U.S. GOVERNMENT ACCOUNTABILITY OFFICE

**441 G St. N.W.
Washington, DC 20548**

May 20, 2020

The Honorable Ron Wyden
Ranking Member
Committee on Finance
United States Senate

Infection Control Deficiencies Were Widespread and Persistent in Nursing Homes Prior to COVID-19 Pandemic

Dear Senator Wyden:

The Coronavirus Disease 2019 (COVID-19) originated in late 2019 as a new and highly contagious respiratory disease causing severe illness and death, particularly among the elderly.[1] Because of this, the health and safety of the nation's 1.4 million nursing home residents—who are often in frail health and living in close proximity to one another—has been a particular concern. One of the first major outbreaks reported in the U.S. occurred in a Washington State nursing home in February 2020. Since then, there has been a rapid increase in the number of COVID-19 cases in U.S. nursing homes, with estimates of more than 25,000 deaths as of May 2020.[2]

The Centers for Medicare & Medicaid Services (CMS), an agency within the Department of Health and Human Services (HHS), is responsible for ensuring approximately 15,500 nursing homes nationwide meet federal quality standards 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.[3] To monitor compliance with these standards, CMS enters into agreements with agencies in each state government—known as state survey agencies—and oversees the work the state survey agencies do.

In general, CMS requires that state survey agencies conduct standard surveys, or evaluations, approximately once each year of the state's nursing homes and investigate both complaints

[1]Patel, A., Jernigan, D.B. "Initial Public Health Response and Interim Clinical Guidance for the 2019 Novel Coronavirus Outbreak—United States, December 31, 2019–February 4, 2020." *CDC Morbidity and Mortality Weekly Report*. vol. 69: 140–146 (2020).

[2]For examples, see Kaiser Family Foundation, "State Reports of Long-Term Care Facility Cases and Deaths Related to COVID-19 (as of May 7, 2020)," May 7, 2020. Also, see K. Yourish, K.K.R. Lai, D. Ivory, and M. Smith, "One-Third of All U.S. Coronavirus Deaths are Nursing Home Residents or Workers," *New York Times*, May 11, 2020.

[3]At 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) (2019).

from the public and facility-reported incidents regarding resident care or safety.[4] If a surveyor from a state survey agency determines that a nursing home violated a federal standard during a survey or investigation, a nursing home receives a deficiency code specific to that standard, known as a deficiency. Surveyors then classify cited deficiencies into categories according to scope (the number of residents potentially affected) and severity (the potential for or occurrence of harm to residents).[5]

When nursing homes are cited with deficiencies, federal enforcement actions can be imposed to encourage homes to make corrections.[6] In general, for deficiencies with a higher scope and severity, CMS may impose certain enforcement actions so that the enforcement actions are implemented—that is, put into effect—immediately.[7] 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 imposed enforcement action not being implemented. Nursing homes are required to submit a plan of correction that addresses how the home would correct the noncompliance and implement systemic change to ensure the deficient practice would not recur.[8]

In light of the COVID-19 pandemic, you asked us to examine CMS's 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. This report describes the prevalence of infection prevention and control deficiencies in nursing homes prior to the COVID-19 pandemic. Future GAO reports will examine more broadly infection prevention and control and emergency preparedness in nursing homes and CMS's response to the COVID-19 pandemic, including recent actions CMS has announced.[9]

To describe the prevalence of infection prevention and control deficiencies in nursing homes prior to the COVID-19 pandemic, we reviewed CMS guidance and analyzed data on nursing

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[4]By law, every nursing home receiving Medicare or Medicaid payment must undergo a standard survey during which teams of state surveyors conduct a comprehensive on-site evaluation of compliance with federal quality standards. These surveys must occur at least once every 15 months, with a statewide average interval for surveys not to exceed 12 months.

[5]CMS categorizes deficiencies into one of three scope categories based on whether the incident was: (1) an isolated occurrence; (2) a part of a pattern of behavior; or (3) a widespread behavior. CMS categorizes deficiencies into one of four severity categories based on whether the deficiency constitutes: (1) no actual harm with a potential for minimal harm; (2) no actual harm with a potential for more than minimal harm, but not immediate jeopardy; (3) actual harm that is not immediate jeopardy; or (4) immediate jeopardy to resident health or safety.

[6]CMS guidance does not require enforcement actions be imposed 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.

[7]The scope and severity of a deficiency is one of the factors that CMS may take into account when imposing 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.

[8]The 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.

[9]See, for example, CMS, Center for Clinical Standards and Quality/Quality Safety & Oversight Group, *Upcoming Requirements for Notification of Confirmed COVID-19 (or COVID-19 Persons under Investigation) among Residents and Staff in Nursing Homes*, QSO-20-26-NH (April 19, 2020).

home deficiencies cited by surveyors in all 50 states and Washington, D.C., from 2013 through 2017 provided by CMS for a prior GAO report, with a particular focus on deficiencies related to infection prevention and control.[10] Using these data, we analyzed the deficiency code used by state surveyors when a nursing home fails to meet CMS's requirements for infection prevention and control.[11] Also using CMS's data, we determined the most common type of deficiency among nursing homes, the number of nursing homes that had infection prevention and control deficiencies, as well as the number of homes with repeated infection prevention and control deficiencies over the 5-year period from 2013 through 2017 and the characteristics of those homes.

We also used CMS's data to identify the enforcement actions associated with these deficiencies. CMS's data also included narratives written by state surveyors describing the deficiencies they identified. We reviewed examples of these narratives written by state surveyors to illustrate infection prevention and control deficiencies with varying severity levels. In addition to the 2013 through 2017 data we obtained from CMS for a prior report, we also examined the number of nursing homes that had infection prevention and control deficiencies in 2018 and 2019 by analyzing publicly available data from CMS's Nursing Home Compare website.[12] We assessed the reliability of each of the datasets used in our analyses by checking for missing values and obvious errors and reviewing relevant CMS documents and other documentation from our prior report that used these data. We determined the data were sufficiently reliable for the purposes of this reporting objective.

This report focuses on the prevalence of infection prevention and control deficiencies in nursing homes in the years prior to the COVID-19 pandemic. It does not examine CMS's actions to

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[10]GAO, *Nursing Homes: Improved Oversight Needed to Better Protect Residents from Abuse*, GAO-19-433, (Washington, D.C.: June 13, 2019). This report is our most recent analysis of CMS nursing home deficiency data, part of a broader GAO body of work examining weaknesses in CMS oversight of nursing homes. For brief summaries of GAO reports on the health and welfare of the elderly in nursing homes and other settings since 2015, including any recommendations, see *Nursing Homes: Better Oversight Needed to Protect Residents from Abuse*, GAO-20-259T, (Washington, D.C.: Nov. 14, 2019).

For the purposes of this report, we include Washington, D.C., when we refer to data for states.

[11]CMS's State Operations Manual provides guidance to state surveyors of nursing homes to determine compliance with federal quality standards, including those related to federal infection prevention and control program requirements. We reviewed Appendix PP of the State Operations Manual because it is the section that provides guidance to state surveyors about determining compliance with federal quality standards and their associated deficiency codes. We used the March 8, 2017, version of the Appendix PP—the most recent version during our period of review—when determining which deficiency codes to analyze for this report. CMS, *State Operations Manual, Appendix PP—Guidance to Surveyors for Long Term Care Facilities.* (March 8, 2017). We also reviewed the multiple revisions to Appendix PP in the State Operations Manual during the period of our review (January 1, 2013, through November 27, 2017). Specifically, there were eight updates to the appendix during the 5-year period. The November 26, 2014, revision to Appendix PP added new guidance and investigative criteria relating to single-use disposable equipment, single-dose medication, and insulin pens, as well as additional guidance on procedures for handling linens to prevent and control infection transmission. Otherwise, none of the other revisions significantly changed the infection prevention and control deficiency citation code used by state surveyors.

CMS restructured its deficiency code system beginning on November 28, 2017, and, due to these coding changes, we did not analyze CMS deficiency data cited by surveyors from November 28, 2017, through December 31, 2017.

[12]To perform this 2018-2019 analysis, we examined nursing homes cited with the current infection prevention and control deficiency code that went into effect as part of CMS's restructured deficiency coding system on November 28, 2017. The CMS Nursing Home Compare Provider Information files were accessed on April 23, 2020, from https://data.medicare.gov/data/archives/nursing-home-compare.

address these issues, including actions announced beginning in March 2020 in light of the COVID-19 pandemic. We will examine CMS's actions in a future report.

We conducted this performance audit from April 2020 to May 2020 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.

Most Nursing Homes Had Infection Control Deficiencies Prior to the COVID-19 Pandemic; Half of These Homes Had Persistent Problems

Our analysis of CMS data shows that infection prevention and control deficiencies were the most common type of deficiency cited in surveyed nursing homes, with most nursing homes having an infection prevention and control deficiency cited in one or more years from 2013 through 2017 (13,299 nursing homes, or 82 percent of all surveyed homes).[13] Infection prevention and control deficiencies cited by surveyors can include situations where nursing home staff did not regularly use proper hand hygiene or failed to implement preventive measures during an infectious disease outbreak, such as isolating sick residents and using masks and other personal protective equipment to control the spread of infection.[14] Many of these practices can be critical to preventing the spread of infectious diseases, including COVID-19.

In each individual year from 2013 through 2017, the percent of surveyed nursing homes with an infection prevention and control deficiency ranged from 39 percent to 41 percent. In 2018 and 2019, we found that this continued with about 40 percent of surveyed nursing homes having an infection prevention and control deficiency cited each year.[15]

About half—6,427 of 13,299 (48 percent)—of the nursing homes with an infection prevention and control deficiency cited in one or more years of the period we reviewed had this type of deficiency cited in multiple consecutive years from 2013 through 2017. This is an indicator of persistent problems. An additional 19 percent of the nursing homes (2,563 out of 13,299) had an infection prevention and control deficiency cited in multiple nonconsecutive years. (See fig. 1.) Furthermore, of the 6,427 nursing homes with an infection prevention and control deficiency

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[13]The next most common deficiencies cited in nursing homes from 2013 through 2017 were related to ensuring the environment is free from accidents (about 37 percent of surveyed nursing homes in each year) and food safety (about 36 percent of surveyed nursing homes in each year).

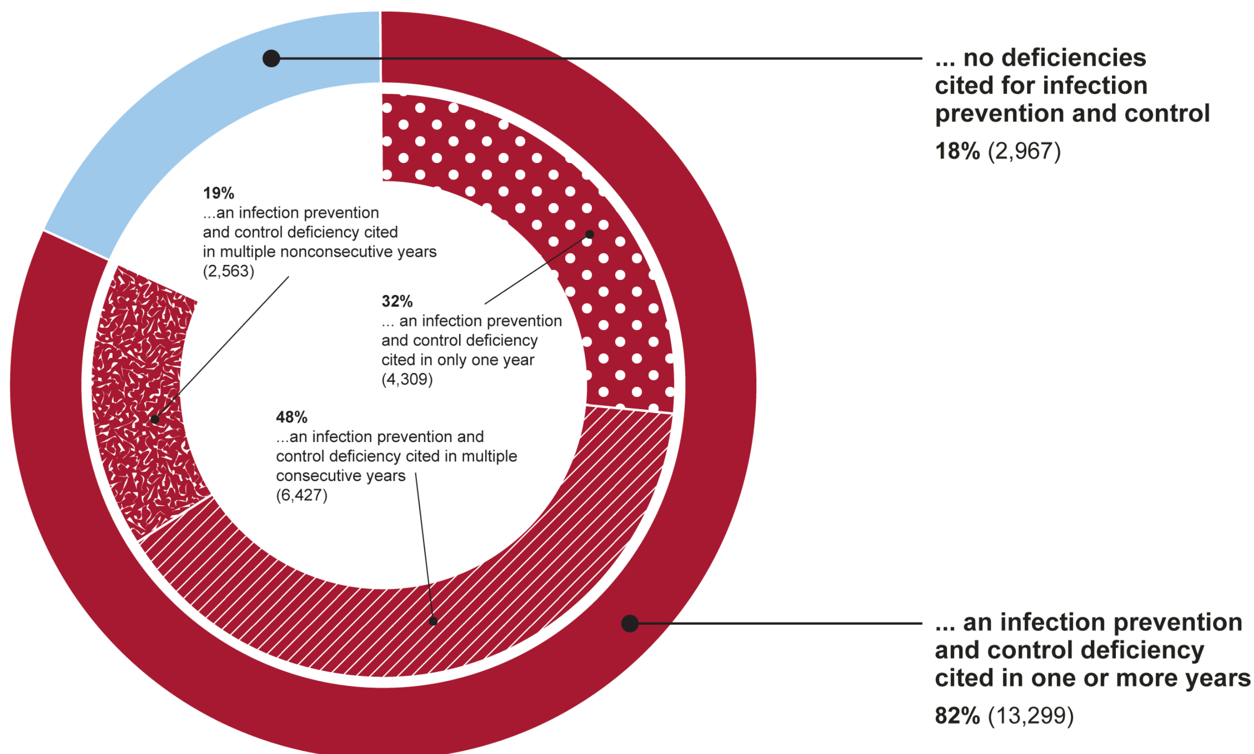
[14]Another deficiency code related to preventing the spread of infections can be cited by surveyors when a nursing home fails to develop policies and procedures to ensure that residents are offered influenza and pneumococcal vaccinations. Nursing homes must educate each resident on the benefits and potential side effects when offering each vaccine and document this interaction, as well as each resident's decision to receive or refuse each vaccine. In 2017, 4 percent of surveyed nursing homes (539 homes) had at least one influenza and pneumococcal vaccination deficiency.

[15]In our review of publicly available data from 2018 and 2019, infection prevention and control deficiencies were the most common type of deficiency cited in surveyed nursing homes, with deficiencies related to ensuring that the environment is free from accidents and deficiencies related to food safety as the next most common.

Also see: D. Cenziper, J. Jacobs, and S. Mulcahy, "Hundreds of Nursing Homes with Cases of Coronavirus Have Violated Federal Infection-Control Rules in Recent Years," *The Washington Post*, April 17, 2020; and Jordan Rau, "Coronavirus Stress Test: Many 5-Star Nursing Homes Have Infection-Control Lapses," *Kaiser Health News*, March 4, 2020.

cited in multiple consecutive years, 35 percent (2,225 nursing homes) had these deficiencies cited in 3 or 4 consecutive years, and 6 percent (411 nursing homes) had these deficiencies cited across all 5 years. At the state level, all states had nursing homes with infection prevention and control deficiencies cited in multiple consecutive years. For additional state-level information, see enclosure I.

Figure 1: Nursing Homes with Infection Prevention and Control Deficiencies Cited in Multiple Years, 2013 through 2017



Source: GAO analysis of Centers for Medicare & Medicaid Services' (CMS) data. | GAO-20-576R

Note: CMS restructured its deficiency code system beginning on November 28, 2017, and, due to these coding changes, we did not analyze CMS data cited by surveyors from November 28, 2017, through December 31, 2017.

Percentages may not add to 100 due to rounding.

We also found that in each year from 2013 through 2017, nearly all infection prevention and control deficiencies (about 99 percent in each year) were classified by surveyors as not severe, meaning the surveyor determined that residents were not harmed.[16] Our review of CMS data shows that implemented enforcement actions for these deficiencies were typically rare: from 2013 through 2017, CMS implemented enforcement actions for 1 percent of these infection

[16]For the purposes of this report, a classification of "not severe" means that surveyors determined that the deficiency posed either 1) no actual harm with a potential for minimal harm or (2) no actual harm with a potential for more than minimal harm, but not immediate jeopardy. Infection prevention and control deficiencies were also categorized by scope—whether the incident was an isolated occurrence, a part of a pattern of behavior, or a widespread behavior—with about 47 percent of infection prevention and control deficiencies cited categorized as isolated, about 38 percent categorized as a pattern, and about 14 percent categorized as widespread each year from 2013 through 2017. Percentages do not add to 100 due to rounding.

prevention and control deficiencies classified as not severe. Furthermore, 67 percent of these infection prevention and control deficiencies classified as not severe did not have any enforcement actions imposed or implemented, and 31 percent had enforcement actions imposed but not implemented—meaning the nursing home likely had an opportunity to correct the deficiency before an enforcement action was imposed.[17] For examples of the types of infection prevention and control deficiencies cited in nursing homes and summaries of their resulting enforcement actions, see table 1. We plan to examine CMS guidance and oversight of infection prevention and control in a future GAO report, including the classification of infection prevention and control deficiencies.

Table 1: Illustrative Examples of Narratives from Infection Prevention and Control Deficiencies Cited in Nursing Homes

Narrative details and resulting CMS enforcement action	Classification of Scope and Severity
A certified nursing assistant in a California nursing home was observed by surveyors coughing and looking unwell. The certified nursing assistant said she had been sick for at least 2 days and had experienced fever, diarrhea, cough, and a runny nose. Surveyors also observed improper hand hygiene by a different certified nurse assistant during incontinent care, which created the potential to spread disease and infection. In addition, seven employees had not been screened for tuberculosis prior to employment. Also, surveyors observed employees who had not been vaccinated for influenza and were not wearing face masks. No enforcement actions were implemented against this nursing home.	Scope: A pattern of behavior Severity: No actual harm with a potential for more than minimal harm, but not immediate jeopardy
Surveyors observed a certified nursing assistant in an Arkansas nursing home providing incontinent care to a resident after a bowel movement and then, without removing her soiled gloves or washing her hands, the certified nursing assistant proceeded to assist the resident in repositioning in bed, adjusting the pillows, and replacing supplies in the resident's bedside table drawer. Surveyors also noted that a glucose meter was not properly disinfected before use on multiple residents. No enforcement actions were implemented against this nursing home.	Scope: A pattern of behavior Severity: No actual harm with a potential for more than minimal harm, but not immediate jeopardy
A New York nursing home experienced a respiratory infection outbreak that sickened 38 residents. The nursing home did not maintain a complete and accurate list of those who were sick, did not isolate residents with symptoms from residents who were symptom-free—nor did it isolate staff members helping sick patients—and continued to allow residents to eat in the community dining room. CMS implemented enforcement actions requiring the nursing home to provide directed, in-service training for its staff and submit a directed plan of correction to the state survey agency.	Scope: A pattern of behavior Severity: Immediate jeopardy
A New Mexico nursing home allowed two residents diagnosed with methicillin-resistant Staphylococcus aureus, a highly contagious type of infection, to share a bathroom with two other residents, therefore putting the two other residents at risk of exposure. There were also two biohazard bins in the bathroom containing contaminated wound dressings from the infected residents. CMS implemented an enforcement action by assessing a civil money penalty against the nursing home.	Scope: A pattern of behavior Severity: Immediate jeopardy

Source: GAO summary of Centers for Medicare & Medicaid Services' (CMS) data. | GAO-20-576R

[17]Percentages do not add to 100 due to rounding. CMS may not implement imposed enforcement actions because the nursing home came into compliance prior to the implementation date of the enforcement action, among other reasons.

Notes: GAO reviewed for illustrative purposes narratives written by nursing home surveyors describing the infection prevention and control deficiencies cited. CMS categorizes deficiencies into one of three scope categories based on whether the incident was: (1) an isolated occurrence; (2) a part of a pattern of behavior; or (3) a widespread behavior. CMS categorizes deficiencies into one of four severity categories based on whether the deficiency constitutes: (1) no actual harm with a potential for minimal harm; (2) no actual harm with a potential for more than minimal harm, but not immediate jeopardy; (3) actual harm that is not immediate jeopardy; or (4) immediate jeopardy to resident health or safety.

Finally, using CMS data, we also analyzed a selection of characteristics over the 5-year period for the nursing homes that had infection prevention and control deficiencies cited in multiple years and found differences for some of the characteristics when we compared these nursing homes to (a) homes that had no infection prevention and control deficiencies cited, (b) homes with infection prevention and control deficiencies cited in a single year, or (c) all surveyed nursing homes. For example, nursing homes owned by for-profit organizations, which comprised about 68 percent of all surveyed nursing homes, accounted for about 72 percent of nursing homes that had infection prevention and control deficiencies cited in multiple years, but nursing homes owned by for-profit organizations comprised only about 61 percent of nursing homes with no infection prevention and control deficiencies cited. In contrast, nursing homes with an average overall five-star rating accounted for about 17 percent of all surveyed nursing homes but comprised about 33 percent of nursing homes with no infection prevention and control deficiencies cited and only about 10 percent of nursing homes that had infection prevention and control deficiencies cited in multiple years.[18] For additional information, see enclosure II.

Agency Comments

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

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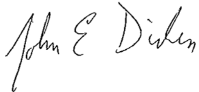
We are sending copies of this report to the appropriate congressional committees, the Secretary of HHS, and other interested parties. In addition, the report is available at no charge on the GAO Web site at http://www.gao.gov.

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. Major contributors to this report were Karin Wallestad (Assistant Director), Sarah-Lynn McGrath (Analyst-in-Charge), Kathryn Richter, and Julianne Flowers. Also contributing were Isabella Guyott, Laurie Pachter, Vikki Porter, Anna Beth Smith, and Jennifer Whitworth.

Sincerely yours,



John E. Dicken
Director, Health Care
Enclosures – 2

[18] The Five-Star Quality Rating System assigns nursing homes with an overall "star" rating, ranging from one to five. Nursing homes with five stars are considered to have quality that is much above average, while nursing homes with one star are considered to have quality that is much below average. For this comparison of nursing home characteristics from 2013 through 2017, we calculated each nursing home's average overall rating in each year during the 5-year period, and then we calculated the average overall rating across all 5 years and rounded to the nearest whole number. According to CMS, some changes to its methodology for calculating the five-star rating were made during the time period of our review.

Enclosure I: State Information on Infection Prevention and Control Deficiencies

We reviewed guidance from the Centers for Medicare & Medicaid Services (CMS) and analyzed data on nursing home deficiencies cited by surveyors in all 50 states and Washington, D.C., from 2013 through 2017 provided by CMS for a prior GAO report, with a particular focus on deficiencies related to infection prevention and control.[19] Using these data, we determined the number of nursing homes that had infection prevention and control deficiencies cited as well as the number of homes with repeated infection prevention and control deficiencies over the 5-year period from 2013 through 2017. Table 2 provides state-level data on the nursing homes that had infection prevention and control deficiencies cited in 2017. Table 3 provides state-level data on the nursing homes with infection prevention and control deficiencies cited by state surveyors from 2013 through 2017, including across multiple years.

Table 2: Infection Prevention and Control Deficiencies Cited, by State, 2017

State	Number of surveyed nursing homes	Number of surveyed nursing homes with an infection prevention and control deficiency cited	Percentage of surveyed nursing homes with an infection prevention and control deficiency cited
AK	16	5	31.3
AL	201	101	50.2
AR	217	86	39.6
AZ	131	30	22.9
CA	1,174	712	60.6
CO	187	87	46.5
CT	213	66	31.0
DC	18	6	33.3
DE	40	22	55.0
FL	646	278	43.0
GA	325	64	19.7
HI	37	17	45.9
IA	400	88	22.0
ID	61	34	55.7
IL	728	394	54.1
IN	535	187	35.0
KS	269	90	33.5
KY	264	95	36.0
LA	267	79	29.6
MA	380	111	29.2
MD	219	88	40.2
ME	100	13	13.0
MI	430	251	58.4
MN	333	138	41.4
MO	480	256	53.3
MS	191	103	53.9
MT	61	28	45.9
NC	407	64	15.7
ND	69	24	34.8
NE	193	64	33.2
NH	69	16	23.2
NJ	334	105	31.4
NM	75	27	36.0
NV	59	22	37.3

[19]GAO, *Nursing Homes: Improved Oversight Needed to Better Protect Residents from Abuse*, GAO-19-433, (Washington, D.C.: June 13, 2019).

State	Number of surveyed nursing homes	Number of surveyed nursing homes with an infection prevention and control deficiency cited	Percentage of surveyed nursing homes with an infection prevention and control deficiency cited
NY	533	113	21.2
OH	901	255	28.3
OK	283	90	31.8
OR	129	42	32.6
PA	680	312	45.9
RI	79	3	3.8
SC	168	40	23.8
SD	96	43	44.8
TN	296	98	33.1
TX	1,166	562	48.2
UT	80	41	51.3
VA	263	102	38.8
VT	36	4	11.1
WA	219	89	40.6
WI	351	141	40.2
WV	104	51	49.0
WY	37	18	48.6
Total	**14,550**	**5,755**	**39.6**

Source: GAO analysis of Centers for Medicare & Medicaid Services' (CMS) data. | GAO-20-576R

Note: CMS restructured its deficiency code system beginning on November 28, 2017, and, due to these coding changes, we did not analyze CMS data cited by surveyors from November 28, 2017, through December 31, 2017.

Table 3: Nursing Homes with Infection Prevention and Control Deficiencies Cited, by State, 2013 through 2017

State	Total surveyed nursing homes, 2013-2017	Nursing homes with no infection prevention and control deficiencies cited	Nursing homes with infection prevention and control deficiencies cited in only 1 year	Nursing homes with infection prevention and control deficiencies cited in multiple nonconsecutive years	Nursing homes with infection prevention and control deficiencies cited in multiple consecutive years
AK	18	1	1	5	11
AL	232	10	48	46	128
AR	243	18	72	50	103
AZ	149	23	49	32	45
CA	1,258	76	176	204	802
CO	228	16	55	47	110
CT	231	45	71	38	77
DC	20	1	4	2	13
DE	47	4	10	13	20
FL	699	91	181	144	283
GA	365	169	136	30	30
HI	48	1	13	7	27
IA	460	134	158	41	127
ID	79	7	17	23	32
IL	791	50	129	127	485
IN	567	123	152	76	216
KS	369	41	100	77	151
KY	293	36	68	70	119
LA	280	60	86	47	87
MA	427	155	169	37	66
MD	234	51	75	49	59
ME	108	57	42	5	4
MI	456	24	74	78	280
MN	392	53	108	75	156
MO	531	52	116	94	269
MS	214	23	58	52	81
MT	84	2	15	17	50
NC	433	217	149	28	39
ND	82	5	24	21	32
NE	233	43	68	46	76
NH	77	32	28	6	11
NJ	374	95	133	55	91
NM	80	27	18	10	25
NV	60	4	9	9	38
NY	637	220	206	57	154
OH	995	308	357	113	217
OK	333	50	81	41	161
OR	144	43	50	26	25
PA	716	85	194	141	296
RI	84	52	25	3	4
SC	192	81	67	22	22
SD	113	2	17	17	77
TN	337	55	93	60	129
TX	1,303	161	280	205	657
UT	105	17	28	15	45
VA	298	44	89	51	114
VT	38	14	6	6	12
WA	230	32	70	37	91
WI	409	37	102	73	197

State	Total surveyed nursing homes, 2013-2017	Nursing homes with no infection prevention and control deficiencies cited	Nursing homes with infection prevention and control deficiencies cited in only 1 year	Nursing homes with infection prevention and control deficiencies cited in multiple nonconsecutive years	Nursing homes with infection prevention and control deficiencies cited in multiple consecutive years
WV	129	19	20	28	62
WY	41	1	12	7	21
Total	**16,266**	**2,967**	**4,309**	**2,563**	**6,427**

Source: GAO analysis of Centers for Medicare & Medicaid Services' (CMS) data. | GAO-20-576R

Note: CMS restructured its deficiency code system beginning on November 28, 2017, and, due to these coding changes, we did not analyze CMS data cited by surveyors from November 28, 2017, through December 31, 2017.

Enclosure II: Comparison of the Percentage of Nursing Homes with and without Infection Prevention and Control Deficiencies Cited, by Characteristic, 2013 through 2017

We reviewed guidance from the Centers for Medicare & Medicaid Services (CMS) and analyzed data on nursing home deficiencies cited by surveyors in all 50 states and Washington, D.C., from 2013 through 2017 provided by CMS for a prior GAO report, with a particular focus on deficiencies related to infection prevention and control.[20] Using these data, we determined the characteristics of all surveyed nursing homes, nursing homes that had no infection prevention and control deficiencies cited, a single year of these deficiencies, or multiple years of these deficiencies from 2013 through 2017. For example, nursing homes owned by for-profit organizations, which comprised about 68 percent of all surveyed nursing homes, accounted for about 72 percent of nursing homes that had infection prevention and control deficiencies cited in multiple years, but nursing homes owned by for-profit organizations comprised only about 61 percent of nursing homes with no infection prevention and control deficiencies cited. (See table 4.)

[20]GAO, *Nursing Homes: Improved Oversight Needed to Better Protect Residents from Abuse*, GAO-19-433, (Washington, D.C.: June 13, 2019).

Table 4: Comparison of the Percentage of All Surveyed Nursing Homes and Those with No, a Single Year, or Multiple Years of Infection Prevention and Control Deficiencies Cited, by Characteristic, 2013 through 2017

Characteristic	All surveyed nursing homes, 2013-2017	Sub-groups of all surveyed nursing homes, 2013-2017: Nursing homes with no infection prevention and control deficiencies cited	Nursing homes with infection prevention and control deficiencies cited in a single year	Nursing homes with infection prevention and control deficiencies cited in multiple years
Number of nursing homes	16,266	2,967	4,309	8,990
Percentage				
Type of ownership[a]				
For-profit	67.9	60.8	63.5	72.3
Nonprofit	23.5	29.7	27.0	19.8
Government-owned	6.0	6.0	6.2	5.9
Mixed ownership[b]	1.2	1.0	1.4	1.2
Location[a]				
Urban	68.4	68.9	67.0	69.0
Rural	27.5	26.7	28.2	27.5
Transitioning area[c]	2.8	2.6	3.0	2.7
Number of Medicare and Medicaid certified beds[a, d]				
Small (Less than 50)	13.0	19.1	14.6	10.2
Medium (50 to 99)	36.5	36.2	37.4	36.2
Large (100 to 199)	43.4	37.0	40.6	46.8
Very large (200 or more)	7.1	7.7	7.4	6.8
Special Focus Facility program designation during the time period reviewed[e]				
Participated in program	2.5	1.0	1.6	3.4
Average of Five-Star System overall quality ratings over the time period reviewed[a, f]				
1 star	5.5	2.1	2.9	7.9
2 stars	21.2	9.2	15.7	27.8
3 stars	26.1	19.1	24.8	29.1
4 stars	28.1	33.2	31.6	24.8
5 stars	17.3	32.7	22.5	9.7

Source: GAO analysis of Centers for Medicare & Medicaid Services' (CMS) data. | GAO-20-576R

Notes: CMS restructured its deficiency code system beginning on November 28, 2017, and, due to these coding changes, we did not analyze CMS data cited by surveyors from November 28, 2017, through December 31, 2017.

[a]Percentages do not always add to 100 due to missing data and rounding. The percentage of nursing homes with missing data was less than 4 percent for each category.

[b]For this comparison of nursing home characteristics from 2013 through 2017, "mixed ownership" refers to nursing homes that changed their profit status at any point during the 5-year period.

[c]For this comparison of nursing home characteristics from 2013 through 2017, a "transitioning area" is where the designation changed from rural to urban or vice-versa at any point during the 5-year period.

[d]For this comparison of nursing home characteristics from 2013 through 2017, if a nursing home changed bed size categories at any point, we assigned the nursing home its largest bed size category during the 5-year period.

[e]Nursing homes with chronic noncompliance with federal standards can be selected for the Special Focus Facility program, which requires state survey agencies to conduct more frequent oversight, and the nursing homes to improve performance or risk termination from the Medicare and Medicaid programs. The table only displays percentages for those nursing homes that participated in the Special Focus Facility program during the 5-year period. The remaining nursing homes did not participate in the Special Focus Facility program during the 5-year period. For this comparison of nursing home characteristics from 2013 through 2017, we considered nursing homes to have participated in the Special Focus Facility program if they participated at any point during the 5-year period.

[f]The Five-Star Quality Rating System assigns nursing homes with an overall "star" rating, ranging from one to five. Nursing homes with five stars are considered to have quality that is much above average, while nursing homes with one star are considered to have quality that is much below average. For this comparison of nursing home characteristics from 2013 through 2017, we calculated each nursing home's average overall rating in each year during the 5-year period, and then we calculated the average overall rating across all 5 years and rounded to the nearest whole number. According to CMS, some changes to its methodology for calculating the five-star rating were made during the time period of our review.

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