



May 2023

NURSING HOMES

CMS Offers Useful Information on Website and Is Considering Additional Steps to Assess Underlying Data

Accessible Version

GAO Highlights

Highlights of [GAO-23-105312](#), a report to the Ranking Member, Committee on the Budget, U.S. Senate

Why GAO Did This Study

CMS is responsible for ensuring that participating nursing homes meet federal standards, and provides information on nursing homes' quality on its web-based tool, Care Compare. CMS's Five-Star Rating System, which includes an overall and three component star ratings—health inspection, staffing, and quality measures—is a prominent source of information on Care Compare. CMS has worked to improve its usefulness to consumers, the quality of the underlying information, and aspects of the rating system.

GAO was asked to examine the nursing home section of Care Compare and the Five-Star Rating System. Among other issues, this report (1) examines the understandability and relevance of nursing home quality information on Care Compare, and (2) describes CMS's assessment of underlying information.

GAO reviewed nursing home information on Care Compare against 15 characteristics of understandability and relevancy for effective transparency tools that were identified in previous GAO work. GAO also reviewed CMS's assessment of three of the primary sources of nursing home information for Care Compare: staffing data, inspections, and quality measures.

What GAO Recommends

GAO is making no new recommendations in this report. GAO has made three prior recommendations that, if implemented, would improve consumers' ability to compare nursing homes' cost and quality on Care Compare.

View [GAO-23-105312](#). For more information, contact John E. Dicken at (202) 512-7114 or dickenj@gao.gov.

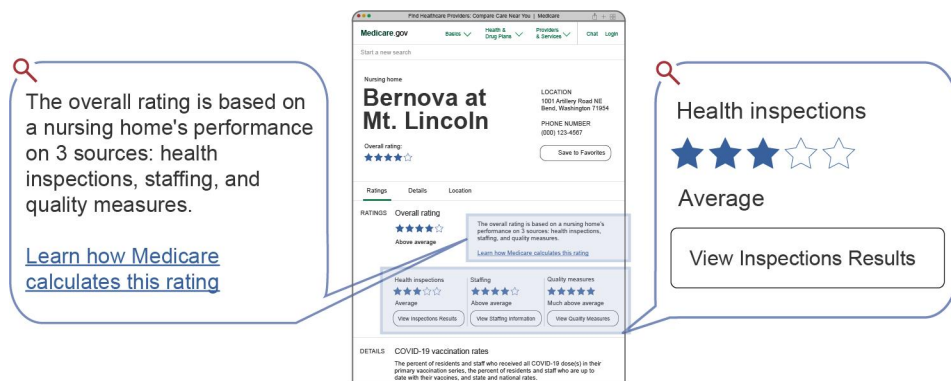
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What GAO Found

GAO found that the nursing home quality information the Centers for Medicare & Medicaid Services (CMS) provides on Care Compare—which was developed to assist consumers in selecting a nursing home—at least partially aligns with 11 of 15 characteristics of understandability and relevancy for an effective transparency tool (see figure). These characteristics include providing descriptions of key differences in clinical quality of care, enabling consumers to customize information, and comparing multiple nursing homes. However, GAO also found Care Compare did not align with four of the characteristics. GAO has made recommendations in the past that apply to some of these characteristics, and for others, CMS told GAO about ongoing efforts to address some of the characteristics GAO identified. For example, CMS officials told GAO they are exploring a way to include information on nursing home residents' experience, which Care Compare currently lacks.



Source: GAO review of the Centers for Medicare & Medicaid Services (CMS) information. | GAO-23-105312

CMS takes various approaches to assess the completeness and accuracy of the sources for the staffing data, inspections, and quality measure information it provides on Care Compare. For example:

Staffing data. CMS has an automated process to check the completeness of staffing data nursing homes report.

Inspection data. CMS uses the Federal Monitoring Survey, which, among other things, replicates recent state inspections to check the completeness and accuracy of inspection results.

Quality measures. CMS has an automated process to check the completeness of the data nursing homes report that inform the measures.

CMS also has processes to assess accuracy, and has recently taken additional steps for one of these measures related to antipsychotic drugs. CMS may audit the nursing home's documentation supporting this measure. CMS recently proposed a validation process for some additional quality measure data represented on Care Compare, though not the rating. According to CMS officials, the agency is exploring to what extent the agency will expand these audits to data that inform the quality measure rating.

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Abbreviations

CMS	Centers for Medicare & Medicaid Services
FMS	Federal Monitoring Survey
HHS	Department of Health and Human Services
MDS	Minimum Data Set

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May 22, 2023

The Honorable Charles E. Grassley
Ranking Member
Committee on the Budget
U.S. Senate

Dear Mr. Grassley:

More than 15,000 nursing homes participate in the Medicare and Medicaid programs and provide services to about 1.4 million nursing home residents—a vulnerable population of elderly and disabled individuals.¹ The Centers for Medicare & Medicaid Services (CMS) is the agency responsible for establishing federal standards for these nursing homes.² To ensure that nursing homes meet the standards to be eligible to participate in these programs, CMS enters into agreements with state survey agencies that inspect participating nursing homes to determine the extent of nursing home compliance with these standards.³

Since 1998 CMS has hosted a web-based tool for finding and comparing providers on the Medicare.gov website. In its current form, Care Compare, consumers can view information on nursing home quality to

¹Nursing homes are required to enroll in the Medicare and Medicaid programs in order to be paid for care provided to beneficiaries in these programs. 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.

²Federal law establishes minimum requirements nursing homes must meet to participate in the Medicare and Medicaid programs, and designates the HHS Secretary as responsible to ensure that requirements governing the provision of care in nursing homes, and the enforcement of such requirements, are adequate to protect the health, safety, welfare, and rights of residents and promote the effective and efficient use of public moneys. 42 U.S.C. §§ 1395i-3(f)(1), 1396r(f)(1); 42 C.F.R. §§ 483.1—483.95 (2021).

³See 42 U.S.C. §§ 1395i-3(g), 1396(g); 42 C.F.R. §§ 488.300-488.335 (2021).

State survey agencies conduct required evaluations of providers to certify compliance with the Centers for Medicare & Medicaid Services’ participation requirements and investigate complaints.

help consumers make decisions about nursing homes.⁴ On Care Compare, CMS features an overall star rating for each nursing home, which is computed from three component ratings—health inspection, staffing, and quality measures.⁵ These ratings provide consumers a summary view of nursing home quality, based on the results from inspections, staffing levels, and a nursing home’s performance on various quality measures. Over the years, CMS has made changes to improve the comparison tool on the website and its underlying information, such as including an icon to signal issues to consumers and adding more detailed information on nursing home staffing levels.

As CMS has worked to improve Care Compare, we have continued to assess the nursing home information and the nursing home rating system, and we have made several recommendations that, if implemented, could improve consumers’ ability to compare nursing homes’ costs and quality on Care Compare. In 2014, we recommended that CMS include additional information on estimated out-of-pocket costs for Medicare beneficiaries in the CMS Compare websites.⁶ In 2015, we found issues in the underlying data used to provide information about nursing home quality on the website.⁷ Finally, in 2016 and 2021, we found that the website lacked explanatory information about the Five-Star Rating System, and that, while CMS had taken steps to improve the

⁴CMS’s Care Compare tool also includes information on seven other provider types, such as hospitals, doctors, and home health services.

⁵CMS has called its rating system the “Nursing Home Five-Star Quality Rating System”. For the purposes of this report, we use the terms “Five-Star Rating System” and “rating system” interchangeably to refer to CMS’s rating system.

⁶We recommended that CMS include in the CMS Compare websites, to the extent feasible, estimated out-of-pocket costs for Medicare beneficiaries for common treatments that can be planned in advance to improve consumers’ access to relevant and understandable information on the cost and quality of health care services. CMS concurred with this recommendation. Although CMS has taken steps to implement, the recommendation remains open. See GAO, *Health Care Transparency: Actions Needed to Improve Cost and Quality Information for Consumers*, [GAO-15-11](#) (Washington, D.C.: Oct. 20, 2014).

⁷We recommended that CMS establish and implement a standardized survey methodology across all states and establish and implement a clear plan for ongoing auditing to ensure the reliability of self-reported data. See GAO, *Nursing Home Quality: CMS Should Continue to Improve Data and Oversight*, [GAO-16-33](#) (Washington, D.C.: Oct. 30, 2015). CMS concurred with these recommendations and implemented them.

staffing information on Care Compare, it still provided limited information about staffing in nursing homes.⁸

Given the importance of providing useful and accurate information to consumers choosing a nursing home, you asked us to examine CMS's nursing home section of the Care Compare tool and the data and information it provides, including the Five-Star Rating System. In this report, we

1. Examine how understandable and relevant to consumers the information on Care Compare is that describes nursing home quality,
2. Describe how CMS assesses the completeness and accuracy of nursing home quality information reported on Care Compare, and
3. Describe stakeholders' perspectives on the strengths and limitations of CMS's Five-Star Rating System.

To examine how understandable and relevant nursing home quality information on Care Compare is to consumers, we reviewed the nursing home information it provides against 15 characteristics of effective transparency tools for consumers (see app. I for descriptions of these 15 characteristics). In this case, transparency tools are websites with health cost or quality information comparing different providers of health care services; Care Compare fits this definition. We previously identified these characteristics for assessing the effectiveness of websites that provide consumers with comparative information on the quality of care delivered by different health care providers.⁹ We also interviewed CMS officials about how the agency made decisions about the nursing home quality information included on Care Compare.

⁸We recommended that CMS add information to the Five-Star Rating System that allows consumers to compare nursing homes nationally. CMS did not concur with this recommendation and has not taken steps to address the recommendation. GAO, *Nursing Homes: Consumers Could Benefit from Improvements to the Nursing Home Compare Website and Five-Star Quality Rating System*, [GAO-17-61](#) (Washington, D.C.: Nov. 18, 2016). We recommended that CMS report minimum nurse staffing thresholds on Care Compare. CMS did not concur with this recommendation and it remains open although CMS has taken steps to address this recommendation. We also recommended that CMS assess the feasibility of incorporating weekend nurse staffing hours into the Five-Star Rating System and report such information on Care Compare. CMS concurred with and has implemented this recommendation. See GAO, *Medicare: Additional Reporting on Key Staffing Information and Stronger Payment Incentives Needed for Skilled Nursing Facilities*, [GAO-21-408](#) (Washington, D.C.: July 9, 2021).

⁹GAO, *Health Care Transparency: Actions Needed to Improve Cost and Quality Information for Consumers*, [GAO-15-11](#) (Washington, D.C.: Oct. 20, 2014).

To describe how CMS assesses the completeness and accuracy of nursing home quality information reported on Care Compare, we reviewed CMS documents and conducted interviews with CMS officials. The CMS documents we reviewed included those specific to the state survey process, such as the Long-Term Care Survey Process Procedure Guide, as well as the State Operations Manual. We also reviewed documents specific to the data sources that contribute to the information on Care Compare, such as the Technical Users' Guide and CMS memos related to staffing and quality data. We also interviewed CMS officials about their oversight of the data and information sources that contribute to the ratings, including their accuracy and validation procedures.

To describe what stakeholders indicate are the strengths and limitations of CMS's Five-Star System in identifying nursing home quality, we identified 12 stakeholders with expertise in nursing home quality. The stakeholders were drawn from organizations and individuals representing resident and family perspectives, as well as researchers and associations representing nursing home providers. We interviewed the selected stakeholders to obtain their perspectives on the strengths and limitations of the five-star system, both generally and across each of the three component ratings: health inspections, staffing, and quality measures. Based on the interviews, we identified themes and summarized the stakeholder perspectives, focusing on areas where stakeholders raised similar issues. We summarized the number of stakeholders that raised similar issues using the following qualitative groupings of organizations and individuals: "several" refers to three to five stakeholders; "many" refers to six to seven stakeholders; and "most" refers to more than seven stakeholders. The evidence collected and reported from these interviews reflects the views of these specific stakeholders and is not generalizable to other groups and individuals.

We also analyzed nursing home-level data that CMS has made publicly available to describe patterns in the Five-Star Rating System, and we report the results of these analyses in appendixes to this report. Specifically, we describe patterns in overall star rating calculations for nursing homes (see appendix II); the results of using a national distribution to calculate health inspection star ratings (see appendix III); and component ratings at the state level (see appendix IV). We used data released in January 2020—the most recent data published prior to the beginning of the COVID-19 pandemic—to eliminate pandemic effects on health inspection timeliness, data reporting waivers, and broad effects on nursing home care settings. To determine the reliability of the CMS data, we reviewed relevant CMS documentation, interviewed CMS officials

familiar with data components, performed manual and electronic tests of the data to identify missing or duplicate records, and reviewed GAO and other research utilizing these data. On the basis of these steps, we determined that these data were sufficiently reliable for reporting patterns in overall star rating calculations, results of calculating health inspections based on a national distribution, and state-level patterns for component ratings.

We conducted this performance audit from June 2021 to May 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

CMS Oversight of Nursing Homes

To help ensure that nursing home residents receive quality care, CMS, an agency within the Department of Health and Human Services (HHS), defines the quality standards that nursing homes must meet in order to participate in the Medicare and Medicaid programs. CMS's quality oversight of nursing homes is a shared federal-state responsibility, through the agreements they enter with state survey agencies. In 2016, CMS finalized a comprehensive update to its nursing home standards, and implemented the update in phases through 2019.¹⁰ CMS also oversees and establishes responsibilities of state survey agencies to ensure that federal standards are met. According to CMS officials, in 2020, CMS reorganized the roles and responsibilities of its central office and its regional offices, renaming them CMS locations, to facilitate collaboration with and oversight of the state survey agencies among other things. State survey agencies assess whether nursing homes meet CMS's standards by, for example, conducting recurring health inspection

¹⁰Medicare and Medicaid Programs; Reform of Requirements for Long-Term Care Facilities, 81 Fed. Reg. 68,688 (Oct. 4, 2016).

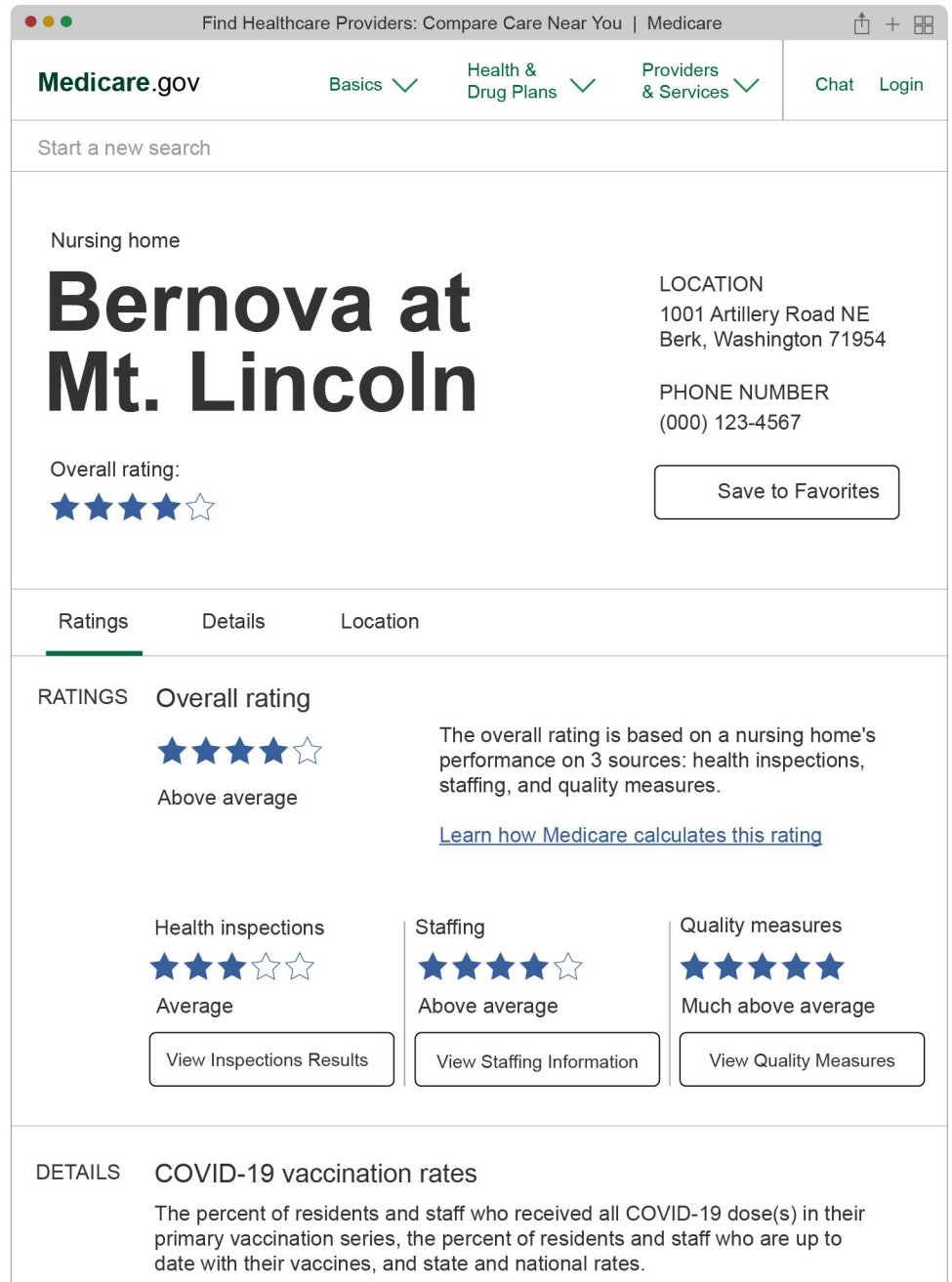
surveys and compliance inspections, and report nursing home performance on those inspections to CMS. CMS assesses the performance of state surveyors through different activities, including the Federal Monitoring Survey (FMS), which is used to assess surveyor's performance in interpreting and applying federal standards and also identifies training or technical assistance needs of surveyors, among other things.

Care Compare Tool

Since 1998, CMS has had provider comparison websites for nursing homes and seven other types of providers, like hospitals, and dialysis facilities. In an effort to streamline their provision of provider comparison websites, in September 2020, CMS launched Care Compare, a tool that consolidated the eight health care compare tools, including Nursing Home Compare (see figure 1 for an example of a nursing home webpage).¹¹ CMS officials told us that the overarching goal of Care Compare is to offer consumers a user-friendly and streamlined comparative experience that helps them choose a provider or care setting that best meets their individual care needs. In addition to the transition of the website, CMS has implemented changes intended to provide additional improvements and information to consumers on a nursing homes' quality. For example, in 2018, CMS added language explaining the Five-Star Rating System on the website. Similarly, in 2021, CMS added COVID-19 vaccination rates to Care Compare.

¹¹In December 2020, CMS decommissioned the predecessor site, Nursing Home Compare.

Figure 1: Illustrative Example of a Care Compare Webpage for a Nursing Home



Source: GAO review of Centers for Medicare & Medicaid Services (CMS) information. | GAO-23-105312

Note: This figure demonstrates the format and content that appears on Care Compare and is not an illustration of an actual nursing home's webpage.

CMS Five-Star Rating System

CMS summarizes some of the information about nursing home quality that appears on Care Compare using a Five-Star Rating System. In 2008, CMS began including a Five-Star Rating System on its provider comparison website that rates all Medicare-and-Medicaid certified nursing homes on several dimensions of nursing home quality. According to CMS, the primary goal of the rating system is to provide beneficiaries with an easy way to understand nursing home quality and distinguish between high- and low- performing nursing homes. Specifically, the rating system assigns each nursing home an overall “star” rating, ranging from one to five. Nursing homes with four or five stars are considered to have above average quality (with five stars being well above average, while nursing homes receiving one or two stars are considered to have below average quality (with one star being well below average). Nursing homes with three stars are considered to have average quality. The overall star rating is based on a combination of ratings for three separate components: health inspections, staffing, and quality measures, with the greatest weight given to the health inspection rating.

Each of the three component ratings are calculated with information collected and reported by nursing homes or state survey agencies to CMS. CMS uses three data and information sources for most of the information needed to calculate the component ratings.¹²

Health Inspections

CMS enters into agreements with state survey agencies to conduct unannounced, on-site nursing home health inspections—known as standard surveys—to determine whether nursing homes meet federal quality standards. Every nursing home receiving Medicare or Medicaid payment must undergo a standard survey not less than once every 15 months, and the statewide average interval for these surveys must not

¹²In addition to the three sources of information obtained from nursing homes and state survey agencies, CMS also uses claims data to calculate some of the measures for one of the rating components.

exceed 12 months.¹³ State surveyors also conduct complaint investigations in response to allegations of quality problems.¹⁴

If nursing homes are found to be out of compliance with any requirements, state surveyors issue deficiency citations that reflect the scope (number of residents affected) and severity (level of harm to residents) of the deficiency. Surveyors may conduct revisits to the nursing home to ensure that serious deficiencies identified have been corrected and that the nursing home is back in compliance.

State survey agencies submit the survey results to CMS, and the agency uses the survey data in calculating the health inspection rating. These ratings are published on Care Compare.¹⁵ A nursing home's health inspection rating is relative to other nursing homes' health inspection ratings in its state. CMS compiles a weighted average inspection score for each nursing home based on inspection results, such as the number and type of deficiency determined by surveyors during the three most recent health inspections.¹⁶ Based on these scores, CMS rank orders the weighted scores for all nursing homes in a state. Then, CMS assigns health inspection ratings to generally achieve the following distribution within each state: the top 10 percent of nursing homes receive five stars, the bottom 20 percent receive one star, and the middle 70 percent of nursing homes are equally divided into two, three, or four stars (see

¹³42 U.S.C. §§ 1395i-3(g)(1)(A), (g)(2)(A)(iii), 1396r(g)(1)(A), (g)(2)(A)(iii); 42 C.F.R. § 488.308(a)-(b) (2021).

¹⁴There are two categories of complaints: (1) complaints submitted by residents, family members, friends, physicians, and nursing home staff; and (2) "facility-reported incidents" that are self-reported by the nursing homes.

In addition to health inspection and complaint investigations, state surveyors are also responsible for conducting fire safety and emergency preparedness inspections. This information is also included on Care Compare.

¹⁵As of November 2017, CMS implemented nationwide electronic survey methodology. Prior to then, surveyors used multiple survey types, including paper based and electronic. See CMS, letter to State Survey Agency Directors, Revision to State Operations Manual (SOM) Appendix PP for Phase 2, F-Tag Revisions, and Related Issues, S&C: 17-36-NH (June 30, 2017).

¹⁶CMS's methodology for constructing the health inspection rating is based on the three most recent recertification surveys for each nursing home, complaint deficiencies during the most recent 3-year period, deficiencies cited on focused infection control surveys in the most recent 3-year period, and any repeat revisits needed to verify that required corrections have brought the facility back into compliance. CMS calculates each home's health inspection score by weighting more recent surveys more heavily than prior surveys.

appendix III for a comparison of CMS’s state-level distribution of health inspection ratings for nursing homes compared to a national distribution).

Staffing

Starting in April 2018, in response to a requirement in the Patient Protection and Affordable Care Act, CMS began basing staffing data used in the rating system on actual payroll-based journal staffing data reported to CMS.¹⁷ Prior to this, nursing homes self-reported staffing hours for a 2-week period during a surveyor’s inspection. Staffing data are reported quarterly and staffing measures and ratings are calculated and posted on Care Compare quarterly. CMS adjusts the staffing levels for differences in the level of complexity of nursing services required to care for residents across nursing homes—referred to as a case-mix adjustment. Each nursing home’s staffing rating is assigned based on how its total nursing and registered nurse staffing levels, as well as measures of staff turnover and weekend staffing, compare to CMS’s national staffing level thresholds.¹⁸

Quality Measures

Nursing homes regularly collect assessment information on all their residents, including information on the residents’ health, physical functioning, mental status, and general well-being. Nursing homes use standardized procedures developed by CMS to assess each resident and report those assessments to CMS using a tool called the Minimum Data Set (MDS). CMS uses some elements of the MDS data to calculate a nursing home’s performance on various measures of the quality of certain aspects of nursing home care, such as measures that track the prevalence of pressure sores and changes in residents’ mobility. CMS reports nine long-stay and six short-stay quality measures on Care

Minimum Data Set (MDS)

MDS data is submitted by nursing homes to the Centers for Medicare & Medicaid Services (CMS) and used to construct some of the quality measures that contribute to the overall quality measure rating on CMS’s Care Compare tool. MDS is a federally-required patient assessment instrument with screening, clinical, and functional status elements that forms a comprehensive assessment of each resident.

Source: GAO review of CMS documentation. | GAO-23-105312

¹⁷Pub. L. No. 111-148, §§ 6103, 6106, 124 Stat. 119, 704, 712 (2010) (codified, as amended, at 42 U.S.C. §§ 1320a-7j(g), 1395i-3(i)). In this report, we use the term ‘staffing data’ to refer to the payroll-based journal data source.

¹⁸Nursing homes earn points for staffing levels for each staffing measure and receive a star rating relative to national point thresholds established by CMS.

Compare that are used in calculating the rating.¹⁹ CMS calculates a short-stay, a long-stay, and an overall quality measure rating for each nursing home based on the nursing home's performance on various quality measures compared to national metrics set by CMS relative to how other nursing homes performed nationally.²⁰ CMS publishes these quality measure ratings, in addition to information on a nursing home's performance on individual quality measures, on Care Compare.

Overall Rating Calculation

The overall star rating for a nursing home is calculated using a process that combines the star ratings from the health inspection, staffing, and quality measure components (see appendix II for a nationwide analysis of the overall rating calculation). The overall rating is assigned based on the following steps:

1. Start with the number of stars for the health inspection rating.
2. Add one star if the staffing rating is five stars and also greater than the health inspection rating.²¹ Subtract one star if the staffing rating is one star. The overall rating cannot go above five stars or below one star.
3. Add one star if the quality measure rating is five stars. Subtract one star if the quality measure rating is one star. The overall rating cannot go above five stars or below one star.

See figure 2 for an example of how a nursing home's overall rating is calculated. CMS updates the ratings on a monthly basis, and a home's overall rating will change if new data affected any one of the component ratings. For example, when a home has a health inspection survey,

¹⁹Among the quality measures, five are calculated using Medicare claims data. CMS also reported additional nursing home quality measures on Care Compare.

²⁰Short-stay quality measures are for resident stays of 100 days or less, such as recovery from surgery or after being discharged from a hospital stay. For example, a quality measure includes the percentage that were re-hospitalized after a nursing home admission. Long-stay quality measures are for resident stays for 101 days or more, and, for example, include a quality measure related to the percentage of residents experiencing one or more falls with major injury.

²¹In July 2022, CMS changed its process for calculating a nursing home's overall rating. Based on that change, nursing homes could only receive a star increase for their overall rating if their staffing rating was five stars. Prior to this change, nursing homes could receive a star increase for their overall rating if their staffing rating was four or five stars. Our data analysis is based on CMS data from January 2020 when the prior version of the overall rating was in effect.

including a complaint investigation, the deficiency data from the survey will become a part of the calculation for the health inspection rating and the overall rating will also be adjusted, if necessary.

Figure 2: CMS Process for Calculating Overall Star Ratings for Nursing Homes

Health inspection

The process to calculate the Five-Star Rating System's overall rating begins with the health inspection rating.

*Example of a **health inspection rating** for Nursing Home X: Nursing Home X received three stars based on its health inspection rating. Therefore, it begins with three stars in its calculation.*



Staffing

For the staffing rating, one star is added to the overall rating for a five-star rating if it is greater than the health inspection rating and one star is subtracted for a one-star staffing rating.

*Example of a **staffing rating** for Nursing Home X: Nursing Home X's staffing rating was five stars, so one star was added to its overall rating.*



Quality measure

For the quality measure rating, one star is added to the overall rating for a five-star quality measure rating and one star is subtracted for a one-star quality measure rating.

*Example of a **quality measure rating** for Nursing Home X: Nursing Home X's quality measure rating was three stars, so there was no effect on the overall rating.*



Five-Star Rating System's overall rating calculation for Nursing Home X



Source: GAO review of Centers for Medicare & Medicaid Services (CMS) documentation. | GAO-23-105312

Text for Figure 2: CMS Process for Calculating Overall Star Ratings for Nursing Homes

- **Health inspection:** The process to calculate the Five-Star Rating System's overall rating begins with the health inspection rating. Example of a health inspection rating for Nursing Home X: Nursing

Home X received three stars based on its health inspection rating. Therefore, it begins with three stars in its calculation.

- **Staffing:** For the staffing rating, one star is added to the overall rating for a five-star rating if it is greater than the health inspection rating and one star is subtracted for a one-star staffing rating. Example of a staffing rating for Nursing Home X: Nursing Home X's staffing rating was five stars, so one star was added to its overall rating.
- **Quality measure:** For the quality measure rating, one star is added to the overall rating for a five-star quality measure rating and one star is subtracted for a one-star quality measure rating. Example of a quality measure rating for Nursing Home X: Nursing Home X's quality measure rating was three stars, so there was no effect on the overall rating.

Source: GAO review of Centers for Medicare & Medicaid Services (CMS) documentation. | GAO-23-105312

Note: If the health inspection rating is one star, then the overall rating cannot be upgraded by more than one star based on the staffing and quality measure ratings. Nursing homes that receive an abuse icon have their health inspection rating capped at two stars. Nursing homes enrolled in the Special Focus Facility program do not receive an overall rating. Staffing ratings may be limited or absent if, for example, nursing homes submit erroneous staffing data.

CMS Provides Nursing Home Information on Care Compare That Generally Aligns with Most of the Characteristics for Understandability and Relevancy

We found that the nursing home quality information that CMS provides on Care Compare generally aligns with most of the relevancy and understandability characteristics for effective transparency tools. However, the Care Compare information does not align with a few of the characteristics. Care Compare contained information that in some instances was older than applicable standards prescribe, or Care Compare was missing information needed to fully align with some of the characteristics.

Care Compare at Least Partially Aligns with 11 of the Understandability and Relevancy Characteristics

We found that the nursing home quality information on Care Compare aligned or at least partially aligned with 11 of the 15 understandability and

relevancy characteristics needed for an effective transparency tool.²² Specifically, we found that Care Compare aligned with eight of the 15 characteristics and partially aligned with three of them. (See table 1.) CMS officials told us that the intent of improvements it made to the website when CMS launched Care Compare in 2020 was to improve the usability of the website through changes to its functionality.

Table 1: Results from Review of Nursing Home Care Compare Against the 15 Characteristics for Transparency Tools

Characteristic	Rating
Reviews a broad range of services	Partially aligned
Covers a broad range of providers	Aligned
Describes key differences in clinical quality of care	Aligned
Describes key differences in patient experiences	Not Aligned
Describes key differences in costs	Not aligned
Describes other information related to quality	Aligned
Provides timely information	Minimally aligned
Describes key strengths and limitations to data	Aligned
Written in plain language with clear graphics	Aligned
Explains purpose and value of quality performance ratings	Aligned
Summarizes related information and organizes data to highlight patterns	Partially aligned
Enables consumers to customize information	Partially aligned
Enables comparison of multiple providers in one view	Aligned
Enables consumer to assess cost and quality information together	Not aligned
Enables easy use and navigation of the tool	Aligned

Legend:

Aligned = The tool has implemented the characteristic to a substantial degree. There may be aspects of the characteristic where improvements could be made, but overall, substantial steps have been taken to implement the characteristic;

Partially aligned = There are discrete areas where the tool has implemented the characteristic to some extent, but those are not representative of the tool as a whole;

Minimally aligned = The tool has largely not implemented the characteristic, with a few exceptions; and

Not aligned = there is no indication of the tool implementing the characteristic.

Source: GAO analysis of CMS information. | GAO-23-105312

²²These 15 characteristics were previously identified See GAO, *Health Care Transparency: Actions Needed to Improve Cost and Quality Information for Consumers*, [GAO-15-11](#) (Washington, D.C.: Oct. 20, 2014).

Below we describe how Care Compare aligned with three of the transparency characteristics (see appendix I for a description of all 15 characteristics):

Describes key differences in clinical quality of care. Including quality measures allows consumers to assess the quality of care that would be provided at one nursing home in comparison to others. We found that Care Compare provides information that aligns with this characteristic. It includes information on clinical quality of care from two sources—quality measures and health inspections. Care Compare includes a comparison function that allows a user to see the differences in performance on each reported quality measure for up to three nursing homes. A nursing home’s performance on the measures is reported for a specific time period. Most of the quality measures are presented relative to state and national averages. In addition to the quality measures, the health inspection component of Care Compare allows the user to navigate to an expanded view of the results from the last three health inspections among three nursing homes.²³ This webpage describes specific findings by the survey team that resulted in cited deficiencies in quality of care as well as the scope and severity of the identified deficiency.

Enables easy use and navigation of the tool. Establishing a website that is easy to find and navigate enables consumers to use the website to assist in identifying information about, and selecting, nursing homes. We found that Care Compare aligns with this characteristic, as it is generally easy to navigate. The Care Compare homepage brings the user to a search function as well as icons for the types of provider, including nursing homes. Searching for nursing homes is intuitive and includes prompts for the user in the search field, such as zip code and name of facility. On an individual nursing home’s webpage, there are options for the user to click on any of the three rating components, which initiates a pop-up page providing information specific to that component. There is an expanded view option that allows the consumer to scroll through the information of all of the components. To see information on the other components, users must close the pop-up page to open the window for the other component.

Written in plain language with clear graphics. An effective transparency tool uses labels and descriptions that make sense to

²³In addition to the health inspections, Care Compare also includes the infection control inspections and complaint inspections from the last three inspection cycles.

consumers, and graphics and symbols to help readily convey information. Generally, we found that Care Compare aligns with this characteristic, as it uses plain language in its presentation of nursing home quality information (see figure 3). In most cases, where Care Compare uses language that may be unfamiliar to users, there is a dotted line under the word or phrase. By hovering a cursor over those words, a small window pops up with a definition or other relevant information. CMS also includes two icons to signal important information to consumers. Specifically, Care Compare includes a hazard sign icon for nursing homes that are enrolled in the Special Focus Facility program, and a red hand icon for nursing homes with abuse violations.²⁴ In both cases, hovering over and clicking on the icon provides the consumer with an explanation for the meaning of the icon.²⁵

Below we describe two characteristics with which Care Compare partially aligned:

Summarizes related information and organizes data to highlight patterns. Summarizing and structuring the presentation of information to make patterns evident to consumers helps them comprehend large amounts of information. Care Compare partially aligns with this characteristic, as it organizes nursing home quality information into discernable categories—including overall rating, each of the three component ratings, emergency preparedness and safety, and COVID-19 vaccinations—that allow the consumer to view high level information in each category (see figure 3). Care Compare also includes the last three health inspection cycles.

However, Care Compare is not structured to highlight patterns beyond the last three inspections in nursing home quality for the other components of

²⁴CMS operates the Special Focus Facilities Program for nursing homes found to have serious or prolonged quality issues. Nursing Homes enrolled in the program are subject to more frequent inspections to monitor their improvement. For nursing homes with the Special Focus Facilities program icon, the ratings are suppressed on Care Compare.

²⁵While both icons include a broad definition for the icon, we found that information regarding the specifics about the abuse cited at the nursing home, or why the nursing home was enrolled in the Special Focus Facility program is not easy for a consumer to find on Care Compare. To understand the context for the abuse icon, a consumer could go through inspection results.

information.²⁶ Without further information about trends or patterns in a nursing homes' performance, consumers may not be able to see the extent to which the nursing home's ratings have been consistent or varied over time. CMS told us the goal of Care Compare is to provide consumers with the most relevant, recent information available about a nursing home's quality; they do not recommend that the website be the sole source of information for consumers about a nursing home.

Reviews a broad range of services: The more services that are covered by a website, the more likely it is that the tool will have information relevant to the particular services of interest to any given consumer. We found that Care Compare partially aligns with this characteristic because it implicitly provides some information on services provided at nursing homes. For example, the quality measure provides information on whether the percentage of long-stay residents who need help with daily activities has increased. However, Care Compare does not explicitly present the services provided by the nursing homes.

²⁶While not included on the nursing home webpages within Care Compare, a consumer could access further information on nursing home quality from CMS's Provider Data Catalog, which houses all of the publicly available data on nursing home performance that is included on nursing home Care Compare.

Figure 3: Illustrative Example of Nursing Home Information Presented on Care Compare

1 Written in plain language with clear graphics

Generally, Care Compare uses plain language in its presentation of the information about nursing homes. In most cases, areas that use language that may be unfamiliar to users, Care Compare includes a link to more information, or if you hover the cursor over those words, a small window pops up with a definition or other information.

2 Summarizes related information and organizes data to highlight patterns

Care Compare organizes nursing home quality information into discernable categories—including overall rating, each of the three component ratings, and COVID-19 vaccination rates—that allows the consumer to view high level information in each category. The user can expand each section for more detailed information. Care Compare, however, includes limited information that would allow the user to see the extent to which a nursing home's performance has been consistent or varied over time.

The screenshot shows the Medicare.gov website interface for finding healthcare providers. The main heading is "Nursing home" followed by "Bernova at Mt. Lincoln" in large, bold text. To the right, location and phone number information is provided. Below the name, an overall rating is shown as four full stars and one half star. A "Save to Favorites" button is present. The "Ratings" section is expanded, showing three categories: Overall rating (4.5 stars, "Above average"), Health inspections (3.5 stars, "Average"), Staffing (4.5 stars, "Above average"), and Quality measures (5 stars, "Much above average"). Each category has a "View" button. The "DETAILS" section shows "COVID-19 vaccination rates" with a brief description of the metric.

Source: GAO analysis of nursing home information on the Centers for Medicare & Medicaid Services (CMS) Care Compare. | GAO-23-105312

Text for Figure 3: Illustrative Example of Nursing Home Information Presented on Care Compare

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2. Summarizes related information and organizes data to highlight patterns. Care Compare organizes nursing home quality information into discernable categories—including overall rating, each of the three component ratings, and COVID-19 vaccination rates—that allows the consumer to view high level information in each category. The user can expand each section for more detailed information. Care Compare, however, includes limited information that would allow the user to see the extent to which a nursing home's performance has been consistent or varied over time.

Source: GAO analysis of nursing home information on the Centers for Medicare & Medicaid Services (CMS) Care Compare. | GAO-23-105312

Note: This figure demonstrates the format and content that appears on Care Compare and is not an illustration of an actual nursing home's webpage.

CMS officials told us that changes made in the transition to Care Compare from its predecessor—as well as since its launch—derive from multiple sources of feedback. These sources include feedback from ongoing user research, feedback through the Medicare.gov site survey, and recurring meetings with industry groups. CMS has established a Technical Expert Panel that includes stakeholder groups representing various perspectives, and officials told us they have made changes to Care Compare based on feedback. CMS officials said they review all feedback for scope and feasibility, and they prioritize short-term and long-term changes to Care Compare while balancing agency goals and priorities. For example, in 2021, CMS implemented seven changes to Care Compare based on feedback.²⁷ In addition, in April 2023, CMS

²⁷Among the changes implemented in 2021, based on feedback from stakeholders, CMS enabled Care Compare to be searched by state, and created separate sections for the fire safety & emergency preparedness inspections and penalties information on Care Compare.

proposed many changes to the information published on Care Compare through the rule making process.²⁸

Care Compare Does Not Align with Four of the Understandability and Relevancy Characteristics

Our analysis also found that some information on Care Compare was either not timely or missing to fully align with four of the characteristics. In the areas covered by these characteristics, we have either issued related recommendations to address these issues, or CMS officials told us about agency efforts to address the identified limitations.

Provides timely information. According to this characteristic, a transparency tool should indicate the age of data and other information it provides, and it should provide timely information. We found that while Care Compare indicated the age of information it provided, in some instances the information was not timely and therefore less useful to consumers in understanding nursing home quality. Specifically, to align with this characteristic, information should be no more than 2 years old to support its relevancy to consumers. When we reviewed the website in October 2022, we found instances in which nursing homes' most recent health inspection survey was more than 2 years old, including inspections dated 2019.²⁹

CMS generally expects state survey agencies to conduct inspections of nursing homes annually and the agency officials told us their survey agency monitoring includes completion of nursing home inspections.

²⁸In the preamble to its fiscal year 2024 skilled nursing facility prospective payment system proposed rule, CMS proposed that adjustments be made to the COVID-19 vaccination rate reporting on Care Compare to better enable short-stay beneficiaries to make comparisons. CMS proposed reporting data for the percent of residents who are up to date on COVID-19 vaccinations on Care Compare. Among other things, CMS also proposed adjustments to some of the quality measures reported on Care Compare. Medicare Program; Prospective Payment System and Consolidated Billing for Skilled Nursing Facilities; Updates to the Quality Reporting Program and Value-Based Purchasing Program for Federal Fiscal Year 2024; 88 Fed. Reg. 21,316 (Apr. 10, 2023).

²⁹We also found that the time period for data for one of the quality measures included in the quality rating was 2018 - 2019. CMS officials told us that this measure was finalized in the fiscal year 2022 rule and that the claims based measures are updated annually on Care Compare. CMS officials said that in the next refresh of Care Compare in October 2022, the measure would reflect a reporting period of fiscal year 2021 and the reporting period will advance by a fiscal year with each refresh.

CMS officials said that the COVID-19 pandemic created or exacerbated the inspection backlogs for states.³⁰ They also said that state survey agencies have experienced staffing shortages, which also affects their ability to conduct inspections. CMS officials told us they continue to monitor inspections backlogs quarterly and work with states in addressing the backlogs, through an effort CMS calls the 'backlog project' which the agency began in 2021. Within this project, CMS has allowed state survey agencies to adjust survey practices that facilitate their completion. CMS officials told us that, generally speaking, CMS tries to use the most recent data available because it reflects the most recent performance of a nursing home. In addition to issues with the timeliness of inspection information reported on Care Compare, HHS Office of Inspector General issued a report in April 2023 on problems with the completeness and accuracy of information from inspections reported on Care Compare.³¹

Describes key differences in patient experiences. The inclusion of information from nursing home residents on the care they received can help consumers understand what their experience could be at a nursing home. However, we found Care Compare does not align with this characteristic because it does not provide information related to nursing home resident experiences.³² We previously recommended that CMS

³⁰CMS paused its expectations for completing most inspections from March 2020 to August 2020 due to the COVID-19 pandemic.

³¹In its April 2023 report, the HHS Office of Inspector General reviewed inspection documentation against Care Compare. The Office of Inspector General found that CMS misreported nursing homes' inspection deficiency information on Care Compare. From a sample of 100 nursing homes, the Office of Inspector General found that Care Compare did not accurately report health deficiencies identified at 34 nursing homes. Additionally, the HHS Office of Inspector General found fire safety inaccuracies at 52 nursing homes and emergency preparedness inaccuracies at 2 nursing homes. From the sample of nursing homes reviewed, the Office of Inspector General estimated that about two thirds of nursing homes' information was not accurately reported on Care Compare. The Office of Inspector General recommended that CMS correct the inaccurately reported deficiencies they identified. See HHS Office of Inspector General, *CMS Did not Accurately Report on Care Compare One or More Deficiencies Related to Health, Fire Safety, and Emergency Preparedness for an Estimated Two-Thirds of Nursing Homes*, A-09-20-02007, April 2023.

³²The National Academies of Sciences recommended that CMS add measures of resident and family experience to Care Compare. See National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality: Honoring our Commitment to Residents, Families, and Staff* (Washington, D.C.: The National Academies Press, 2022), 532.

evaluate the feasibility of adding this information to the website.³³ CMS officials told us that the agency is exploring including an established patient experience quality measure through the rulemaking process.³⁴

Two characteristics related to cost. Including cost information on a website can allow consumers to understand potential out of pocket costs. We found that CMS does not include readily available cost information on Care Compare that helps consumers understand out-of-pocket costs. This does not align with the two cost-related characteristics— describe key differences in costs and enable consumer to assess cost and quality information together.³⁵ We previously recommended that CMS include cost information on its nursing home website. This recommendation remains open.³⁶

In February 2022, the White House announced an initiative to improve nursing home quality, including some related to Care Compare and the

³³[GAO-17-61](#). In this report, GAO recommended that CMS should evaluate the feasibility of adding consumer satisfaction information to the Five-Star System. CMS closed this recommendation by conducting a study dated October 2017 examining the feasibility of including consumer satisfaction data to Nursing Home Compare. The study described “widespread consensus that measuring satisfaction of nursing home residents and families is crucial to understanding resident experience and to informing consumers on choosing a nursing home.”

³⁴In the fiscal year 2023 skilled nursing facility prospective payment system proposed rule, CMS requested stakeholder feedback on the CoreQ short-stay discharge measure, a measure endorsed by the National Quality Forum. This measure shows the percent of individual discharges in a 6-month period that reported satisfaction with the discharging skilled nursing facility. The preamble to the proposed rule stated that this measure is a patient-reported outcome measure and is based on a four question survey using a five-point scale. 87 Fed. Reg. 22,720, 22, 761 (Apr. 15, 2022). CMS officials told us that they are considering including this measure in its program in a future rulemaking cycle, noting that some nursing homes are conducting this survey voluntarily. In the fiscal year 2024 proposed rule, CMS proposed to adopt the measure beginning in fiscal year 2026. 88 Fed. Reg. at 21,333 (Apr. 10, 2023).

³⁵We found that Care Compare included one quality measure that shows Medicare spending per beneficiary. This may provide an indirect assessment of the cost-efficiency of the nursing home, but is not sufficient to replace actual patient costs for services. The Care Compare tool includes a resources and information section for all provider types. Within the nursing home section, a consumer can find Medicare coverage information.

³⁶[GAO-15-11](#). Specifically, GAO recommended that CMS include in the CMS Compare websites, to the extent feasible, estimated out-of-pocket costs for Medicare beneficiaries for common treatments that can be planned in advance to improve consumers’ access to relevant and understandable information on the cost and quality of health care services. CMS concurred with this recommendation. Although CMS has taken steps to implement, the recommendation remains open.

Five-Star Rating System.³⁷ As of January 2023, CMS has implemented several of the Care Compare related initiatives.³⁸

CMS Assesses Information Used on Care Compare for Completeness and Accuracy, and Is Determining Next Steps for Further Assessments

CMS assesses the completeness and accuracy, through various processes, of three of the primary sources of nursing home information for Care Compare staffing data, Minimum Data Set (MDS), and inspections. It has taken steps over the past several years to improve its assessment of the accuracy of MDS, and is determining the appropriate next steps for these efforts.

CMS Conducts Automated Checks and Audits to Assess the Completeness and Accuracy of Staffing Data

Payroll-Based Journal

Payroll-based journal staffing data is a key data source used to calculate nursing home staffing ratings on the Centers for Medicare & Medicaid Services' (CMS) Care Compare tool. Nursing homes are required to submit to CMS

³⁷See White House, "FACT SHEET: Protecting Seniors by Improving Safety and Quality of Care in the Nation's Nursing Homes" (Washington, D.C.: Feb. 28, 2022).

³⁸In September 2022 CMS announced that it made additional nursing home ownership information available on Care Compare. Also, in January 2023, CMS announced that the agency began posting disputed citations, issued to nursing homes for inspection results on Care Compare. Prior to this change, CMS waited until disputes by nursing homes were resolved to post the final results of the health inspection on Care Compare. See QSO-23-05-NH (Jan., 18, 2023).

“complete and accurate direct care staffing information...based on payroll and other verifiable and auditable data.”

Source: GAO review of CMS documentation. | GAO-23-105312

CMS conducts automated checks of the completeness and accuracy of staffing data, which is a key data source used to calculate nursing home staffing ratings on Care Compare. CMS also conducts audits on a sample of nursing homes every quarter.³⁹ Staffing data are uploaded into a system with embedded data validation procedures that check for incomplete or out of range information. In some cases, incomplete data impact a facility’s star rating on Care Compare. Under CMS guidance, nursing homes that do not submit staffing data by the deadline will receive a one-star staffing rating. This one-star staffing rating, in turn, may affect the facility’s overall rating. (See app. II).

According to officials, for its quarterly audits of staffing data from a sample of nursing homes, CMS, with the assistance of a contractor, identifies and reviews the data for certain metrics that may be indicative of staffing data errors. These metrics are subject to change every quarter depending on their success at identifying facilities with significant discrepancies in staffing data, according to CMS officials. As a result, CMS officials told us that a sample of the nursing homes with these discrepancies are subject to these audits, which can include comparisons between staffing hours reported by a nursing home and staffing hours verified by CMS and its contractor. According to CMS officials, CMS conducts these audits on fewer nursing homes per quarter than they would like due to limited resources.

CMS Conducts Automated Checks of MDS Data, Has Implemented Additional Accuracy Checks, and Is Considering Next Steps for Additional Checks

Similar to the staffing data, CMS conducts automated data validation checks for incomplete or out of range information. CMS has been working to improve the accuracy of MDS data for several years, and has identified additional issues with data accuracy when it has assessed the data. In an effort to improve its assessments of MDS data—including those that inform quality measures—CMS piloted additional checks for accuracy in

³⁹CMS completes these checks to review nurse staffing information that it reports on Care Compare, but does not take similar steps for non-nurse staffing, including physical therapists. See HHS Office of Inspector General, *CMS Use of Data on Nursing Home Staffing: Progress and Opportunities To Do More*, OEI-04-18-00451(Washington, D.C.: March 2021). In addition to the staffing data, some data from MDS is also used to calculate the staffing rating.

2014 to verify MDS data via focused surveys.⁴⁰ These focused surveys enabled state surveyors to review nursing home resident assessments in more depth. For example, findings from these surveys included inaccurate documentation of pressure ulcers and poor coding regarding the use of restraints.

Minimum Data Set (MDS)

MDS data is submitted by nursing homes to the Centers for Medicare & Medicaid Services (CMS) and used to construct some of the quality measures that contribute to the overall quality measure rating on CMS's Care Compare tool. MDS is a federally-required patient assessment instrument with screening, clinical, and functional status elements that forms a comprehensive assessment of each nursing home resident.

Source: GAO review of CMS documentation. | GAO-23-105312

After the pilot of new survey procedures identified a number of deficiencies in the MDS data from the nursing homes in its sample, CMS concluded that the piloted focused surveys were effective at identifying issues with MDS data. According to CMS officials, CMS subsequently updated state survey procedures to integrate these focused surveys into standard survey procedures. CMS officials also told us that since 2017, State Survey Agencies have implemented these new procedures for MDS accuracy as part of the survey process conducted by state surveyors. When surveyors observe an adverse event or other resident issues, the survey procedures guide the surveyor to also check what the nursing home reported in its MDS data. In these instances, surveyors may cite the nursing home for a deficiency. CMS officials told us that the agency monitors this survey process by tracking the rates of these citations.

In addition to these new procedures, CMS has also recently begun auditing the accuracy of the MDS data related to a measure of the percentage of nursing home residents who are prescribed antipsychotic medications for schizophrenia and other conditions. Focused surveys were implemented on this area of care and, as a result, led CMS to pilot these audits. Further, as a result of finding that CMS's use of MDS as the sole data source to count the number of nursing home residents who are receiving antipsychotic medications may not always provide complete information, the HHS Office of Inspector General issued two recommendations in 2021 related to antipsychotic medication monitoring in nursing homes. The recommendations were that CMS take additional steps to validate the information reported in MDS assessments and to supplement the data it uses to monitor antipsychotic medication use.⁴¹

In 2022, according to CMS officials, CMS began piloting offsite audits of schizophrenia coding in MDS. During the course of this audit pilot, CMS found inaccuracies in MDS coding, including residents that were inaccurately coded with a diagnosis of schizophrenia. These erroneous

⁴⁰In addition to MDS, Medicare claims data is used to calculate the quality rating.

⁴¹See HHS Office of Inspector General, *CMS Could Improve the Data It Uses To Monitor Antipsychotic Drugs in Nursing Homes*, OEI-07-19-00490(Washington D. C.: May 2021).

diagnoses can lead to unnecessary use of antipsychotic medications, among other things. As a result, in January 2023, CMS issued a memorandum stating the agency would be conducting offsite audits of schizophrenia coding in MDS moving forward, and announced that star ratings would be adjusted based on the results of the audits for nursing homes with inaccurate coding.⁴² If implemented effectively, the additional audits should improve CMS’s awareness of issues with the accuracy of its MDS data and ultimately improve the accuracy of the data.

These audits are assessing the underlying data for one of ten MDS quality measures, and according to CMS officials, the agency is still determining the appropriate next steps for any further efforts related to MDS quality measure data. (See table 2 for a list of the MDS quality measures used to calculate the quality measure rating.)

Table 2: Minimum Data Set (MDS) Quality Measures Used in the Quality Measure Rating

Percentage of long-stay residents whose need for help with daily activities has increased
Percentage of long-stay residents whose ability to move independently worsened
Percentage of long-stay high-risk residents with pressure ulcers
Percentage of long-stay residents who have or had a catheter inserted and left in their bladder
Percentage of long-stay residents with a urinary tract infection
Percentage of long-stay residents experiencing one or more falls with major injury
Percentage of long-stay residents who got an antipsychotic medication
Percentage of short-stay residents who improved in their ability to move around on their own
Percentage of short-stay skilled nursing facility residents with pressure ulcers/pressure injuries that are new or worsened

⁴²Among other things, this memorandum states that facilities that have coding inaccuracies identified through these audits will have their quality measure ratings adjusted. These adjustments will include a downgrade to a one star rating for 6 months for both the overall quality measure and the long-stay quality measure, and suppression of the short-stay quality measure rating for 6 months. Further, the long-stay antipsychotic quality measure will be suppressed for 12 months. Nursing homes that are subject to audit have an option to forego the audit by admitting they have errors and committing to correct the issue. As a result, CMS will consider a lesser action related to the nursing home’s star rating. See CMS, *Updates to the Nursing Home Care Compare Website and Five Star Quality Rating System: Adjusting Quality Measure Ratings Based on Erroneous Schizophrenia Coding, and Posting Citations Under Dispute*, QSO-23-05-NH, January 18, 2023.

Percentage of short-stay residents who got antipsychotic medication for the first time

Source: CMS. | GAO-23-105312

According to CMS officials, the agency is considering next steps to verify the accuracy of the MDS data used to inform CMS's nursing home quality measures. Such steps would be consistent with a 2022 White House initiative that called for CMS "to launch a new effort to identify problematic diagnoses and refocus efforts to continue to bring down the inappropriate use of antipsychotic medications" as a result of inappropriate diagnoses and prescribing practices.⁴³ According to CMS, their recent audits of schizophrenia coding in MDS supports this goal. The initiative also calls for CMS to "ensure that ratings more closely reflect data that is verifiable, rather than self-reported, and will hold nursing homes accountable for providing inaccurate information." According to CMS officials, the recent audits are a step toward this goal as well.

Further, in 2022, the National Academies of Sciences reported concerns that have been raised about the self-reported nature of MDS data, including the opportunities for nursing homes to falsify their data or use questionable strategies to improve scores. The report recommended CMS enhance quality measures by "improving the validity of Minimum Data Set–based measures of clinical quality (e.g., better risk adjustment, auditing for accuracy, and inclusion of resident preferences)."⁴⁴ According to CMS officials, the agency is still considering the appropriate next steps for any additional future quality measure audits or other efforts to align with the White House initiative. Among other changes included in CMS's skilled nursing facility prospective payment system fiscal year 2024 proposed rule, the agency proposed a validation process for the skilled nursing facility value-based-purchasing measures calculated using MDS data.⁴⁵ Value-based-purchasing measures are included on Care Compare but are not currently used to calculate a nursing home's quality measure rating.

⁴³See White House, "FACT SHEET: Protecting Seniors by Improving Safety and Quality of Care in the Nation's Nursing Homes" (Washington, D.C.: Feb. 28, 2022).

⁴⁴See National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality: Honoring our Commitment to Residents, Families, and Staff* (Washington, D.C.: The National Academies Press, 2022), 532.

⁴⁵CMS proposed to conduct a validation process of the value-based purchasing measures by having a contractor audit MDS data for up to 1,500 randomly selected nursing homes annually. 88 Fed. Reg. at 21, 398 (Apr. 10, 2023).

CMS Assesses the Completeness and Accuracy of Inspection Data via the Federal Monitoring Survey

CMS oversees state survey agency surveys to ensure the completeness and accuracy of their inspection results, which are used to calculate nursing home inspection ratings on Care Compare. To do this, CMS uses the FMS, which is intended to verify the completeness and accuracy of nursing home inspections by reviewing the work of state surveyors.⁴⁶

Inspections

Information from state survey agency surveys of nursing homes provides the basis for the health inspections rating on the Centers for Medicare & Medicaid Services' (CMS) Care Compare tool. CMS uses the Federal Monitoring Survey to assess the completeness and accuracy of surveyors in interpreting and applying federal standards during their inspections, among other things.

Source: GAO review of CMS documentation. | GAO-23-105312

CMS is required to conduct the FMS in at least 5 percent of nursing homes annually.⁴⁷ According to CMS officials, resource often limit the agency from conducting activities beyond this 5 percent. FMS falls within three categories: Resource and Support Surveys, Focused Concern Surveys, and Health Comparative Surveys.

Resource and Support Surveys

Resource and Support Surveys allow federal surveyors to join the state survey agency's team at a selected facility for a survey, serving as a resource for the state survey agency team. The federal surveyors help the state survey agency team by assisting them in conducting thorough investigations and answering questions that arise during the survey.

Focused Concern Surveys

Focused Concern Surveys are conducted within 60 days of a state survey, and, according to CMS officials, are an attempt by federal surveyors to try to duplicate the state's findings and deficiencies. Federal surveyors conduct a new survey, without the state surveyors present, focused on key areas that CMS has determined are important priorities. These priorities may change from year to year. For example, these focus

⁴⁶As part of its work identifying inaccuracies of inspection information on Care Compare, the Office of Inspector General recommended that CMS strengthen its processes for reviewing inspection results reported on Care Compare by requiring state survey agencies to verify the deficiencies reported, providing technical assistance and additional training to state survey agencies, and verifying that nursing home inspection results are accurately reported. See HHS Office of Inspector General, *CMS Did Not Accurately Report on Care Compare*.

⁴⁷Federal monitoring surveys are to occur in at least 5 percent of a state's nursing homes per year, but in no case less than 5 per year. See 42 U.S.C. §§ 1395i-3(g)(3), 1396r(g)(3).

areas can include behavioral health, immunizations, and infection prevention.

Health Comparative Surveys

Health Comparative Surveys involve a new survey of a facility where the federal survey team conducts a separate inspection of a facility that was recently inspected by a team of state surveyors. According to CMS officials, the federal surveyors keep certain variables the same, such as the number of surveyors and the length of the survey. The results from the federal survey are then compared to the state survey agency's findings.

CMS officials said that when CMS identifies issues with state surveys, it can serve as training and support to state survey agencies to ensure the completeness and accuracy of surveys. If needed, CMS also has available sanctions to ensure the completeness and accuracy of state survey agencies surveys to ensure compliance. CMS can sanction a state survey agency in response to a state survey agency's inadequate performance, which can include, among other things, demonstrating a pattern of failure to identify deficiencies or conduct surveys in accordance with CMS procedures. Sanctions could include measures to withhold funding for state agencies and termination of agreements between CMS and the state.⁴⁸

⁴⁸See CMS, *State Operations Manual, Chapter 8 – Standards and Certification*, Rev. 1, May 21, 2004.

Federal Financial Participation can be reduced for a pattern of failure to identify deficiencies in Medicaid facilities. In both Medicaid and Medicare facilities, CMS provides for training of survey teams for survey inadequacies, among other things. See 42 C.F.R. § 488.320 (2021).

According to Stakeholders, CMS's Five-Star Rating System Exhibits Both Strengths and Limitations in Its Ability to Identify Nursing Home Quality

The twelve stakeholders we spoke with—composed of individuals and groups representing consumer, provider, and research perspectives—described the strengths and limitations of the nursing home Five-Star Rating System.⁴⁹ Stakeholders told us about strengths and limitations of the rating system as a whole and for each component of the rating system: health inspections, staffing, and quality measures. These perspectives included strengths of the rating system, such as its inclusion of measures that are important for understanding nursing home quality, as well as limitations of the rating system, such as difficulty for consumers to interpret ratings. We did not identify patterns in the responses associated with each type of stakeholder.

CMS's Stakeholder Feedback Processes

Officials from the Centers for Medicare & Medicaid Services (CMS) described processes in place to learn about strengths and limitations of Care Compare, including the nursing home rating system. CMS officials and several stakeholders described an ongoing interactive working relationship between CMS and experts in nursing home quality. In addition to feedback CMS receives about Care Compare, CMS convenes technical expert panels composed of nursing home industry stakeholders to advise on matters of nursing home quality, including updates to the rating system. CMS officials also told us that they engage stakeholders in less formal ways, such as hosting calls and meetings with stakeholders. Officials told us that they receive unprompted feedback directly from stakeholders as well.

Source: GAO review of CMS documentation and stakeholder interviews. | GAO-23-105312

Five-Star Rating System as a Whole

General strengths of the rating system. According to most of the stakeholders, the rating system generally reflects nursing homes quality by incorporating a variety of measures related to the multidimensional nature of nursing home quality of care. Several stakeholders noted that the rating components—health inspections, staffing, and quality measures—are generally appropriate for a rating system. For example, one stakeholder told us that the ratings are a good starting point for comparing nursing homes. Another stakeholder said that the rating system provides a meaningful distinction between a 5-star home and a 1-star home.

General limitations of the rating system. Stakeholders also noted several general limitations of the rating system related to consumers'

⁴⁹In addition to the strengths and limitations of the Five-Star Rating System identified by the stakeholders we spoke with, this report also provides the results of our assessment of Care Compare. Our assessment found that Care Compare at least partially aligned with 11 out of 15 understandability and relevancy characteristics for an effective transparency tool.

ability to understand relationships between ratings, interpret ratings, and make distinctions between nursing homes.

- Several of the stakeholders noted that relationships between the three component ratings and how CMS combines them into an overall rating may be unclear to consumers. Several stakeholders said that interpretation of the overall rating may be particularly difficult when there is variation between the component ratings (i.e., a nursing home receives a low health inspection rating and high staffing or quality measure ratings).
- Several stakeholders told us that it may also be difficult for consumers to interpret the ratings due to the breadth of data that are aggregated to create the component ratings or how those components are weighted. Several stakeholders also noted that summarizing nursing home quality into an overall rating may also oversimplify complex quality of care issues. For example, one stakeholder told us that if consumers rely on the star ratings, they may miss an important quality issue at a nursing home. In addition, several stakeholders noted that they believe the health inspection component may be over-weighted in the overall rating calculation.
- Several stakeholders told us that the rating system is limited in its ability to consistently identify nursing home quality across all star ratings. Those stakeholders told us that a 1-star overall rating signals poor nursing home quality and a 5-star rating signals high quality, but middle ratings may not reflect quality as accurately. One stakeholder particularly mentioned challenges with comparing nursing homes that receive a 2-, 3-, or 4-star rating, noting that the differences are “muddled.” Stakeholders have also highlighted this limitation of the rating system as reported in our prior work.⁵⁰ In addition, the National Academies of Sciences’ 2022 report recommended CMS test and improve the rating system’s ability to better distinguish the “middle ranges of rating[s].”⁵¹

Health Inspection Rating

Stakeholders noted strengths and several limitations specific to the health inspection component of the rating system. Many of the stakeholders agreed that the in-person observation of nursing homes through

⁵⁰See [GAO-17-61](#).

⁵¹See National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality*, 532.

inspections, using established standards is important for a rating system. Stakeholders also identified limitations with the timeliness and reliability of health inspection results, potentially resulting in out-of-date or imprecise information for a facility.

Strengths associated with the health inspection rating. Many of the stakeholders emphasized the rating system’s incorporation of health inspections as a strength of the rating system. One stakeholder noted the importance of having information gathered on site at the facility using, according to another stakeholder, “reasonably objective” health inspection procedures. According to another stakeholder, the recent inclusion of the infection control inspections has improved the health inspection component rating.

Limitations associated with the health inspection rating. Stakeholders identified limitations with the timeliness and reliability of health inspection results, potentially resulting in out-of-date or imprecise information for a facility.

- According to many of the stakeholders, limitations in the timeliness with which health inspections are conducted could affect the health inspection component rating. Several stakeholders critiqued the disparity between the age of the information used to calculate the health inspection rating—particularly when inspections are overdue—and relatively real-time data for other components that are updated quarterly.⁵² According to these stakeholders, delays may limit the rating system’s ability to accurately reflect current nursing home quality.
- Many stakeholders also cited limitations around the reliability of health inspection information used in the health inspection rating. Many stakeholders told us that state survey agency surveyors may not consistently apply CMS’s inspection protocols, potentially creating inconsistencies between inspection results for nursing homes within

⁵²Standard surveys are required to be conducted at least every 15 months. CMS officials told us that the COVID-19 pandemic created or exacerbated inspection backlogs for states. They said state survey agencies have experienced staffing shortages, which also affects their ability to conduct inspections.

one state or between states.⁵³ One stakeholder attributed variation, in part, to staffing issues within state survey agencies, related to the training and supervision of inspectors, which may lead to different interpretations of the scope and severity of deficiencies. Several stakeholders said the way CMS calculates health inspection ratings masks the wide variation of inspection practices between states and makes it difficult for consumers to understand nursing home ratings relative to national standards.⁵⁴ See appendix III for further analysis.

Staffing Rating

Stakeholders emphasized strengths of the staffing rating, such as improvements in data sources and new staffing measures. Stakeholders also noted limitations of the staffing rating, such as the exclusion of some types of staff and measures related to the use of staffing agencies.

Strengths associated with the staffing rating. Most of the stakeholders we interviewed identified strengths for the staffing component of the rating system, including improved staffing data and a relationship between nursing home quality and staffing levels. Most stakeholders said the staffing data used to calculate the staffing rating are more reliable, accurate, timely, or auditable than prior staffing data sources. Several stakeholders told us there was a relationship between staffing levels and nursing home quality of care. Several stakeholders considered the staffing rating to be the most useful of the component ratings.⁵⁵

During our interviews, many stakeholders emphasized the importance of including weekend staffing and turnover information into the staffing rating. In 2021, we recommended that CMS assess the feasibility of

⁵³To address the variation in inspection practices between states, CMS has assigned nursing home health inspection ratings according to a state-level distribution of all nursing home inspection scores within a state. In doing so, CMS, has created different health inspection star-rating thresholds for each state.

⁵⁴GAO reviewed CMS's practice of basing health inspection ratings on within-state distributions and issued a recommendation that CMS add information to the Five-Star Rating System that allows consumers to compare homes nationally. CMS did not agree with our recommendation and, in September 2021, told us that they do not plan to take steps to implement the recommendation. See [GAO-17-61](#).

⁵⁵The National Academies of Science recommended that HHS should increase the weight of staffing measures within the rating system. See National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality*, 532.

incorporating into the rating system weekend decreases in registered nurse and total nurse staffing levels.⁵⁶ CMS agreed with our recommendation. In July 2022, CMS began to incorporate weekend and turnover measures into the staffing rating, addressing stakeholders' concerns about the exclusion of these measures in prior iterations of the rating system.⁵⁷ As a result of CMS's efforts, our recommendation has been implemented.

Limitations associated with the staffing rating. Despite most of the stakeholders identifying improvements in staffing data as a strength of the rating system, stakeholders also pointed to several limitations of the staffing rating. These limitations related to the exclusion of some types of staff, whether staff are providing direct care, the use of staffing agencies, and the application of evidence-based staffing requirements.

- Several of the stakeholders told us the staffing rating may not account for all staff types providing care to nursing home residents. One stakeholder highlighted the need for the staffing rating to include, for example, occupational and respiratory therapists who provide care at a nursing home.
- Several stakeholders also said the rating system may have a limited ability to distinguish between staff that provide direct care and those that perform administrative or other duties, perhaps inflating staffing ratings. One stakeholder suggested that nursing homes may be unclear about whether to include these staff in reported staffing data.
- In addition, several stakeholders told us that CMS's rating system does not take into account whether staff are sourced from a staffing agency.⁵⁸ These staff, according to one stakeholder, are more likely to be temporary placements and less likely to build relationships with

⁵⁶See GAO, *Medicare: Additional Reporting on Key Staffing Information and Stronger Payment Incentives Needed for Skilled Nursing Facilities*, [GAO-21-408](#) (Washington, D.C.: July 9, 2021).

⁵⁷GAO conducted its stakeholder interviews prior to CMS adding weekend and turnover staffing measures to the staffing rating. While stakeholders discussed the exclusion of these staffing categories as a limitation, the implication is that CMS's actions reduced this issue as a limitation. However, we were not able to gather stakeholder perspectives on whether there were strengths and limitations related to the specific staffing measures CMS chose to add, and how CMS chose to incorporate them into the staffing star rating.

⁵⁸According to CMS, oversight of staffing agencies is outside the scope of CMS's authority.

residents, potentially affecting quality.⁵⁹ According to CMS, its July 2022 inclusion of staff turnover measures into the rating system addresses this issue. The staff turnover measures, however, do not directly address the extent to which staffing agencies are used to supply nursing home staff.

- Finally, several stakeholders emphasized that the rating system is limited because it does not base staffing ratings on benchmarks derived from a current and evidence-based study of minimum staffing standards.⁶⁰ A recent report by the National Academies of Sciences recommended that CMS “enhance the current minimum staffing requirements”.⁶¹ In addition, the Biden administration has highlighted CMS’s plans to conduct a study to “determine the level and type of staffing needed to ensure safe and quality care,” and to establish staffing requirements through the rulemaking process.⁶² Since April 2022, CMS has begun the process of conducting such a study.⁶³

⁵⁹A report by the National Academies of Sciences concluded that CMS has limited data on contract and agency staff providing care in nursing homes and recommended that CMS should enhance data collection for these care providers. See National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality*, 516-517.

⁶⁰In 2021, we highlighted stakeholder concerns with the age of the existing staffing study completed in 2001 and recommended that CMS report minimum nurse staffing thresholds below which nursing home residents are at increased risk of quality problems on Care Compare. At the time, CMS did not concur with this recommendation. Since the report’s publication, CMS has taken steps to address the recommendation and has stated that it will conduct a new research study to help determine the level and type of staffing needed to ensure safe and quality care. See GAO, *Medicare: Additional Reporting on Key Staffing Information and Stronger Payment Incentives Needed for Skilled Nursing Facilities* | [GAO-21-408](#) (Washington, D.C.: July 9, 2021).

⁶¹Specifically, the National Academies of Sciences recommended CMS “fund research to identify and rigorously test specific minimum and optimum staffing standards for direct-care staff”. See National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality*, 511.

⁶²See White House, “FACT SHEET: Protecting Seniors by Improving Safety and Quality of Care in the Nation’s Nursing Homes” (Washington, D.C.: Feb. 28, 2022).

⁶³In a fact sheet accompanying CMS’s issuance of its skilled nursing facility prospective payment fiscal year 2024 proposed rule, the agency stated that it continues to consider public comments on minimum staffing requirements and collect evidence through a study of staffing levels.

Quality Measures Rating

Many of the stakeholders discussed strengths of the quality measures rating, such as the inclusion of measures that are important indicators of nursing home quality. In addition, stakeholders noted several limitations of the quality measures rating, citing challenges with the accuracy of MDS data, completeness of Medicare claims data, and a missing measure related to resident experience.

Strengths associated with the quality measures rating. Many of the stakeholders told us that a notable strength of the rating system, which is particularly applicable to the quality measures rating component, is the variety of quality measures that are important in understanding nursing home quality.

Limitations associated with the quality measures rating. Stakeholders also noted several limitations with the accuracy and completeness of the information used in the quality measures rating based on MDS and Medicare claims data.

- Many of the stakeholders characterized much of the data pulled from the MDS as self-reported by nursing homes and unaudited, presenting what they believed to be potential accuracy limitations. This perspective prompted several stakeholders to rank the quality measure rating as the least reliable of all the component ratings. In 2022, the National Academies of Sciences recommended CMS “improv[e] the validation of MDS-based measures of clinical quality,” which if implemented, may address some of the concerns raised by the stakeholders we interviewed.⁶⁴ In this report, we have described steps CMS has taken to improve the quality of the MDS data. According to CMS officials, the agency is still considering the appropriate next steps for any additional future quality measure audits.
- Several stakeholders shared other concerns with claims-based data used for five quality measures. Two of these stakeholders said that claims-based data only reflect a portion of the resident population (e.g., the exclusion of information from the Medicare Advantage program) and one noted that they tend to be less current than other quality measure data.

⁶⁴See National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality*, 532.

In addition, similar to what we found when we assessed Care Compare, many of the stakeholders told us that the rating system does not include a resident experience measure, an important component of quality of life in a nursing home. Several stakeholders pointed to the availability of patient experience tools that could be incorporated.⁶⁵ In 2016, we recommended that CMS evaluate the feasibility of adding patient experience information as part of Care Compare.⁶⁶ CMS implemented this recommendation by providing a study examining the feasibility of including satisfaction data, but has not included such information on Care Compare. CMS officials told us that the agency is exploring including an established patient experience quality measure through the rulemaking process.

Agency Comments

We provided a draft of this report to the Department of Health and Human Services for comment, and the department provided technical comments, which we incorporated as appropriate.

As agreed with your office, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 30 days from its issuance of date. At that time, we will send copies to the Secretary of Health and Human Services, the Administrator of the Centers for Medicare & Medicaid Services, and other interested parties. In addition, the report is available at no charge on the GAO website at <http://www.gao.gov>.

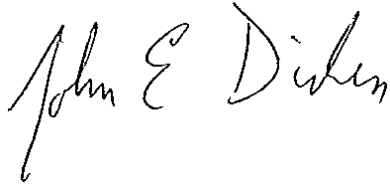
If you or your staff have any questions about this report, please contact me at (202) 512-7114 or dickenj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed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

Sincerely yours,

⁶⁵The National Academies of Sciences has indicated that the Consumer Assessment of Healthcare Providers and Systems (CAHPS) measures are the “most well-validated measures of resident and family experience” and has recommended CMS add these measures to Care Compare. See National Academies of Sciences, Engineering, and Medicine, *The National Imperative to Improve Nursing Home Quality*, 531.

⁶⁶See [GAO-17-61](#).

Letter

A handwritten signature in black ink that reads "John E. Dicken". The signature is written in a cursive style with a large, prominent 'J' and 'D'.

John E. Dicken
Director
Health Care

Appendix I: Assessment of Care Compare Nursing Home Information

This appendix provides additional details on our assessment of the nursing home quality information provided through the Centers for Medicare & Medicaid Services' (CMS) Care Compare.

To examine how understandable and relevant nursing home quality information on Care Compare is to consumers, we reviewed Care Compare against 15 characteristics of effective transparency tools for consumers. Transparency tools are websites with health cost or quality information comparing different providers of health care services; Care Compare fits this definition. We identified these characteristics as those from our 2014 report on transparency tools that were relevant to nursing home quality information.¹ Eight of the 15 characteristics examine whether the information is presented in an understandable way that enables the consumer to locate and interpret it as intended.

The remaining seven criteria address the extent to which a tool provides relevant information to consumers in making informed decisions about nursing homes. In our analysis, we defined overall nursing home quality to include information related to the quality of care or safety performance of a nursing home. We analyzed the nursing home section of Care Compare, including entries for a nongeneralizable sample of 24 individual nursing homes,² webpages with respect to its alignment with the 15 characteristics.² Two analysts independently rated Care Compare on these characteristics to reach consensus on assessment of alignment on the characteristics. In the areas where we did not find alignment, we have either issued related recommendations to address these issues, or CMS

¹See GAO, *Health Care Transparency: Actions Needed to Improve Cost and Quality Information for Consumers*, [GAO-15-11](#) (Washington, D.C.: Oct. 20, 2014).

² We reviewed a sample of individual nursing home webpages from four selected states—Alabama, Maine, Missouri, and Oregon. For each state, we reviewed individual nursing home webpages from a zip code that represented each of the overall five-star ratings—one to five stars—as well as a nursing home assigned an abuse and special focus facility program icon.

**Appendix I: Assessment of Care Compare
Nursing Home Information**

officials told us about agency efforts to address the identified limitations. All 15 of the characteristics are included in table 1 below.

Table 3: Alignment of Nursing Home Quality Information on Care Compare with Understandability and Relevancy Characteristics

Characteristic	GAO assessment of alignment	Rationale overview
Reviews a broad range of services	Partially aligned	Care Compare implicitly provides some information on services provided at nursing homes. For example, the quality measure information provides information on whether the percentage of long-stay residents who need help with daily activities has increased. However, Care Compare does not explicitly present the services provided by the nursing homes.
Covers a broad range of providers	Aligned	Care Compare includes a searchable listing of all nursing homes in a geographical area (zip code, city, state). This includes nursing homes that are new to the program and have yet to undergo an inspection with the results on Care Compare.
Describes key differences in clinical quality of care	Aligned	Care Compare includes information on clinical quality of care in two sources –quality measures and health inspections. Care Compare includes a comparison function that allows a user to see the differences in performance against each reported quality measure for up to three nursing homes. The quality measures describe performance on a series of 16 long-stay and 18 short-stay measures relevant to the nursing home population, such as rates of falls, hospitalizations, and pressure ulcers. Almost all of the measures are represented as percentages, with one as a ratio and two as numerical scores. A nursing home’s performance against the measures is reported for a specific time period. Most of the quality measures are presented relative to state and national averages. In addition, the health inspection component of Care Compare allows the user to navigate to an expanded view of the results from the last three health inspection cycles. This webpage describes specific findings by the survey team that resulted in cited deficiencies in quality of care and well as the scope and severity.
Describes key differences in patient experiences	Not aligned	Care Compare does not include information about nursing home patient experience.
Describes key differences in costs	Not aligned	Care Compare does not include information on service or stay costs to help consumers understand key differences in out-of-pocket costs. It does provide one quality measure that shows Medicare spending per beneficiary. This may provide an indirect assessment of the cost-efficiency of the nursing home, but is not sufficient to replace actual patient costs for services to a consumer.
Describes other information related to quality	Aligned	In addition to the quality measures, Care Compare includes a star rating for staffing levels and the specific measures used to derive the star rating. On Care Compare, the Centers for Medicare & Medicaid Services (CMS) states the relationship between staffing and quality of care: “Higher staffing levels and lower staffing turnover in a nursing home may mean higher quality of care for residents.” The inspection section also includes information that indicates quality at a nursing home. There is also COVID-19 vaccination and booster rates on individual nursing home webpages.

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Nursing Home Information**

Characteristic	GAO assessment of alignment	Rationale overview
Provides timely information	Minimally aligned	Care Compare includes the dates of the last three inspections on an individual nursing home’s webpage and CMS includes a webpage that lists the current data reporting period for the information used in calculating the quality measures. As of October 2022, we found instances in which nursing homes’ most recent health inspection survey was more than 2 years old, including inspections dated 2019. However, federal law requires every nursing home receiving Medicare or Medicaid payment to undergo a standard survey not less than once every 15 months. We also found that the time period for data for one of the quality measures included in the quality rating was 2018 – 2019 but that data was updated before the end of 2022.
Describes key strengths and limitations to data	Aligned	Care Compare includes a ‘current data collection period’ webpage that describes the data collection time period for all of the quality measures. This webpage also includes a description of each quality measure, and why the measure is important.
Written in plain language with clear graphics	Aligned	<p>Generally, Care Compare uses plain language in its presentation of the information about nursing homes. In most cases, there is a dotted line under words that may be unfamiliar to users. If a cursor is hovered over those words, a small window pops up with a definition or other information. When a user drills down into the details of health inspection summary data, there are several categories of deficiencies. If a specific deficiency has been found in one of these categories, that deficiency is listed as well as the level of harm of the deficiency found.</p> <p>CMS includes a red hand icon to signal abuse next to the nursing home’s name. Within the individual home’s webpage it states that the nursing homes has been cited for abuse, but there are no specifics on the abuse. Care Compare uses a hazard sign icon to signal that a nursing home is enrolled in the Special Focus Facility program. If a user hovers the cursor over the icon a generic explanation of the reason a nursing home could be included in this program. There is no information specifying why this nursing home was enrolled in the program.</p>
Explains purpose and value of quality performance ratings	Aligned	<p>Care Compare contains a section that defines each of the quality measures and includes an explanation for what the quality measure is intended to show. This webpage, however, is not easy to find; it can be found if looking at the quality measures section of an individual nursing home (not while using the compare function to review multiple nursing homes).</p> <p>Care compare includes, in various places, an explanation of the purpose of the quality ratings and measures. On the quality measures page, users can view a brief description of the short-stay and long-stay measures. This description explains the resident population to which these measures apply (e.g., residents staying less than 100 days) and explains the purpose of a short stay. There are also areas in which CMS provides some context to a nursing home’s performance.</p>

**Appendix I: Assessment of Care Compare
Nursing Home Information**

Characteristic	GAO assessment of alignment	Rationale overview
Summarizes related information and organizes data to highlight patterns	Partially aligned	Care Compare organizes nursing home quality information into categories—including overall rating, each of the three component ratings, emergency preparedness and safety, and COVID-19 vaccinations—that allows the consumer to view high-level information in each category. While Care Compare includes the last three health inspection cycles, it is not structured to highlight patterns in nursing home quality for the other components of information. Without information about trends or patterns in a nursing homes' performance, consumers may not be able to see the extent to which the nursing home's ratings have been consistent or varied over time.
Enables consumers to customize information	Partially aligned	When using the main search function on the nursing home's webpage, users can filter and sort the results on the following parameters. <ul style="list-style-type: none"> • Distance • Overall rating • Component ratings • Number of certified beds • Medicare or Medicaid acceptance • Whether the facility is hospital or community based. Consumers of Care Compare cannot customize the nursing home information relevant to their needs. In certain cases, users may opt to expand or collapse sets of results (e.g., short-stay or long-stay quality measure results) or click additional links to find more detailed information (e.g., health inspection reports).
Enables comparison of multiple providers in one view	Aligned	Care Compare includes a compare function that allows the user to select and review information side-by-side for up to three nursing homes.
Enables consumer to assess cost and quality information together.	Not aligned	Care Compare does not contain cost information that would allow the user to compare cost and quality together.
Enables easy use and navigation of the tool.	Aligned	Care Compare's homepage brings the user to a search function as well as icons for the types of provider, including nursing homes. We found that Care Compare is generally easy to navigate. Searching for nursing homes is intuitive and supported by example prompts for the user, including zip code and name of facility. On an individual nursing home's webpage, there are options for the user to click on rating components, which initiates a pop-up page providing information specific to that component. To see information on the other components, users must close the pop-up page to open the window for the other component. There is also an option for the consumer to expand the view that allows them to scroll through the information for all of the components.

Legend:

- Aligned= The tool has implemented the characteristic to a substantial degree. There may be aspects of the characteristic where improvements could be made, but overall, substantial steps have been taken to implement the characteristic.
- Partially aligned= There are discrete areas where the tool has implemented the characteristic to some extent, but those are not representative of the tool as a whole.
- Minimally aligned= The tool has largely not implemented the characteristic, with a few exceptions.
- Not aligned= There is no indication of the tool implementing the characteristic.

Source: GAO analysis of CMS's Care Compare. | GAO-23-105312

Note: CMS paused its expectations for completing most inspections from March 2020 to August 2020 due to the COVID-19 pandemic.

**Appendix I: Assessment of Care Compare
Nursing Home Information**

CMS operates the Special Focus Facilities Program for nursing homes found to have serious or prolonged quality issues. Nursing Homes enrolled in the program are subject to more frequent inspections to monitor their improvement. Though there is not direct language on the nursing home webpage, a consumer could review the inspection results that could provide some indication for the quality issues that lead to its enrollment in the Special Focus Facilities program.

While not included on the nursing home webpages within Care Compare, a consumer could access further information on nursing home quality from CMS's Provider Data Catalog, which houses all of the publicly available data on nursing home performance that is included on Care Compare.

Appendix II: Patterns in Overall Star Rating Calculations for Nursing Homes Nationwide

We analyzed Five-Star Rating System data to describe patterns in how the Centers for Medicare & Medicaid Services (CMS) determines a nursing home's overall star rating by combining the star ratings those nursing homes received for the component star ratings: health inspections, staffing, and quality measures. For our analysis, we used data published monthly by CMS that includes ratings information for each nursing home in the country. We selected data from January 2020, before the onset of the COVID-19 pandemic. We determined that this dataset was sufficiently reliable for describing patterns in overall nursing home star ratings by reviewing relevant CMS documentation, interviewing and reviewing written responses from CMS officials familiar with data components, performing manual and electronic data checks, and reviewing GAO and other research that used the dataset.

Below, based on CMS's method for calculating a nursing home's overall star rating, we describe the relationship between a nursing home's health inspection star rating and overall star rating. Because a nursing home's health inspection star rating and its overall star rating represent the starting and ending point of CMS's overall star rating calculation process, the difference between those ratings shows the net result of combining all three component ratings together to determine the overall star rating. We also describe how CMS's method of incorporating each component star rating to calculate a nursing home's overall rating can affect overall ratings for nursing homes nationwide.¹

We assessed these effects by comparing the number of nursing homes nationwide with below average (1 or 2 stars) and above average (4 or 5 stars) health inspection star ratings to the number of nursing homes with below and above average overall star ratings. This comparison shows the

¹Nursing home health inspection star ratings are assigned using the same distribution of ratings for each state, also known as a state-level distribution. To assign staffing and quality measure star ratings to nursing homes, CMS does not use a fixed distribution and instead compares nursing home performance to national targets.

shift in the proportion of below and above average scores that occurs as a result of the way CMS calculates overall star ratings.

Process for calculating a nursing home's overall star rating. CMS calculates a nursing home's overall rating by starting with the number of stars obtained in the nursing home's health inspection rating. CMS then adds a star if the nursing home's staffing rating is 1) four or five stars and 2) greater than its health inspection rating.² CMS subtracts a star if the nursing home's staffing rating is one star. Then CMS will add or subtract a star if the nursing home's quality measure rating is five stars or one star respectively. A nursing home's overall star rating represents the net effect of combining its staffing and quality measure star ratings with its health inspection star rating.³

Nursing homes' overall star rating is often higher than the star rating they receive on health inspections. When we compared all nursing homes' health inspection star ratings to their corresponding overall rating, we found that, at each of the health inspection star levels where an overall rating could be higher or lower (i.e., 2-star, 3-star, or 4-star), nursing homes more frequently ended up with higher overall star ratings than their health inspection star ratings.⁴ For example, of the 3,469 nursing homes in the country with a 3-star health inspection rating, 1,760 ended up with an overall star rating higher than three stars and 455 had an overall star rating lower than three stars. See figure 4 for a comparison of health inspection star ratings, grouped by star level, and corresponding overall star ratings, grouped by star level, for all nursing homes nationwide.

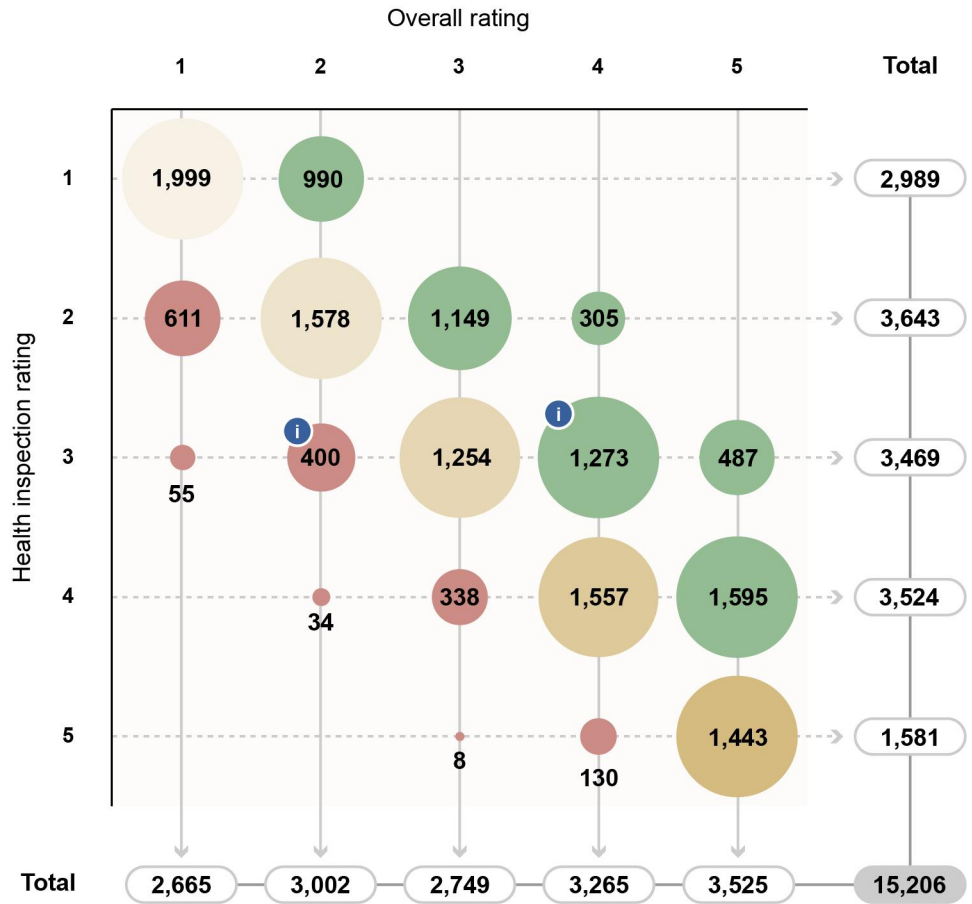
²CMS has made changes to the methodology for calculating star ratings since January 2020. For example, in July 2022, CMS adjusted how the staffing rating is used to calculate a nursing home's overall rating. Prior to this change, nursing homes with a four or five star staffing rating would be eligible for a one-star increase in their overall ratings. Following the change, only nursing homes with a five star staffing rating would be eligible for an overall rating increase. We analyzed CMS data from January 2020 when the prior rating calculation process was in effect.

³If a nursing home receives a 1-star health inspection rating, its overall rating cannot exceed two stars. A nursing home's overall star rating cannot be above five stars or below one star.

⁴Nursing homes with a 5-star health inspection rating cannot have a higher overall rating and among those nursing homes 138 ended up with a lower overall star rating. Nursing homes with a 1-star health inspection rating cannot have a lower overall star rating and among those homes 990 ended up with a higher overall star rating.

Appendix II: Patterns in Overall Star Rating Calculations for Nursing Homes Nationwide

Figure 4: Comparison of Nursing Homes' Health Inspection Ratings and Overall Ratings Nationwide, January 2020



- Nursing homes with higher overall ratings compared to health inspection ratings
- Nursing homes with lower overall ratings compared to health inspection ratings
- Nursing homes that received the same health inspection rating and overall rating

i For example, there were 400 nursing homes with a 3-star health inspection rating and a 2-star overall rating. Also, there were 1,273 nursing homes with a 3-star health inspection rating and a 4-star overall rating.

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

Data for Figure 4: Comparison of Nursing Homes' Health Inspection Ratings and Overall Ratings Nationwide, January 2020

Health Inspection Rating	Overall Rating					Total
	1	2	3	4	5	
1	1,999	990				2,989

Appendix II: Patterns in Overall Star Rating Calculations for Nursing Homes Nationwide

Health Inspection Rating	Overall Rating					Total
	1	2	3	4	5	
2	611	1,578	1,149	305		3,643
3	55	400	1,254	1,273	487	3,469
4		34	338	1,557	1,595	3,524
5			8	130	1,443	1,581
Total	2,665	3,002	2,749	3,265	3,525	15,206

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

Note: At the time of our review, CMS calculated a nursing home’s overall star rating based on the following process. (1) Start with the health inspection rating; (2) Add one star if the staffing rating is four or five stars and greater than the health inspection rating; subtract one star if the staffing rating is one star. (3) Add one star if the quality measure rating is five stars; subtract one star if the quality measure rating is one star.

The overall rating cannot be more than five stars or less than one star. If the health inspection rating is one star, then the overall rating cannot be upgraded by more than one star based on the staffing and quality measure ratings.

We also found that, at each step in CMS’s method for calculating nursing homes’ overall star ratings, more homes met the criteria for a higher overall star rating as compared to a lower overall star rating, as each component star rating was added to the calculation.

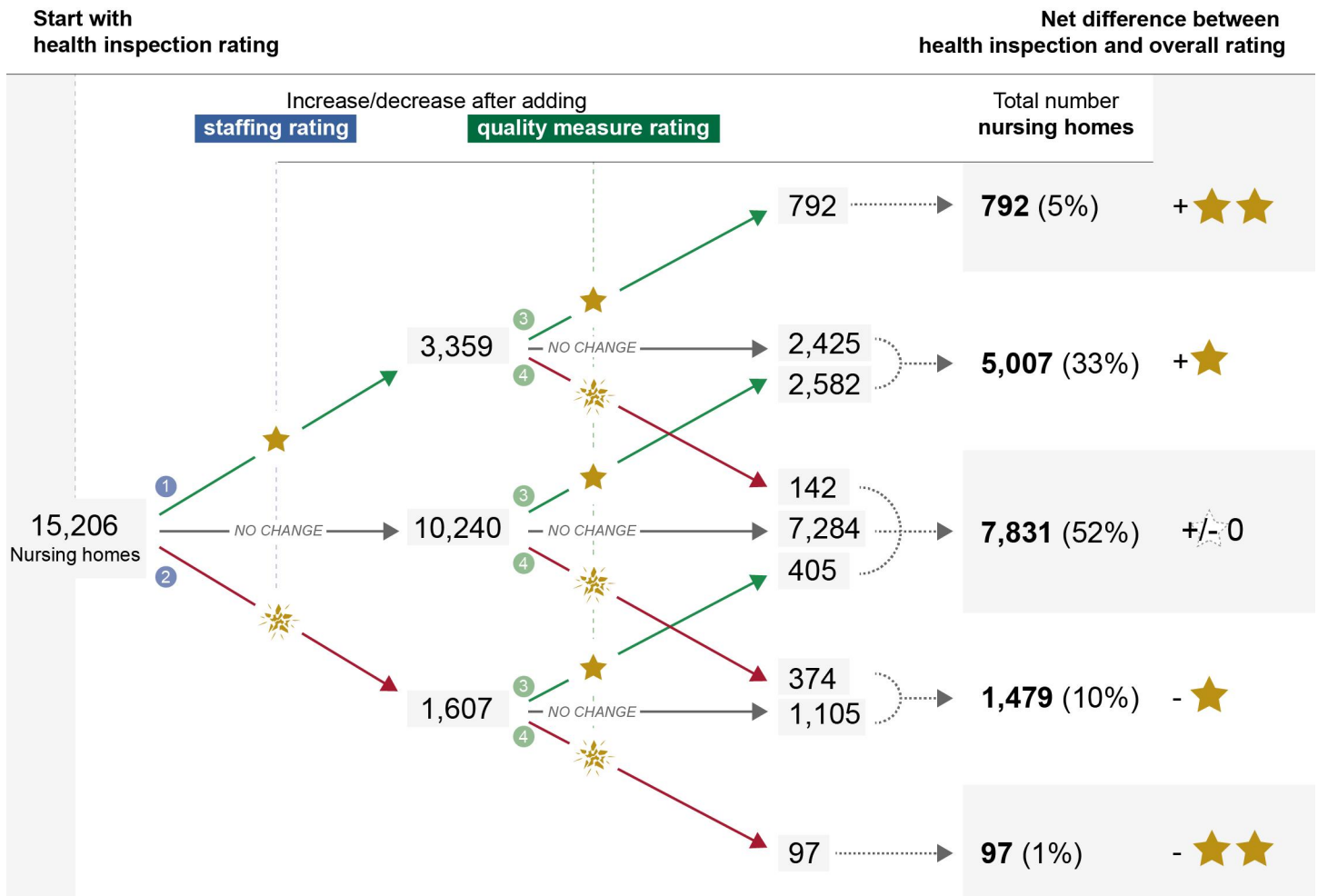
Staffing. When CMS incorporated staffing ratings into the calculation of overall ratings, we found that this increased the overall star rating of 3,359 (22 percent) nursing homes and decreased the overall rating for 1,607 (11 percent) nursing homes.

Quality measure star ratings. Similarly, when CMS incorporated the quality measure star rating in the next step of the calculation process, we found that CMS added a star to 3,779 (25 percent) nursing homes’ overall star ratings, compared to 613 (4 percent) nursing homes that lost a star at this step.

Combined (net) effect on overall star rating. Nationwide, after both staffing ratings and quality measure ratings were combined with health inspection ratings, 52 percent (7,831) of nursing homes’ overall ratings were the same as those homes’ health inspection ratings (i.e., a net-zero difference), 38 percent (5,799) of homes’ overall ratings were higher than their health inspection rating, and 11 percent (1,576) of homes’ overall ratings were lower. See figure 5 for an illustration of the net effect on nursing home overall ratings as the adjustments for staffing ratings and then quality measure ratings were combined with health inspection ratings.

Appendix II: Patterns in Overall Star Rating Calculations for Nursing Homes Nationwide

Figure 5: Net Overall Rating Calculation Effect on Nursing Homes Nationwide, January 2020



- 1 Increase overall star rating by a star if staffing rating is four or five stars and greater than health inspection rating
- 2 Decrease overall star rating by a star if staffing rating is one star
- 3 Increase overall star rating by a star if quality measure rating is five stars
- 4 Decrease overall star rating by a star if quality measure rating is one star

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

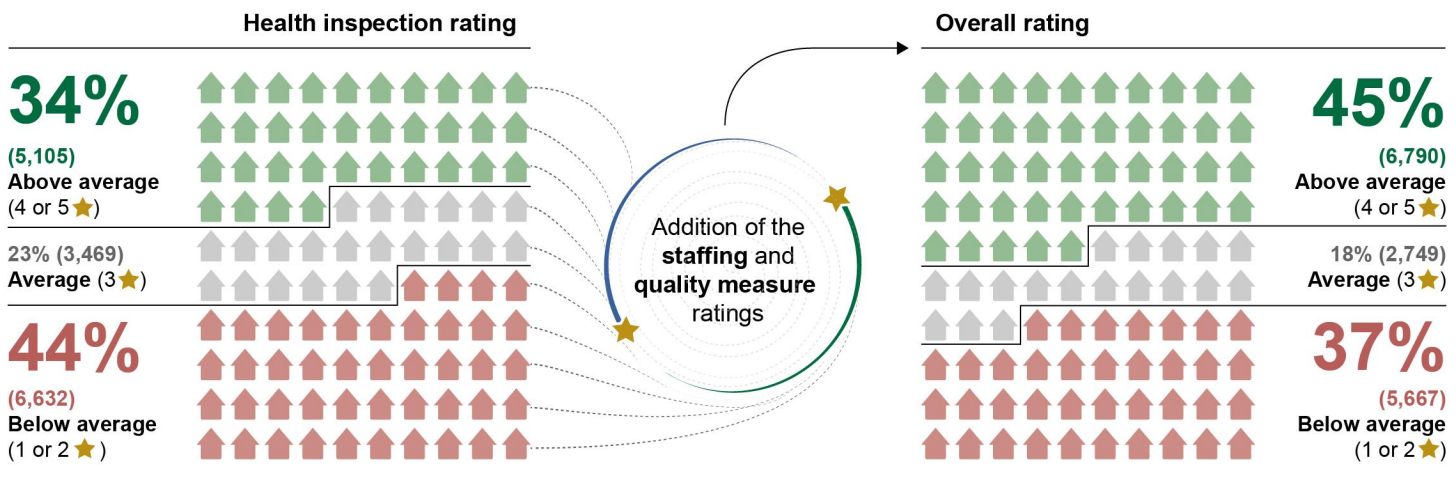
Note: At the time of our review, CMS calculated a nursing home's overall star rating based on the following process. (1) Start with the health inspection rating; (2) Add one star if the staffing rating is four or five stars and greater than the health inspection rating; subtract one star if the staffing rating is one star. (3) Add one star if the quality measure rating is five stars; subtract one star if the quality measure rating is one star.

The overall rating cannot be more than five stars or less than one star. If the health inspection rating is one star, then the overall rating cannot be upgraded by more than one star based on the staffing and quality measure ratings.

Appendix II: Patterns in Overall Star Rating Calculations for Nursing Homes Nationwide

Because overall nursing home star ratings tended to increase as staffing and quality star ratings were taken into account, more nursing homes ended up being rated above average (4 or 5 stars) than below average (1 or 2 stars) overall, even though more homes were rated below average than above average in their health inspection ratings. For health inspection star ratings, 44 percent of homes were rated below average and 34 percent were rated above average. Comparatively, looking at final overall ratings, 37 percent of homes received a below average overall star rating and 45 percent received an above average rating. In total, 1,527 more nursing homes were rated below average on their health inspection star rating than above average, but 1,123 more homes were given an above average overall star rating than below average. See figure 6 for an illustration of the differences in the proportion of above average and below average ratings for the health inspection and overall star ratings.

Figure 6: Shift in Share of Nursing Homes with Above or Below Average Health Inspection and Overall Ratings Nationwide, January 2020



Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

Data for Figure 6: Shift in Share of Nursing Homes with Above or Below Average Health Inspection and Overall Ratings Nationwide, January 2020

	Health inspection rating	Overall rating (after adding the staffing and quality measure ratings)
Above average (four or five stars)	34% (5,105)	45% (6,790)
Average (three stars)	23% (3,469)	18% (2,749)
Below average (one or two stars)	44% (6,632)	37% (5,667)

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

**Appendix II: Patterns in Overall Star Rating
Calculations for Nursing Homes Nationwide**

Note: At the time of our review, CMS calculated a nursing home's overall star rating based on the following process. (1) Start with the health inspection rating; (2) Add one star if the staffing rating is four or five stars and greater than the health inspection rating; subtract one star if the staffing rating is one star. (3) Add one star if the quality measure rating is five stars; subtract one star if the quality measure rating is one star.

The overall rating cannot be more than five stars or less than one star. If the health inspection rating is one star, then the overall rating cannot be upgraded by more than one star based on the staffing and quality measure ratings.

Appendix III: National Distribution of Health Inspection Star Ratings

We analyzed Five-Star Rating System data to examine the Centers for Medicare & Medicaid Services' (CMS) method for calculating nursing homes' health inspection star ratings based on a state-level distribution of ratings to see how many homes would have received a different health inspection star rating under a national distribution. Our analysis recalculated each nursing home's health inspection star rating based on how its inspection results compared to other nursing homes across the country. We then compared the nationally distributed health inspection star ratings to the ratings CMS calculated for nursing homes based on how each nursing home's inspection results compared to other nursing homes in the same state.

For our analysis, we used data published monthly by CMS that includes star ratings information, such as nursing home health inspection scores and star ratings, for each nursing home in the country. We selected data from January 2020, before the onset of the COVID-19 pandemic. We determined that this dataset was sufficiently reliable for us to recalculate each nursing home's health inspection star rating under a national distribution. We determined this reliability by reviewing relevant CMS documentation, interviewing and reviewing written responses from CMS officials familiar with data components, performing manual and electronic data checks, and reviewing GAO and other research that used the dataset.

State-level distribution of nursing home health inspection star ratings. To determine a nursing home's health inspection star rating, CMS scores each nursing home based on its results from prior health inspections. CMS then assigns a health inspection star rating for a nursing home based on how its health inspection score compares to other nursing homes in the same state. This approach uses a state-level distribution such that, in each state, nursing homes with inspection scores in the top 10 percent receive a 5-star rating and nursing homes with scores in the bottom 20 percent receive a 1-star rating. The nursing homes with scores that fall in between the top 10 percent and the bottom 20 percent are divided evenly between 2-, 3-, and 4-stars based on how their scores compare to other nursing homes in the same state. CMS

applies the same distribution scale (i.e., the percentage of homes that receive each star rating) in each state.¹

According to several stakeholders we interviewed for this report and our prior work, CMS's state-level distribution may limit a consumer's ability to interpret nursing home star ratings in one state compared to inspection results for nursing homes across the country.² CMS has stated that variation between states' health inspection results warrants its current approach of assigning health inspection star ratings for nursing homes relative to other nursing homes in the same state and asserted that a state-level distribution provides a valid measure of nursing home performance relative to other nursing homes in a particular location. CMS has said that such variation is the result of many factors, including

- variation among states in the skill sets of inspectors, supervision of inspectors, and the inspection processes;
- differences between state licensing laws for nursing homes; and
- state administration of Medicaid, which pays for the largest proportion of long-term care in nursing homes.

National distribution of nursing home health inspection star ratings. We recalculated each nursing home's health inspection star rating using a national distribution rather than CMS's state-level distribution. In other words, we took each nursing home's health inspection score and determined its star rating relative to all other nursing homes in the country using the same distribution scale that CMS applies at the state level.

When we recalculated star ratings based on a national distribution of nursing home health inspection scores, approximately 44 percent (6,683) of all nursing homes received a different health inspection star rating than the rating they were assigned using CMS's state-level distribution. Out of all nursing homes in country, 23 percent (3,434) would have received a

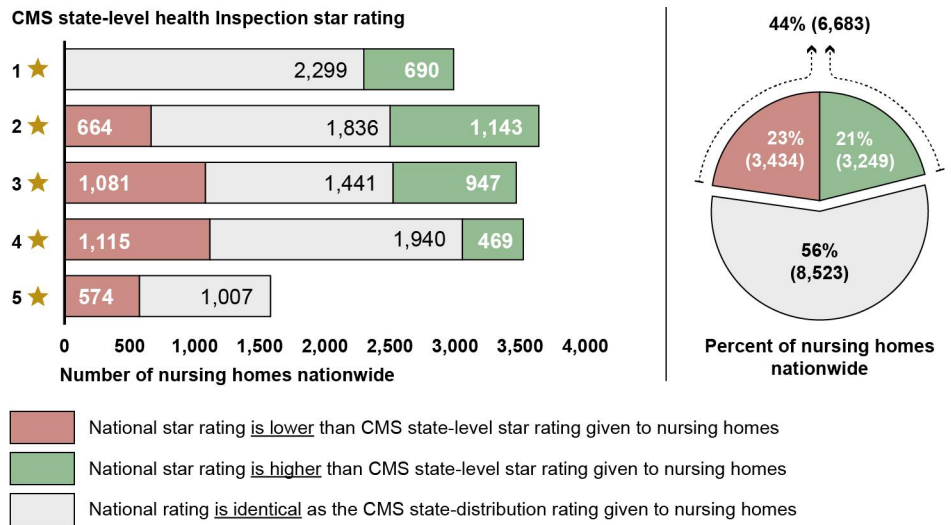
¹CMS rank-orders each nursing home in a state based on their health inspection scores. Based on this ranking, CMS then uses percentile groupings to assign each nursing home's star rating.

²GAO reviewed CMS's practice of basing health inspection ratings on within-state distributions and issued a recommendation that CMS, in addition to the inspection star rating as currently calculated, present the consumer with a nursing home's relative performance based on a national distribution of health inspection scores. CMS did not agree with our recommendation and has not taken steps to implement the recommendation. GAO, *Nursing Homes: Consumers Could Benefit from Improvements to the Nursing Home Compare Website and Five-Star Quality Rating System*, [GAO-17-61](#) (Washington, D.C.: Nov. 18, 2016).

Appendix III: National Distribution of Health Inspection Star Ratings

lower health inspection star rating based on a national distribution. In comparison, 21 percent (3,249) of homes would have received a higher health inspection star rating. These changes also affected homes' overall star ratings, since CMS uses a nursing home's health inspection star rating as a starting point for calculating its overall star rating. We found that 20 percent (2,988) of homes would have had a lower overall star rating compared to the rating assigned by CMS and 17 percent (2,650) would have had a higher overall rating. See figure 7 for an illustration of the differences between CMS's state-level distribution of health inspection star ratings and a national distribution.

Figure 7: Comparison of CMS's State-level Distribution and a National Distribution of Health Inspection Star Ratings for Nursing Homes, January 2020



Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

Data for Figure 7: Comparison of CMS's State-level Distribution and a National Distribution of Health Inspection Star Ratings for Nursing Homes, January 2020

CMS state-level health inspection rating	National rating is lower than CMS state-level star rating (3,434) (23%)	National rating is the same as CMS state-level star rating (8,523) (56%)	National rating is higher than CMS state-level star rating (3,249) (21%)	Total
1 star	N/A	2,299	690	2,989
2 stars	664	1,836	1,143	3,643
3 stars	1,081	1,441	947	3,469
4 stars	1,115	1,940	469	3,524
5 stars	574	1,007	N/A	1,581
Total	3,434	8,523	3,249	15,206

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

**Appendix III: National Distribution of Health
Inspection Star Ratings**

Notes: CMS assigns health inspection star ratings based on a state-level distribution of health inspection results to generally achieve the following distribution within each state: the top 10 percent of nursing homes receive five stars, the bottom 20 percent receive one star, and the middle 70 percent of nursing homes are equally divided into two, three, or four stars.

We recalculated nursing homes' health inspection star ratings based on a national distribution of nursing homes' health inspection results.

We found that using a national distribution to calculate nursing homes' health inspection star ratings did not impact all states in the same way. Since health inspection star ratings are distributed the same way for each state, there are minimal differences in average ratings between states. We examined the effects of a national distribution of health inspection ratings on the average health inspection rating in each state to see if states experienced differing trends. The national distribution resulted in a lower average health inspection star rating in 26 states and a higher average star rating in 23 states.

Appendix IV: State-Level Analysis of Patterns in Component Ratings Assigned to Nursing Homes

We analyzed Five-Star Rating System data to describe patterns that these data reveal about the health inspection, staffing, and quality measure component star ratings across states. For each of the components, we calculated the average star ratings given to nursing homes in each state, and then we compared differences between these average star ratings from state to state.¹ We also used state-average star ratings to see which of the three components tended to have the highest and lowest average ratings when taking all states into account.² In addition, we reviewed the number of homes in each state that received the highest (5-stars) and the lowest (1-star) star ratings for the different components.

For our analysis, we used data published monthly by the Centers for Medicare & Medicaid Services (CMS) that includes star ratings information, such as nursing home health inspection scores and star ratings, for each nursing home in the country. We selected data from January 2020, before the onset of the COVID-19 pandemic. We determined that these datasets were sufficiently reliable for the purposes of describing state-level patterns for component star ratings by reviewing

¹Although the star rating system does not assign partial star ratings for nursing homes, the average star rating for each state is expressed as a partial star rating (e.g., 2.8 stars). Therefore, the average star rating is a summary of the ratings for all nursing homes within a state and does not represent an actual star rating for any nursing home in the state. Summarizing the star ratings in each state using an average allows us to compare states to each other.

²For each rating component, we arranged the states' average star ratings in order from highest to lowest and identified the state with an average star rating that was the median state (i.e., in the middle of all states). We then compared the state-average of the median state for each component rating to see which components tended to have higher ratings. To provide an example of the variation between states for each component rating, we looked at the number of states with an average star rating that was within or beyond the median state.

**Appendix IV: State-Level Analysis of Patterns
in Component Ratings Assigned to Nursing
Homes**

relevant CMS documentation, interviewing and reviewing written responses from CMS officials familiar with data components, performing manual and electronic data checks, and reviewing prior GAO reports and other research that used the data.

CMS assigns star ratings to nursing homes for each component. For health inspection star ratings, CMS scores nursing homes based on the results of prior health inspections and then gives nursing homes a star rating based on how they were scored relative to other nursing homes in the same state. The health inspection star ratings are assigned using the same distribution for all states, also known as a state-level distribution.³ According to CMS, variation among states' inspection processes and outcomes make it necessary to base these ratings on the relative performance of facilities within each state.

CMS uses a different approach for staffing star ratings and quality measure star ratings. For these ratings, CMS rates nursing homes based on how their staffing levels compare to national thresholds and how their performance on various quality measures compares to national metrics set by CMS relative to the performance of all nursing homes in the country.⁴

CMS does not impose the same fixed distribution for the five levels of star ratings for the staffing and quality measure ratings that it does for health inspection ratings at the state level. According to CMS officials, CMS expects there to be differences in the rating distributions between states for the staffing and quality measure star ratings because all facilities are compared to the same national norms.

³After rank-ordering nursing homes in each state based on health inspection results, CMS assigns 10 percent of nursing homes in each state a five-star rating and 20 percent a 1 star rating. The remaining 70 percent of nursing homes are divided into even groups of 2-, 3-, and 4-star ratings.

⁴CMS considers how the number of staff providing care in a nursing home compare to the needs and demographics of residents in that nursing home. This is called a case-mix adjustment and is a factor in determining staffing ratings. Nursing home performance on various quality measures are also adjusted for risk factors based on related clinical conditions of nursing home residents.

Nursing homes earn points for staffing levels for each staffing measure and receive a star rating relative to national point thresholds established by CMS.

Health inspection star ratings variation and distribution among states. CMS's state-level distribution—which assigns health inspection ratings relative to other nursing homes in a state and allocates a fixed proportion of homes to each star rating—virtually eliminates variation in average health inspection ratings for nursing homes between states.⁵ For example, 47 states had an average health inspection star rating that was within a tenth of a star from the average star rating for the median state (2.8 stars). CMS's distribution procedure also assigns roughly twice as many homes a 1-star rating (20 percent) than a 5-star rating (10 percent) in each state, meaning states would have had more 1-star homes compared to 5-star homes.

Staffing star rating variation and distribution among states.⁶ We identified variation between states' average staffing ratings, and more homes received 5-star ratings compared to 1-star ratings. To assign staffing star ratings to nursing homes, CMS has based a nursing home's staffing levels relative to national thresholds set by CMS, which is different than the state-level distribution CMS uses to assign health inspection star ratings.⁷ As a result, we saw more variation between states and found 45 states that had an average staffing rating that was more than a tenth of a star away from the average star rating for median state (3.3 stars). See figure 8 for a map of average staffing ratings in each state.

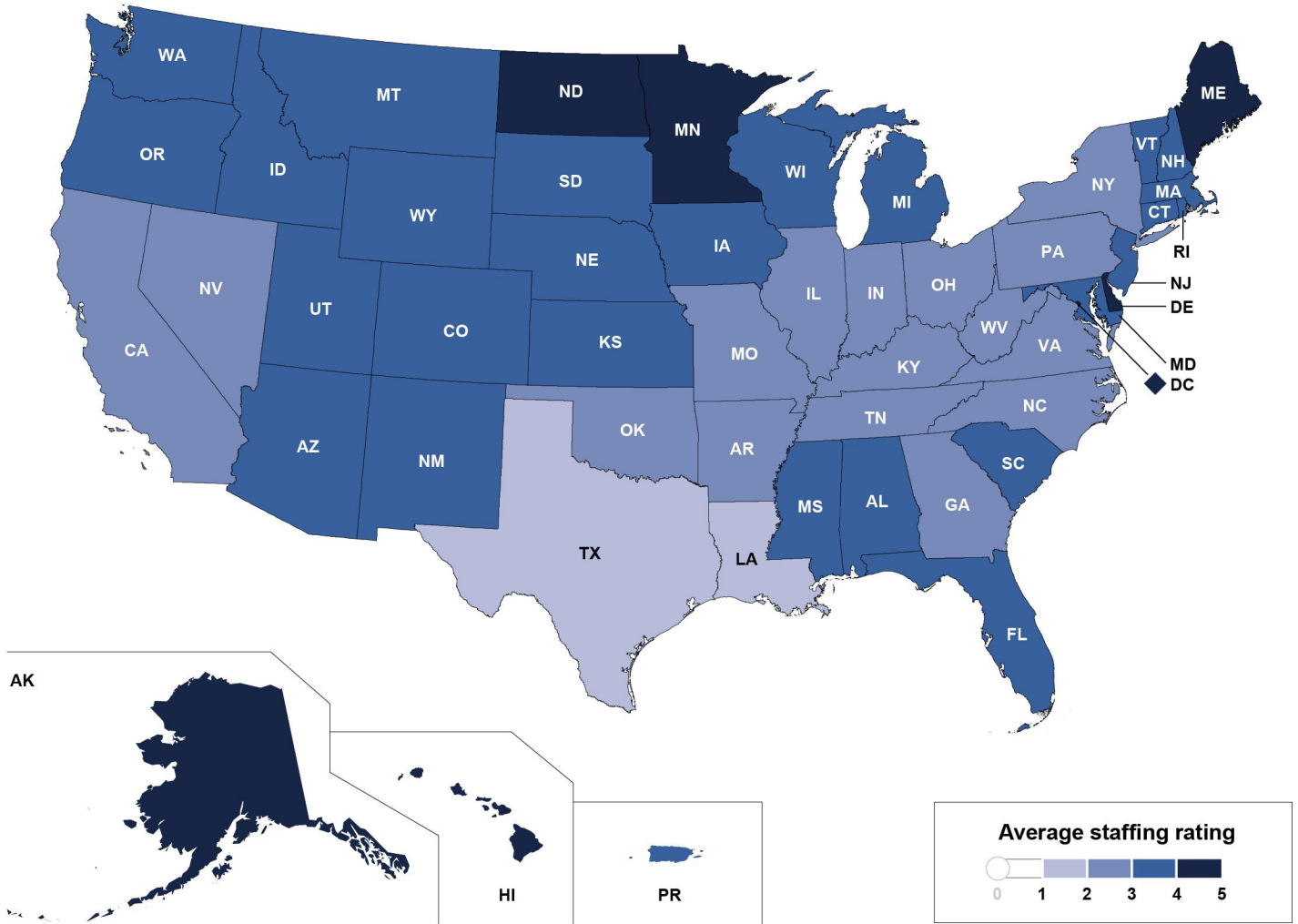
⁵Based on the way CMS distributes health inspection star ratings for nursing homes based on how their health inspection results compare to other nursing homes in the same state, theoretically, average health inspection ratings should be the same in each state. In some cases, a nursing home's health inspection rating would be held constant and not recalibrated to fit the state-level distribution.

⁶In July 2022, CMS added four staffing measures related to staff turnover and weekend staffing as factors in the calculation of a nursing home's staffing star rating. Our analysis was based on final staffing star ratings prior to this change and would not have included these new measures.

⁷Nursing homes earn points for staffing levels for each staffing measure and receive a star rating relative to national point thresholds established by CMS.

Appendix IV: State-Level Analysis of Patterns in Component Ratings Assigned to Nursing Homes

Figure 8: Average Staffing Star Ratings in Each State, January 2020



Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

Data for Figure 8: Average Staffing Star Ratings in Each State, January 2020

State	Average staffing rating
DISTRICT OF COLUMBIA	4.44
DELAWARE	4.33
ALASKA	4.25
NORTH DAKOTA	4.24
HAWAII	4.19
MAINE	4.15

**Appendix IV: State-Level Analysis of Patterns
in Component Ratings Assigned to Nursing
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State	Average staffing rating
MINNESOTA	4.12
IDAHO	3.96
WYOMING	3.95
COLORADO	3.71
WISCONSIN	3.70
RHODE ISLAND	3.67
OREGON	3.66
WASHINGTON	3.65
UTAH	3.61
IOWA	3.58
FLORIDA	3.54
MONTANA	3.54
MICHIGAN	3.54
NEBRASKA	3.53
SOUTH DAKOTA	3.51
VERMONT	3.43
CONNECTICUT	3.37
NEW HAMPSHIRE	3.35
ARIZONA	3.32
KANSAS	3.31
NEW JERSEY	3.30
ALABAMA	3.27
MARYLAND	3.21
MASSACHUSETTS	3.19
MISSISSIPPI	3.09
SOUTH CAROLINA	3.08
NEW MEXICO	3.06
PUERTO RICO	3.00
PENNSYLVANIA	2.95
KENTUCKY	2.87
NEVADA	2.86
CALIFORNIA	2.83
ILLINOIS	2.75
VIRGINIA	2.69
ARKANSAS	2.69
WEST VIRGINIA	2.63
TENNESSEE	2.62

**Appendix IV: State-Level Analysis of Patterns
in Component Ratings Assigned to Nursing
Homes**

State	Average staffing rating
MISSOURI	2.62
INDIANA	2.57
NEW YORK	2.53
NORTH CAROLINA	2.52
OHIO	2.44
OKLAHOMA	2.24
GEORGIA	2.11
LOUISIANA	1.87
TEXAS	1.69

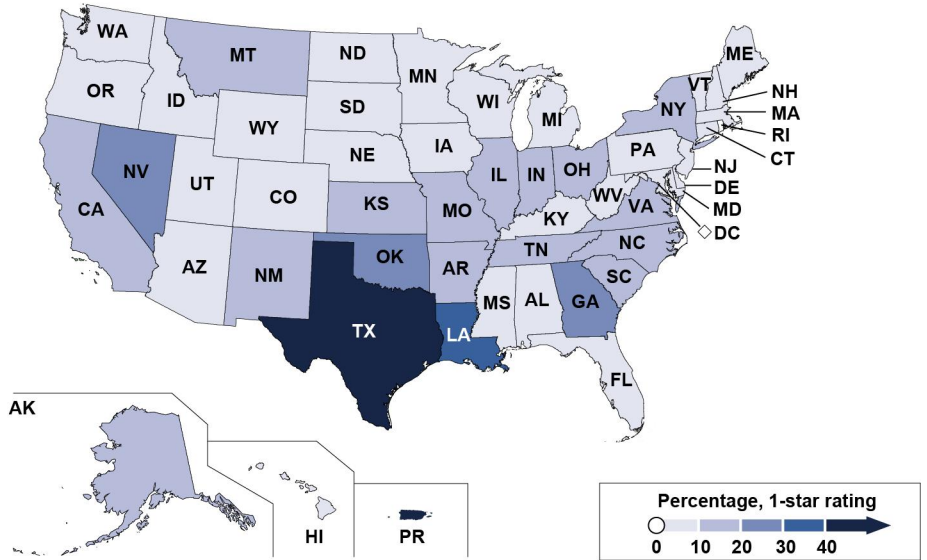
Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

In addition, in 33 states, more homes received a 5-star staffing rating than a 1-star rating on staffing. See figure 9 for the percent of homes in each state with a 1-star and 5-star staffing rating.

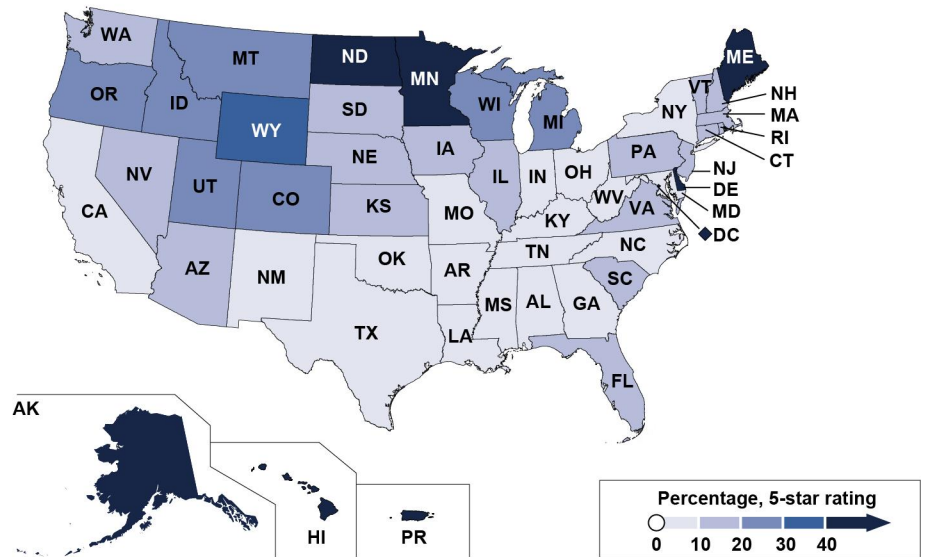
Appendix IV: State-Level Analysis of Patterns in Component Ratings Assigned to Nursing Homes

Figure 9: Percentage of Homes with a 1-star and a 5-star Staffing Rating in Each State, January 2020

1-star rating



5-star rating



Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

**Appendix IV: State-Level Analysis of Patterns
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Data for Figure 9: Percentage of Homes with a 1-star and a 5-star Staffing Rating in Each State, January 2020

State	Number of nursing homes (1-star rating)	Percentage (1-star rating)	Number of nursing homes (5-star rating)	Percentage (5-star rating)
TX	635	53.0%	17	1.4%
PR	3	50.0%	3	50.0%
LA	94	34.7%	6	2.2%
GA	99	27.9%	5	1.4%
OK	67	22.8%	1	0.3%
NV	12	20.3%	6	10.2%
AK	3	18.8%	13	81.3%
OH	172	18.1%	36	3.8%
IL	124	17.6%	83	11.8%
MO	83	16.3%	21	4.1%
NC	66	15.8%	27	6.4%
IN	78	14.7%	23	4.3%
VA	41	14.4%	30	10.5%
KS	46	14.2%	64	19.7%
MT	9	12.9%	18	25.7%
CA	143	12.1%	91	7.7%
TN	38	12.1%	11	3.5%
NY	73	11.9%	33	5.4%
SC	21	11.4%	24	13.0%
AR	23	10.4%	1	0.5%
NM	7	10.1%	6	8.7%
SD	10	9.8%	18	17.6%
OR	12	9.5%	31	24.6%
NE	19	9.4%	36	17.7%
WV	10	8.1%	6	4.9%
MA	30	8.0%	38	10.2%
HI	3	7.1%	21	50.0%
MI	29	6.7%	99	22.8%
ME	6	6.5%	42	45.7%
KY	18	6.4%	25	8.9%
CO	13	5.8%	53	23.8%
NH	4	5.6%	10	13.9%
MS	11	5.5%	13	6.5%
MN	20	5.4%	156	42.5%
WA	11	5.4%	37	18.3%

**Appendix IV: State-Level Analysis of Patterns
in Component Ratings Assigned to Nursing
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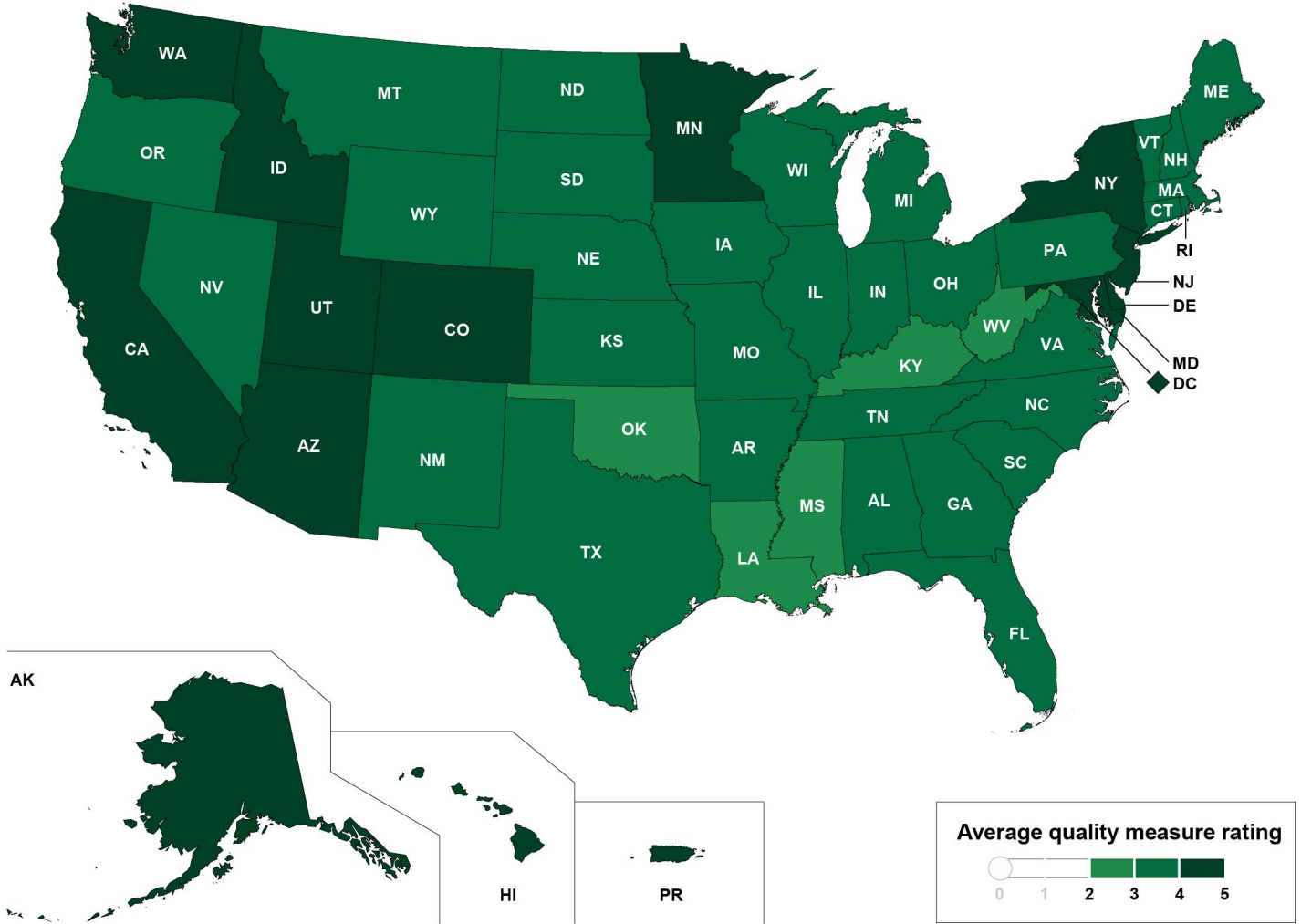
State	Number of nursing homes (1-star rating)	Percentage (1-star rating)	Number of nursing homes (5-star rating)	Percentage (5-star rating)
PA	36	5.2%	82	11.9%
AL	11	4.9%	11	4.9%
WI	17	4.7%	97	27.1%
IA	20	4.7%	83	19.4%
NJ	14	3.9%	45	12.5%
ND	3	3.8%	32	40.5%
AZ	5	3.5%	19	13.3%
CT	7	3.3%	29	13.6%
MD	7	3.1%	18	8.0%
UT	3	3.1%	21	21.4%
VT	1	2.9%	5	14.3%
WY	1	2.7%	12	32.4%
ID	2	2.6%	21	26.9%
FL	16	2.4%	90	13.3%
DE	1	2.2%	23	51.1%
RI	-	-	13	16.5%
DC	-	-	9	50.0%

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

Quality measure star rating variation and distribution among states. We identified variation between states' average quality measure star ratings and more homes in many states received 5-star ratings compared to 1-star ratings. CMS has set national targets for nursing home performance on quality measures to assign quality measure star ratings to nursing homes, which is different than the way health inspection ratings are assigned using a state-level distribution. As a result, we saw more variation between states. For example, in 37 states, the average quality measure rating was more than a tenth of a star away from the median state-average (3.7 stars). See figure 10 for a map of average quality measure ratings in each state.

Appendix IV: State-Level Analysis of Patterns in Component Ratings Assigned to Nursing Homes

Figure 10: Average Quality Measure Ratings in Each State, January 2020



Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

Data for Figure 10: Average Quality Measure Ratings in Each State, January 2020

State	Average quality measure rating
HAWAII	4.68
PUERTO RICO	4.50
NEW JERSEY	4.43
UTAH	4.42
CALIFORNIA	4.39
ARIZONA	4.36

**Appendix IV: State-Level Analysis of Patterns
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State	Average quality measure rating
DELAWARE	4.29
DISTRICT OF COLUMBIA	4.28
ALASKA	4.19
NEW YORK	4.12
COLORADO	4.11
IDAHO	4.09
MARYLAND	4.05
WASHINGTON	4.02
MINNESOTA	4.01
MICHIGAN	3.97
CONNECTICUT	3.95
FLORIDA	3.93
WISCONSIN	3.92
NORTH DAKOTA	3.91
MONTANA	3.80
WYOMING	3.78
OHIO	3.78
NEVADA	3.78
NEW HAMPSHIRE	3.76
VIRGINIA	3.75
OREGON	3.74
PENNSYLVANIA	3.74
VERMONT	3.71
RHODE ISLAND	3.71
SOUTH DAKOTA	3.69
MAINE	3.68
INDIANA	3.67
IOWA	3.61
MASSACHUSETTS	3.60
NEBRASKA	3.57
ALABAMA	3.46
SOUTH CAROLINA	3.35
ILLINOIS	3.34
TENNESSEE	3.32
NORTH CAROLINA	3.29
KANSAS	3.28
MISSOURI	3.26

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State	Average quality measure rating
TEXAS	3.16
ARKANSAS	3.09
NEW MEXICO	3.04
GEORGIA	3.02
WEST VIRGINIA	2.91
KENTUCKY	2.64
OKLAHOMA	2.63
MISSISSIPPI	2.45
LOUISIANA	2.31

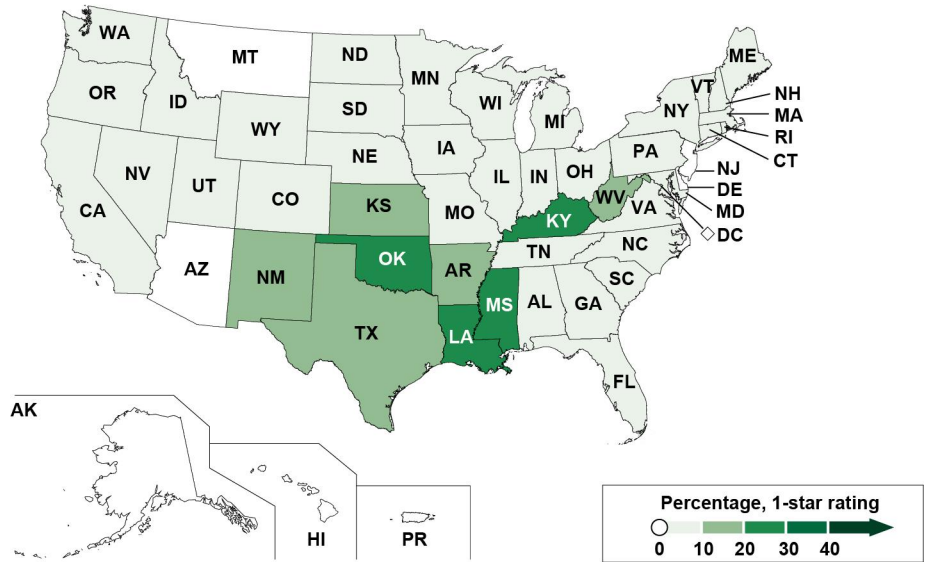
Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

In addition, in 46 states, more homes received a 5-star quality measure rating than a 1-star rating on quality measures. See figure 11 for the percent of homes in each state with a 1-star and 5-star quality measure rating.

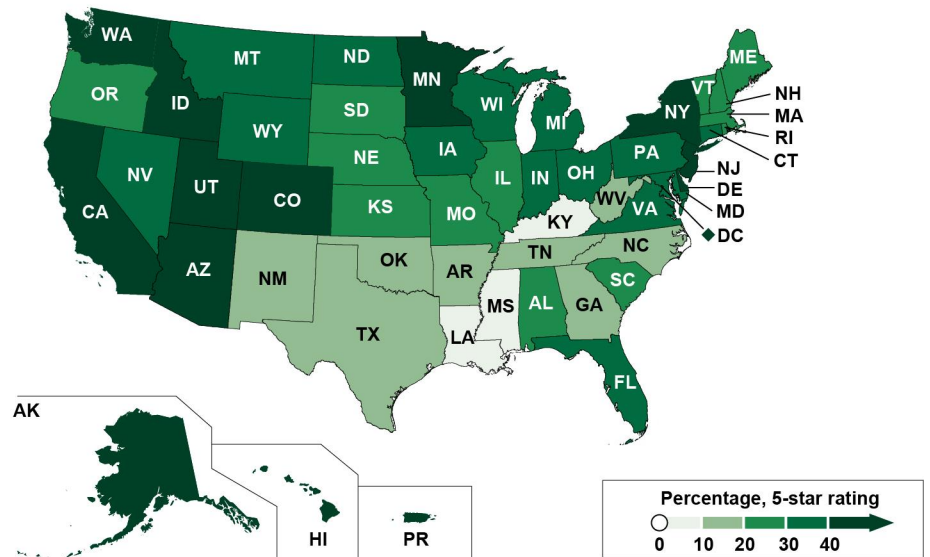
Appendix IV: State-Level Analysis of Patterns in Component Ratings Assigned to Nursing Homes

Figure 11: Percentage of Homes with a 1-star and a 5-star Quality Measure Rating in Each State, January 2020

1-star rating



5-star rating



Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

**Appendix IV: State-Level Analysis of Patterns
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Homes**

Text for Figure 11: Percentage of Homes with a 1-star and a 5-star Quality Measure Rating in Each State, January 2020

State	Number of nursing homes (1-star rating)	Percentage (1-star rating)	Number of nursing homes (5-star rating)	Percentage (5-star rating)
LA	77	28.5%	16	5.9%
MS	49	24.4%	11	5.5%
OK	67	22.8%	31	10.5%
KY	61	21.6%	27	9.6%
AR	27	12.2%	36	16.2%
KS	39	12.1%	73	22.7%
TX	135	11.3%	238	19.9%
WV	13	10.6%	13	10.6%
NM	7	10.1%	7	10.1%
MO	50	9.8%	106	20.9%
GA	33	9.3%	43	12.1%
IL	58	8.2%	169	23.9%
SC	15	8.1%	44	23.8%
TN	25	8.0%	59	18.8%
NC	31	7.4%	81	19.4%
IA	27	6.3%	131	30.6%
AL	14	6.2%	50	22.1%
IN	32	6.0%	166	31.3%
NE	11	5.4%	60	29.6%
RI	4	5.1%	23	29.1%
OH	47	5.0%	323	34.0%
VA	14	4.9%	100	35.1%
MA	17	4.5%	106	28.3%
PA	24	3.5%	229	33.2%
NV	2	3.4%	19	32.8%
CO	7	3.1%	110	49.3%
SD	3	2.9%	29	28.4%
VT	1	2.9%	10	28.6%
NH	2	2.8%	21	29.2%
MN	10	2.7%	160	43.7%
WY	1	2.7%	12	32.4%
ID	2	2.6%	37	47.4%
OR	3	2.4%	34	27.0%
MI	10	2.3%	171	39.3%
WI	8	2.2%	138	38.5%

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in Component Ratings Assigned to Nursing
Homes**

State	Number of nursing homes (1-star rating)	Percentage (1-star rating)	Number of nursing homes (5-star rating)	Percentage (5-star rating)
ME	2	2.2%	27	29.3%
FL	14	2.1%	240	35.5%
UT	2	2.0%	63	64.3%
WA	4	2.0%	85	42.1%
NY	9	1.5%	308	50.2%
MD	3	1.3%	88	39.3%
ND	1	1.3%	31	39.2%
CA	13	1.1%	721	61.4%
CT	2	0.9%	80	37.4%
MT	-	-	23	32.9%
AK	-	-	8	50.0%
DE	-	-	23	51.1%
DC	-	-	8	44.4%
NJ	-	-	225	62.3%
AZ	-	-	80	55.9%
HI	-	-	32	78.0%
PR	-	-	3	50.0%

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-23-105312

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

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Staff Acknowledgments

In addition to the contact listed above, Tom Conahan (Assistant Director), Jessica L. Preston (Analyst-in-Charge), Will Garrard, John Lalomio, and Joshua Stick made key contributions to this report. Also contributing were Todd Anderson, Eric Peterson, Ethiene Salgado-Rodriguez, Cathleen Whitmore, and Jennifer Whitworth.

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