



March 2023

COVID-19 IN NURSING HOMES

Experts Identified Actions Aimed at Improving Infection Prevention and Control

Accessible Version

GAO Highlights

Highlights of [GAO-23-105613](#), a report to congressional addressees

Why GAO Did This Study

Before the COVID-19 pandemic led to devastating consequences in nursing homes, infections were a leading cause of hospitalization and death among nursing home residents. As the nation moves forward, COVID-19 and other infectious diseases will continue to present a threat to these individuals. Proper infection prevention and control procedures, such as hand hygiene, will remain critical to ensuring resident safety.

The CARES Act includes a provision for GAO to monitor and report on the federal pandemic response. GAO was also asked to review federal oversight of nursing homes in light of the pandemic. This report: (1) describes actions experts identified that HHS should continue, enhance, or discontinue to improve infection prevention and control practices in nursing homes and (2) compares actions identified by experts with prior recommendations from GAO and others.

GAO convened a roundtable of 13 experts to discuss actions to improve infection prevention and control in nursing homes. GAO contracted with the National Academies of Sciences, Engineering, and Medicine to help identify experts representing a range of perspectives on nursing homes and infection prevention and control, including researchers and infectious disease specialists, nursing home staff, individuals with nursing home oversight and regulatory experience, as well as representatives for residents and their families. GAO also interviewed officials from CMS and the Centers for Disease Control and Prevention.

View [GAO-23-105613](#). For more information, contact John E. Dicken at (202) 512-7114 or dickenj@gao.gov.

March 2023

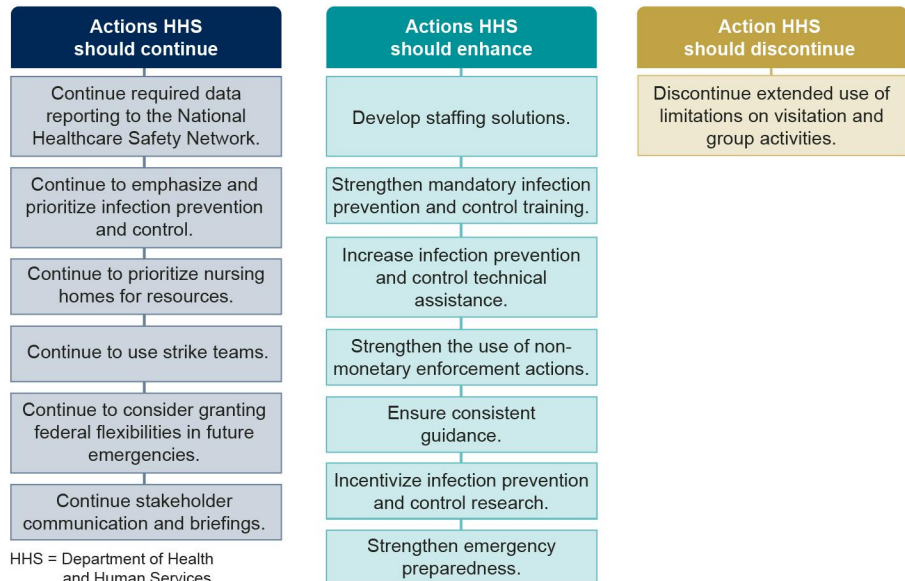
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Experts Identified Actions Aimed at Improving Infection Prevention and Control

What GAO Found

The Department of Health and Human Services (HHS), primarily through the Centers for Medicare & Medicaid Services (CMS) and the Centers for Disease Control and Prevention, has led the federal response to the COVID-19 pandemic in nursing homes.

The expert roundtable GAO convened identified actions aimed at improving infection prevention and control in nursing homes, including six actions HHS should continue, seven it should enhance, and one it should discontinue.



Source: GAO analysis of statements made by a roundtable of 13 experts. | GAO-23-105613

Note: The actions in this report are not listed in any specific rank or order, and their inclusion should not be interpreted as GAO endorsing any of them. Implementing any one action or a combination of actions listed in this report might require additional efforts to address program design or legal issues. Except in those areas directly related to GAO's prior recommendations, GAO did not assess how effective the actions listed in this report may be or the extent to which legislative changes and federal financial support would be needed to implement them.

Many of the actions identified by GAO's expert roundtable are consistent with prior recommendations made to HHS to improve infection prevention and control. Specifically, reports from CMS's Coronavirus Commission on Safety and Quality in Nursing Homes, and the National Academies' Committee on the Quality of Care in Nursing Homes, as well as prior GAO reports, have examined infection prevention and control challenges in nursing homes and made similar recommendations.

HHS's continued leadership in prioritizing infection prevention and control—in coordination with other federal, state, and private entities—is critical to better protect nursing home residents from the enduring risks of declining health and premature death posed by infections. The actions identified by GAO's expert roundtable may, for example, assist HHS in addressing prior recommendations from GAO and others, presenting new solutions, or expanding on current efforts.

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Abbreviations

CDC	Centers for Disease Control and Prevention
CMS	Centers for Medicare & Medicaid Services
HHS	Department of Health and Human Services

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March 20, 2023

Congressional Addressees

Long before COVID-19 emerged as a new and highly contagious respiratory disease with devastating consequences in nursing homes, infections—such as pneumonia—were a leading cause of hospitalization and death among nursing home residents.¹ Nursing homes and state and federal agencies have made progress in responding to the unprecedented challenges presented by the COVID-19 pandemic. However, as the nation moves forward, the ongoing risk of both COVID-19 and other infectious diseases will continue to present a threat to nursing home residents.² Proper infection prevention and control procedures, such as hand hygiene and using masks and other personal protective equipment to control the spread of infections, will remain critical to ensuring the safety of the nation’s more than one million nursing home residents and ensuring high quality of care.³

The Department of Health and Human Services (HHS), primarily through the Centers for Medicare & Medicaid Services (CMS) and the Centers for Disease Control and Prevention (CDC), has led the federal response to the COVID-19 pandemic in the nation’s more than 15,000 Medicare- and Medicaid-certified nursing homes. CMS is responsible for ensuring that nursing homes meet federal quality standards to be eligible to participate in the Medicare and Medicaid programs. These standards require, for example, that nursing homes establish and maintain an infection prevention and control program. To monitor compliance with these standards, CMS enters into agreements with state survey agencies in

¹Estimates are that up to 380,000 residents died from infections each year prior to COVID-19. Department of Health and Human Services, *The National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination* (Washington, D.C.: 2013).

²For example, the spread of drug-resistant infections and deaths increased by 15 percent in 2020, the first year of the pandemic. Prior to this, in 2017, deaths from drug-resistant infections decreased by 18 percent. See Centers for Disease Control and Prevention, *COVID-19: U.S. Impact on Antimicrobial Resistance, Special Report* (Atlanta, Georgia: 2022).

³According to the Centers for Disease Control and Prevention, infection prevention and control protects patients, residents, healthcare personnel and visitors by preventing healthcare-associated infections and limiting the spread of pathogens through the implementation of evidence-based interventions.

each state government and oversees the work the state survey agencies do. CDC issues guidance with recommendations for preventing and managing infectious diseases, operates infectious disease surveillance systems, and provides technical assistance through programs aimed at supporting and assessing infection prevention and control in nursing homes. According to agency officials, CMS and CDC coordinate infection prevention and control efforts through nursing home task force meetings, which took place daily earlier in the COVID-19 pandemic and currently take place about once a week, but more or less often as needed.

Since 2020, we have examined infection prevention and control and the federal response to COVID-19 in nursing homes in multiple studies. For a complete list of our previous work in this area, see the Related GAO Products page at the end of this report. In addition, others have also reported on nursing home challenges with infection prevention and control.⁴ The CARES Act includes a provision for us to monitor and report on the federal response to the COVID-19 pandemic.⁵ Further, you also asked us to examine federal oversight of infection prevention and control protocols and the adequacy of emergency preparedness standards for emerging infectious diseases in nursing homes, as well as CMS's response to the pandemic.

In this report, we

1. describe actions experts identified that HHS should continue, enhance, or discontinue to improve infection prevention and control practices in nursing homes, and
2. compare actions identified by experts with prior recommendations by GAO and others.

⁴See National Academies of Sciences, Engineering, and Medicine, Committee on the Quality of Care in Nursing Homes, *The National Imperative to Improve Nursing Home Quality: Honoring Our Commitment to Residents, Families, and Staff* (Washington, D.C.: The National Academies Press, 2022) and MITRE, Coronavirus Commission on Safety and Quality in Nursing Homes, *Commission Final Report* (McLean, Va.: The MITRE Corporation, 2020). This report was written for CMS under a government contract.

⁵Pub. L. No. 116-136, § 19010(b), 134 Stat. 281, 580 (2020). The American Rescue Plan Act of 2021 also includes a provision for us to conduct oversight of the COVID-19 response. Pub. L. No. 117-2, § 4002, 135 Stat. 4, 78. Throughout the pandemic, we regularly issued government-wide reports on the federal response to COVID-19. All government-wide reports are available on GAO's website at <https://www.gao.gov/coronavirus>.

To address our first objective, in April 2022, we convened a roundtable of 13 experts to discuss actions that HHS should continue, enhance, or discontinue to improve infection prevention and control practices in nursing homes.⁶ Specifically, we contracted with the National Academies of Sciences, Engineering, and Medicine (National Academies) to help us identify individuals with expertise in this topic area. The experts we selected represented a broad spectrum of views and a variety of professional and academic fields—such as researchers and infectious disease specialists, nursing home management and staff, individuals with nursing home oversight and regulatory experience at the federal and state levels, as well as representatives for nursing home residents and families.⁷ The 13 experts who participated in the roundtable, their professional disciplines, and their institutional affiliations at the time of our roundtable are listed in appendix I.

We then convened a roundtable where we asked experts to identify actions that HHS should continue, enhance, or discontinue to improve infection prevention and control practices in nursing homes and examples of each. The actions in this report are not listed in any specific rank or order, and their inclusion should not be interpreted as GAO endorsing any of them. Implementing any one action or a combination of actions listed in this report might require additional efforts to address program design or legal issues. Except in those areas directly related to GAO's prior recommendations, we did not assess how effective the actions listed in this report may be or the extent to which legislative changes and federal financial support would be needed to implement them. Following the roundtable, we sent the experts the actions and examples for review and comment and incorporated those comments into this report as appropriate.

In addition, we reviewed CMS regulations and policies and CDC guidance related to infection prevention and control in nursing homes, and interviewed CMS and CDC officials. We also reviewed selected research

⁶This roundtable was planned and convened with the assistance of the National Academies of Sciences, Engineering, and Medicine to help ensure that a breadth of expertise was brought to bear in its preparation; however, all final decisions regarding meeting substance and expert participation are the responsibility of GAO.

⁷The comments provided by the experts reflected their own views and not those of the organizations with which they are affiliated. Further, the experts' views may not correspond with those of others with similar backgrounds and expertise.

related to infection prevention and control in nursing homes to provide additional context.

To compare actions identified by experts with prior recommendations by GAO and others, we reviewed prior reports by GAO, CMS's Coronavirus Commission on Safety and Quality in Nursing Homes, and the National Academies' Committee on the Quality of Care in Nursing Homes.⁸

We conducted this performance audit from December 2021 to March 2023 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to 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

Federal law requires Medicare- and Medicaid-certified nursing homes to establish and maintain an infection prevention and control program designed to help prevent the development and transmission of communicable diseases and infections.⁹

Infections in Nursing Homes

Even before COVID-19, nursing home residents were at a high risk for several different types of infections, including respiratory infections, gastroenteritis, skin and soft tissue infections, and urinary tract infections. Nursing home residents can be particularly susceptible to infections because of their advanced age and higher risk of comorbidities.¹⁰ Further,

⁸The prior work we reviewed was: National Academies, *The National Imperative to Improve Nursing Home Quality*; MITRE, *Commission Final Report*; GAO, *COVID-19 in Nursing Homes: CMS Needs to Continue to Strengthen Oversight of Infection Prevention and Control*, [GAO-22-105133](#) (Sep. 14, 2022); *COVID-19: Sustained Federal Action is Crucial as Pandemic Enters Its Second Year*, [GAO-21-387](#) (Mar. 31, 2021); and *COVID-19: Federal Efforts Could Be Strengthened by Timely and Concerted Actions*, [GAO-20-701](#) (Sept. 21, 2020). Some of the experts in our roundtable also participated in the CMS and National Academies' efforts.

⁹42 U.S.C. §§ 1395i-3(d)(3)(A), 1396r(d)(3)(A); 42 C.F.R. § 483.80 (2021).

¹⁰Comorbidity refers to the presence of more than one distinct disease in a person at the same time.

nursing home residents are increasingly requiring more medically complex care and are therefore more susceptible to infection. Residents discharged from the hospital back to the nursing home can bring infections into the home. In addition, while nursing homes create important social opportunities for residents through communal dining and recreational spaces, these shared spaces can increase the transmission risk for infectious diseases, especially viruses causing respiratory or gastrointestinal outbreaks.

The COVID-19 Pandemic

COVID-19 originated in late 2019 as a new and highly contagious respiratory disease that quickly spread across the country and has led to high rates of infection and death in U.S. nursing home residents and staff. One of the first major COVID-19 outbreaks was reported in a Washington State nursing home in February 2020. In the weeks that followed, the Secretary of HHS declared a public health emergency for the U.S. and the World Health Organization characterized COVID-19 as a pandemic. Within 1 year, COVID-19 had reached nearly all of the nation's nursing homes.¹¹

The introduction of COVID-19 vaccines in December 2020 was a key turning point in the pandemic, with cases and deaths in nursing homes declining through the first part of 2021. However, cases and deaths began to increase again with the emergence of more transmissible virus variants that could infect and spread among people regardless of vaccination status—first, during the summer of 2021, coinciding with the emergence of the Delta variant, and again in the winter of 2022, coinciding with the emergence of the Omicron variant.¹² According to CDC, nursing home residents continue to be at a high risk for severe illness and death due to COVID-19; however, getting vaccinated and staying up-to-date with booster doses will help to prevent severe illness, hospitalization, and death. Further, public health officials continue to

¹¹GAO, *COVID-19 in Nursing Homes: Most Homes Had Multiple Outbreaks and Weeks of Sustained Transmission from May 2020 through January 2021*, [GAO-21-367](#) (Washington, D.C.: May 19, 2021).

¹²See GAO, *COVID-19 in Nursing Homes: Outbreak Duration Averaged 4 Weeks and Was Strongly Associated with Community Spread*, [GAO-23-104291](#) (Washington, D.C.: Dec. 15, 2022).

emphasize the need for nursing homes to remain vigilant in maintaining proper infection prevention and control practices.

Federal Oversight of Nursing Homes

Federal laws establish minimum requirements nursing homes must meet to participate in the Medicare and Medicaid programs, including standards for the quality of care.¹³ One such standard is that nursing homes establish and maintain an infection prevention and control program.¹⁴ In 2016, CMS finalized a comprehensive update to its nursing home standards.¹⁵ For example, CMS updated infection prevention and control requirements to include the requirement that nursing homes designate at least one infection preventionist to oversee the facility's infection prevention and control program, effective beginning November 2019.

The Infection Preventionist Role

The infection preventionist must work at least part time at the nursing home and have training in infection prevention and control. This individual is responsible for the home's program for preventing, identifying, reporting, investigating, and controlling infections and communicable diseases.

Source: 42 C.F.R. § 483.80(b) (2021). | GAO-23-105613

To monitor compliance with federal quality standards, CMS enters into agreements with state survey agencies in each state to assess whether nursing homes meet CMS's standards through both recurring comprehensive standard surveys and as-needed investigations for complaints from the public and facility-reported incidents. For a number of months during the first year of the pandemic, regular standard surveys of nursing homes and low priority investigations were temporarily suspended, replaced by focused infection control surveys. These focused infection control surveys evaluated compliance with CMS infection

¹³42 U.S.C. §§ 1395i-3, 1396r; 42 C.F.R. §§ 483.1—483.95 (2021). Federal statutes and their implementing regulations use the terms “skilled nursing facility” (Medicare) and “nursing facility” (Medicaid). For the purposes of this report, we use the term “nursing home” to refer to both skilled nursing facilities and nursing facilities.

¹⁴At a minimum, nursing homes must (1) have a system to prevent, identify, report, investigate, and control infections and communicable diseases for all residents, staff, volunteers, visitors, and others providing services in the home; (2) have written standards, policies, and procedures for their infection prevention and control program; (3) have antibiotic use protocols and a system to monitor antibiotic use; and (4) have a system for recording incidents identified under the home's infection prevention and control program and any corrective actions taken. 42 C.F.R. § 483.80(a)(1)-(4) (2021).

¹⁵Medicare and Medicaid Programs, *Reform of Requirements for Long-Term Care Facilities*, 81 Fed. Reg. 68,688 (Oct. 4, 2016). Phase 1 (effective November 28, 2016) implemented mostly minor modifications to the existing nursing home regulations; phase 2 (effective November 28, 2017) implemented new regulations and re-structured CMS's deficiency code system; and phase 3 (effective November 28, 2019) implemented the remaining requirements.

prevention and control policies.¹⁶ If a surveyor from a state survey agency determines that a nursing home violated a federal standard during a survey or investigation, the nursing home is cited for the deficiency.

For most cited deficiencies, nursing homes are required to submit a plan of correction that addresses how the home plans to correct the noncompliance and implement systemic change to ensure the deficient practice will not recur.¹⁷ In addition, when nursing homes are cited with deficiencies, federal enforcement actions can be implemented to compel homes to make corrections.¹⁸ In general, for deficiencies with a higher scope and severity, CMS may implement the enforcement action immediately.¹⁹ For other deficiencies with a lower scope and severity, the nursing home may be given an opportunity to correct the deficiencies, which, if corrected before the scheduled effective date, can result in the planned enforcement action not being implemented. We previously reported that in each year from 2013 through 2017, nearly all infection prevention and control deficiencies were classified by surveyors as not severe, meaning the surveyor determined that residents were not harmed and that implemented enforcement actions for these deficiencies were typically rare.²⁰

¹⁶Beginning in March 2020, CMS required state survey agencies to conduct focused infection control surveys, a new type of survey in response to the pandemic with a narrower scope than a standard survey. Beginning in August 2020, CMS indicated state survey agencies should resume standard surveys as soon as they have the resources to conduct the surveys but also required them to continue conducting focused infection control surveys. In November 2021, CMS required state survey agencies to perform focused infection control surveys for 20 percent of nursing homes in their state annually, prioritizing those facilities that report new COVID-19 cases and low vaccination rates, in addition to continuing to conduct standard surveys and investigations.

¹⁷The plan of correction serves as the nursing home's allegation of compliance. Depending on the severity of the deficiency cited, surveyors revisit the nursing home to ensure that the home actually implemented its plan and corrected the deficiency.

¹⁸CMS does not require enforcement actions be implemented for all deficiencies. Enforcement actions include, but are not limited to, directed in-service training, fines known as civil money penalties, denial of payment, and termination from the Medicare and Medicaid programs.

¹⁹The scope and severity of a deficiency is one of the factors that CMS may take into account when implementing enforcement actions. CMS may also consider a nursing home's prior compliance history, desired corrective action and long-term compliance, and the number and severity of all the nursing home's deficiencies.

²⁰See GAO, *Infection Control Deficiencies Were Widespread and Persistent in Nursing Homes Prior to the COVID-19 Pandemic*, [GAO-20-576R](#) (Washington, D.C.: May 20, 2020).

Experts Identified Actions HHS Should Continue, Enhance, or Discontinue to Improve Infection Prevention and Control

The expert roundtable we convened identified actions aimed at improving infection prevention and control in nursing homes, including six actions HHS should continue, seven it should enhance, and one it should discontinue.

Experts Identified Six Actions HHS Should Continue

The expert roundtable we convened identified six infection prevention and control actions that HHS should continue, focusing in particular on the actions taken by HHS during the COVID-19 pandemic. Experts said that, by carrying forward the HHS actions that worked well during the pandemic, nursing homes would be in a better position to prepare for the next infectious disease emergency. (See fig. 1 for each action and examples of how the action could be continued.)

Figure 1: Actions Experts Said the Department of Health and Human Services (HHS) Should Continue

Actions HHS should continue	Examples of how the action could be continued
Continue required data reporting to the National Healthcare Safety Network.^a	HHS could consider continuing required data reporting to the Centers for Disease Control and Prevention's (CDC) National Healthcare Safety Network. ^b
Continue to emphasize and prioritize infection prevention and control.	HHS could consider continuing to work with federal and state partners to promote successful infection prevention and control practices in nursing homes, as well as learning from and correcting infection prevention and control weaknesses in nursing homes identified during and prior to the pandemic.
Continue to prioritize nursing homes for resources.	HHS could consider continuing to coordinate with federal partners to designate nursing homes as high priority health care providers for access to personal protective equipment, testing, and vaccines during future infectious disease emergencies.
Continue to use strike teams.^c	HHS could consider continuing to work with federal and state partners to make strike teams available to help nursing homes during future infectious disease emergencies.
Continue to consider granting federal flexibilities in future emergencies.	HHS could consider evaluating the effectiveness of the flexibilities it provided to providers and state survey agencies during the COVID-19 pandemic and could consider whether to continue these during future infectious disease emergencies. ^d
Continue stakeholder communication and briefings.	HHS could consider creating standardized communication practices for future infectious disease emergencies based on lessons learned from the COVID-19 pandemic.

Source: GAO analysis of statements made by a roundtable of 13 experts. | GAO-23-105613

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^aCDC's National Healthcare Safety Network is a national infection surveillance system that collects data on a range of different healthcare-associated infections from different types of health care facilities, including nursing homes. In May 2020, CMS began requiring nursing homes to report data at least weekly through the National Healthcare Safety Network on the number of COVID-19 cases and deaths among residents and staff, access to personal protective equipment and testing supplies, and staff shortages, among other things.

^bExperts generally agreed that HHS could consider ways to leverage the surveillance data opportunities in the National Healthcare Safety Network while balancing the time commitment required by nursing home staff if additional reporting were required.

^cStrike teams are teams of infection prevention and public health professionals.

^dDuring the pandemic, CMS implemented regulatory flexibilities through its authority under section 1135 of the Social Security Act to temporarily waive or modify certain program requirements in certain emergencies. One expert noted that these flexibilities were too flexible and should be rolled back. Another expert noted that some of these waivers should be made permanent.

Continue required data reporting to the National Healthcare Safety Network. Experts said that HHS could consider continuing to require nursing homes to report data on COVID-19 to CDC’s National Healthcare Safety Network, noting it is helpful for understanding the effect of the pandemic and for providing information to consumers.²¹ Prior to the pandemic, nursing homes could report infections, like *C. difficile*, to the National Healthcare Safety Network, but reporting was voluntary. The reporting of infectious disease data to the National Healthcare Safety Network is consistent with reporting by other types of facilities, like hospitals, which must report data to qualify for reimbursement. Reporting these types of data has also been a national priority since the release of HHS’s *National Action Plan to Prevent Health Care-Associated Infections* in 2013.²² While experts generally agreed that required COVID-19 data reporting to the National Healthcare Safety Network should continue, with some experts saying it should be expanded to include other infectious diseases, the experts noted that HHS should balance the reporting requirements with the time commitment required by nursing home staff.²³

²¹The National Healthcare Safety Network is a national infection surveillance system administered by CDC that collects data on a range of different healthcare-associated infections from different types of health care facilities, including nursing homes. In May 2020, CMS began requiring nursing homes to report data at least weekly through the National Healthcare Safety Network on the number of COVID-19 cases and deaths among residents and staff, access to personal protective equipment and testing supplies, and staff shortages, among other things. Medicare and Medicaid Programs; *Additional Policy and Regulatory Revisions in Response to the COVID-19 Public Health Emergency*, 85 Fed. Reg. 27,550, 27,627 (May 8, 2020) (codified at 42 C.F.R. § 483.80(g)).

²²This plan is intended to coordinate and maximize the efficiency of healthcare-associated infection prevention efforts across the federal government. See Department of Health and Human Services, *The National Action Plan to Prevent Health Care-Associated Infections: Road Map to Elimination* (Washington, D.C.: 2013).

²³CMS officials noted that any changes to what nursing homes report to the National Healthcare Safety Network must occur through the notice and comment rulemaking process.

We discussed this action with HHS officials. Specifically, CMS officials said that they are continuing to evaluate the amount of data nursing homes are required to report to the National Healthcare Safety Network. CDC officials said the requirements evolved during the pandemic to include more data fields and told us the benefits of reporting this critical information outweighed the reporting burden it put on nursing homes. CMS and CDC have both taken steps to ease this burden. For example, according to CDC officials, early in 2022, CMS and CDC removed some required fields that were no longer pertinent. CMS also extended the requirement that nursing homes report data to the National Healthcare Safety Network through 2024, beyond the anticipated end of the public health emergency, in order to maintain this reporting.²⁴

Continue to emphasize and prioritize infection prevention and control. Experts said that HHS could consider continuing to work with federal and state partners to promote successful infection prevention and control practices in nursing homes, as well as learning from and correcting infection prevention and control weaknesses identified during and prior to the pandemic. With the onset of the COVID-19 pandemic, one expert said that people now pay more attention to infection prevention and control in nursing homes, and this expert would like to see this emphasis continued in the long-term. Another expert noted that the pandemic brought infection prevention and control to the forefront in nursing homes because “everybody’s talking about it.”

We discussed this action with HHS officials. Specifically, CDC officials said they are supportive of continuing to improve infection prevention and control efforts in nursing homes, noting that CDC has learned a lot during the pandemic about weaknesses in infection prevention and control in nursing homes and ways that nursing homes can improve.

Expert Perspectives on Prioritizing Nursing Homes for Resources

“Early on in the pandemic, nursing homes weren’t prioritized. They were getting supplies to hospitals, and they were not considering nursing homes. That did not come until later in the pandemic. And I believe from the very beginning that nursing homes systemically need to be prioritized.”

²⁴Medicare and Medicaid Programs; *COVID-19 Reporting Requirements for Long-Term Care Facilities*, 86 Fed. Reg. 62,240. (Nov. 9, 2021).

“Somewhere during the pandemic, we did prioritize nursing homes for vaccines, testing, personal protective equipment, and other resources. I would like to see that prioritization maintained.”

Source: Statements from GAO’s roundtable of 13 experts. | GAO-23-105613

Continue to prioritize nursing homes for resources. Experts said that HHS could consider continuing to coordinate with federal partners to designate nursing homes as high priority health care providers for access to personal protective equipment, testing, and vaccines during future infectious disease emergencies.²⁵

At the start of the pandemic, experts said that nursing homes faced challenges with shortages of personal protective equipment and testing supplies.²⁶ Beginning in the summer of 2020, the federal government began prioritizing nursing homes for these resources.²⁷ However, experts said it would have been helpful if nursing homes were prioritized at the outset of the pandemic. This was the case for the COVID-19 vaccines. As the initial vaccines received emergency use approval in December 2020, nursing home residents and staff were prioritized for receiving vaccinations, which experts said was very helpful to responding to the pandemic.²⁸

²⁵One article we reviewed said that nursing homes have residents that are among the most vulnerable to infection and related adverse events and should be a priority for federal and state governments in providing adequate resources, particularly in underserved areas, where health disparities make residents more susceptible. See J. Ouslander and D. Grabowski, “COVID-19 in Nursing Homes: Calming the Perfect Storm,” *Journal of the American Geriatrics Society*, vol. 68, no. 10 (2020), 2153-2162.

²⁶We and others have reported on challenges with lack of supplies during the pandemic needed to perform proper infection prevention and control. See [GAO-20-701](#) and B. McGarry et al., “Severe Staffing and Personal Protective Equipment Shortages Faced by Nursing Homes During the COVID-19 Pandemic,” *Health Affairs*, vol. 39, no. 10 (2020), 1812-1821.

²⁷From May through August 2020, the Federal Emergency Management Agency coordinated a two-shipment initiative to send a 14-day supply of personal protective equipment to all Medicare- and Medicaid-certified nursing homes. Federal Emergency Management Agency officials acknowledged some issues with the initial round of supplies sent to nursing homes and said that adjustments were made in subsequent rounds.

Beginning in July 2020, HHS began distributing antigen diagnostic tests and associated point-of-care testing instruments to nursing homes in COVID-19 hotspots across the country to help identify and prevent the spread of COVID-19 through rapid, on-site testing.

²⁸CDC’s Advisory Committee on Immunization Practices recommended prioritizing nursing home residents for vaccinations, in addition to health care personnel and other residents of long-term care facilities. The CDC Director then accepted the advisory committee’s recommendation for priority groups for the initial phase of the COVID-19 vaccination program.

We discussed this action with HHS officials. They did not have any comments.

Continue to use strike teams. Experts said that HHS could consider continuing to work with federal and state partners to make strike teams available to help nursing homes during future infectious disease emergencies.²⁹ Specifically, beginning in July 2020, HHS deployed federal strike teams of infection prevention and public health professionals from CDC, CMS, and other organizations to nursing homes facing challenges with infection control.³⁰ When describing a strike team, one expert said it was the first time they had seen an active multidisciplinary collaboration between the acute care health system and nursing homes. The involvement of acute care professionals was important, the expert told us, because they gave strike teams the expertise to help determine the needs of nursing homes experiencing outbreaks and the ability to connect them with those resources.

We discussed this action with HHS officials. Specifically, CDC officials said they are continuing to fund state-based strike teams in collaboration with CMS but noted that the funding for these teams will end 12 months after the conclusion of the public health emergency. CDC officials said that Congress would need to take action to extend the program for it to continue.

Continue to consider granting federal flexibilities in future emergencies. Experts said HHS could consider evaluating the effectiveness of the flexibilities it provided to providers and state survey agencies during the COVID-19 pandemic and could consider whether to continue these during future infectious disease emergencies. For example, CMS issued several temporary emergency blanket waivers to provide nursing homes with flexibility to respond to the COVID-19

²⁹Strike teams are teams of infection prevention and public health professionals. The American Rescue Plan Act of 2021 appropriated funds for strike teams to be deployed to nursing facilities to assist with clinical care, infection control, or staffing during, and for up to 1 year following, the COVID-19 emergency. Pub. L. No. 117-2, §§ 9402, 9818, 135 Stat. 4, 127, 218.

³⁰The strike teams identified challenges related to staffing, personal protective equipment supplies, COVID-19 testing, and infection prevention and control measure implementation. See L. Anderson et al., "Protecting Nursing Home Residents from COVID-19: Federal Strike Team Findings and Lessons Learned," *New England Journal of Medicine Catalyst* (June 28, 2021).

pandemic.³¹ Experts said that the waiver of certain training and certification requirements for certified nurse assistants, the waiver of the Medicare requirement for a 3-day prior hospitalization before coverage of a nursing home stay, and the waiver allowing for provider visits to be conducted via telehealth, were particularly helpful. One expert said that some of the waivers should be considered for future permanent regulatory change; however, we did not assess the extent to which additional legislative authority would be necessary for such permanent regulatory changes.³² Conversely, one expert noted that these waivers were too lenient and should be rolled back. CMS officials have reported the agency has continued to assess the need for the emergency blanket waivers throughout the pandemic and have ended some waivers as appropriate.³³

We discussed this action with HHS officials. Specifically, CMS officials said that the agency is developing a “playbook” of the types of flexibilities the agency would use again in a future pandemic. CMS has used emergency blanket waivers in the past for natural disasters like floods and fires but had not used these before in the context of a pandemic emergency and with such a long duration.

³¹Under section 1135 of the Social Security Act, HHS may temporarily waive or modify certain federal health care requirements when both a public health emergency and a disaster or emergency have been declared. 42 U.S.C. § 1320b-5. The President authorized HHS to issue waivers under section 1135 beginning in March 2020.

Blanket waivers apply automatically to all applicable providers and suppliers in the emergency area, which encompassed the entire United States in the case of the COVID-19 pandemic. Providers and suppliers do not need to apply individually or notify CMS that they are acting upon the waiver.

³²See Centers for Medicare & Medicaid Services, *COVID-19 Emergency Declaration Blanket Waivers for Health Care Providers* (Baltimore, Md.: March 13, 2020) and Centers for Medicare & Medicaid Services, *Update to COVID-19 Emergency Declaration Blanket Waivers for Specific Providers*, QSO-22-15-NH (Baltimore, Md.: April 7, 2022).

³³CMS’s *Pandemic Plan* outlining its policies for responding to a pandemic establishes that the agency will monitor the efficacy of the waivers CMS implements. We have previously reported that CMS officials said it would not be possible to measure the unique effects of waivers and flexibilities, given other changes affecting nursing home residents. However, the agency stated that certain waivers and flexibilities—among other factors—might have contributed to declines in patient safety metrics for long-term care residents. See GAO, *Medicare: CMS Needs to Address Risks Posed by Provider Enrollment Waivers and Flexibilities*, [GAO-23-105494](#) (Washington, D.C.: Dec. 19, 2022) and Department of Health and Human Services, Centers for Medicare & Medicaid Services, *Pandemic Plan*, V. 3.1. Public Release (updated Jan. 11, 2021).

Continue stakeholder communication and briefings. Experts said that HHS could consider creating standardized communication practices for future infectious disease emergencies based on lessons learned from the COVID-19 pandemic. One expert said that the regular outreach and communication during the pandemic was an important opportunity for nursing homes to, for example, receive updated COVID-19 case counts and understand changing guidance. Experts added that the question and answer period of these routine calls were helpful for nursing homes.

We discussed this action with HHS officials. Specifically, CMS officials noted that it was helpful to share information during the pandemic between CMS and nursing homes, and that these briefings are continuing. CMS officials also noted the importance of nursing homes sharing best practices and lessons learned with one another.

Experts Identified Seven Actions HHS Should Enhance

The expert roundtable we convened identified seven actions HHS should enhance that could improve infection prevention and control in nursing homes. Experts said that enhancing these actions through new agency investments or policies could improve routine and emergency infection prevention and control practices. (See fig. 2 for each action and examples of how the action could be enhanced.)

Figure 2: Actions Experts Said the Department of Health and Human Services (HHS) Should Enhance

Actions HHS should enhance	Examples of how the action could be enhanced
<p>Develop staffing solutions.</p>	<p>HHS could consider developing solutions to ensure adequate staffing to perform proper infection prevention and control in nursing homes, including by increasing the minimum staffing standards for the infection preventionist and other nursing home staff.</p>
<p>Strengthen mandatory infection prevention and control training.</p>	<p>HHS could consider strengthening mandatory infection prevention and control training requirements for all nursing home staff and surveyors in its federal regulations.^a</p> <p>HHS could consider developing additional infection prevention and control training resources for nursing home staff and surveyors.</p>
<p>Increase infection prevention and control technical assistance.</p>	<p>HHS could consider strengthening and broadening the quality improvement organization program.^b</p> <p>HHS could consider assisting states with conducting more in-person Infection Control Assessment and Response assessments in nursing homes and offering other types of technical assistance through state-based Healthcare Associated Infection programs.</p>
<p>Strengthen the use of non-monetary enforcement actions.</p>	<p>HHS could consider strengthening the use of non-monetary enforcement actions, like directed plans of correction, in order to help nursing homes improve their infection prevention and control practices.</p>
<p>Ensure consistent guidance.</p>	<p>HHS could consider working with federal and state partners to ensure the release of online guidance that is consistent across levels of government and updated to reflect the most current information.</p>
<p>Incentivize infection prevention and control research.</p>	<p>HHS could consider incentivizing demonstration projects in nursing homes to evaluate and test effective interventions to improve infection prevention and control in the nursing home setting.</p> <p>HHS could consider working with academic groups and public health colleagues to conduct infection prevention and control research in nursing homes.</p>
<p>Strengthen emergency preparedness.</p>	<p>HHS could consider better ensuring that nursing homes adhere to requirements that they develop and refine their emergency preparedness plans to include the potential for an infectious disease emergency, and ensure they are regularly updated.</p> <p>HHS could consider better ensuring that nursing homes adhere to requirements that they coordinate with local, state, and regional partners to plan for assistance during emergencies.</p>

Source: GAO analysis of statements made by a roundtable of 13 experts. | GAO-23-105613

Note: The actions in this report are not listed in any specific rank or order, and their inclusion should not be interpreted as GAO endorsing any of them. Implementing any one action or a combination of actions listed in this report might require additional efforts to address program design or legal issues. Except in those areas directly related to GAO’s prior recommendations, we did not assess how effective the actions listed in this report may be or the extent to which legislative changes and federal financial support would be needed to implement them. For the examples of how the action can be enhanced, experts said that specific details on the implementation approach are important and input from relevant stakeholders should be considered.

According to HHS officials, two of the actions—increasing infection prevention and control technical assistance and ensuring consistent guidance—were already underway and therefore should be considered actions HHS should continue.

^aOne expert noted that more state collaboration is needed when determining mandatory infection prevention and control training requirements.

Expert Perspective on Staffing in Nursing Homes

“I don’t think I’m in a single conversation where people don’t prioritize staffing as probably the number one issue.”

Source: Statement from GAO’s roundtable of 13 experts. | GAO-23-105613

^bOne expert said that there is a need to strengthen and encourage state-based assistance programs to increase infection prevention and control technical assistance. Another expert said that infection prevention and control technical assistance should be evaluated for its effectiveness.

Develop staffing solutions. Experts told us that HHS could consider developing solutions to ensure adequate staffing to perform proper infection prevention and control in nursing homes, including increasing the minimum staffing standards for the infection preventionist and other nursing home staff.

Experts consistently described the need to improve staffing as the highest priority issue in nursing homes, noting several long-term and ongoing staffing challenges including shortages and high turnover. Experts said that inadequate staffing can make it difficult for nursing homes to adhere to proper infection prevention and control practices and can have effects beyond infection prevention and control to other aspects of quality of care.³⁴ For example, numerous studies have demonstrated a relationship between nursing home staffing and quality, as shown through a 2001 CMS study that identified minimum nurse-to-resident staffing levels required to ensure quality care and avoid poor outcomes.³⁵ Nursing homes are required to employ an infection preventionist, who must work at the nursing home at least part-time, and generally must employ a registered nurse at least 8 consecutive hours a day, 7 days a week.³⁶ In February 2022, the Administration announced that CMS will conduct a new research study to determine the level and type of staffing needed to ensure safe and quality care. Experts were supportive of CMS’s efforts to examine minimum staffing requirements.

However, the experts emphasized that additional staffing solutions are needed in the nursing home sector to ensure there are enough staff available for nursing homes to meet any new federal standards. For example, experts told us that nursing homes need to create more incentives for improving staff recruitment, retention, and compensation,

³⁴For example, a 2021 study found that staff turnover was positively associated with the probability of a nursing home receiving an infection control citation. See L. Loomer et al., “Association between Nursing Home Staff Turnover and Infection Control Citation,” *Health Services Research* (2021).

³⁵See Centers for Medicare & Medicaid Services, *Report to Congress: Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes Phase II Final Report* (Baltimore, Md.: 2001).

³⁶42 C.F.R. § 483.80(b) (2021). See also 42 U.S.C. §§ 1395i-3(b)(4)(C)(i), 1396r(b)(4)(C)(i).

noting that low wages and few benefits mean that nursing home staff sometimes struggle to make ends meet and have to work multiple jobs.

For the role of the infection preventionist, experts said that they often do not have adequate time to perform their responsibilities because the role is often shared with the Director of Nursing. Experts specified that it should be a dedicated position with enough time to perform needed duties. Some experts said that the position should be full-time while others said that full-time equivalence should depend on the number of beds in the nursing home.

We discussed this action with HHS officials. Specifically, CMS officials said that they have taken action where they can, such as publicly posting data on staffing measures and staff turnover to encourage nursing homes to retain staff and evaluating the minimum standards for nursing home staffing. CMS officials said they plan to issue a proposal based on this evaluation in the spring of 2023. CDC officials were supportive of this action and noted that increased resources and funding would need to be allocated by facilities and agencies in this area. CMS officials said that, for the role of the infection preventionist, their regulations already indicate that infection preventionists must work in this role at least part-time to implement an effective infection prevention and control program, but noted that the infection preventionist could work more than that according to the needs of the home. CMS officials said they expect nursing homes to know how much time an infection preventionist needs to work in order to implement an effective infection prevention and control program.³⁷

Expert Perspective on Infection Prevention and Control Training in Nursing Homes

“Certified nurse assistants [those trained to help nurses by providing non-medical care] are the largest employee group, by far, in skilled nursing...[and] they’re only regulated in long-term care to have one hour of infection control [training] annually.”

Source: Statement from GAO’s roundtable of 13 experts. | GAO-23-105613

Strengthen mandatory infection prevention and control training.

Experts said that HHS could consider strengthening mandatory infection prevention and control training requirements in its federal regulations for all nursing home staff positions and for surveyors conducting nursing home inspections. Experts also said that HHS could consider developing additional infection prevention and control training resources for nursing home staff and surveyors. Experts described challenges with nursing home staff and surveyors lacking adequate infection prevention and

³⁷Specifically, CMS officials noted that nursing homes are required to conduct at least an annual facility assessment, which considers resident needs and staff ability to provide care. See 42 C.F.R. § 483.70(e) (2021).

control training and variable training requirements for certain nursing home staff.³⁸

Experts said that all types of nursing home staff—including those not providing direct care such as housekeeping staff—lacked proficiency in infection prevention and control practices. These practices include proper hand hygiene and the consistent and appropriate use of personal protective equipment.³⁹ For example, one expert noted that, prior to the pandemic, consistent hand hygiene compliance in long-term care settings was generally low.⁴⁰ Experts noted that the federal regulations that describe required nursing home staff training, including for the infection preventionist, need to be enhanced. Experts also discussed the need to increase training for nursing home surveyors, noting that some surveyors do not know the basics of infection prevention.

We discussed this action with HHS officials. Specifically, CMS officials noted that federal regulations require nursing homes to train all new and

³⁸For example, experts said that the infection preventionist has responsibilities that are distinct from a physician or nurse and require specialized training. One expert said that CDC's free, online infection preventionist training course was a good starting point, but that additional training is needed. One study found that nursing homes that received infection prevention and control deficiencies were more likely to have infection preventionists with less experience and training and were less likely to provide financial resources for continuing education in infection control. See C. Herzig et al., "Infection Prevention and Control Programs in United States Nursing Homes: Results of a National Survey," *Journal of the American Medical Directors Association*, vol. 17, no. 1, (2016), 85-88.

CMS requirements specify that nursing homes must develop, implement, and maintain an effective training program for all new and existing staff, including contract staff and volunteers. Nursing homes must determine the amount and types of training necessary for their staff based on individual home needs. Training topics are required to include infection control, among other things. See 42 C.F.R. § 483.95 (2021).

³⁹We and others have also found that nursing homes have faced persistent challenges with infection prevention and control. See, for example [GAO-20-576R](#) and [GAO-22-105133](#).

⁴⁰One study found that compliance with hand washing by nurse aides was likely less than optimal, citing barriers to hand washing such as time constraints and lack of materials. This study found that about 57 percent of nurse aides comply with hand washing when caring for residents most of the time, and about 22 percent of nurse aides always comply. See N. Castle et al., "Hand Hygiene Practices Reported By Nurse Aides in Nursing Homes," *Journal of Applied Gerontology*, vol. 35, no. 3, 267-85 (2016).

One expert noted that more state collaboration is needed when determining mandatory infection prevention and control training requirements.

existing nursing home staff—including temporary contract staff—on infection prevention and control practices. CMS officials said that state surveyors are also required to be trained in infection prevention and control practices.⁴¹ However, CMS officials also said that infection prevention and control deficiencies are the most commonly cited deficiency in nursing homes, indicating that nursing homes may not be correctly implementing infection prevention and control practices learned during trainings.

CMS officials described training and resources they have made available to nursing homes, noting that they collaborated with CDC to provide a publicly available 19-hour course that meets federal training requirements.⁴² CDC officials said the agency is working with public health, clinical, academic and federal partners, including nursing home organizations and CMS, to develop and disseminate innovative and quality infection control training and education for frontline healthcare workers.⁴³ CMS and CDC officials said they would like to continue to collaborate on additional nursing home training resources; however, CMS officials noted the development of additional resources would require additional funding.

⁴¹CMS officials noted that all facilities are required to include as part of their infection prevention and control program mandatory training that includes the written standards, policies, and procedures for the program. See 42 C.F.R. § 483.95(e) (2021). CMS officials also pointed to a requirement that each facility develop, implement, and maintain an effective training program for all new and existing staff; individuals providing services under a contractual arrangement; and volunteers, consistent with their expected roles. Each facility must determine the amount and types of training necessary based on a facility assessment that occurs as necessary, but at least annually. See 42 C.F.R. § 483.70(e) (2021).

⁴²CMS officials stated the agency has also published a training on antibiotic stewardship to support compliance with requirements for an effective antibiotic stewardship program. CMS officials also noted the agency provides additional resources for nursing homes, such as the nursing home Infection Control Worksheet, developed in collaboration with CDC, and other resources for nursing homes on antibiotic stewardship.

⁴³According to CDC officials, this work is being conducted under the name Project Firstline. Agency officials described Project Firstline as a collaboration of health care, academic, and public health partners focused on stopping the spread of infectious diseases in healthcare, including COVID-19, respiratory syncytial virus, and infections caused by resistant bacteria.

Expert Perspectives on Technical Assistance in Nursing Homes

"[Nursing homes] need...onsite supports in a meaningful way that work with facilities one-on-one to improve systems, correct deficient practices, and connect to hard-to-find services."

"The Infection Control Assessment and Response assessment...was actually very helpful [and it would make] a difference in oversight...because there would be fewer deficiencies cited..."

Source: Statements from GAO's roundtable of 13 experts. | GAO-23-105613

Increase infection prevention and control technical assistance.

Experts said that HHS could consider strengthening and broadening the quality improvement organization program—organizations that help nursing homes and other types of providers improve quality of care. Experts said that HHS could also consider assisting states with conducting more in-person Infection Control Assessment and Response assessments—a tool developed by CDC to direct infection prevention and control technical assistance efforts in nursing homes—and offering other types of technical assistance through state-based Healthcare Associated Infection programs.⁴⁴

Specifically, experts said that HHS could consider strengthening and broadening the quality improvement organization program by ensuring consistency between the organizations and ensuring that quality improvement organization program staff have adequate infection prevention and control expertise.⁴⁵ As part of its pandemic response, in June 2020, CMS deployed a network of these organizations to provide technical assistance, such as training staff on proper personal protective equipment usage and cohorting (grouping) residents, to approximately 3,000 low performing nursing homes with a history of infection control challenges.⁴⁶ However, experts said that these organizations were active in some states and not others, and that their level of effectiveness varied. For example, one expert said that a nursing home reached out to their

⁴⁴Since 2002, CMS has required quality improvement organizations to work with nursing homes to improve quality of care. CMS contracts with a quality improvement organization for each state. We have previously reported that CMS needs to improve targeting and evaluation of assistance to quality improvement organizations. See GAO, *Nursing Homes: Federal Actions Needed to Improve Targeting and Evaluation of Assistance by Quality Improvement Organizations*, [GAO-07-373](#) (Washington, D.C.: May 29, 2007).

CDC funds state-level programs to detect, prevent, contain, and respond to healthcare associated infections in health care facilities, including nursing homes. CDC developed a nursing home-specific Infection Control Assessment and Response tool to systematically assess a nursing home's infection prevention and control practices and guide quality improvement by addressing identified gaps.

⁴⁵One expert said that there is a need to strengthen and encourage state-based assistance programs to increase infection prevention and control technical assistance. Another expert said that infection prevention and control technical assistance should be evaluated for its effectiveness.

⁴⁶Centers for Medicare & Medicaid Services, *COVID-19 Survey Activities, CARES Act Funding, Enhanced Enforcement for Infection Control Deficiencies, and Quality Improvement Activities in Nursing Homes*, QSO-20-31-ALL (Baltimore, Md.: June 1, 2020) (revised January 4, 2021).

state's quality improvement organization in the middle of its first outbreak but was unable to obtain onsite assistance. Another expert noted that some quality improvement organizations do not have staff with appropriate expertise and background to work with nursing homes while others do.

Experts praised the use of HHS's Infection Control Assessment and Response tool during the pandemic, which assisted health departments and nursing homes to assess infection prevention and control programs and practices. This tool was developed by CDC in 2016 to guide quality improvement activities in nursing homes and was later adapted to include COVID-19-specific practices.⁴⁷ Experts said this tool could be more widely used on-site in nursing homes. For example, one expert described the assessment as incredibly helpful, noting that the assessor spent the entire day with the nursing home staff, identified gaps in their infection control program, and showed staff where time and attention needed to be prioritized.

We discussed this action with HHS officials. Specifically, CDC officials described the agency's investment in state-based Healthcare Associated Infection prevention programs. Specifically, from January 2020 to July 2021, these CDC-funded infection prevention programs conducted over 8,000 online Infection Control Assessment and Response tool assessments and over 13,000 remote assessments, a majority of which were conducted in nursing homes and other long-term care facilities. The state programs also provided over 58,000 consultations by email, phone, or in the field. CMS officials said that this action should be categorized as continued rather than enhanced, citing the infection prevention and control resources it already provides to nursing home staff. They noted that CMS evaluations show that quality improvement organizations are beneficial to nursing homes. However, any expansion of the program would require additional funding.

Strengthen the use of non-monetary enforcement actions. Experts told us that non-monetary enforcement actions, like directed plans of correction, are an underused tool in HHS's enforcement toolbox, and that HHS could consider strengthening their use to help nursing homes improve infection prevention and control practices.

⁴⁷The Infection Control Assessment and Response tool was adapted and used by health departments and other partners to perform remote video-assisted or onsite assessment of COVID-19-specific infection prevention and control practices.

Specifically, experts discussed how the enforcement actions most often used for infection prevention and control deficiencies, such as civil money penalties, are intended to encourage homes to swiftly fix deficient practices and are not intended to assist nursing homes with finding and correcting the root cause. Experts acknowledged that the surveyor's role is to enforce regulation and ensure a minimum level of quality and not to provide technical assistance and feedback when deficient practices are identified.⁴⁸ However, experts noted that this can be challenging because, after a surveyor cites a deficiency, a nursing home may not know how to correct the deficient infection prevention and control practice without assistance. One expert said that surveyors come in and say "this is wrong...but they can't give any feedback." Experts said that surveyors could more frequently use directed plans of correction—a non-monetary type of enforcement action that describes the actions the nursing home is required to take to correct the deficient practices.⁴⁹

We discussed this action with HHS officials. Specifically, CMS officials said that, in June 2020, they launched an enforcement program for infection prevention and control noncompliance, which included imposing directed plans of correction.⁵⁰

Ensure consistent guidance. Experts said that HHS could consider working with federal and state partners to ensure the release of online guidance that is consistent across levels of government and updated to reflect the most current information. Especially during the beginning of the pandemic, nursing homes struggled to implement conflicting and rapidly changing infection prevention and control requirements and guidance issued by different levels of government. One expert said that the federal government would release guidance, then the state department of health

⁴⁸According to the procedural guidelines for nursing home surveys, the role of the surveyor is to identify care and services that are not consistent with the regulatory requirements and not to ascertain the root causes of deficient practices. See 42 C.F.R. § 488.110 (2021).

⁴⁹A directed plan of correction is a plan developed by CMS or the state survey agency that describes the actions the nursing homes are required to take in order to correct the deficiencies and specifies the date by which the deficiencies must be corrected.

⁵⁰This guidance states that, due to the heightened threat to resident health and safety for even low-level isolated infection prevention and control citations, CMS is expanding enforcement to improve accountability and sustained compliance with these crucial practices. In addition, CMS is also providing directed plans of correction, including root cause analysis, to facilitate lasting systemic changes within facilities to drive sustained compliance. Centers for Medicare & Medicaid Services, QSO-20-31-ALL (Baltimore, Md.: June 1, 2020).

and the local board of health would release different guidance, which made compliance difficult. Another expert also noted the importance of having guidance align across federal partners. In another example, nursing homes and surveyors would sometimes be following old guidance that was no longer up-to-date, since guidance was rapidly changing in the face of the novel virus. One expert said that state surveyors were sometimes confused about whether to survey nursing homes against the older guidance or the newer guidance.

We discussed this action with HHS officials. Specifically, CDC and CMS officials said they worked closely to align their guidance, and they felt their guidance was aligned during the pandemic. However, CDC officials acknowledged that the agencies fulfill different roles, which may have contributed to some disconnect.⁵¹ They also noted that CDC works with state-level stakeholders to align recommendations, but that they cannot control what rules states choose to enact. CMS officials said this action should be categorized as continued rather than enhanced, noting that CMS currently meets with CDC weekly. CMS officials noted that, earlier in the pandemic, they met daily to ensure federal coordination on the COVID-19 pandemic.

Incentivize infection prevention and control research. Experts said that HHS could consider incentivizing infection prevention and control research in nursing homes, such as demonstration projects to evaluate and test effective interventions to improve infection prevention and control in the nursing home setting. Experts also said that HHS could consider working with academic groups and public health colleagues to conduct infection prevention and control research in nursing homes.

Experts described a lack of research specific to nursing homes and identified infection prevention and control topic areas where more research is needed, such as research on hand hygiene compliance and evaluating the quality improvement organization program. One expert said that nursing home infection prevention and control policies are largely based on research from the acute care setting. Another expert said that the acute care setting is different from the nursing home setting in terms of resources, the population served, and staffing, which makes applying infection prevention and control guidance from acute care

⁵¹CMS is the federal oversight agency responsible for setting requirements and monitoring nursing homes' compliance with these requirements. CDC provides guidance, recommendations, and technical assistance to support infection prevention and control in nursing homes.

settings to the nursing home setting difficult. For example, nursing homes not only provide health care but also serve as a person’s living space and home. This can create infection prevention and control challenges not faced in acute care settings when cleaning and disinfecting resident rooms.

We discussed this action with HHS officials. Specifically, CDC officials were supportive of the experts’ identified action and noted that increased funding and resources would need to be allocated by facilities and agencies in these areas.

Expert Perspective on Emergency Preparedness Plans in Nursing Homes

“You can go into any of the 15,000 nursing homes in the country...and some of them will be able to show you their emergency plan and some of them won’t...they won’t know where it is, or what’s in it.”

Source: Statement from GAO’s roundtable of 13 experts. | GAO-23-105613

Strengthen emergency preparedness. Experts said that HHS could consider better ensuring that nursing homes adhere to requirements that they develop and refine their emergency preparedness plans to include the potential for an infectious disease emergency and ensure they are regularly updated. Experts also said that HHS could consider better ensuring that nursing homes adhere to requirements that they coordinate with local, state, and regional partners to plan for assistance during emergencies.

Experts said that some nursing homes lack emergency preparedness plans, which CMS requires nursing homes to develop, maintain, and regularly update.⁵² One expert highlighted the usefulness of a specific nursing home’s emergency preparedness plan during the pandemic. For instance, this nursing home used a communication system—which they had never used before the pandemic—to call staff, families, and residents daily to provide updates on the number of COVID-19 cases in the home, and the planned meals and activities for the day. The expert described this emergency plan as “very effective” and noted that the nursing home likely would not have had this plan in place without the CMS requirement to do so.

Experts also said that nursing homes should better engage with local, state, and regional partners to plan for assistance during emergencies, as

⁵²According to CMS’s State Operation Manual, Appendix Z, nursing homes are required to develop and maintain an emergency preparedness plan that includes planning for emerging infectious disease outbreaks, and that must be reviewed and updated at least annually. See Centers for Medicare & Medicaid Services, *State Operations Manual, Appendix Z – Emergency Preparedness for All Provider and Certified Supplier Types Interpretive Guidance* (Baltimore, Md., April 16, 2021).

required by CMS.⁵³ One expert said that nursing homes should partner with these agencies to better allocate and distribute personal protective equipment and testing supplies. This expert also said that nursing homes should leverage these partnerships for emergency medical services to provide transportation for residents between nursing homes and hospitals. Another expert said that nursing homes should connect with regional partners, such as public health departments and academic centers, to leverage research and support.

We discussed this action with HHS officials. Specifically, CMS officials said their guidance in the State Operations Manual outlines requirements for developing emergency preparedness plans and coordinating with local and regional partners.⁵⁴

Experts Identified One Action HHS Should Discontinue

The expert roundtable we convened identified one action—the extended use of limitations on visitation and group activities—that HHS should discontinue. (See fig. 3 for the action and examples of how the action could be discontinued.)

⁵³According to CMS's State Operation Manual, Appendix Z, nursing homes are required to include a process to coordinate with federal, state, tribal, regional, and local emergency preparedness systems. See Centers for Medicare & Medicaid Services, *State Operations Manual, Appendix Z – Emergency Preparedness for All Provider and Certified Supplier Types Interpretive Guidance* (Baltimore, Md.: April 16, 2021).

⁵⁴See Centers for Medicare & Medicaid Services, *State Operations Manual, Appendix Z – Emergency Preparedness for All Provider and Certified Supplier Types Interpretive Guidance*.

Figure 3: Action Experts Said the Department of Health and Human Services (HHS) Should Discontinue

Action HHS should discontinue	Examples of how the action could be discontinued
<p>Discontinue extended use of limitations on visitation and group activities.</p>	<p>HHS could consider developing evidence-based standards for when, if at all, to implement any limitations on visitation and group activities in nursing homes during infectious disease emergencies and for how long.</p> <p>HHS could consider issuing guidance that outlines tools nursing homes can use to enable visitation during an outbreak.</p>

Source: GAO analysis of statements made by a roundtable of 13 experts. | GAO-23-105613

Note: The actions in this report are not listed in any specific rank or order, and their inclusion should not be interpreted as GAO endorsing any of them. Implementing any one action or a combination of actions listed in this report might require additional efforts to address program design or legal issues. Except in those areas directly related to GAO’s prior recommendations, we did not assess how effective the actions listed in this report may be or the extent to which legislative changes and federal financial support would be needed to implement them.

In March 2020, to limit the transmission of COVID-19 in nursing homes, CMS temporarily restricted visitation from all visitors and non-essential health care personnel (except for certain compassionate care situations) and suspended group activities.⁵⁵ In November 2021, CMS lifted these restrictions.⁵⁶ Prior to the COVID-19 pandemic, nursing homes would occasionally place temporary limitations on visitation and group activities during an infectious disease outbreak as a tool to help stop transmission. According to CDC officials, until the pandemic, these restrictions had not been universally used across all nursing homes and for such an extended period of time.

⁵⁵These restrictions included ombudsmen, which are advocates for nursing home residents. These restrictions were later clarified to allow certain conditions for visitation, such as to allow residents access to long-term care ombudsmen. See Centers for Medicare & Medicaid Services, *Guidance for Infection Control and Prevention of Coronavirus Disease 2019 (COVID-19) in Nursing Homes*, QSO-20-14-NH (Baltimore, Md.: Mar. 13, 2020 revision) and Centers for Medicare & Medicaid Services, *Nursing Home Five Star Quality Rating System Updates, Nursing Home Staff Counts, Frequently Asked Questions, and Access to Ombudsman*, QSO-20-28-NH (Baltimore, Md.: April 24, 2020 and Jul. 9, 2020 revision). After the initial restrictions, CMS made changes to its visitation guidance multiple times during the pandemic to allow increased visitation and group activities. See Centers for Medicare & Medicaid Services, *Nursing Home Visitation – COVID-19*, QSO-20-39-NH (Sept. 17, 2020), revised March 10, 2021, April 27, 2021, and Nov. 12, 2021.

⁵⁶Centers for Medicare & Medicaid Services, QSO-20-39-NH (Nov. 12, 2021 revision).

Experts said that the extended period during which there were limitations on visitation and group activities was detrimental to the physical and mental health of residents.⁵⁷ They also said it was ineffective at keeping COVID-19 from entering the nursing homes.⁵⁸ Experts said that HHS could consider developing evidence-based standards for when, if at all, to implement any limitations on visitation and group activities in future infectious disease emergencies and for how long. HHS could also consider issuing guidance that outlines tools nursing homes can use to enable visitation during an outbreak. One expert said there are several tools available that can help enable visitation and group activities, including personal protective equipment and testing. Another expert noted that designating one family caregiver per resident who can be allowed to enter the facility to provide essential care during a period of visitation restrictions is one approach that worked well in their state.

We discussed discontinuing this action with HHS officials. Specifically, CMS officials said that, when the decision to place limitations on visitation and group dining was first implemented, it was early in the pandemic when the nation was facing a novel virus with significant uncertainty about how it was spreading so rapidly. CMS officials said that they could not restrict staff from entering nursing homes because they were needed to care for residents, but they could decrease visitation. CMS officials said they saw the unintended consequences in terms of resident psychological well-being and decided to ease those restrictions. They said what they learned will serve them in future infectious disease emergencies and that, in the future, they envision providing guidance that allows for visitation to occur while also mitigating the risk of infectious disease transmission.

CDC officials said it is possible that short-term restrictions may be necessary in the future to control the spread of an infectious disease, but they will be carefully balanced with resident well-being. CDC officials noted that isolation precautions are a valuable tool for limiting transmission but agreed the use of limitations on visitation and group activities for a prolonged duration can potentially cause more harm to residents than good. CDC officials said it would be helpful to have

⁵⁷This is consistent with our prior work, which found resident mental and physical health declined during the pandemic. [GAO-22-105133](#).

⁵⁸This is consistent with our prior work, which found that nursing homes reported that most COVID-19 outbreaks began with a staff case, indicating that staff are likely to bring the virus into the nursing home especially during times of high transmission in the community. [GAO-23-104291](#).

guidance with a limit on the duration of these restrictions during an outbreak or guidance outlining how to ease restrictions.

Many Actions Experts Identified Are Consistent with Prior Recommendations Made to Improve Infection Prevention and Control

Many of the actions identified by the expert roundtable we convened are consistent with prior recommendations made to HHS to improve infection prevention and control practices in nursing homes. Specifically, reports from CMS's Coronavirus Commission on Safety and Quality in Nursing Homes and the National Academies' Committee on the Quality of Care in Nursing Homes, as well as prior GAO reports, have examined infection prevention and control challenges in nursing homes and made many similar recommendations to the actions identified by our expert roundtable. See figure 4 for a comparison of the actions identified by our expert roundtable with prior recommendations by GAO and others.

Figure 4: Comparison of GAO Expert Roundtable Actions on Infection Prevention and Control with Prior Recommendations by GAO and Others

	GAO expert roundtable action	The Centers for Medicare & Medicaid Services (CMS) Commission recommendation ^a	National Academies of Sciences, Engineering, and Medicine Committee recommendation ^b	Prior GAO report recommendation ^c
Actions experts said the Department of Health and Human Services (HHS) should continue	Continue required data reporting to the National Healthcare Safety Network. ^d	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Continue to emphasize and prioritize infection prevention and control.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Continue to prioritize nursing homes for resources.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Continue to use strike teams. ^e	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Continue to consider granting federal flexibilities in future emergencies.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Continue stakeholder communication and briefings.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Actions experts said HHS should enhance	Develop staffing solutions.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Strengthen mandatory infection prevention and control training.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Increase infection prevention and control technical assistance.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Strengthen the use of non-monetary enforcement actions.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Ensure consistent guidance.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Incentivize infection prevention and control research.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Strengthen emergency preparedness.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Action experts said HHS should discontinue	Discontinue extended use of limitations on visitation and group activities.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Related recommendation No related recommendations

Source: GAO analysis. | GAO-23-105613

^aMITRE, Coronavirus Commission on Safety and Quality in Nursing Homes, *Commission Final Report* (McLean, Va.: The MITRE Corporation, 2020). This report was written for CMS under a government contract.

^bNational Academies of Sciences, Engineering, and Medicine, Committee on the Quality of Care in Nursing Homes, *The National Imperative to Improve Nursing Home Quality: Honoring Our*

Commitment to Residents, Families, and Staff (Washington, D.C.: The National Academies Press, 2022).

^cGAO, *COVID-19 in Nursing Homes: CMS Needs to Continue to Strengthen Oversight of Infection Prevention and Control*, [GAO-22-105133](#) (Sep. 14, 2022); *COVID-19: Sustained Federal Action is Crucial as Pandemic Enters Its Second Year*, [GAO-21-387](#) (Mar. 31, 2021); and *COVID-19: Federal Efforts Could Be Strengthened by Timely and Concerted Actions*, [GAO-20-701](#) (Sept. 21, 2020).

^dThe Centers for Disease Control and Prevention's National Healthcare Safety Network is a national infection surveillance system that collects data on a range of different healthcare-associated infections from different types of health care facilities, including nursing homes. In May 2020, CMS began requiring nursing homes to report data at least weekly through the National Healthcare Safety Network on the number of COVID-19 cases and deaths among residents and staff, access to personal protective equipment and testing supplies, and staff shortages, among other things.

^eStrike teams are teams of infection prevention and public health professionals.

Details and recommendations from CMS's Coronavirus Commission on Safety and Quality in Nursing Homes, the National Academies' Committee on the Quality of Care in Nursing Homes, and prior GAO reports are listed below. The work by CMS and the National Academies was not specifically focused on the topic of infection prevention and control, in contrast to some of GAO's prior work and the work of the expert roundtable. However, those projects did identify infection prevention and control-related recommendations in addition to recommendations that are broader in scope to address systemic issues.⁵⁹

- **CMS's Coronavirus Commission on Safety and Quality in Nursing Homes.** In June 2020, CMS announced the establishment of the 25-member Coronavirus Commission on Safety and Quality in Nursing Homes. The Commission was tasked with addressing safety and quality in nursing homes in relation to the public health emergency by soliciting lessons learned from the early days of the pandemic and recommendations to improve infection prevention and control, safety procedures, and quality of life for residents. According to the Commission's report, which was released by CMS in September 2020, the spread of COVID-19 in nursing homes has exposed and exacerbated long-standing, underlying challenges, including a patchwork approach to infection prevention and control. The Commission's report included 27 recommendations organized under 10 themes.⁶⁰

⁵⁹There was also discussion of systemic issues during the expert roundtable we convened. For example, roundtable experts raised concerns about whether nursing homes had sufficient resources available to invest in improvements to things like the physical plant.

⁶⁰See MITRE, *Commission Final Report*.

As of May 2021, CMS developed an internal tracking document that notes the status of each of the Commission's recommendations, the responsible agency for each recommendation, and the planned actions for CMS-related recommendations. This document is to be updated quarterly. This was done in response to GAO's November 2020 recommendation that CMS quickly develop a plan that further details how it intends to respond to and implement, as appropriate, the Commission's recommendations.⁶¹

- **The National Academies' Committee on the Quality of Care in Nursing Homes.** In April 2022, the National Academies' 17-member Committee on the Quality of Care in Nursing Homes published its first comprehensive examination of nursing home quality since 1986, noting that, while many improvements have been made since then, the COVID-19 pandemic brought new attention to long-standing problems, including infection prevention and control.⁶² Specifically, the report notes that the pandemic revealed a significant lack of nursing home staff expertise in infection prevention and control practices necessary to limit the introduction and spread of COVID-19 within nursing homes. For example, efforts to isolate those infected or quarantine those exposed were often delayed or inadequate and sometimes non-existent, resulting in rapid spread of the virus. The report identified seven broad goals related to quality of care with 35 related recommendations. CMS officials said they are tracking the recommendations from the National Academies that they believe are within the scope of their authority.
- **GAO's prior work.** In reports issued in September 2020, March 2021, and September 2022, GAO made recommendations related to bolstering COVID-19 data reporting to the National Healthcare Safety Network and to strengthening the role of the infection preventionist.⁶³ GAO made a total of six recommendations to HHS, and the agency agreed or partially agreed with two recommendations and did not state whether it agreed or disagreed with the remaining four

⁶¹As noted, this recommendation was implemented by CMS as of May 2021. GAO, *COVID-19: Urgent Actions Needed to Better Ensure an Effective Federal Response* (Nursing Homes Enclosure), [GAO-21-191](#) (Washington, D.C.: Nov. 30, 2020).

⁶²National Academies, *The National Imperative to Improve Nursing Home Quality*.

⁶³See [GAO-22-105133](#), [GAO-21-387](#), and [GAO-20-701](#).

recommendations.⁶⁴ As of September 2022, the agency has taken steps to implement two of these recommendations.

The COVID-19 pandemic has had devastating consequences in nursing homes and has drawn attention to the critical importance of robust infection prevention and control practices to address not only the threat of COVID-19, but other infectious diseases. A growing body of work shows that COVID-19 exposed and worsened long-standing infection prevention and control problems in nursing homes and indicates there are opportunities for HHS to evaluate and prioritize efforts to bolster infection prevention and control. HHS's continued leadership in prioritizing infection prevention and control—in coordination with other federal, state, and private entities—is critical to better protect nursing home residents from the enduring risks of declining health and premature death posed by infections. Our roundtable experts offered several potential actions to address these long-standing problems that are consistent with prior recommendations made by GAO, the National Academies' Committee on the Quality of Care in Nursing Homes, and CMS's Coronavirus Commission on Safety and Quality in Nursing Homes. These actions may, for example, assist HHS in addressing prior recommendations from GAO and others, presenting new solutions, or expanding on current efforts.

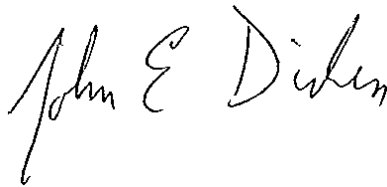
⁶⁴In September 2020, GAO made a recommendation that HHS develop a strategy to capture more complete data on COVID-19 cases and deaths in nursing homes retroactively back to January 1, 2020, and clarify the extent to which nursing homes have reported data before May 2020. HHS partially agreed with this recommendation. As of September 2022, HHS had not implemented this recommendation. In March 2021, GAO made two recommendations that HHS collect data specific to COVID-19 vaccination rates in nursing homes and make these data publicly available, and that HHS require nursing homes to offer COVID-19 vaccinations to residents and staff and design and implement associated quality measures. HHS neither agreed or disagreed with these two recommendations. As of September 2022, HHS had implemented the recommendation related to collecting data and partially implemented the other recommendation. In September 2022, GAO made three recommendations, including that HHS establish minimum infection preventionist training standards. HHS agreed with one of these recommendations and did not agree or disagree with the other two recommendations. As of September 2022, HHS had not implemented these recommendations. See [GAO-20-701](#), [GAO-21-387](#), and [GAO-22-105133](#).

Agency Comments

We provided a draft of this report to HHS for review and comment. HHS, specifically CDC, provided us with technical comments, which we incorporated as appropriate.

We are sending copies of this report to the appropriate congressional committees, the Secretary of HHS, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

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



John E. Dicken
Director, Health Care

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The Honorable Susan Collins
Vice Chair
Committee on Appropriations
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The Honorable Michael F. Bennet
United States Senate

Appendix I: Expert Roundtable on Infection Prevention and Control in Nursing Homes

To address our first objective, we convened a 2-day roundtable on April 27 and 28, 2022, of 13 experts to discuss actions that the Department of Health and Human Services (HHS) should continue, enhance, or discontinue to improve infection prevention and control practices in nursing homes. We contracted with the National Academies of Sciences, Engineering, and Medicine (National Academies) to help us identify potential experts.¹ The National Academies identified potential experts based on the experts' experience in the following areas:

- academic researchers and infectious disease specialists with knowledge of nursing home infection prevention and control oversight,
- nursing home management and staff,
- individuals with oversight and regulatory experience, and
- representatives for residents and their families.

From the list of potential experts from the National Academies, we selected the experts based on factors such as (1) type and depth of experience, (2) recognition in the professional community, (3) published work and its relevance to our research objectives, (4) professional affiliations, and (5) present and past employment history. The team also considered other factors like geographic representation and diversity, where possible. Some experts had experience or qualifications in multiple areas of interest.

To help identify any potential biases or conflicts of interest, before finalizing the participation of experts, we asked each expert who participated in the roundtable to disclose whether they had investments, sources of earned income, organizational positions, relationships, or other circumstances that could affect, or could be viewed to affect, an expert's

¹The expert roundtable was planned and convened with the assistance of the National Academies to help ensure that a breadth of expertise was brought to bear in its preparation; however, all final decisions regarding meeting substance and expert participation are the responsibility of GAO.

Appendix I: Expert Roundtable on Infection Prevention and Control in Nursing Homes

statements during the roundtable. None of the experts reported potential conflicts that would affect their ability to participate in the roundtable. (See table 1).

Table 1: List of Expert Participants in GAO’s Roundtable on Infection Prevention and Control in Nursing Homes, Held April 27 and 28, 2022

Expert	Discipline	Institutional affiliation at time of roundtable
Alice Bonner, Ph.D., R.N., FAAN	Nurse Practitioner, Former CMS Director of the Division of Nursing Homes	Johns Hopkins University School of Nursing; Institute for Healthcare Improvement
Kathy Bradley	Resident and Family Advocate, Director of Nonprofit Advocacy Organization serving people across the country	Our Mother’s Voice
Scott Brunner	State Survey Agency Official	Kansas Department for Aging and Disability Services
Deb Patterson Burdsall, Ph.D., R.N.-B.C., CIC, LTC-CIP, FAPIC	Long-Term Care Infection Preventionist, Registered Nurse	Hektoen Institute of Medicine. Grantee, Illinois Department of Public Health
Sumathi Devarajan, M.D.	Medical Director of Geriatrics; Attending Physician at a Nursing Home	Department of Family Medicine, Oregon Health Science University; Kindred Hospice; Friendship Holgate Center (nursing home)
Morgan Katz, M.D., M.H.S.	Physician Specializing in Infectious Disease, State Nursing Home Strike Team Member	Johns Hopkins University
Beverly L. Laubert, M.A.	Former State Ombudsman	The Administration for Community Living
Nicky Martin, M.P.A., LNHA, QCP	Technical Assistance Program, Clinical Instructor, Quality Improvement Organization Program Team Leader	Quality Improvement Program for Missouri, University of Missouri Sinclair School of Nursing
Lori Porter, CNA	Certified Nursing Assistant, Director of National CNA Organization	National Association of Health Care Assistants (NAHCA)
Janet Snipes, LNHA	Nursing Home Administration (Executive Director)	Holly Heights Nursing Center (nursing home)
David G. Stevenson, Ph.D.	Professor of Health Policy	Vanderbilt University School of Medicine, Geriatric Research, Education, and Clinical Center (GRECC), VA Tennessee Valley Healthcare System
Patricia W. Stone, Ph.D., R.N., FAAN, CIC, FAPIC	Professor of Health Policy; Nurse Scientist, Nurse Practitioner, and Infection Preventionist	Columbia University School of Nursing
Dallas Taylor, B.S.N., M.P.H., R.N.	Nursing Home Administration (Director of Nursing); Registered Nurse	The Village of St. Edward (nursing home)

Legend: M.D. = doctor of medicine; Ph.D. = doctor of philosophy; M.A. = master of arts; B.S.N. = bachelor of science in nursing; FAAN = fellow of the American Academy of Nursing; R.N. = registered nurse; R.N.-B.C. = registered nurse board certified; CIC = certified in infection control; LTC-CIP= long-term care certification in infection prevention; M.H.S. = master of health science; M.P.A. = master of public administration; M.P.H. = master of public health; LNHA = licensed nursing home administrator; QCP = quality assurance and performance improvement certified professional; CNA = certified nursing assistant; FAPIC = Fellow of the Association for Professionals in Infection Control and Epidemiology.

**Appendix I: Expert Roundtable on Infection
Prevention and Control in Nursing Homes**

Source: GAO. | GAO-23-105613

Note: The comments provided by the experts reflected their own views and not those of the organizations with which they are affiliated. Further, the experts' views may not correspond with those of others with similar backgrounds and expertise. To help identify any potential biases or conflicts of interest, before finalizing the participation of experts, we asked each expert who participated in the roundtable to disclose whether they had investments, sources of earned income, organizational positions, relationships, or other circumstances that could affect, or could be viewed to affect, their statements during the roundtable. None of the experts reported potential conflicts that would affect their ability to participate in the roundtable.

The 2-day expert roundtable discussions were recorded and transcribed to ensure that we accurately captured experts' statements. We then reviewed the transcripts and identified the actions that experts said HHS should continue, enhance, or discontinue to improve infection prevention and control practices in nursing homes and examples of each.² Following the roundtable, we sent the experts the actions and examples for review and comment and incorporated those comments into our report as appropriate.

²The comments provided by the experts reflected their own views and not those of the organizations with which they are affiliated. Further, the experts' views may not correspond with those of others with similar backgrounds and expertise.

The actions in this report are not listed in any specific rank or order, and their inclusion should not be interpreted as GAO endorsing any of them. Implementing any one action or a combination of actions listed in this report might require additional efforts to address program design or legal issues. Except in those areas directly related to GAO's prior recommendations, we did not assess how effective the actions listed in this report may be or the extent to which legislative changes and federal financial support would be needed to implement them.

Appendix II: GAO Contact and Staff Acknowledgments

GAO Contact

John E. Dicken, (202) 512-7114 or dickenj@gao.gov

Staff Acknowledgments

In addition to the contact named above, key contributors to this report were Karin Wallestad (Assistant Director), Sarah-Lynn McGrath (Analyst-in-Charge), and Elaina Stephenson. Also contributing were Elise Pressma, Kathryn Richter, Isabella Guyott, Meghann Lewis, Laurie Pachter, Patricia Powell, Roxanna Sun, Walter Vance, and Jennifer Whitworth.

Related GAO Products on COVID-19 in Nursing Homes

COVID-19 in Nursing Homes: Outbreak Duration Averaged 4 Weeks and Was Strongly Associated with Community Spread. [GAO-23-104291](#). Washington, D.C.: Dec. 15, 2022.

COVID-19 in Nursing Homes: CMS Needs to Continue to Strengthen Oversight of Infection Prevention and Control. [GAO-22-105133](#). Washington, D.C.: Sept. 14, 2022.

Health Care Capsule: Improving Nursing Home Quality and Information. [GAO-22-105422](#). Washington, D.C.: Jan. 14, 2022.

COVID-19: Continued Attention Needed to Enhance Federal Preparedness, Response, Service Delivery, and Program Integrity (Nursing Homes Enclosure). [GAO-21-551](#). Washington, D.C.: July 19, 2021.

COVID-19 in Nursing Homes: Most Homes Had Multiple Outbreaks and Weeks of Sustained Transmission from May 2020 through January 2021. [GAO-21-367](#). Washington, D.C.: May 19, 2021.

COVID-19: Sustained Federal Action is Crucial as Pandemic Enters its Second Year (Nursing Homes Enclosure). [GAO-21-387](#). Washington, D.C.: March 31, 2021.

COVID-19 in Nursing Homes: HHS Has Taken Steps in Response to Pandemic, but Several GAO Recommendations Have Not Been Implemented. [GAO-21-402T](#). Washington, D.C.: March 17, 2021.

COVID-19: Critical Vaccine Distribution, Supply Chain, Program Integrity, and Other Challenges Require Focused Federal Attention (Nursing Homes Enclosure). [GAO-21-265](#). Washington, D.C.: January 28, 2021.

COVID-19: Urgent Actions Needed to Better Ensure an Effective Federal Response (Nursing Homes Enclosure). [GAO-21-191](#). Washington, D.C.: November 30, 2020.

Related GAO Products on COVID-19 in Nursing Homes

COVID-19: Federal Efforts Could Be Strengthened by Timely and Concerted Actions (Nursing Homes Enclosure). [GAO-20-701](#). Washington, D.C.: September 21, 2020.

COVID-19: Opportunities to Improve Federal Response and Recovery Efforts (Nursing Homes Enclosure). [GAO-20-625](#). Washington, D.C.: June 25, 2020.

Infection Control Deficiencies Were Widespread and Persistent in Nursing Homes Prior to COVID-19 Pandemic. [GAO-20-576R](#). Washington, D.C.: May 20, 2020.

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