department of Veterans Affairs, HHS, and volunteers from universities and other organizations.¹⁸ According to IHS headquarters officials, between December 29, 2019, and May 22, 2021, IHS had approximately 422 Commissioned Corps temporary deployments to different federal (including IHS hospitals) and tribal locations to support COVID-19 activities. Fifteen of 24 IHS hospitals reported receiving staffing assistance from the Commissioned Corps to address staffing challenges.

According IHS officials, IHS facilities also received staff support under an interagency agreement with VHA; for example, six of the 24 IHS hospitals reported receiving temporary staff from VHA. According to VHA's October 2020 COVID-19 response report, the agency sent registered nurses to facilities in the Navajo and Phoenix IHS areas, including Gallup Indian Medical Center and Whiteriver Indian Hospital. Area offices also helped

¹⁷COVID-19 Excepted Service Hiring Authority, authorized by the Office of Personnel Management, allows agencies to make use of excepted-service appointments on a temporary basis to address the need for hiring additional staff in response to COVID-19 without requiring a public notice (posting on USAJOBS.gov).

¹⁸The U.S. Public Health Service Commissioned Corps is one of the nation's uniformed services. Officers serve in agencies across the government in 800 locations across the United States and around the world.

address staffing shortages and helped service units establish, manage, and leverage existing contracts to meet their workforce needs, according to IHS headquarters officials. Officials from the three selected area offices reported working to facilitate deployment of additional providers. For example, working with headquarters to implement “disaster privilege,” an area office was able to authorize and enlist over 500 medical volunteers to work in IHS-operated health facilities.¹⁹ Two of the areas also deployed volunteers from universities and other organizations to assist with the pandemic response.

IHS established critical care response teams of a physician, up to two nurses, and a respiratory therapist. These teams could be deployed rapidly to provide medical care for COVID-19 patients, as well as hands-on clinical education. According to IHS officials, from June 2020 through October 2021, critical care response teams deployed to over 25 IHS and tribally operated hospitals and medical facilities, and provided clinical education on COVID-19 treatment to 1,400 frontline IHS and tribal staff.

IHS hospital officials reassigned clinical and non-clinical staff to assist with its COVID-19 response. All 24 IHS hospitals reported reassigning clinical staff to provide care for patients with COVID-19, and reassigning non-clinical staff to perform certain non-clinical tasks, such as patient screening.

IHS supported training to build clinical capacity. In our survey, officials from 16 of the 24 IHS hospitals reported training staff virtually in COVID-19 care. For example, in one IHS area with strong primary care, but limited critical care capacity, the area office offered training through telementoring. In this way, the area office provided educational sessions and instructive case review to prepare their staff to care for very ill COVID-19 patients. To build staff capacity for contact tracing, IHS offered contact tracing training via a centralized platform and prepared guidance to assist IHS, tribal, and UIO health programs in organizing and developing their contact tracing programs, according to IHS headquarters officials.

¹⁹“Disaster privilege” refers to the privileging of volunteer non-Service health care practitioners in health care facilities operated and maintained by IHS or operated under a contract or compact pursuant to the Indian Self-Determination and Education Assistance Act. Such practitioners may be designated as federal employees for the purpose of receiving Federal Tort Claims Act coverage pursuant to 25 U.S.C. § 1680c(e) in order to provide health care services during the COVID-19 pandemic.

While IHS hospitals reported in our survey that they initially had difficulty staffing for clinical and administrative tasks, at the time of the survey in the spring of 2021 (about 14 months into the pandemic), the majority of hospitals were able to staff each clinical and administrative service listed in the survey. Twenty of the 24 hospitals could meet the need for staff to perform administrative tasks related to COVID-19 response, and 10 of the 17 IHS hospitals for which it was applicable reported that the hospital could meet the need for clinical staff to provide specialty care for patients with COVID-19.

In the spring of 2021, IHS hospital officials reported confidence in staffing clinical and administrative roles in the next 30 days. Half or more of IHS hospital officials providing a response reported that they were very or completely confident that they could meet their staffing needs for clinical tasks (testing patients for COVID-19, providing general care for patients with COVID-19, conducting contact tracing, and providing general care unrelated to COVID-19) and support tasks (administrative tasks, and procurement and acquisition tasks related to COVID-19 response). Respondents from fewer than half of the hospitals providing a response reported being very or completely confident that they could meet their staffing needs for clinical tasks (providing specialty care related to COVID-19, and providing specialty care unrelated to COVID-19) and support task of hiring and onboarding staff to assist with COVID-19 response.

IHS Mitigated Hospitals Supply Shortages, through a Variety of Administrative Measures

In our survey administered April through May 2021, IHS hospital officials reported shortages in PPE and infection control supplies, testing supplies, medical equipment, and other supplies during the pandemic, which IHS mitigated through administrative measures.²⁰ At the time of our survey, 14 months into the pandemic, officials reported that supply shortages had persisted, on average, 4 months or less. (See table 3.) However, for some hospitals and some supplies, the shortages persisted.

²⁰In a March 2021 report, GAO reported that shortages of PPE and COVID-19 testing supplies were a challenge for some providers, but most of the 146 hospitals that GAO surveyed reported having an adequate 7-day supply of 11 types of PPE. In some cases, hospital reported avoiding shortages only with reuse or extending the use of the items. See GAO, *COVID-19: Sustained Federal Action Is Crucial as Pandemic Enters Its Second Year*, [GAO-21-387](#) (Washington, D.C.: Mar. 31, 2021).

Table 3: Reported Duration of IHS Hospital Supply Shortages, March 2020 – March 2021, by Type of Supply

Supply type	Average	Maximum	Supply type	Average	Maximum
	(number of months)			(number of months)	
Personal protective equipment and infection control					
- Sanitizing wipes	3.2	12	- Goggles	0.9	5
- Cleaning and disinfecting supplies	2	12	- Nitrile gloves	0.9	11
- N95 respirators	1.9	10	- Surgical masks	0.9	6
- Surgical gowns	1.7	6	- Shoe covers	0.6	7
- Hand sanitizer	1.5	9	- Bouffant caps	0.6	7
- Powered air purifying respirators	1.2	5	- Coveralls	0.4	2
- Non-surgical gowns	1.2	6	- Non-surgical masks	0.1	1
- Face shields	1	5	—	—	—
COVID-19 testing supplies					
- Transport media	1.5	4	- Rapid point-of-care tests	0.7	5
- Testing swabs	1.2	4	- Laboratory consumables	0.2	3
- Polymerase chain reaction testing kits	0.8	3	- Reagents	0.1	2
- Other specimen transport supplies	0.7	6	—	—	—
Medications					
- Remdesivir	0.3	3	- Monoclonal antibodies	0.1	2
- Dexamethasone	0.2	1	- Convalescent plasma	0	0
Medical equipment					
- High flow oxygen delivery equipment	2.3	8	- Oximeters	0.7	4
- Auxiliary supplies for medical equipment	1.8	9	- Oxygen	0.2	3
- Ventilators	1.5	6	—	—	—

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals in April-May 2021. | GAO-22-104360

PPE and infection control supplies. In our survey, IHS hospitals reported PPE and infection control supply shortages lasting an average of 4 months or less. The average length of shortage was longest for sanitizing wipes (3.2 months), cleaning and disinfecting supplies (2.0 months), N95 respirators (1.9 months), surgical gowns (1.7 months), and hand sanitizer (1.5 months). While some hospitals reported that they did not experience shortages of particular PPE and infection control supplies,

“Area Office did a great job supporting [National Supply Service Center] procurement activities. In the future, improved communication and active listening would support synergy between sites and promote effective use of limited resources.”

Source: GAO survey of officials from 24 IHS hospitals administered April-May, 2021. | GAO-22-104360

other hospitals reported experiencing shortages lasting 4 or more months. For example, seven of the 24 hospitals experienced shortages of sanitizing wipes; and four hospitals experienced shortages of air purifying respirators, surgical gowns, and N95 respirators that lasted 4 months or longer.

COVID-19 testing supplies. Surveyed IHS hospital officials reported shortages of testing supplies lasting an average of 2 months or less. Average shortages lasted 1.5 months for media for transporting testing specimen (transport media), and 1 month or less for all other testing supply items included in the survey. However, officials from one or two hospitals reported that the hospital experienced shortages of 4 months or more for transport media, other specimen transport supplies, testing swabs, and rapid tests.

COVID-19 medications. Surveyed IHS hospital officials reported brief shortages of medications used to treat COVID-19. Among the 21 hospital officials who answered the question, the average shortage of Remdesivir, Dexamethasone, and monoclonal antibodies persisted an average of 1 month or less.²¹

COVID-19 medical equipment. Surveyed IHS hospital officials reported medical equipment supply challenges. At the time of our survey, IHS officials reported they had experienced shortages of medical equipment (ventilators, high flow oxygen delivery equipment, oximeters, oxygen, and auxiliary supplies for medical equipment) that persisted on average for approximately 2 months or less. However, the duration of medical equipment shortages at some hospitals was longer. Of the 21 hospital officials who answered the question, five reported facing shortages of high flow oxygen delivery equipment; four hospitals for ventilators; three hospitals for auxiliary supplies for medical equipment, and one for oximeters, all of which lasted 4 or more months.

Our review of information from IHS headquarters and the three selected area offices shows that to address the shortages, IHS led and supported efforts to understand hospitals' needs, secure additional supplies, and improve supply request processes. To understand hospitals' needs, IHS

²¹The maximum duration of shortages of Remdesivir and monoclonal antibodies were based on the date each product originally received emergency use authorization for treatment of COVID-19 (May 1, 2020 and November 21, 2020, respectively). Dexamethasone has received approval from the Food and Drug Administration to treat a variety of indications and is sometimes used to treat certain patients with COVID-19.

headquarters asked area offices to provide situation reports, including supply needs. Area offices developed processes for tracking supplies and for communicating with service units to ensure supply adequacy, according to IHS headquarters officials. To secure additional supplies, IHS coordinated with federal entities. For example, IHS worked with the Federal Emergency Management Agency to establish acquisition protocols for goods not available through ordinary sources, and entered into a formal partnership with the HHS Office of the Assistant Secretary for Preparedness and Response for the purchase and supply of COVID-19 emergency PPE items for IHS hospitals and clinics. To efficiently administer and oversee supply requests, IHS streamlined area office and facility access to supplies through process improvement with the Strategic National Stockpile and IHS National Supply Service Center, and offered guidance on supply request processes to IHS, tribal, and UIO health programs. IHS also placed IHS staff in liaison functions to ensure oversight of requests.

Despite the shortages experienced during the first 14 months of the pandemic, all or most IHS hospitals for whom the supply item was applicable, reported they were able to meet their current needs for medical supplies at the time of our survey. Additionally, a large majority (75 percent or more) reported being very or completely confident in the near future in their supply of most items we asked about in our survey.²²

Our review of survey responses suggest that IHS efforts to secure COVID-19 medical supplies were successful, though not all hospitals were very confident in future supply of all supplies.

- All or most hospitals reported they were able to meet their current need for all PPE and infection control supplies applicable to them. For example, officials from all 24 hospitals reported they were able to meet the need for nitrile gloves. A majority of hospitals reported they were very or completely confident they could meet their need for each item over the next 60 days.
- Officials from nearly all hospitals surveyed reported they were able to meet their current needs for COVID-19 testing supplies applicable to them. For example, all 24 hospitals reported they could meet the current supply needs for testing swabs and transport media. A majority of officials reported they were very or completely confident

²²This is consistent with the results of our February 2021 survey that found that, while most hospitals expressed great confidence in their future supply of applicable PPE items, there was variation among the PPE items. See [GAO-21-387](#).

they could meet their hospital's need for each applicable testing supply item over the next 15 days.

- Officials representing all but one of the 21 hospitals providing a response to the question reported they could meet their current need for COVID-19 medications Remdesivir and Dexamethasone, and a large majority of hospitals reported being very or completely confident in their supply of these medications over the next 15 days. Officials from all six hospitals for whom it was applicable reported that the hospital could meet their current need for convalescent plasma. The same was true for monoclonal antibodies: all 17 hospitals for whom it was applicable could meet their current need. Similarly, all but one hospital official surveyed reported being very or completely confident in their supply of monoclonal antibodies over the next 15 days, and all but one of the five hospitals for whom it was applicable reported being very or completely confident in their 15 day supply of convalescent plasma.
- Officials responding to our survey at all 21 hospitals for whom the question was applicable reported that they were able to meet their current demand for oxygen, and 20 hospitals could also meet their current need for ventilators, high-flow oxygen delivery equipment, oximeters, and auxiliary supplies for equipment. A majority of hospital officials also reported they were very or completely confident they could meet their future need for medical equipment items; however, some hospital officials reported less confidence that they could meet their need for medical equipment in the next 15 days. For example, IHS officials at five of the 21 hospitals for whom it was applicable expressed less confidence than their peers in their supply of ventilators over the next 15 days.
- All 24 hospitals had begun administering the COVID-19 vaccine, and at the time of our survey in April through May 2021, hospital officials reported that they had a high degree of confidence they would have a sufficient quantity of supplies to handle and administer vaccines over the next 30 days. Most reported that they were completely confident they would have the necessary quantity of all vaccination supplies.

IHS Addressed Physical Infrastructure Challenges to COVID-19 Response through Care Delivery Adjustments

Physical infrastructure challenges—such as aging buildings, outdated design, and insufficient space—complicated IHS's ability to provide routine health care and COVID-19 care during the pandemic. IHS hospital officials reported that they mitigated IHS hospital infrastructure challenges through adjustments to care delivery and other measures.

Facility age. Officials in one IHS area office reported that facility age was one of the biggest challenges they faced during the pandemic. For example, in older facilities, patient beds may be located in larger, open areas with other patient beds. Officials from this area office also reported that plumbing issues and outdated electrical capacity interfered with their ability to provide health care and maintain infection control during the pandemic. The officials described a facility with decaying sewer lines that broke regularly, including in a COVID-19 treatment area, requiring staff to relocate numerous patients. IHS officials described inadequate electrical capacity as a factor that limited staff from making better use of their space.

Facility design. Facility design also posed impediments to providing health care during the pandemic. For example, officials at two area offices described challenges isolating patients with COVID-19, because the facilities in their areas lacked the capacity to provide a negative pressure environment or had inadequate heating, ventilation, and air conditioning systems to provide air circulation necessary to contain infectious diseases. According to officials in one of these areas, the inability to provide a negative pressure environment made it impossible to safely provide routine care at facilities that also provided COVID-19 care. Officials at 12 of the 24 IHS hospitals surveyed indicated that their facility’s lack of capacity for a negative pressure environment impeded the ability to treat COVID-19 patients or maintain the provision of routine care during the pandemic to a great or the fullest extent. Officials at 11 of the 24 IHS hospitals identified floor plans, and 10 identified heating, ventilation, and air conditioning systems, as impediments to a great or the fullest extent.

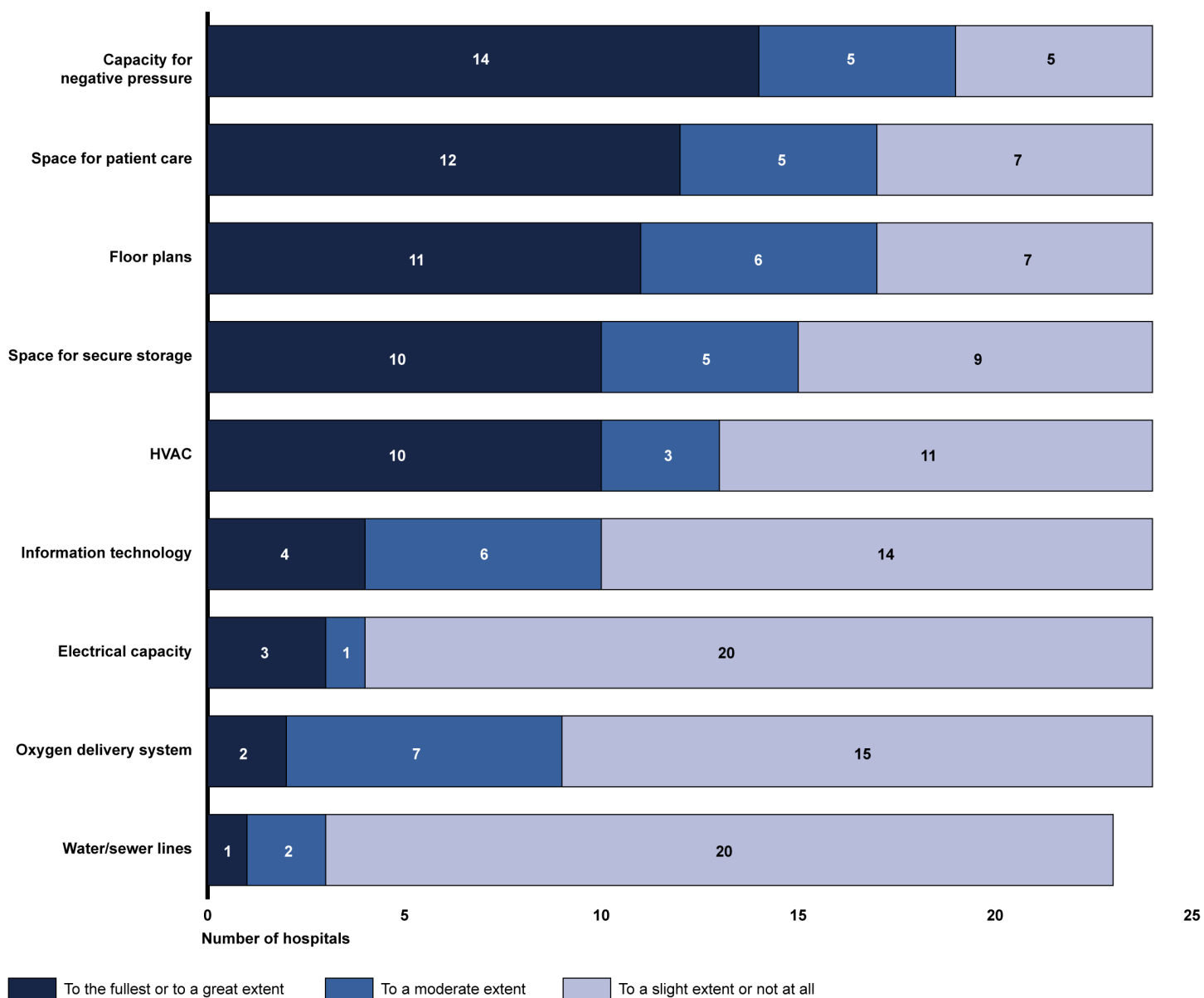
“Our facility is not designed to have airborne isolation in our outpatient care areas. This severely limited our ability to provide care to COVID-19 suspect or positive patients.”

Source: GAO survey of officials from 24 IHS hospitals administered April-May, 2021. | GAO-22-104360

Facility size. IHS hospital officials reported facility space issues as impediments to COVID-19 and routine care delivery. Twelve of the 24 IHS hospital officials identified space for patient care as an impediment to a great or the fullest extent. An area office official described small facility size as a challenge that made it difficult to adapt the facility to protect the health and safety of patients and staff through separation of COVID-19 and COVID-19 suspect patients from uninfected patients. Officials at two of the selected IHS area offices also reported limited IHS hospital bed capacity as a challenge that made it necessary for staff to work overtime to ensure capacity or to transfer patients out of the area to facilities with bed capacity. Apart from space for patients, 10 of the 24 IHS hospital officials surveyed reported space for secure storage—which could be used to store greater quantities of PPE and medications—as an

impediment to COVID-19 and routine care delivery to a great or the fullest extent. (See fig. 4.)

Figure 4: Reported Infrastructure Characteristics that Impeded COVID-19 and Routine Care Delivery at Indian Health Service Hospitals

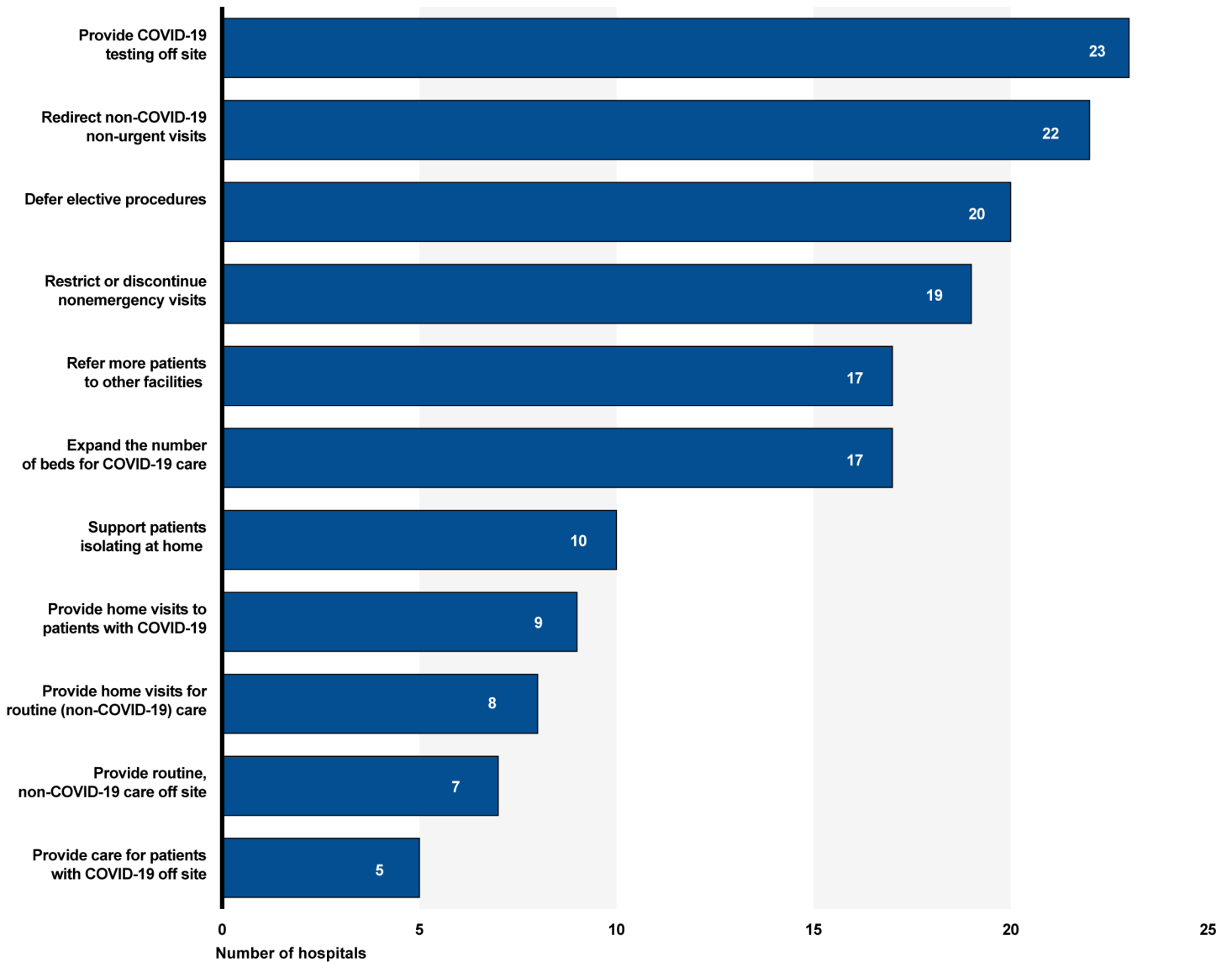


Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Although fewer hospitals indicated that other facility characteristics—such as information technology, electrical capacity, the oxygen delivery system, or water and sewer lines—were impediments to care delivery, these facility characteristics posed significant challenges for some hospitals.

In our survey, IHS officials reported making a number of adjustments to the care environment in response to facility challenges. (See fig. 5.) All but one hospital provided COVID-19 testing off site; 22 hospitals redirected non-COVID-19, non-urgent visits; 20 deferred elective procedures; and 19 restricted or discontinued nonemergency visits. Seventeen hospitals referred more patients than usual to other facilities and the same number expanded the number of beds for COVID-19 care.

Figure 5: Reported Care Delivery Adjustments at Indian Health Service Hospitals



Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Area office officials and survey respondents provided additional descriptive information of care delivery adjustments. “Strike Teams” at one area office provided technical support to assist facilities with adjustments to the care environment including triage system set up, environment of care assessments, and infection control. Officials at another area office reported, for example, using outdoor medical tents for

COVID-19 testing and treatment, allowing hospitals to create a negative pressure environment to care for COVID-19 patients outside the hospital.

When asked to identify which of these care delivery adjustments most improved the hospital's ability to deliver health care, six hospitals reported COVID-19 testing off site, such as drive-through testing, and five reported redirecting non-COVID-19, non-urgent facility visits; for example, by offering a drive-through pharmacy or off-site lab.

IHS Prioritized Telehealth, but Information Technology, Broadband Internet Limitations, and Other Barriers Created Additional Challenges for Hospitals' Pandemic Response

As a means of maintaining access to care and keeping patients safe, IHS headquarters officials reported that the agency prioritized the provision of health care services through telehealth during the COVID-19 pandemic. For example, IHS

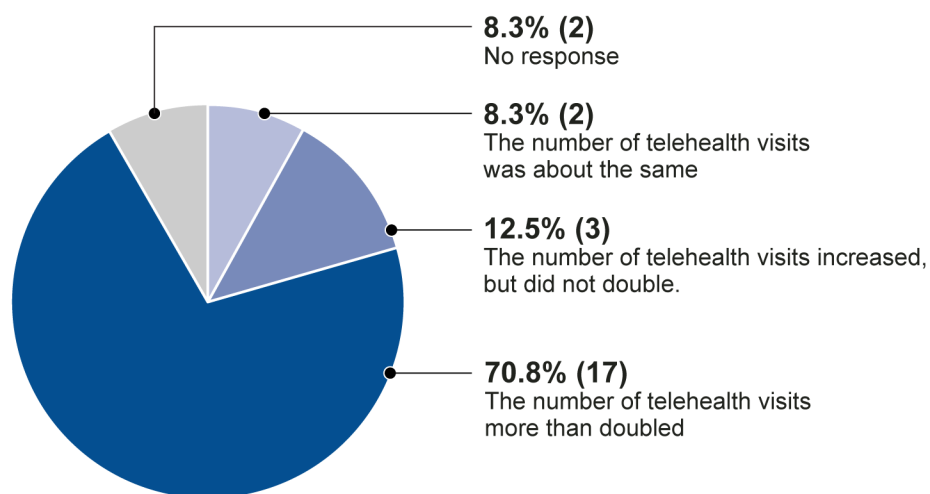
- permitted health care providers to communicate with patients and provide telehealth services through various communications technologies;
- expanded telehealth to allow patients to receive care from their homes, and permitted emergency use of commonly used mobile apps to support telehealth provision;
- expanded access to its nationwide, secure teleconferencing platform to enable its broader use for telehealth; and
- began offering primary care to be delivered via telehealth and expanded telehealth to other disciplines; for example, physical therapy.

IHS data show a period of rapid growth in the number of telehealth visits in the months following the pandemic declaration. Our analysis of data from IHS facilities shows a 30 fold increase in the average total monthly telehealth visits from the 5 month period before the declaration to the 5 month period following the declaration, from an average monthly total of 1,273 to an average monthly total of 38,824 telehealth visits, with a nearly 40 fold increase between December 2019 (1,150 telehealth visits) and December 2020 (46,228 telehealth visits). IHS headquarters officials also reported that a high proportion of telehealth visits, between 75 and 80 percent, were via telephone during the first few months of the pandemic (April through July 2020). Our survey asked hospital officials to estimate the change in the number of weekly telehealth visits with IHS providers (including telephone, one-way radio, or audio-visual) during the week of March 1, 2020, and the week of March 1, 2021. Among the 22 hospitals that responded to this question, telehealth increased for 20, with 17

estimating that the number of telehealth visits more than doubled. (See fig. 6.).

Figure 6: Reported Estimated Change in Hospital Telehealth Visits, March 1, 2020, to March 1, 2021

Percentage (number of hospitals)



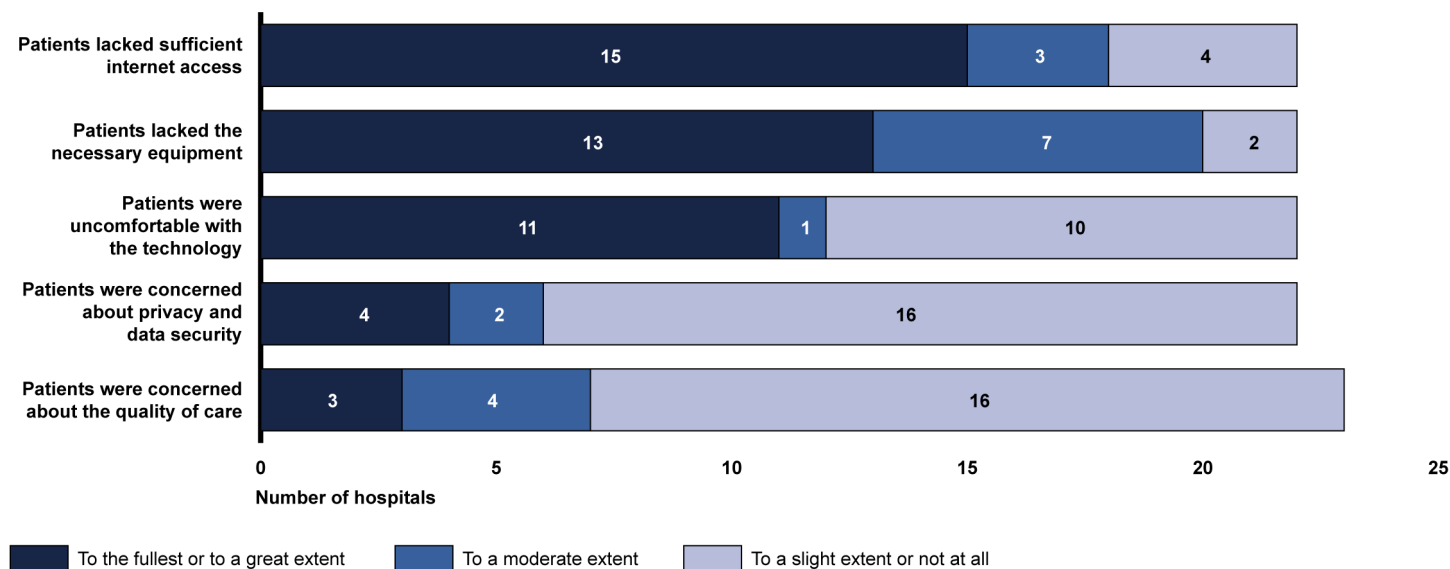
Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Despite the increased use of telehealth, information technology limitations complicated IHS facilities' COVID-19 pandemic response. For example:

- **Barriers to optimizing telehealth.** Hospital officials indicated the extent to which certain barriers posed impediments to telehealth. Of the 22 hospitals that responded to the question, 15 reported that patient internet access posed an impediment to telehealth, 13 reported that lack of necessary equipment (for example, computers or smartphones) was an impediment, and 11 reported patients' discomfort with the technology was an impediment to a great or to the fullest extent. (See fig. 7.)
- **Lack of broadband internet access.** IHS officials reported that broadband connectivity and patients' lack of equipment are barriers to conducting patient-to-provider telehealth visits while the patient is at home. A 2019 Federal Communications Commission publication also reported that tribal lands, particularly those located in rural areas,

have lower rates of fixed and mobile broadband deployment than non-tribal areas.²³

Figure 7: Reported Patient Barriers to Telehealth

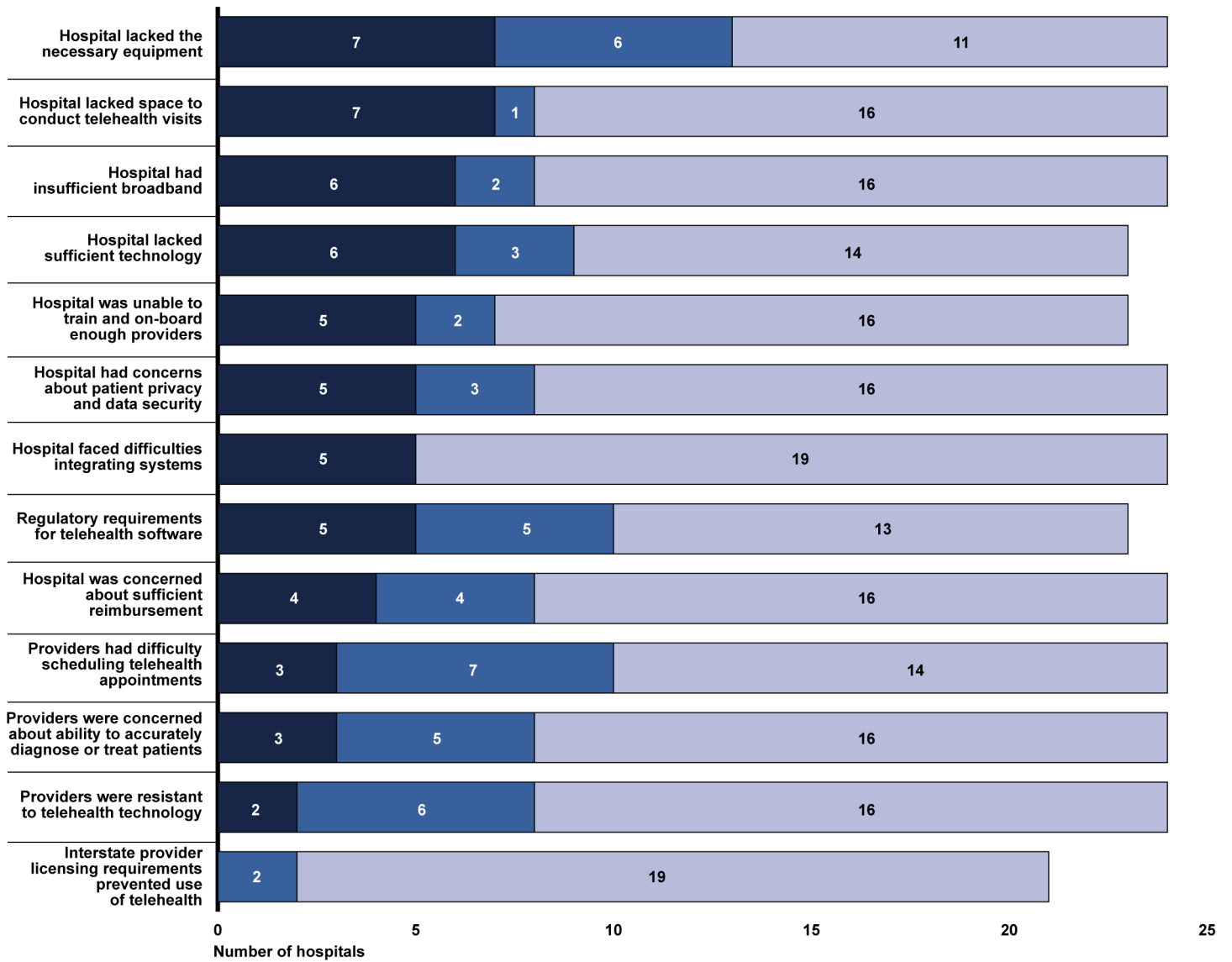


Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

In our survey, hospital officials also reported hospital and provider barriers to telehealth. Seven of the 24 IHS hospitals reported that a lack of equipment and lack of space for telehealth visits were barriers to a great or to the fullest extent. Officials from six of the 24 hospitals reported that insufficient broadband internet and insufficient technology were telehealth barriers to a great or to the fullest extent. (See fig. 8.)

²³Federal Communications Commission, *Report on Broadband Deployment in Indian Country, Pursuant to Repack Airwaves Yielding Better Access for Users of Modern Services Act of 2018* (Washington, D.C.: May 2019).

Figure 8: Reported Hospital and Provider Barriers to Telehealth



To the fullest or to a great extent
 To a moderate extent
 To a slight extent or not at all

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Although improving broadband internet access to AI/AN communities is beyond the scope of IHS, agency officials said they plan to use COVID-19 relief funds for centralizing services and shared technology infrastructure

to deliver patient care and provide a foundation to support long-term sustainability of telehealth services.

Agency Comments

We provided a draft of this report to HHS, including IHS, for review and comment. HHS provided technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional addressees, the Secretary of Health and Human Services, and the Acting Deputy Director of the Indian Health Service. In addition, the report is available at no charge on the GAO website at <https://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-7114 or farbj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs can be found on the last page of this report. Major contributors to this report are listed in Appendix II.



Jessica Farb
Managing Director, Health Care

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Appendix I: Responses to GAO's Survey of IHS Hospitals

To obtain relevant and useful information on the response of the Indian Health Service (IHS) to COVID-19, we developed and deployed a survey to all 24 hospitals operated by IHS. Survey topics were developed through an information gathering process that included interviews with IHS area office officials and stakeholder groups; and a review of IHS documents, news articles, and other surveys. We pretested the survey with three IHS hospitals from different areas and revised for clarity. The survey was deployed on April 6, 2021, and closed on May 13, 2021, about 14 months into the pandemic.¹ To provide a more complete understanding of IHS hospitals' experience, we present summary information on the 24 hospitals' responses to each categorical question contained within the survey instrument; we did not include respondents' narrative responses to open ended questions. (See tables 5 through 34.)

Table 4: Funding Guidance and Opportunity for Input

Statement	Completely Agree		Somewhat agree		Neither agree nor disagree		Somewhat disagree		Completely disagree		Total responses Number
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
IHS management provided clear and timely guidance on the use of COVID-19 relief funds	14	58.33	8	33.33	1	4.17	1	4.17	0	0	24
The hospital was given an opportunity to provide input to IHS management prior to final allocation decisions	9	37.5	5	20.83	2	8.33	4	16.67	4	16.67	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

¹The World Health Organization declared COVID-19 a pandemic on March 11, 2020.

Appendix I: Responses to GAO's Survey of IHS Hospitals

Table 5: Shortages of Personal Protective Equipment and Infection Control Items

How many months during the pandemic did the hospital experience a shortage?	Average number of months	0 months		1-3 months		4 or more months		Total responses
		Number	Percent	Number	Percent	Number	Percent	Number
Sanitizing wipes	3.2	8	33.33	9	37.5	7	29.17	24
Cleaning and disinfecting supplies	2	12	50	9	37.5	3	12.5	24
N95 respirators	1.9	13	54.17	7	29.17	4	16.67	24
Surgical gowns	1.7	11	45.83	9	37.5	4	16.67	24
Hand sanitizer	1.5	12	50	10	41.67	2	8.33	24
Powered air purifying respirators	1.2	17	70.83	3	12.5	4	16.67	24
Non-surgical gowns	1.2	14	58.33	7	29.17	3	12.5	24
Face shields	1	15	62.5	7	29.17	2	8.33	24
Goggles	0.9	15	62.5	7	29.17	2	8.33	24
Nitrile gloves	0.9	18	75	4	16.67	2	8.33	24
Surgical masks	0.9	17	70.83	5	20.83	2	8.33	24
Shoe covers	0.6	18	75	5	20.83	1	4.17	24
Bouffant caps	0.6	19	79.17	4	16.67	1	4.17	24
Coveralls	0.4	19	79.17	5	20.83	0	0	24
Non-surgical masks	0.1	21	87.5	3	12.5	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 6: Current Supply of Personal Protective Equipment and Infection Control Items

Is the hospital currently able to meet its supply needs?	Yes, without reuse		Yes, with reuse		No		Do not know		Not applicable		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Nitrile gloves	24	100	0	0	0	0	0	0	0	0	24
Cleaning and disinfecting supplies	23	95.83	0	0	0	0	0	0	1	4.17	24
Surgical gowns	22	91.67	1	4.17	0	0	0	0	1	4.17	24
Shoe covers	22	91.67	0	0	0	0	1	4.17	1	4.17	24
Sanitizing wipes	22	91.67	0	0	1	4.17	0	0	1	4.17	24
Hand sanitizer	22	91.67	0	0	1	4.17	0	0	1	4.17	24
Surgical masks	21	87.5	3	12.5	0	0	0	0	0	0	24
Bouffant caps	21	87.5	0	0	0	0	0	0	3	12.5	24

Appendix I: Responses to GAO's Survey of IHS Hospitals

Is the hospital currently able to meet its supply needs?	Yes, without reuse		Yes, with reuse		No		Do not know		Not applicable		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Non-surgical gowns	20	83.33	2	8.33	0	0	0	0	2	8.33	24
N95 respirators	19	79.17	5	20.83	0	0	0	0	0	0	24
Goggles	19	79.17	5	20.83	0	0	0	0	0	0	24
Non-surgical masks	18	75	1	4.17	0	0	0	0	5	20.83	24
Face shields	18	75	6	25	0	0	0	0	0	0	24
Coveralls	18	75	1	4.17	0	0	0	0	5	20.83	24
Powered air purifying respirators	16	66.67	6	25	0	0	0	0	2	8.33	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 7: Future Supply of Personal Protective Equipment and Infection Control Items

How confident are you that you will meet your needs over the next 60 days?	Not at all		Slightly confident		Confident		Very confident		Completely confident		Not applicable		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
N95 respirators	0	0	0	0	5	20.83	5	20.83	14	58.33	0	0	24
Powered air purifying respirators	0	0	1	4.17	4	16.67	3	12.5	14	58.33	2	8.33	24
Surgical masks	0	0	0	0	3	12.5	4	16.67	17	70.83	0	0	24
Non-surgical masks	0	0	0	0	3	12.5	2	8.33	14	58.33	5	20.83	24
Face shields	0	0	1	4.17	3	12.5	5	20.83	15	62.5	0	0	24
Goggles	0	0	1	4.17	4	16.67	5	20.83	14	58.33	0	0	24
Nitrile gloves	0	0	0	0	3	12.5	5	20.83	16	66.67	0	0	24
Surgical gowns	0	0	2	8.33	2	8.33	4	16.67	15	62.5	1	4.17	24
Non-surgical gowns	0	0	1	4.17	3	12.5	3	12.5	16	66.67	1	4.17	24
Shoe covers	0	0	1	4.17	1	4.17	6	25	15	62.5	1	4.17	24

Appendix I: Responses to GAO's Survey of IHS Hospitals

How confident are you that you will meet your needs over the next 60 days?	Not at all		Slightly confident		Confident		Very confident		Completely confident		Not applicable		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Coveralls	0	0	0	0	3	12.5	3	12.5	14	58.33	4	16.67	24
Bouffant caps	0	0	0	0	2	8.33	4	16.67	15	62.5	3	12.5	24
Cleaning and disinfecting supplies	0	0	2	8.33	4	16.67	5	20.83	13	54.17	0	0	24
Sanitizing wipes	0	0	5	20.83	5	20.83	4	16.67	10	41.67	0	0	24
Hand sanitizer	1	4.17	2	8.33	2	8.33	5	20.83	14	58.33	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 8: Shortages of COVID-19 Testing Supply Items

How many months during the pandemic did the hospital experience a shortage?	Average number of months	0		1-3		4 or more		Total responses
		Number	Percent	Number	Percent	Number	Percent	Number
Transport media	1.5	9	37.5	14	58.33	1	4.17	24
Testing swabs	1.2	11	45.83	12	50	1	4.17	24
PCR testing kits	0.8	15	62.5	9	37.5	0	0	24
Other specimen transport supplies	0.7	17	70.83	5	20.83	2	8.33	24
Rapid point-of-care tests	0.7	17	70.83	6	25	1	4.17	24
Laboratory consumables	0.2	22	91.67	2	8.33	0	0	24
Reagents	0.1	23	95.83	1	4.17	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Appendix I: Responses to GAO's Survey of IHS Hospitals

Table 9: Current Supply of COVID-19 Testing Supply Items

Is the hospital currently able to meet its supply needs?	Yes		No		Not applicable		No response		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Testing swabs	24	100	0	0	0	0	0	0	24
Transport media	24	100	0	0	0	0	0	0	24
Laboratory consumables	23	95.83	0	0	0	0	1	4.17	24
PCR testing kits	23	95.83	0	0	1	4.17	0	0	24
Rapid point-of-care tests	22	91.67	0	0	2	8.33	0	0	24
Reagents	22	91.67	0	0	1	4.17	1	4.17	24
Other specimen transport supplies	21	87.5	0	0	3	12.5	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 10: Future Supply of COVID-19 Testing Supplies

How confident are you that you will meet your needs over the next 15 days?	Not at all		Slightly confident		Confident		Very confident		Completely confident		Not applicable		No response		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Testing swabs	0	0	1	4.17	3	12.5	3	12.5	17	70.83	0	0	0	0	24
Transport media	0	0	1	4.17	3	12.5	3	12.5	17	70.83	0	0	0	0	24
Other specimen transport supplies	0	0	0	0	3	12.5	4	16.67	14	58.33	3	12.5	0	0	24
Reagents	0	0	1	4.17	5	20.83	2	8.33	14	58.33	1	4.17	1	4.17	24
Laboratory consumables	0	0	0	0	4	16.67	4	16.67	15	62.5	0	0	1	4.17	24
PCR testing kits	0	0	1	4.17	6	25	3	12.5	13	54.17	1	4.17	0	0	24
Rapid point-of-care tests	0	0	1	4.17	4	16.67	5	20.83	12	50	2	8.33	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

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Table 11: Shortages of Medications Used to Treat COVID-19

How many months during the pandemic did the hospital experience a shortage?	Average number of months	0		1-3		4 or more		Total responses
		Number	Percent	Number	Percent	Number	Percent	Number
Remdesivir	0.3	17	80.95	4	19.05	0	0	21
Dexamethasone	0.2	18	85.71	3	14.29	0	0	21
Convalescent plasma	0	7	33.33	0	0	0	0	21
Monoclonal antibodies	0.1	17	80.95	1	4.76	0	0	21

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Note: This survey question applied to the 21 IHS hospitals that reported treating COVID-19 patients.

Table 12: Current Supply of Medications Used to Treat COVID-19

Is the hospital currently able to meet its supply needs?	Yes		No		Not applicable		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number
Dexamethasone	20	95.24	1	4.76	0	0	21
Remdesivir	20	95.24	1	4.76	0	0	21
Monoclonal antibodies	17	80.95	0	0	4	19.05	21
Convalescent plasma	6	28.57	0	0	15	71.43	21

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Note: This survey question applied to the 21 IHS hospitals that reported treating COVID-19 patients.

Table 13: Future Supply Medications Used to Treat COVID-19

How confident are you that you will meet your needs over the next 15 days?	Not at all		Slightly confident		Confident		Very confident		Completely confident		Not applicable		No response		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Remdesivir	1	4.76	0	0	1	4.76	6	28.57	13	61.9	0	0	0	0	21
Dexamethasone	1	4.76	0	0	2	9.52	5	23.81	13	61.9	0	0	0	0	21
Convalescent plasma	0	0	0	0	1	4.76	2	9.52	3	14.29	14	66.67	1	4.76	21
Monoclonal antibodies	0	0	0	0	1	4.76	5	23.81	11	52.38	4	19.05	0	0	21

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Note: This survey question applied to the 21 IHS hospitals that reported treating COVID-19 patients.

Appendix I: Responses to GAO's Survey of IHS Hospitals

Table 14: Shortages of Medical Equipment

How many months during the pandemic did the hospital experience a shortage?	Average number of months	0		1-3		4 or more		Total responses
		Number	Percent	Number	Percent	Number	Percent	Number
High flow oxygen delivery equipment	2.3	9	42.86	7	33.33	5	23.81	21
Auxiliary supplies for medical equipment	1.8	12	57.14	6	28.57	3	14.29	21
Ventilators	1.5	14	66.67	3	14.29	4	19.05	21
Oximeters	0.7	14	66.67	6	28.57	1	4.76	21
Oxygen	0.2	19	90.48	2	9.52	0	0	21

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Note: This survey question applied to the 21 IHS hospitals that reported treating COVID-19 patients.

Table 15: Current Supply of Medical Equipment

Is the hospital currently able to meet its supply needs?	Yes		No		No response		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number
Oxygen	21	100	0	0	0	0	21
Auxiliary supplies for medical equipment	20	95.24	0	0	1	4.76	21
High flow oxygen delivery equipment	20	95.24	1	4.76	0	0	21
Oximeters	20	95.24	1	4.76	0	0	21
Ventilators	20	95.24	1	4.76	0	0	21

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Note: This survey question applied to the 21 IHS hospitals that reported treating COVID-19 patients.

Table 16: Future Supply of Medical Equipment

How confident are you that you will meet your needs over the next 15 days?	Not at all		Slightly confident	Confident	Very confident	Completely confident	Not applicable	No response	Total responses					
	Number	Percent	Number	Number	Number	Number	Number	Number	Number					
Ventilators	0	0	0	5	23.81	6	28.57	10	47.62	0	0	0	0	21

Appendix I: Responses to GAO's Survey of IHS Hospitals

How confident are you that you will meet your needs over the next 15 days?	Not at all		Slightly confident		Confident		Very confident		Completely confident		Not applicable		No response		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
High flow oxygen delivery equipment	1	4.76	0	0	2	9.52	5	23.81	13	61.9	0	0	0	0	21
Oximeters	0	0	1	4.76	2	9.52	6	28.57	12	57.14	0	0	0	0	21
Oxygen	0	0	1	4.76	2	9.52	5	23.81	13	61.9	0	0	0	0	21
Auxiliary supplies for medical equipment	0	0	0	0	2	9.52	7	33.33	10	47.62	1	4.76	1	4.76	21

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Note: This survey question applied to the 21 IHS hospitals that reported treating COVID-19 patients.

Table 17: Staffing Shortages

During how many months of the pandemic was staffing a challenge for each type of medical or support service?	Average number of months	0		1-3		4 or more		Total responses
		Number	Percent	Number	Percent	Number	Percent	
Hire and onboard staff to assist with COVID-19 response	6.9	5	20.83	5	20.83	14	58.33	24
Provide general care for patients with COVID-19	5.9	8	33.33	3	12.5	13	54.17	24
Provide specialty care for patients with COVID-19	5.7	11	45.83	3	12.5	10	41.67	24
Provide specialty care unrelated to COVID-19	5.5	10	41.67	2	8.33	12	50	24
Conduct contact tracing	5.1	8	33.33	6	25	10	41.67	24
Provide general care unrelated to COVID-19	5.1	9	37.5	5	20.83	10	41.67	24
Test patients for COVID-19	4.8	6	25	8	33.33	10	41.67	24
Perform administrative tasks related to COVID-19 response	3.8	11	45.83	5	20.83	8	33.33	24
Perform procurement and acquisition tasks related to COVID-19 response	3.8	14	58.33	3	12.5	7	29.17	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

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Table 18: Current Staffing Supply

Is the hospital currently able to meet its needs for each type of medical or support service?	Yes		No		Not applicable		Don't know		No response		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Perform administrative tasks related to COVID-19 response	20	83.33	4	16.67	0	0	0	0	0	0	24
Test patients for COVID-19	19	79.17	5	20.83	0	0	0	0	0	0	24
Provide general care for patients with COVID-19	19	79.17	5	20.83	0	0	0	0	0	0	24
Conduct contact tracing	19	79.17	3	12.5	1	4.17	0	0	1	4.17	24
Provide general care unrelated to COVID-19	18	75	6	25	0	0	0	0	0	0	24
Perform procurement and acquisition tasks related to COVID-19 response	18	75	5	20.83	0	0	1	4.17	0	0	24
Hire and onboard staff to assist with COVID-19 response	15	62.5	9	37.5	0	0	0	0	0	0	24
Provide specialty care unrelated to COVID-19	14	58.33	8	33.33	2	8.33	0	0	0	0	24
Provide specialty care for patients with COVID-19	10	41.67	7	29.17	7	29.17	0	0	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

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Table 19: Future Staffing Supply

How confident are you that you will meet your needs over the next 30 days?	Not at all		Slightly confident		Confident		Very confident		Completely confident		Not applicable		No response		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Test patients for COVID-19	3	12.5	2	8.33	5	20.83	3	12.5	11	45.83	0	0	0	0	24
Provide general care for patients with COVID-19	4	16.67	4	16.67	4	16.67	4	16.67	8	33.33	0	0	0	0	24
Provide specialty care for patients with COVID-19	5	20.83	2	8.33	3	12.5	0	0	8	33.33	6	25	0	0	24
Conduct contact tracing	2	8.33	3	12.5	5	20.83	3	12.5	9	37.5	1	4.17	1	4.17	24
Provide general care unrelated to COVID-19	5	20.83	2	8.33	4	16.67	4	16.67	9	37.5	0	0	0	0	24
Provide specialty care unrelated to COVID-19	5	20.83	2	8.33	5	20.83	2	8.33	7	29.17	2	8.33	1	4.17	24
Perform administrative tasks related to COVID-19 response	3	12.5	1	4.17	6	25	6	25	8	33.33	0	0	0	0	24
Hire and onboard staff to assist with COVID-19 response	5	20.83	5	20.83	5	20.83	2	8.33	7	29.17	0	0	0	0	24

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How confident are you that you will meet your needs over the next 30 days?	Not at all		Slightly confident		Confident		Very confident		Completely confident		Not applicable		No response		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Perform procurement and acquisition tasks related to COVID-19 response	2	8.33	4	16.67	4	16.67	4	16.67	10	41.67	0	0	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 20: Issues Contributing to Staffing Shortages

To what extent, if any, have each of the following issues contributed to staff shortages?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Preexisting provider shortage	4	16.67	3	12.5	7	29.17	5	20.83	5	20.83	24
Staff exposure to COVID-19	0	0	6	25	12	50	4	16.67	2	8.33	24
Staff illness due to COVID-19	0	0	9	37.5	10	41.67	3	12.5	2	8.33	24
Reassignment of staff at increased risk of severe illness	1	4.17	13	54.17	2	8.33	5	20.83	3	12.5	24
Limited ability to provide hazard pay	19	79.17	1	4.17	1	4.17	2	8.33	1	4.17	24
Lack of funds to hire contract staff	17	70.83	4	16.67	0	0	0	0	3	12.5	24
Staff unavailability due to need to care for family at home	3	12.5	8	33.33	9	37.5	3	12.5	1	4.17	24

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To what extent, if any, have each of the following issues contributed to staff shortages?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Staff experience burn-out – unable to work	2	8.33	10	41.67	8	33.33	2	8.33	2	8.33	24
Staff resignations	4	16.67	9	37.5	7	29.17	2	8.33	2	8.33	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 21: Strategies Used to Address Staffing Challenges

Which of the following strategies did your hospital use to meet staffing challenges due to the pandemic?	Number of hospitals	Percent of hospitals
Reassigning clinical staff to perform COVID-19 care	24	100
Reassigning non-clinical staff to perform non-clinical tasks (e.g., screening)	24	100
Training staff virtually in COVID-19 care	16	66.67
Obtaining temporary staff from Commissioned Corps	15	62.5
Obtaining temporary staff from non-governmental organizations	12	50
Assigning volunteers to perform appropriate tasks that free up hospital staff	11	45.83
Obtaining temporary staff from university partnerships or university volunteers	9	37.5
Easing or streamlining credentialing rule	7	29.17
Obtaining temporary staff from the Veterans Health Administration	6	25

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

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Table 22: Clarity and Sufficiency of IHS Guidance

To what extent has IHS provided clear and sufficient guidance for the following topics?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Not applicable		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Telehealth delivery	0	0	4	16.67	9	37.5	9	37.5	2	8.33	0	0	0	0	24
Infection control, including proper PPE use	0	0	4	16.67	5	20.83	11	45.83	4	16.67	0	0	0	0	24
COVID-19-specific health care	0	0	2	8.33	7	29.17	12	50	3	12.5	0	0	0	0	24
Contact tracing	1	4.17	5	20.83	7	29.17	7	29.17	2	8.33	1	4.17	1	4.17	24
Safe delivery of routine health services	1	4.17	4	16.67	5	20.83	11	45.83	3	12.5	0	0	0	0	24
Vaccine administration	1	4.17	1	4.17	3	12.5	7	29.17	12	50	0	0	0	0	24
Vaccine billing and coding	1	4.17	3	12.5	7	29.17	6	25	7	29.17	0	0	0	0	24
Other billing and coding	2	8.33	5	20.83	10	41.67	6	25	1	4.17	0	0	0	0	24
Personnel issues	2	8.33	6	25	10	41.67	5	20.83	1	4.17	0	0	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 23: Health Care Delivery Challenges

To what extent did the hospital experience the following challenges in delivering health care during the duration of the pandemic?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Lack of data to plan ahead for surges in your service area	12	50	5	20.83	6	25	1	4.17	0	0	0	0	24
Too few intensive care beds	7	29.17	7	29.17	5	20.83	4	16.67	1	4.17	0	0	24
Inability to isolate patients with confirmed or possible COVID-19 from those patients without COVID-19	7	29.17	8	33.33	7	29.17	1	4.17	1	4.17	0	0	24
Inability to monitor mildly ill COVID-19 patients or those who have been discharged at home	5	20.83	11	45.83	5	20.83	2	8.33	1	4.17	0	0	24

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To what extent did the hospital experience the following challenges in delivering health care during the duration of the pandemic?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Lack of support services (such as delivery of food, medication, and other goods) for COVID-19 patients isolating at home	11	45.83	8	33.33	2	8.33	1	4.17	1	4.17	1	4.17	24
Staffing shortages	0	0	6	25	7	29.17	6	25	5	20.83	0	0	24
Difficulty maintaining routine care and chronic disease management during the pandemic	1	4.17	3	12.5	9	37.5	7	29.17	4	16.67	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 24: Adjustments Hospitals Made to Care Delivery since March 1, 2020

At any time since March 1, 2020, did the hospital make any of the following adjustments to standard healthcare delivery?	Number of hospitals	Percent of hospitals
Provide COVID-19 testing off site (e.g., drive through testing)	23	95.83
Redirect non-COVID, non-urgent facility visits (e.g., drive through pharmacy, off-site lab)	22	91.67
Defer elective procedures	20	83.33
Restrict or discontinue nonemergency visits	19	79.17
Refer more patients to other facilities or providers than usual	17	70.83
Expand the number of beds to provide COVID-19 care	17	70.83

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At any time since March 1, 2020, did the hospital make any of the following adjustments to standard healthcare delivery?	Number of hospitals	Percent of hospitals
Support patients isolating at their homes through delivery of necessities (e.g., food, water)	10	41.67
Provide home visits to patients with COVID-19	9	37.5
Provide home visits for routine (non-COVID-19) care	8	33.33
Provide routine (non-COVID-19) care at alternative sites (e.g., schools)	7	29.17
Provide care for patients with COVID-19 at alternative sites (e.g., schools)	5	20.83

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 25: Adjustment that Provided the Most Improvement to Hospitals' Ability to Deliver Health Care

Which adjustment provided the most improvement to the hospital's ability to deliver health care?	Number of hospitals	Percent of hospitals
Provide COVID-19 testing off site (e.g., drive through testing)	6	25
Redirect non-COVID, non-urgent facility visits (e.g., drive through pharmacy, off-site lab)	5	20.83
Expand the number of beds to provide COVID-19 care	3	12.5
Restrict or discontinue nonemergency visits	3	12.5
Defer elective procedures	2	8.33
Expand telehealth service	2	8.33
Provide care for patients with COVID-19 at alternative sites (e.g., schools)	1	4.17
Provide home visits to patients with COVID-19	1	4.17
None	1	4.17

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 26: Barriers or Difficulties Hospitals Encountered when Transferring COVID-19 Patients to Non-IHS facilities

Which barriers or difficulties, if any, did you encounter when transferring COVID-19 patients to non-IHS facilities?	Number of hospitals	Percent of hospitals
Availability of ground transportation	19	79.17
Receiving hospitals within 100 miles had no available beds	18	75
Receiving hospitals lacked specialists or beds for higher-level cares	14	58.33
Availability of air transportation	13	54.17
State policies	1	4.17

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

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Table 27: Change in Number of Weekly Telehealth Visits between March 1, 2020 and March 1, 2021

Comparing the week of March 1, 2020, and March 1, 2021, please estimate the change in the number of weekly telehealth visits with IHS providers (including telephone, one-way radio, or audio-visual) experienced by the hospital.	Number of hospitals	Percent of hospitals
More than doubled	17	70.83
Increased, but did not double	3	12.5
About the same	2	8.33
No response	2	8.33
Total	24	100

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 28: Telehealth Barriers

To what extent where the following barriers to optimizing telehealth to provide care?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Not applicable		Total response
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Hospital lacked the necessary equipment (for example smartphones computers)	7	29.17	4	16.67	6	25	3	12.5	4	16.67	0	0	0	0	24
Hospital had insufficient broadband	10	41.67	6	25	2	8.33	1	4.17	5	20.83	0	0	0	0	24
Hospital was unable to train and on-board enough providers	11	45.83	5	20.83	2	8.33	1	4.17	4	16.67	0	0	1	4.17	24
Hospital lacked sufficient technology	9	37.5	5	20.83	3	12.5	1	4.17	5	20.83	1	4.17	0	0	24
Hospital had concerns about patient privacy and data security	12	50	4	16.67	3	12.5	1	4.17	4	16.67	0	0	0	0	24

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To what extent where the following barriers to optimizing telehealth to provide care?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Not applicable		Total response
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Hospital faced difficulties integrating systems (for example, scheduling, medical records, and billing)	11	45.83	8	33.33	0	0	2	8.33	3	12.5	0	0	0	0	24
Hospital was concerned about sufficient reimbursement	10	41.67	6	25	4	16.67	4	16.67	0	0	0	0	0	0	24
Hospital lacked space to conduct telehealth visits	10	41.67	6	25	1	4.17	3	12.5	4	16.67	0	0	0	0	24
Regulatory requirements for telehealth software	5	20.83	8	33.33	5	20.83	3	12.5	2	8.33	1	4.17	0	0	24
Difficulty scheduling telehealth appointments	9	37.5	5	20.83	7	29.17	2	8.33	1	4.17	0	0	0	0	24
Patients lacked the necessary equipment (for example, smartphones, computers)	0	0	2	8.33	7	29.17	6	25	7	29.17	2	8.33	0	0	24
Patients lacked sufficient internet access	0	0	4	16.67	3	12.5	7	29.17	8	33.33	2	8.33	0	0	24

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To what extent where the following barriers to optimizing telehealth to provide care?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Not applicable		Total response
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Patients were uncomfortable with the technology (for example, installing a specific app or logging in to a portal)	3	12.5	7	29.17	1	4.17	7	29.17	4	16.67	2	8.33	0	0	24
Patients were concerned about privacy and data security	9	37.5	7	29.17	2	8.33	3	12.5	1	4.17	1	4.17	1	4.17	24
Patients were concerned about the quality of care delivered through telehealth (for example, accurate diagnosis or treatment plans)	6	25	10	41.67	4	16.67	1	4.17	2	8.33	1	4.17	0	0	24
Providers were resistant to telehealth technology.	10	41.67	6	25	6	25	2	8.33	0	0	0	0	0	0	24
Providers were concerned about their ability to accurately diagnose or treat through telehealth.	5	20.83	11	45.83	5	20.83	3	12.5	0	0	0	0	0	0	24

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To what extent where the following barriers to optimizing telehealth to provide care?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Not applicable		Total response
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number
Interstate licensing requirements prevented the use of telehealth.	17	70.83	2	8.33	2	8.33	0	0	0	0	0	0	3	12.5	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 29: Hospitals' Vaccine Status

Has the hospital received and/or begun administering any COVID-19 vaccine(s)?		Total responses
Yes		Number
	Number	Percent
Yes	24	100
		24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 30: Vaccine Doses Administered

Doses administered	Moderna and Pfizer-BioNTech	Johnson & Johnson	Total
	Number	Number	Number
1st doses administered as of March 31, 2021	161,952	3,788	165,740
2nd doses administered as of March 31, 2021	126,392	N/A	126,392
Total doses administered as of March 31, 2021	288,344	3,788	292,132

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 31: Confidence Hospital will Have Sufficient Amount of Vaccine Related Items for the Next 30 days

How confident are you that the hospital will have a sufficient quantity of the following vaccine-related items to successfully handle and administer COVID-19 vaccines in the next 30 days?	Not at all		Slightly		Confident		Very		Completely		Not applicable		Total response
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Bandages	0	0	0	0	1	4.17	1	4.17	22	91.67	0	0	24
Needles	0	0	0	0	2	8.33	2	8.33	20	83.33	0	0	24
Syringes	0	0	1	4.17	1	4.17	3	12.5	19	79.17	0	0	24
Sharps containers	1	4.17	0	0	2	8.33	1	4.17	19	79.17	1	4.17	24
Alcohol prep pads	0	0	0	0	1	4.17	1	4.17	21	87.5	1	4.17	24
Gloves	0	0	0	0	4	16.67	1	4.17	18	75	1	4.17	24
Masks	0	0	0	0	1	4.17	2	8.33	20	83.33	1	4.17	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 32: Vaccine Administration Barriers

To what extent has the hospital encountered the following challenges or barriers in administering the COVID-19 vaccine?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Properly storing the vaccine	16	66.67	5	20.83	2	8.33	0	0	1	4.17	0	0	24
Staff to manage and administer vaccine	9	37.5	6	25	5	20.83	3	12.5	1	4.17	0	0	24
Space to administer vaccine	11	45.83	6	25	3	12.5	2	8.33	2	8.33	0	0	24
IT systems to track report administered doses	7	29.17	9	37.5	5	20.83	2	8.33	1	4.17	0	0	24
Hesitancy with population to receive vaccine	2	8.33	5	20.83	7	29.17	8	33.33	1	4.17	1	4.17	24

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To what extent has the hospital encountered the following challenges or barriers in administering the COVID-19 vaccine?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Challenges with ensuring second doses of the Moderna and Pfizer-BioNTech COVID-19 vaccines	8	33.33	12	50	3	12.5	0	0	1	4.17	0	0	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Table 33: Hospital Infrastructure Characteristics Impeding Hospitals' Ability to Treat COVID-19 Patients or Maintain Routine Care

To what extent did the following infrastructure characteristics impeded the hospital's ability to treat COVID-19 patients or maintain the provision of routine care?	Not at all		To a slight extent		To a moderate extent		To a great extent		To the fullest extent		Do not know		Total responses
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	
Space for patient care	4	16.67	3	12.5	5	20.83	6	25.00	6	25	0	0	24
Space for secure storage	3	12.5	6	25	5	20.83	4	16.67	6	25	0	0	24
Capacity for negative pressure	1	4.17	4	16.67	5	20.83	8	33.33	6	25	0	0	24
Floor plans	3	12.5	4	16.67	6	25.00	7	29.17	4	16.67	0	0	24
HVAC	4	16.67	7	29.17	3	12.50	6	25.00	4	16.67	0	0	24
Information technology	6	25	8	33.33	6	25.00	1	4.17	3	12.5	0	0	24
Electrical capacity	15	62.5	5	20.83	1	4.17	1	4.17	2	8.33	0	0	24
Oxygen delivery system	9	37.5	6	25	7	29.17	1	4.17	1	4.17	0	0	24
Water/sewer lines	15	62.5	5	20.83	2	8.33	1	4.17	0	0	1	4.17	24

Source: GAO survey of officials from 24 Indian Health Service (IHS) hospitals administered in April-May, 2021. | GAO-22-104360

Appendix II: GAO Contact and Staff Acknowledgements

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