July 2021

# MEDICARE

# Additional Reporting on Key Staffing Information and Stronger Payment Incentives Needed for Skilled Nursing Facilities

## Accessible Version

On August 10, 2021, this report was corrected to display the first page of written comments from the Department of Health and Human Services, which appears on page 56.

GAO@100

*A Century of Non-Partisan Fact-Based Work*

GAO-21-408

# GAO Highlights

**July 2021**

## MEDICARE

## Additional Reporting on Key Staffing Information and Stronger Payment Incentives Needed for Skilled Nursing Facilities

## Why GAO Did This Study

In 2019, Medicare spent nearly $28 billion on care provided to 1.5 million beneficiaries in SNFs—a type of nursing facilty that provides residents short-term rehabilitation care after a hospital stay rather than long-term nursing home care that Medicare does not cover. SNFs must meet federal standards to participate in Medicare. CMS rates SNFs on factors such as staffing and quality of care and publishes its ratings on the Care Compare website.

GAO was asked to examine SNF staffing and rates of critical incidents. This report examines (among other objectives): SNF performance on staffing measures, CMS reporting of staffing information on Care Compare, and Medicare payments for critical incidents. GAO analyzed CMS staffing and critical incidents data, information on Care Compare, and Medicare claims data for 2018 and 2019. GAO also interviewed CMS officials and other stakeholders such as key researchers and beneficiary groups.

## What GAO Recommends

Congress should consider directing the Secretary of the Department of Health and Human Services to implement appropriate payment reductions for SNFs that generate Medicare spending on potentially preventable critical incidents. GAO is making three recommendations, including that CMS report more staffing information on Care Compare. HHS agreed to report weekend decreases in nurse staffing levels, but did not agree to report minimum nurse staffing thresholds needed to ensure quality of care. GAO continues to believe both are important, as discussed in the report.

View GAO-21-408. For more information, contact Jessica Farb at (202) 512-7114 or farbj@gao.gov.

## What GAO Found

Medicare covers short-term care for residents in about 15,500 skilled nursing facilities (SNF) after a hospital stay. GAO's analysis of 2019 staffing data found that almost all SNFs frequently met a federal requirement for a registered nurse (RN) on site for 8 hours per day. Fewer SNFs frequently met two other staffing measures that specify different numbers of nursing hours per resident per day. For example, about half of SNFs frequently met Centers for Medicare & Medicaid Services (CMS) case-mix measures—hours worked per resident that vary based on the medical needs of each SNF's residents—that CMS uses to set SNF staffing ratings. Further, about one-quarter of SNFs frequently met staffing thresholds for minimum RN and total nurse staffing that a CMS staffing study identified as needed to avoid quality problems. SNFs are not subject to these quality thresholds for ratings or as requirements, but many stakeholders have recommended that they be used as SNF staffing thresholds.

**Percent of Skilled Nursing Facilities (SNFs) That Met Registered (RN) Nurse Staffing Requirement or Measures, 2019**
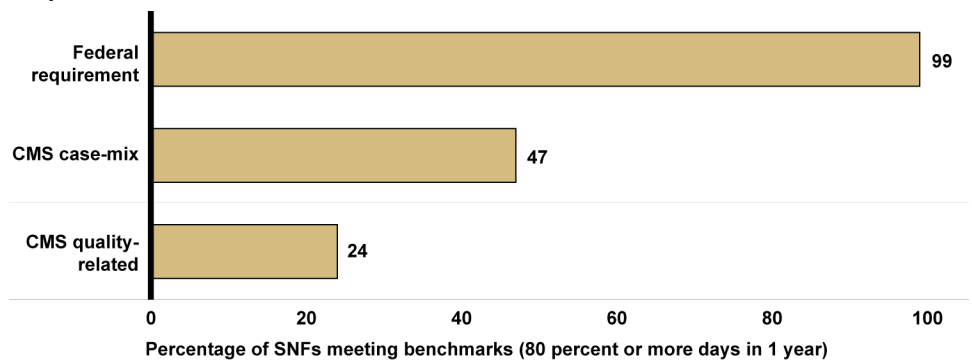


Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-21-408

**Data table for Percent of Skilled Nursing Facilities (SNFs) That Met Registered (RN) Nurse Staffing Requirement or Measures, 2019**

|  | Percentage of SNFs meeting benchmarks (80 percent or more days in 1 year |
|---|---|
| Federal requirement | 99 |
| CMS case-mix | 47 |
| CMS quality-related | 24 |

CMS reports certain key staffing information—such as RN overall staffing hours—on its Care Compare website, but does not report other important information. For example, GAO found that average RN staffing hours decreased about 40 percent on weekends, but CMS does not directly report this information. This limits the ability of beneficiaries to make informed choices among SNFs when choosing a facility.

GAO estimated that in 2018 Medicare spent over $5 billion on critical incidents that CMS defines as potentially preventable—which are mostly about 377,000

**United States Government Accountability Office**

hospital readmissions occurring within 30 days of the SNF admission.  Current law directs CMS to make reductions of up to 2 percent to certain SNFs' payments to incentivize them to improve care, but does not address additional reductions. Experts have noted that payment incentives under current law may not be sufficient to motivate SNFs to improve their staffing, which in turn could lead to reductions in critical incidents. Without stronger payment incentives, Medicare is unlikely to reduce the billions in spending on potentially preventable critical incidents or the patient harm that can occur from them.

# Contents

Tables

Figures

**Abbreviations**

| | |
|---|---|
| CMS | Centers for Medicare & Medicaid Services |
| ER | emergency room |
| Five-Star System | Five-Star Quality Rating System |
| HHS | Department of Health and Human Services |
| HPRD | hours per resident day |
| PBJ | payroll-based journal |
| RN | registered nurse |
| SNF | skilled nursing facility |
| VBP | Value-Based Purchasing |

**GAO@100**

**U.S. GOVERNMENT ACCOUNTABILITY OFFICE**
*A Century of Non-Partisan Fact-Based Work*

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

July 9, 2021

The Honorable Ron Wyden
Chairman
Committee on Finance
United States Senate

The Honorable Charles E. Grassley
United States Senate

Medicare covers short-term skilled nursing and rehabilitation services provided to beneficiaries generally after a qualifying stay of at least 3 days in an acute care hospital. In 2019, Medicare spent nearly $28 billion for care provided to 1.5 million Medicare beneficiaries in about 15,500 skilled nursing facilities (SNF), which are a type of nursing facility that provides the short-term, temporary care for beneficiaries after a hospital stay.[1]

To help ensure that Medicare SNF residents receive quality care, the Centers for Medicare & Medicaid Services (CMS), an agency within the Department of Health and Human Services (HHS), defines the quality standards that SNFs must meet in order to participate in Medicare. Federal law also requires SNFs to meet certain standards for nurse staffing in most circumstances—specifically, SNFs must have one registered nurse (RN) on duty for at least 8 consecutive hours, 7 days per week, and offer 24-hour licensed nurse staff services sufficient to care for all residents provided by RNs or licensed practical nurses.[2]

Research has demonstrated a relationship between nurse staffing and quality outcomes for residents in SNFs. For example, a 2001 study—that we refer to as the CMS staffing study—identified minimum SNF nurse-to-resident staffing levels required to ensure quality care and avoid

---

[1]The majority of SNFs (more than 90 percent) also provide long-term care services to Medicaid and private pay residents. A SNF's staff provides services generally to all residents of a facility regardless of whether the residents are beneficiaries of Medicare or Medicaid, or are private pay residents.

[2]42 U.S.C. § 1395i-3(b)(4)(C)(i); 42 C.F.R. § 483.35 (2019).

potentially preventable hospital readmissions and other poor outcomes.[3] In addition, a 2013 study by the HHS Office of Inspector General noted that hospital readmissions can result in billions of dollars in additional Medicare program spending because Medicare pays hospitals for these incidents in addition to payments made to SNFs for the care that they provide.[4] In August 2020, the HHS Office of Inspector General also raised questions about fluctuations in 2018 SNF staffing levels and whether this variation was appropriately captured by CMS' rating system for consumers.[5] Further, in September 2020, an independent commission of experts that CMS assembled to address safety and quality in nursing homes in light of the Coronavirus Disease 2019 (COVID-19) pandemic— which we refer to as the Nursing Home Commission—noted long-standing staffing challenges that significantly contribute to current gaps in resident care.[6]

CMS has developed a rating system to help beneficiaries select SNFs based on their quality of care and nurse staffing levels, and it publishes these ratings on its Care Compare website—which incorporated the former Nursing Home Compare website in December 2020.[7] Starting in April 2018, in response to a requirement in the Patient Protection and Affordable Care Act, CMS began basing staffing data used in this rating system on actual payroll-based journal (PBJ) staffing data instead of SNF

---

[3]Centers for Medicare & Medicaid Services (CMS). *Report to Congress: Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes Phase II Final Report.* Baltimore, MD: CMS; 2001, (hereafter referred to as the "CMS staffing study"). CMS identified these minimum staffing thresholds in response to a provision in the Omnibus Budget Reconciliation Act of 1990. Pub. L. No. 101-508, § 4801(e)(17)(B), 104 Stat. 1388, 1388-218 (1990).These thresholds have been validated in more recent studies for some nurse types.

[4]Department of Health and Human Services, Office of Inspector General, *Medicare Nursing Home Resident Hospitalization Rates Merit Additional Monitoring* (Washington, D.C.: November 2013).

[5]Department of Health and Human Services, Office of Inspector General, *Some Nursing Homes' Reported Staffing Levels in 2018 Raise Concerns; Consumer Transparency Could Be Increased* (Washington, D.C.: August 2020).

[6]MITRE, Coronavirus Commission on Safety and Quality in Nursing Homes: Commission Final Report, PRS Release Number 20-2382 (September 2020).

[7]In December 2020, CMS began using a new Care Compare website that merged eight healthcare compare tools, including Nursing Home Compare. For purposes of our report, we are referring to the nursing home component of Care Compare.

self-reported staffing data.[8] This change allows CMS to collect staffing information from all Medicare-certified SNFs for various types of staff, including RNs, licensed practical nurses, and nurse aides.[9]

You asked us to examine staffing levels, the characteristics of SNFs with low staffing rates, and the relationship, if any, between staffing levels and critical incidents—including hospital readmissions—for Medicare residents receiving SNF care. This report

1. describes SNF performance on selected staffing measures in in 2019;

2. examines the extent to which CMS reports key staffing information on Care Compare;

3. describes the relationship, if any, between staffing and the rate of critical incidents; and

4. examines the spending Medicare incurred for potentially preventable critical incidents and the implications for Medicare SNF payment policy.

Our report also describes the characteristics of SNFs that had low average annual staffing rates or decreases in weekend staffing for RN and total nurse staffing. (See appendix I.)

To describe SNF performance on selected staffing measures, we analyzed publicly-available PBJ quarterly data from CMS for 2018 and 2019—the most recently available at the time of our study—for about 14,423 of the over 15,500 SNFs nationwide (93 percent) that had reported staffing data for at least three of the four quarters in each year. The PBJ data provide information on daily staffing levels for each nurse type: RN, licensed practical nurse, and nurse aide, as well as for total nurse staffing for each SNF. We used the PBJ data to determine each SNF's performance relative to three staffing measures—the federal requirement for RN staffing; CMS case-mix staffing measures based on residents' need at each SNF; and quality-related thresholds from the CMS staffing study that identified minimum staffing thresholds needed to

---

[8]Pub. 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)).

[9]On March 23, 2020, CMS temporarily waived the requirement for SNFs to submit PBJ data due to the Coronavirus Disease (COVID-19) pandemic, and ended the waiver on June 25, 2020.

avert quality problems.[10] Additionally, we interviewed seven stakeholders knowledgeable about SNF staffing and quality issues, including key researchers, advocates for long term care facilities and for consumers of long term care, and representatives of the Medicare Payment Advisory Commission. While not necessarily representative of all perspectives on these topics, our selected stakeholders represent leading and diverse views, and have published extensively on issues related to our reporting objectives. We also interviewed CMS officials and reviewed the Nursing Home Commission's recommendations on nursing home staffing and quality of care.[11]

To examine the extent to which CMS reported key staffing information on Care Compare, we reviewed the statutory requirements for information to be included on Care Compare and the system's goals, reporting and development of information from Care Compare and the staffing rating system technical guides, staffing data submission and collection requirements in the PBJ Policy Manual, and CMS memoranda to state survey agency directors on the agency's plans for (among other things) Care Compare reporting on turnover and tenure. We then compared the reported information on staffing from the Care Compare website to these various requirements and guides, as well as determined the extent to which CMS reports information on weekend staffing levels and any quality of care thresholds, such as those in the CMS staffing study. We also examined the use of contract and employed staff for each nurse type for all SNFs that reported this information in 2019. Additionally, we interviewed CMS officials and the stakeholders knowledgeable about

---

[10]See *Appropriateness of Minimum Nurse Staffing Ratios.* SNFs are not required to meet the case mix measures although CMS uses them to help determine SNF staffing ratings. While CMS does not use the CMS staffing study thresholds, researchers and others suggest the thresholds be used for SNF ratings or as minimum staffing requirements for SNFs. For example, stakeholders we interviewed—including a researcher and advocates for consumers of long term care—support the CMS staffing study thresholds for use in SNF ratings or as staffing requirements. Others have also suggested they be used by CMS—see Charlene Harrington, et al., "Appropriate Nurse Staffing Levels for Nursing Homes," *Health Services Insights*, vol. 13 (2020); Charlene Harrington et al., "The Need for Higher Minimum Staffing Standards in U.S. Nursing Homes," *Health Services Insights* (2016); Lori Smetanka, "Promoting Elder Justice: A Call for Reform; Hearing Before the U.S. Senate Committee on Finance," *National Consumer Voice for Quality Long-Term Care* (July 23, 2019); Institute of Medicine, *Keeping Patients Safe: Transforming the Work Environment of Nurses* (Washington, D.C.: National Academy of Medicine, 2004).

[11]MITRE, *Commission Final Report.*

SNF staffing and quality of care that we identified earlier about staffing information.

To describe the relationship between staffing and the rates of critical incidents, we used publicly available CMS data from Care Compare, for each SNF, on the percentage of residents who had what CMS defines as a potentially preventable hospital readmission or an outpatient visit to the emergency room (ER) within 30 days of the SNF admission date during calendar years 2018 and 2019.[12] (These were the most recent SNF-level available data at the time of our analysis.) We grouped SNFs into 10 groups based on their average annual RN and total hours per resident day (HPRD), and compared the rates of critical incidents for SNFs in the lowest and highest staffing groups respectively.

To examine the spending that Medicare incurred for critical incidents in 2018 we used data from multiple sources. Specifically, we obtained data from CMS on residents admitted for short-stay SNF admissions in 2018 who had a potentially preventable hospital readmission or an ER visit within 30 days of the SNF admission date.[13] (The resident-level data was the most recently available complete data at the time of our analysis). We next examined 2018 Medicare claims data to determine Medicare payments for these readmissions and ER visits. We reviewed Medicare payment policies to assess the extent to which these potentially preventable critical incidents and Medicare's spending on them is consistent with the agency's goal of reducing readmissions, ensuring quality care, and being a prudent purchaser of services.

We assessed the reliability of the various datasets we used for our objectives by reviewing relevant CMS data documentation, performing manual and electronic tests of the data to identify any outliers or anomalies, and comparing the data with other published sources where available. For example, to assess the reliability of PBJ data, we compared

---

[12]The 30-day hospital readmission measure only includes potentially preventable or unplanned readmissions. For example, planned readmissions such as admissions for inpatient chemotherapy are excluded. CMS identifies these planned admissions based on diagnoses or procedure codes included on the payment claim. Hospital readmissions also include observation stays—outpatient hospital stays in which patients receive medical services to assess whether they should be admitted to the hospital or be discharged. CMS calculates these rates of critical incidents based on Medicare claims data. CMS also adjusts these rates to account for differences in demographics, functional status, and medical conditions of residents that could account for different rates of critical incidents across SNFs.

[13]Short-stay residents are those who have a SNF stay that is 100 days or less.

our calculations of nurse HPRD to those that CMS publicly provides on Care Compare. We determined that these datasets were sufficiently reliable for the purposes of our reporting objectives. For additional information about our methodology for conducting these analyses, see appendix II.

We conducted this performance audit from September 2019 to July 2021 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

## SNF Characteristics

SNFs are a type of facility that provides short-term, temporary care for residents undergoing medically necessary rehabilitation treatment after a hospital stay. For example, a SNF resident could be recovering from a surgical procedure such as a hip or knee replacement or from a medical condition such as a stroke. Unlike facilities that provide a residence for people in need of round-the-clock care that Medicare does not cover, SNFs treat residents that typically have the potential to function independently after a limited period of care. SNFs therefore generally have multidisciplinary specialized staff such as rehabilitation specialists, physical therapists, and occupational therapists, among others. SNFs participating in Medicare are required to comply with federal standards and CMS contracts with state agencies to send surveyors to conduct initial and follow-up visits to assess such compliance.

The majority of SNFs are located in urban areas, have been in operation for at least 20 years, and have between 51 to 200 beds. Nearly all SNFs are certified for participation in Medicare and also provide Medicaid services. Most SNFs (96 percent) are freestanding (not attached to a hospital), and about 70 percent of SNFs are for-profit.[14]

---

[14]SNF characteristics determined by GAO analysis of 2019 PBJ staffing data.

## SNF Nurse Staffing

SNFs employ three types of nursing staff: RNs, licensed practical nurses, and nurse aides. The responsibilities and salaries of these three types of nurses are based on their levels of education.

- **RNs** have at least a 2-year degree and are licensed in a state. Because of their advanced training and ability to provide skilled nursing care, RNs are paid more than other nursing staff. Generally, RNs are responsible for managing residents' nursing care and performing complex procedures, such as starting intravenous feeding or fluids.

- **Licensed practical nurses** have a 1-year degree, are also licensed by the state, and typically provide routine bedside care, such as taking vital signs.

- **Nurse aides** generally work under the direction of licensed practical nurses, have at least 75 hours of training, and have passed a competency exam. Nurse aides' responsibilities usually include assisting residents with eating, dressing, bathing, and toileting. They typically have more contact with residents than other nursing staff, thus providing the greatest number of hours of care per resident day—a measurement of nursing care. Nurse aides are generally paid less than RNs and licensed practical nurses.

The mix of nurse types that SNFs employ is generally related to the needs of the residents served. For example, a higher proportion of RNs may be employed to meet residents' needs in SNFs that serve more residents with acute care needs or in SNFs with specialty care units (such as units for residents who require ventilators for assistance with breathing). However, as we reported in 2016, SNFs may not be able to achieve their ideal staffing of the various nurse types based on resident need due to, for example, high turnover among licensed practical nurses and nurse aides.[15]

As we additionally reported in 2016, staffing decisions may also be driven by financial goals. Nurse staffing represents the largest component— about 53 percent—of SNFs' operating costs, according to a 2019 analysis

---

[15]See GAO, *Skilled Nursing Facilities: CMS Should Improve Accessibility and Reliability of Expenditure Data*, GAO-16-700 (Washington, D.C.: Sept. 7, 2016).

of SNF industry trends.[16] For-profit SNFs generally have a goal of making profits that are distributed among their owners and stockholders, and several studies have demonstrated that for-profit SNFs generally have lower nurse-to-resident staffing ratios compared with nonprofit SNFs, likely allowing them to increase their profit margins by reducing their personnel costs.[17]

## Staffing Standards and Quality of Care

There is no federal requirement specific to the minimum number of nurses needed per number of residents for SNFs. CMS does not require SNFs to have a minimum number of nurses per resident, citing concerns that a mandated ratio could result in unintended consequences such as facilities staffing to the minimum and stifling staffing innovation. In a 2016 Final Rule, CMS stated that it would instead require SNFs to conduct an annual facility assessment through which they would make staffing decisions after taking into account resident needs and staff ability to provide care.[18] We therefore considered three other measures for SNF nurse hours of staffing for purposes of our report: one is a federal requirement for a minimum number of RN hours, one is used by CMS for rating SNFs, and one (which is tied to quality of care), is not used, though it stems from a CMS study and has been recommended for use as SNF staffing thresholds—see table 1.

---

[16]See CliftonLarsonAllen Wealth Advisors, LLC, *34th SNF Cost Comparison and Industry Trends Report* (2019).

[17]For example, see Charlene Harrington et al., "Nurse Staffing and Deficiencies in the Largest For-Profit Nursing Home Chains and Chains Owned by Private Equity Companies," *Health Services Research*, vol. 47, no. 1 (2012); Charlene Harrington et al., "Ownership, Financing, and Management Strategies of the Ten Largest For-Profit Nursing Home Chains in the United States," *International Journal of Health Services*, vol. 41, no. 4 (2011); and The Henry J. Kaiser Family Foundation, *Overview of Nursing Facility Capacity, Financing, and Ownership in the United States in 2011* (Washington, D.C.: The Kaiser Commission on Medicaid and the Uninsured, June 2013).

[18]See Medicare and Medicaid Programs; Reform of Requirements for Long-Term Care Facilities, 81 Fed. Reg., 68753 – 68759 (Oct. 4, 2016). CMS officials informed us that the agency had not updated its position since this final rule.

**Table 1: Measures for Nurse Staffing In Medicare Skilled Nursing Facilities (SNF)**

| | Federal requirement[a] | Centers for Medicare & Medicare Services (CMS) case-mix | CMS quality-related |
|---|---|---|---|
| **Staffing measure** | 8 consecutive hours a day, 7 days a week for registered nurses (RN). Additionally, 24 hours a day for licensed nursing services which are sufficient to meet the nursing needs of its residents. | Hours per resident day (HPRD) calculations that vary based on demographics and medical conditions of residents in each SNF. | At least 0.55 HPRD for RN staffing and 3.55 HPRD for total nurse staffing for SNF admissions (shorter than 90 days).[b] |
| **Purpose** | Enacted in 1987 to improve standards of care in nursing homes.[c] | CMS originally developed case-mix staffing measures to determine SNF payments. CMS now uses these measures for rating SNFs' staffing on its Care Compare website. To compare SNFs fairly, CMS adjusts reported staffing for differences in residents' varying medical conditions.[d]<br><br>SNFs are not required to meet these measures—but CMS uses them to determine SNF staffing ratings on its Care Compare website. | CMS conducted a congressionally-mandated study to determine if an appropriate minimum ratio of nurses to residents could be determined from data. The study identified the hours per resident day thresholds below which residents are at substantially increased risk of quality problems.<br><br>SNFs are not required to meet these thresholds but knowledgeable stakeholders endorse them and recommend their use for SNF staffing thresholds.[f] |
| **Data used to develop the measure** | Not available | The measures were based on a study using a sample of 205 SNFs representing approximately 10,000 residents in 15 states[e] | The study was based on cost and quality data from a representative sample of over 5,000 SNFs in 10 states. |
| **Key limitations identified by stakeholders[f]** | The requirement is not tied to the number of residents (e.g., it is the same for a 60-bed facility or a 600-bed facility); their medical conditions; or quality of care outcomes.<br><br>The requirement does not identify adequate RN staffing levels needed to care for nursing home residents. | The measures are too low due to two key limitations: First, the study's sample of nursing homes was not representative of all nursing homes.<br><br>Second, the study recorded the average time nurses spent on care activities, but did not examine if the care provided was sufficient to avoid quality problems. | The CMS staffing study that reported the thresholds was published in 2001, although stakeholders have noted that the thresholds have been validated in more recent studies and are therefore still relevant. |

Source: GAO analysis of Centers for Medicare & Medicaid Services information. | GAO-21-408

[a]CMS may waive this requirement under certain conditions. See 42 U.S.C. §§ 1395i-3(b)(4)(C)(ii); 42 C.F.R. § 483.35 (2019).

[b]The CMS staffing study identified higher staffing levels for long-stay residents (those 90 days or longer) of 0.75 HPRD for RNs and 4.1 HPRD for total nurse staffing. See Centers for Medicare & Medicaid Services (CMS), *Report to Congress: Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes Phase II Final Report* (Baltimore, Md. CMS; 2001).

[c]Some states require a minimum number of nursing hours per resident per day, while others require a minimum number of nursing staff relative to the number of residents. Some states' requirements apply only to licensed nurses, while others apply to nurse aides as well.

[d]For example, a SNF that treats residents that are much older or with more complex medical conditions than the average SNF would require more nurse staffing than the average SNF.

[e]See Iowa Foundation for Medical Care, *Staff Time Resource Intensity Verification (STRIVE) Project* (Sept. 1, 2011).

[f]See Charlene Harrington, et al., "Appropriate Nurse Staffing Levels for Nursing Homes," *Health Service Insights*, vol. 13 (2020); Charlene Harrington et al., "The Need for Higher Minimum Staffing Standards in U.S. Nursing Homes," *Health Services Insights* (2016); L. Smetanka, "Promoting Elder Justice: A Call for Reform; Hearing Before the U.S. Senate Committee on Finance," *National Consumer Voice for Quality Long-Term Care* (July 23, 2019); Institute of Medicine, *Keeping Patients Safe: Transforming the Work* (Washington, D.C.: National Academy of Medicine: 2004). In addition, stakeholders we interviewed (including a researcher and advocates for consumers of long term care) support the CMS staffing study thresholds for use in SNF ratings or as staffing requirements.

Numerous studies have explored the relationship between nurse staffing and quality of care and found that low nurse staffing is linked with poorer outcomes and higher rates of critical incidents.[19] A number of organizations have therefore suggested CMS could use the minimum daily staffing thresholds identified in the CMS staffing study because the study identified minimum thresholds below which higher rates of critical incidents were observed.[20] Critical incidents have been examined by the HHS Office of Inspector General and other stakeholders because they are viewed as a measure of nursing home quality. Specifically, preventable hospital readmissions or outpatient ER visits may be indications of potentially poor or inadequate care in the SNFs.[21] An HHS Office of Inspector General 2014 study noted that critical incidents can create additional problems for vulnerable medically frail residents because they

- often occur during nights or weekends with limited prior planning of the hospital readmission, and staff who are not familiar with the residents' history may end up providing care;

- can disrupt the residents' SNF care plans and present greater potential for residents' stress and disorientation; and

---

[19]For example, H. Lin, "Revisiting the Relationship between Nurse Staffing and Quality of Care in Nursing Homes: An Instrumental Variables Approach," *Journal of Health Economics*, vol. 37 (2014); and J. He et al., "Nurse Staffing and Patient Outcomes: A Longitudinal Study on Trend and Seasonality," *BMC Nursing* (2016).

[20]Harrington et al., "The Need for Higher Minimum Staffing Standards," and Smetanka, "Promoting Elder Justice."

[21]Planned hospital readmissions such as for maintenance chemotherapy and rehabilitation are not examined because they are expected to occur.

- can result in billions of dollars in additional Medicare program spending because Medicare pays hospitals for these incidents in addition to SNF daily payment rates.[22]

CMS has also reported—for example, in its technical guide for its staffing rating system and in memoranda to state survey agency officials—that nurse staffing has a strong impact on the quality of care nursing homes—which include SNFs—deliver. For example, in a 2018 memorandum, CMS reported the results of its study that found that as RN hours increased, nursing facilities had better performance on three quality measures used in its staffing rating system.[23]

## Care Compare and the CMS Five-Star Quality Rating System

Since 1998, CMS has reported information related to the quality of nursing homes on a public website—originally on the Nursing Home Compare website, and as of December 2020, on its Care Compare website. The goals for the website include helping consumers compare nursing home quality and assisting them in finding other information about nursing homes. CMS has increased the amount of information reported on the website over time—initially it reported information about nursing home characteristics and nursing home health inspection results. Later, CMS began reporting additional information, for example, the ratio of nursing staff to residents. Federal law now requires that staffing information be included in the public website as part of the information provided for comparisons of nursing homes.[24] The website must include, for each SNF, data on the hours of care provided daily for each resident, which is expressed as hours per resident per day, based on direct care

---

[22]Department of Health and Human Services, Office of Inspector General, *Adverse Events in Skilled Nursing Facilities: National Incidence Among Medicare Beneficiaries*, OEI-06-11-00370, (February 2014).

[23]See CMS memorandum QSO-18-17-NH, April 6, 2018.

[24]42 U.S.C. § 1395i–3(i). The staffing data must be provided in a format that is clearly understandable to consumers of long-term care services and allows consumers to compare differences in staffing between facilities and with state and national averages.

staffing information from payroll data submitted by SNFs in PBJ, including information on staffing tenure and turnover.[25]

To further assist beneficiaries in selecting SNFs, in 2008 CMS included on its website a Five-Star Quality Rating System (Five-Star System) that rates all Medicare-certified SNFs on several dimensions including nurse staffing levels and quality of care. According to CMS, the primary goal of the Five-Star 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 Five-Star System assigns each nursing home an overall "star" rating, ranging from one to five. Nursing homes with five stars are considered to have much above average quality, while nursing homes receiving one star are considered to have much below average quality.[26] The overall star rating is based on ratings for three separate components including staffing and quality measures.

To determine staffing ratings, CMS first calculates the hours per resident day (HPRD) for RN and total nurse staffing based on data reported in the PBJ system. Next, CMS adjusts this reported HPRD to account for differences in case-mix (which reflect the level of residents' nursing staff needs based on the complexity of their medical conditions). CMS then compares the adjusted RN and total nurse HPRD for each SNF to staffing thresholds that it sets for each to determine the staffing rating, and assigns the appropriate ratings for RN and total nurse staffing. Finally, CMS averages the RN and total nurse ratings, rounding towards the RN rating if the two ratings are different—see figure 1.

---

[25]SNFs are required to submit direct care staffing information based on payroll and other verifiable and auditable data regarding the category of work a certified employee performs, resident census data and case mix, and employee turnover and tenure as part of PBJ data. See 42 U.S.C. § 1320a-7j(g). While the statute does not define turnover or tenure, the Bureau of Labor Statistics generally defines turnover as separation of an employee from an establishment, and tenure as a measure of how long an employee has been with a current employer over a specific time period.

[26]In April 2018, CMS announced that it would automatically downgrade a SNF's staffing star rating to one star if it reported no RN hours for at least seven days within a quarter. In April 2019, CMS revised this rating downgrade and now downgrades the staffing rating if no RN hours are reported for at least four days within a quarter, and increased the threshold a facility must exceed to obtain a five star staffing rating.

**Figure 1: Example of Centers for Medicare & Medicaid Services (CMS) Determination of Staffing Rating for a Hypothetical Skilled Nursing Facility**

| STEP 1 | STEP 2 | STEP 3 | STEP 4 | STEP 5 |
|---|---|---|---|---|
| Calculate HPRD. | Adjust for differences in residents' nursing needs based on their medical conditions. | Determine staffing ratings based on CMS thresholds. | Assign staffing rating. | Average RN and total nurse staffing rating. |

**STEP 1**

Calculate HPRD.

RN= 0.273
Total= 3.291

**STEP 2**

Adjust for differences in residents' nursing needs based on their medical conditions.

Adjusted RN= 0.162

Adjusted Total= 3.108

**STEP 3**

Determine staffing ratings based on CMS thresholds.

*CMS National Star Thresholds for Staffing Measures Based on Adjusted HPRD*

| Star rating | RN | Total |
|---|---|---|
| 1-star | Less than 0.317 | Less than 3.108 |
| 2-star | 0.317-0.507 | 3.108-3.579 |
| 3-star | 0.508-0.730 | 3.580 - 4.037 |
| 4-star | 0.731-1.048 | 4.038-4.407 |
| 5-star | Greater than 1.049 | Greater than 4.408 |

**STEP 4**

Assign staffing rating.

RN rating= 1
Total rating= 2

**STEP 5**

Average RN and total nurse staffing rating.

*In cases where the average rating for RN and total nursing is not a whole number, the overall staffing rating rounds towards the RN staffing rating.*

Average of RN and Total rating: 1.5

Final rating: 1

Legend: CMS=Centers for Medicare & Medicaid Services; HPRD=hours per resident day; RN=registered nurse.

Source: GAO analysis of CMS information.  |  GAO-21-408

**Text of Figure 1: Example of Centers for Medicare & Medicaid Services (CMS) Determination of Staffing Rating for a Hypothetical Skilled Nursing Facility**

1. Step 1,
   Calculate HPRD

2. Step 2,
   Adjust for differences in resident's nursing needs based on their medical conditions.

3. Step 3,
   Determine staffing ratings based on CMS thresholds

4. Steph 4, .
   Assign staffing rating.

5. Step 5,
   Average RN and total nurse staffing rating. In cases where the average rating for RN and toal tursing is not a whole number, the overall staffing rating rounds towards the RN staffing rating.

As with staffing ratings, the Five-Star System's quality ratings are based on the extent to which SNFs' performance on various quality measures—

such as measures of rates of critical incidents—meet metrics set by CMS that are adjusted for residents' demographics and clinical conditions.

## Medicare Coverage of and Payment for SNF Care

Medicare covers SNF care for beneficiaries who need daily skilled nursing care or therapy for conditions related to a hospital stay of at least 3 consecutive calendar days, if the hospital discharge occurred within a specific period—generally, no more than 30 days—prior to admission to the SNF. For qualified beneficiaries, Medicare will pay for medically necessary SNF services, including room and board; nursing care; and ancillary services, such as drugs, laboratory tests, and physical therapy, for up to 100 days per incidence of illness.

In the Balanced Budget Act of 1997, Congress established a SNF prospective payment system under which SNFs receive a daily payment rate that covers almost all services provided to Medicare beneficiaries during their stay.[27] CMS adjusted the daily payment rate according to the SNF's case-mix (or residents' nursing staff needs for care based on assignment to one of the 66 resource utilization groups) and geographic variation in labor costs. The daily rate covers the cost of nursing, therapy, ancillary services such as drugs, laboratory tests and imaging, with greater payment for a resident assigned to a group requiring more care.[28]

As required by statute, CMS makes two adjustments to SNF daily payment rates. Specifically:

- Starting October 1, 2018, CMS began implementing the SNF Value-Based Purchasing (VBP) program to incentivize SNFs to improve their

---

[27]Pub. L. No. 105-33, § 4432, 111 Stat. 251, 414 (1997) (codified, as amended, at 42 U.S.C. § 1395yy(e)).

[28]Payment rates are updated annually for each fiscal year to reflect changes in the costs of goods and services used to provide SNF care.

quality of care.[29] Under the program, CMS is required to withhold 2 percent of adjusted daily payments across all SNFs each year and redistribute between 50 and 70 percent of the withheld payments back to SNFs as incentive payments based on their performance in controlling the number of hospital readmissions occurring within 30 days of discharge from the initial hospital stay to a SNF.[30] (CMS redistributes 60 percent of the withheld payments; the remainder is returned back to the Medicare program as savings). SNFs with low performance scores do not receive any incentive payments (essentially experiencing an up to 2 percent reduction in their per diem payments). According to CMS data, 9,878 of the 15,202 SNFs (65 percent) participating in the program in fiscal year 2020 had payment decreases of up to 2 percent while 2,909 SNFs (19 percent) received payment increases of up to 3.1 percent.[31]

- In addition, under the SNF Quality Reporting Program, starting in fiscal year 2018 SNFs were required to submit data on certain quality measures, including rates of hospital readmissions within 30 days of

[29]The Protecting Access to Medicare Act of 2014 required the Secretary to establish a SNF readmission quality measure and SNF Value-Based Purchasing (VBP) program using the readmission measure. Pub. L. No. 113-93, § 215, 128 Stat. 1040, 1048 (2014) (codified, as amended, at 42 U.S.C. § 1395yy(g)-(h)). All SNFs that are paid under Medicare's prospective payment system are included in the program currently. However, the Consolidated Appropriations Act, 2021 provides for the exclusion of SNFs for which there are not a minimum number of cases or measures on or after October 1, 2022.  Pub. L. No. 116-260, div. CC, title I, § 111, 134 Stat. 1182, 2945 (2020).

[30]CMS has set that percentage at 60 percent. The remaining 40 percent of withheld payments is counted as savings to Medicare. SNFs receive incentive payments based on the higher of two performance scores: an improvement score that is based on the extent to which SNFs reduced their rates of unplanned readmissions over a defined period of time; and an achievement score that is based on each SNF's rate of unplanned readmissions relative to a benchmark. For example, incentive payments for fiscal year 2020 were based on the extent to which SNFs had reduced their rates of unplanned readmissions in fiscal year 2018 compared to fiscal year 2016.  The Consolidated Appropriations Act, 2021 authorizes the Secretary to apply up to ten additional quality measures in the SNF Value-Based Purchasing program on or after October 1, 2023. Pub. L. No. 116-260, div. CC, title I, § 111, 134 Stat. 1182, 2945 (2020). CMS is currently evaluating which measures might be appropriate to consider within this authority. The Act does not make any changes to the 2 percent withhold or the thresholds for redistribution of the withheld payments to SNFs.

[31]The remaining 16 percent had no change in their payments. In 2019, about 72 percent of 15,305 participating SNFs received payment decreases of up to 2 percent while the remaining SNFs had increases of up to 1.6 percent. The incentive payments were based on reductions in SNFs' rates of unplanned readmissions in calendar year 2017 compared to calendar year 2015.

discharge from the SNF.[32] CMS is required to reduce the annual payment update by two percent for SNFs that do not submit data in accordance with the statute.[33]

# Almost All SNFs Frequently Met the Federal RN Staffing Requirement, while Fewer SNFs Frequently Met CMS Staffing Measures, Particularly on Weekends and for RNs

Our analysis of SNF staffing data shows that in 2019 almost all SNFs— nearly 99 percent— frequently met a federal requirement to have at least one RN on site at least 8 hours per day.[34] Throughout this report, we define "frequently met" as meeting the requirement 80 percent or more of days in a year. Of the small number of SNFs that did not have an RN onsite every day, the majority recorded RN absences for 5 or fewer days within the year. These trends were generally similar in 2018. See appendix III for average SNF staffing levels for RNs and other nurse types and changes in these levels over time.

Compared to the federal RN requirement, fewer SNFs frequently met CMS's staffing measures adjusted for case-mix, which are specific staffing levels that CMS calculates for each SNF based on the severity of their residents' medical conditions. Specifically, nearly half of SNFs frequently met (80 percent or more of days in 1 year) these case-mix staffing measures for RN staffing, while 9 percent of SNFs infrequently met (19 percent or fewer days in 1 year) these measures during this period. (See fig. 2.) Total nurse staffing (RNs and all other nurse types) followed similar trends. These trends were generally similar in 2018. While SNFs are not required to meet these measures, which can vary by facility, CMS uses these measures to calculate staffing star ratings on Care Compare.

---

[32]See 42 U.S.C. §§ 1395yy(e)(6), 1395lll.

[33]42 U.S.C. § 1395yy(e)(6)(A)(i).

[34]Absent a waiver, SNFs must also have licensed nurse staffing on site 24 hours a day. Our study focused on the federal requirement for RN staffing because studies have shown the strongest link between RN staffing and quality compared to other nurse types. For example, see H. Lin, Revisiting the Relationship.

**Figure 2: Percentage of Skilled Nursing Facilities That Met the Centers for Medicare & Medicaid Services Case-Mix Staffing Measures for Registered Nurse Staffing in 2019**
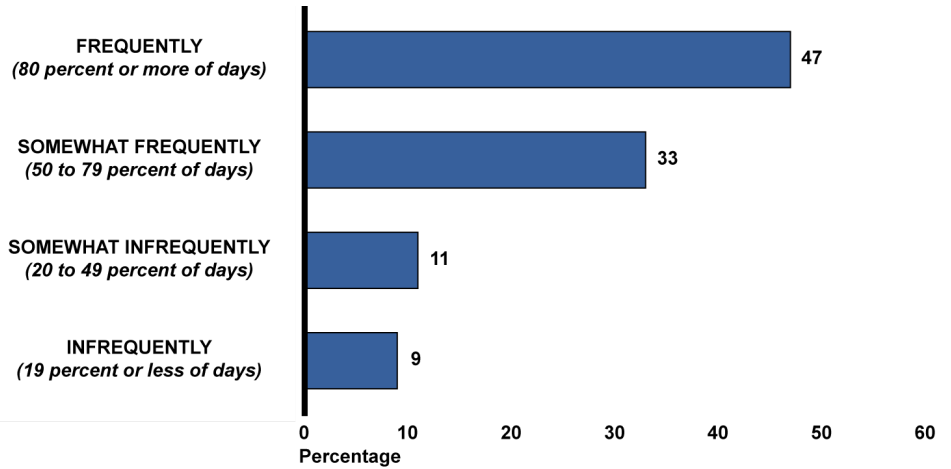


Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data.  |  GAO-21-408

**Data table for Figure 2: Percentage of Skilled Nursing Facilities That Met the Centers for Medicare & Medicaid Services Case-Mix Staffing Measures for Registered Nurse Staffing in 2019**

|  | Percentage |
| --- | --- |
| Frequently (80 percent or more of days) | 47 |
| Somewhat frequently (50 to 79 percent of days) | 33 |
| Somewhat infrequently (20 to 49 percent of days) | 11 |
| Infrequently (19 percent or less of days) | 9 |

Note: CMS calculates case-mix staffing measures for each individual skilled nursing facility (SNF); these measures specify the number of hours per resident per day for each type of nurse based on the severity of residents' medical conditions in each SNF.

Compared to the federal RN requirement and CMS's case-mix staffing measures, in 2019, fewer SNFs frequently met quality-related thresholds identified by the CMS staffing study. These thresholds are minimum staffing levels that the study identified as needed to avoid poor quality of care.[35] Specifically, about 24 percent of SNFs frequently met (80 percent or more of days in 1 year) this threshold for RN staffing in 2019 while another 26 percent of SNFs infrequently met this threshold for RN staffing. (See fig. 3.) Total nurse staffing followed similar trends; see appendix III for additional information on total nurse staffing at SNFs in

---

[35]*Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes*. The minimum staffing levels identified in the study are 0.55 HPRD for RN staffing, and 3.55 HPRD for total nurse staffing.

2019 relative to quality-related thresholds. In addition, trends in 2018 were similar to 2019 trends. Although SNFs are not required to meet these thresholds, stakeholders have endorsed them and recommended that they be used in SNF ratings or as minimum staffing thresholds.

**Figure 3: Percentage of Skilled Nursing Facilities That Met Quality-Related Registered Nurse Staffing Thresholds in 2019**



Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-21-408

**Data table for Figure 3: Percentage of Skilled Nursing Facilities That Met Quality-Related Registered Nurse Staffing Thresholds in 2019**

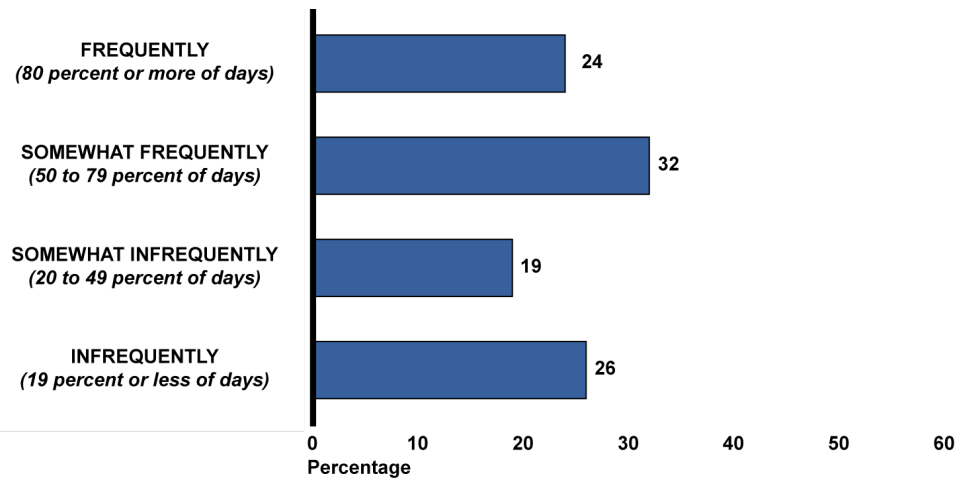|  | Percentage |
| --- | --- |
| Frequently (80 percent or more of days) | 24 |
| Somewhat frequently (50 to 79 percent of days) | 32 |
| Somewhat infrequently (20 to 49 percent of days) | 19 |
| Infrequently (19 percent or less of days) | 26 |

Note: CMS conducted a Congressionally-mandated study, Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes, which in 2001 identified minimum staffing thresholds—the hours per resident day below which residents are at substantially increased risk of quality problems.

Our analysis of PBJ data also found that in 2019 less than one-third of SNFs had RN weekend staffing that frequently met CMS's case-mix staffing measures. A smaller share—12 percent—of SNFs had RN weekend staffing that frequently met the quality-related RN staffing threshold identified in the CMS staffing study, while over 60 percent of SNFs had weekend staffing that infrequently met the threshold during this period. This performance reflects the fact that average RN staffing hours decreased over 40 percent on weekends, more than double the decrease

for any other nurse type. (See fig. 4.) As with other staffing trends, decreased weekend staffing trends in 2018 were similar to 2019 trends.

**Figure 4: Average Adjusted Skilled Nursing Facility Staffing by Nurse Type, by Day of Week, 2019**
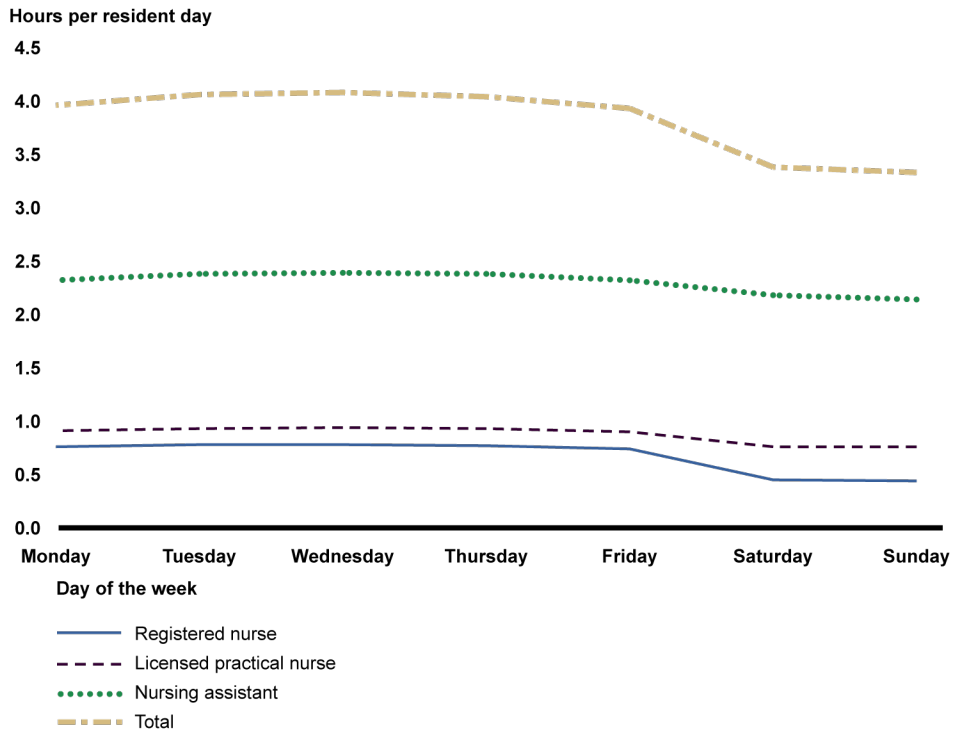


Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data.  |  GAO-21-408

**Data table for Figure 4: Average Adjusted Skilled Nursing Facility Staffing by Nurse Type, by Day of Week, 2019**

Average adjusted staffing rates by day of week and nurse type, CY 2019

| Monday | Tuesday | Wednesday | Thursday | Friday | Saturday | Sunday |
|--------|---------|-----------|----------|--------|----------|--------|
| 0.76 | 0.78 | 0.78 | 0.77 | 0.74 | 0.45 | 0.44 |
| 0.91 | 0.93 | 0.94 | 0.93 | 0.90 | 0.76 | 0.76 |
| 2.32 | 2.38 | 2.39 | 2.38 | 2.32 | 2.18 | 2.14 |
| 3.96 | 4.06 | 4.08 | 4.04 | 3.93 | 3.38 | 3.33 |

# CMS Reports Certain Key Staffing Information on Care Compare, but Does Not Include Information on Weekend Staffing Levels or Related to Minimum Staffing Thresholds

## CMS Reports Some Key Staffing Information on Care Compare Such as Staffing Ratings, but Not Other Information Such as Weekend Staffing Levels

CMS reports certain key staffing information on Care Compare as part of its Five-Star System reporting. This information is reported as part of the star staffing rating component for a SNF, and is updated quarterly.[36] For example, along with a SNF's star ratings for total and RN staffing, CMS reports the hours worked in relation to the number of facility residents—the HPRD—for a SNF's total number of licensed nurses, and separately reports the HPRD for RNs, licensed practical nurse/licensed vocational nurses, nurse aides, and physical therapist staff.[37] For the nurse total and for each nurse type, CMS also reports the corresponding national average HPRD, and the average HPRD calculated for the state where the SNF is located.

However, CMS does not report other required key staffing information on Care Compare. Specifically, CMS does not currently report data on SNF staff turnover and tenure that the agency is required to report on its website. Staffing measures such as turnover and tenure can be linked to quality of care, such as staff turnover leading to poorer quality outcomes, according to stakeholders we interviewed that included an expert on staffing and quality of care and advocates for consumers in facilities such as nursing homes. CMS officials said that they have been analyzing information on turnover with available PBJ data and are establishing turnover rates for nursing staff, but have not yet reported these data due to other pressing priorities related to responding to COVID-19, especially

---

[36]PBJ staffing data are reported quarterly, so new staffing measures and ratings are calculated and posted quarterly.

[37]Total nurse HPRD staffing includes RN, licensed practical nurse, and nurse aide staffing. The ratio is expressed as hours and/or minutes.

for nursing homes.[38] They noted that they are likely to report data on staff turnover and tenure on Care Compare in 2021. CMS officials also said that they have been examining SNF use of contract staff (temporary staff from contracting agencies employed in lieu of permanent staff), but the agency does not have plans to establish a corresponding metric at this time because SNFs' use of contract staff tends to be low—no more than 3 percent of nurse staff are contract staff. The numbers of staff employed as contract staff is included in SNF's PBJ data reported to CMS, though it is not required to be reported on Care Compare. For more information on the distribution of contract staff, see appendix IV.

Additionally, while we found that SNF nurse staffing decreased on weekends compared to weekday staffing for all nurse types, but more significantly for RN staffing, CMS does not report weekend staffing levels on Care Compare. Currently, beneficiaries attempting to select the best SNF for their needs would not be able to consider the stability of staffing throughout the entire week by using the information available on Care Compare, which is contrary to the website's goal to help beneficiaries choose quality SNFs.[39]

CMS also does not incorporate information on weekend staffing in its staffing ratings on Care Compare. According to CMS officials, the agency has considered incorporating information on weekend staffing levels but has not done so because SNFs with low weekend staffing also tend to have low average staffing levels. Therefore, according to CMS officials, these SNFs would have already received a 1-star staffing rating on Care Compare. Officials said that incorporating weekend staffing fluctuations into ratings would not be of any additional benefit to consumers; rather, providing too much information could confuse rather than help them.

However, our analysis shows that SNFs' Care Compare ratings are not a reliable indicator of their weekend staffing levels. Although we found that SNFs with lower staffing ratings (1 or 2 stars) often had weekend nurse

---

[38]We were unable to determine rates of staff tenure and turnover because SNFs are not required to report employee start and termination dates in the PBJ system. However, CMS officials told us that they have been measuring these rates by tracking the dates on which hours worked were first reported and when they were stopped for each employee in the PBJ system.

[39]The primary goal of Care Compare is to provide residents and their families with an easy way to understand nursing home quality and distinguish between high and low-performing nursing homes.

staffing that was lower than what was indicated by their CMS case-mix measures, we also found this to be true among some SNFs with higher staffing ratings. Specifically, in 2019 nearly 3,000—or 31 percent—of SNFs with Care Compare ratings of 3 or more stars had average weekend staffing hours that were lower than CMS case-mix staffing hours for RN staffing.[40] Further, the SNFs with staffing hours that were lower than CMS case-mix staffing hours on weekends tended to staff below the staffing hours to a large degree. For example, we found that the SNFs with a 3-star rating had, on average, weekend RN staff who worked 0.28 HPRD, whereas the comparable RN case-mix measure was 0.37 HPRD, a 24 percent difference. In other words, we found that these RN staff on average worked about 17 minutes per resident each weekend day, compared to the case-mix measure average of 22 minutes.

We also found that some SNFs with equivalent staffing ratings had different levels of weekend staffing. For example, we found two SNFs in Massachusetts that had the same 3-star staffing rating, though one had RN staffing on weekends consistent with its weekday staffing, while the other experienced an average drop in RN staffing of nearly 70 percent on weekends. By not assessing the feasibility of incorporating information about decreases in weekend staffing into the ratings on Care Compare, CMS potentially limits Medicare beneficiaries' or their representatives' ability to make more fully informed choices among SNFs, and potentially avoid risks of critical incidents associated with low weekend staffing.[41]

One stakeholder we interviewed from a national nursing home patient advocacy coalition, as well as CMS officials, told us that decreases in staffing, particularly for RNs, could lead to critical incidents. According to this stakeholder, this is because, unlike other nurse staff, RNs are uniquely qualified to clinically assess and address changes in residents' conditions and take action to help avoid critical incidents. Similar concerns were recently reported by the Nursing Home Commission that

---

[40]For this comparison, we compared reported weekend staffing to the CMS case-mix staffing quarterly averages, since daily case-mix staffing hours were not uniformly available for all SNFs and quarters. GAO determined that case-mix staffing hours do not tend to differ from weekdays to weekends.

[41]In 2016, we made four recommendations, including that adding information to the Five-Star rating system could benefit consumers trying to differentiate between high- and low-performing nursing homes. HHS agreed with three of the four recommendations, and, as of July 2019, had implemented three of the four recommendations. 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).

addressed nursing home safety and quality in light of COVID-19. Specifically, in its September 2020 report the Nursing Home Commission stated that RNs address sudden clinical changes that require, among other things, assessment, intervention, and possible transfer of the resident to a higher level of care, but that RNs are insufficiently present in nursing homes, especially during weekend hours.[42]

## Staffing Information Reported on Care Compare Does Not Include Comparison of SNF Staffing to Minimum Staffing Thresholds for Quality of Care

We also found that CMS does not report minimum staffing thresholds below which SNF residents are at increased risk of quality problems, such as the total nurse and RN thresholds identified in the CMS staffing study. By not reporting such information on Care Compare, CMS limits beneficiaries' ability to make informed choices about care quality when selecting a SNF—a key CMS goal for Care Compare.

The CMS staffing study was published in 2001 and while two stakeholders we spoke with said its staffing thresholds continue to be valid, another stakeholder suggested the study could be updated because of changes in acuity among facility residents since its publication, among other things. The stakeholder stated that these changes could result in higher, or lower, minimum staffing thresholds than those identified in the 2001 study. Other researchers have long recommended that CMS should use the thresholds in the study to set minimum staffing thresholds for SNFs.

The Nursing Home Commission's 2020 report echoed longstanding stakeholder concerns that SNF staffing should be closely tied to minimum quality of care standards. In a principal recommendation related to staffing, one action step calls for CMS to issue guidance based on recent research that defines updated, acuity-adjusted, evidence-based, and person-centered minimum care standards. The action step further stated that these standards should specify hours of care per resident per day during normal and emergency operations, and require nursing homes to adhere to these standards.[43] Additionally, the report stated that if no

---

[42]MITRE, *Coronavirus Commission on Safety and Quality.*

[43]See principal recommendation 6A and its action steps in MITRE, *Coronavirus Commission on Safety and Quality,* 55.

recent research existed for CMS to use, it should commission a study to establish the evidence base for this guidance. In its September 2020 response to the Nursing Home Commission report that broadly outlined the actions the agency had taken in response to the COVID-19 pandemic, CMS did not identify any efforts related to this action step. Regardless of whether it uses thresholds from the CMS staffing study or another source, CMS could provide an additional comparison measure for Care Compare users by including quality of care staffing thresholds.

Additionally, CMS does not incorporate information on the extent to which SNFs meet minimum staffing thresholds below which SNF residents are at increased risk of quality problems into its ratings on Care Compare. While CMS recently increased the staffing HPRDs needed for each SNF to receive a specific star rating, CMS can award 3-star ratings to SNFs with staffing levels that fall below the CMS staffing study thresholds.[44] For example, the CMS staffing study threshold of 0.55 HPRD for RN staffing is within the updated 3-star RN staffing rating range of 0.508-0.730 HPRD. Additionally, based on CMS's rating methodology for calculating a SNF's overall star staffing rating, a SNF could provide 3.108 HPRD of total nurse staffing and 0.508 HPRD of RN staffing—the lowest HPRD within each of the respective 2- and 3-star rating ranges—and receive a 3-star overall staffing rating, though the HPRDs are below the CMS staffing study thresholds.[45] For example, the SNF could have total staffing of about 3 hours and 7 minutes (3.108 HPRD), which is 26 minutes less than the CMS staffing study minimum threshold for total nurse staffing of 3 hours and 33 minutes. By not assessing the feasibility of incorporating information about a specific quality of care threshold into the ratings on

---

[44]Specifically, CMS examined PBJ staffing data and Medicare claims data to determine the relationship between staffing levels and hospital readmissions and emergency room visits within 30 days of SNF admissions. Based on this study CMS raised the thresholds for most staffing ratings. For example, CMS raised the minimum threshold to receive a 3 star staffing rating for RN staffing from 0.383 hours per resident day to 0.508 hours per resident day.

[45]The overall staffing rating is based on the combination of RN and total nurse staffing ratings. Usually the overall staffing rating is the average of the two staffing ratings; however, in cases where the average is not a whole number, the overall staffing rating "rounds towards" the RN staffing rating. As an example, a SNF's average is 4.5 if it earns 5 stars on RN staffing and 4 stars on total staffing, and with rounding toward the RN staffing, the SNF would receive a 5-star overall rating. See Centers for Medicare & Medicaid Services, Design for Nursing Home Compare Five-Star Quality Rating System: Technical User's Guide (July 2020).

Care Compare, CMS limits beneficiaries' ability to make informed choices about care quality when selecting a SNF.

# SNFs with Low RN Staffing Levels Generally Had Higher Rates of Critical Incidents

Our analysis of CMS data on critical incidents showed that SNFs in the lowest RN staffing group (that is, in the lowest of 10 groups ranked by their average annual RN HPRD) had higher rates of critical incidents than SNFs in the highest RN staffing group (that is, in the highest of 10 groups ranked by their average annual RN HPRD) in 2018 and 2019, after adjusting for differences in the medical conditions of residents across SNFs.[46]

Specifically, in 2018, about 23.6 percent of SNF admissions in the lowest RN staffing group resulted in a hospital readmission within 30-days of the SNF admission date compared with 21.3 percent of SNF admissions in the highest RN staffing group (see table 2).This higher rate translates to about 2,265 hospital readmissions. Similarly, about 12.4 percent of SNF admissions in the lowest RN staffing group resulted in an ER visit within 30-days of the SNF admission date compared with 10.5 percent of SNF admissions in the highest RN staffing group. This higher rate translates to about 1,624 ER visits. These trends were similar for both types of critical incidents in 2019.[47]

---

[46]CMS determined that all of these hospital readmissions were potentially preventable. CMS does not determine whether ER visits are potentially preventable.

[47]We found a similar relationship between total nurse staffing and rates of critical incidents as for RN staffing, although the differences in hospital readmissions between the highest and lowest groups were smaller for the total nurse staffing groups than for the RN staffing groups.  For example, about 22.8 percent of SNF admissions in the lowest total nurse staffing group resulted in a hospital readmission compared to about 21.4 percent in the highest total nurse staffing group in 2018. However, the rates of critical incidents did not always decline as total nurse staffing increased.

**Table 2: Percent of SNF Admissions That Resulted in Critical Incidents for Skilled Nursing Facilities (SNF) with the Lowest and Highest Average Annual Registered Nurse (RN) Staffing, 2018 and 2019[a]**

| Percent of SNF admissions that resulted in a hospital readmission within 30-days of the SNF admission date[b] | 2018 | 2019 |
|---|---|---|
| SNFs in the lowest of 10 groups ranked by their average annual RN hours per resident day | 23.6 | 23.0 |
| SNFs in the highest of 10 groups ranked by their average annual RN hours per resident day | 21.3 | 21.3 |

| Percent of SNF admissions that resulted in an emergency room visit within 30-days of the SNF admission date[c] | 2018 | 2019 |
|---|---|---|
| SNFs in the lowest of 10 groups ranked by their average annual RN hours per resident day | 12.4 | 11.7 |
| SNFs in the highest of 10 groups ranked by their average annual RN hours per resident day | 10.5 | 9.8 |

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-21-408

[a]Critical incidents are hospital readmissions or emergency room (ER) visits that occurred within 30-days of the SNF admission date in 2018 and 2019 respectively. The lowest RN staffing group includes SNFs that GAO identified as having the lowest 10 percent of RN hours per resident day in each year respectively. Hospital readmissions and ER visits are adjusted by CMS for differences in the medical conditions of residents across SNFs. The highest RN staffing group includes SNFs that GAO identified as having the highest 10 percent of RN hours per resident day in each year respectively.

[b]CMS determined these readmissions were potentially preventable.

[c]CMS does not determine whether ER visits are potentially preventable.

Moreover, the percent of SNF admissions that resulted in both types of critical incidents declined as RN staffing increased across the 10 staffing groups, further illustrating the relationship between RN staffing and critical incidents—see figure 5.

**Figure 5: Percent of Skilled Nursing Facility (SNF) Admissions with Hospital Readmissions and Emergency Room Visits within 30-Days of SNF Admission by Registered Nurse (RN) Staffing Group, 2018**

| 30-day hospital readmissions | 30-day emergency room visits |
|---|---|

Adjusted rates
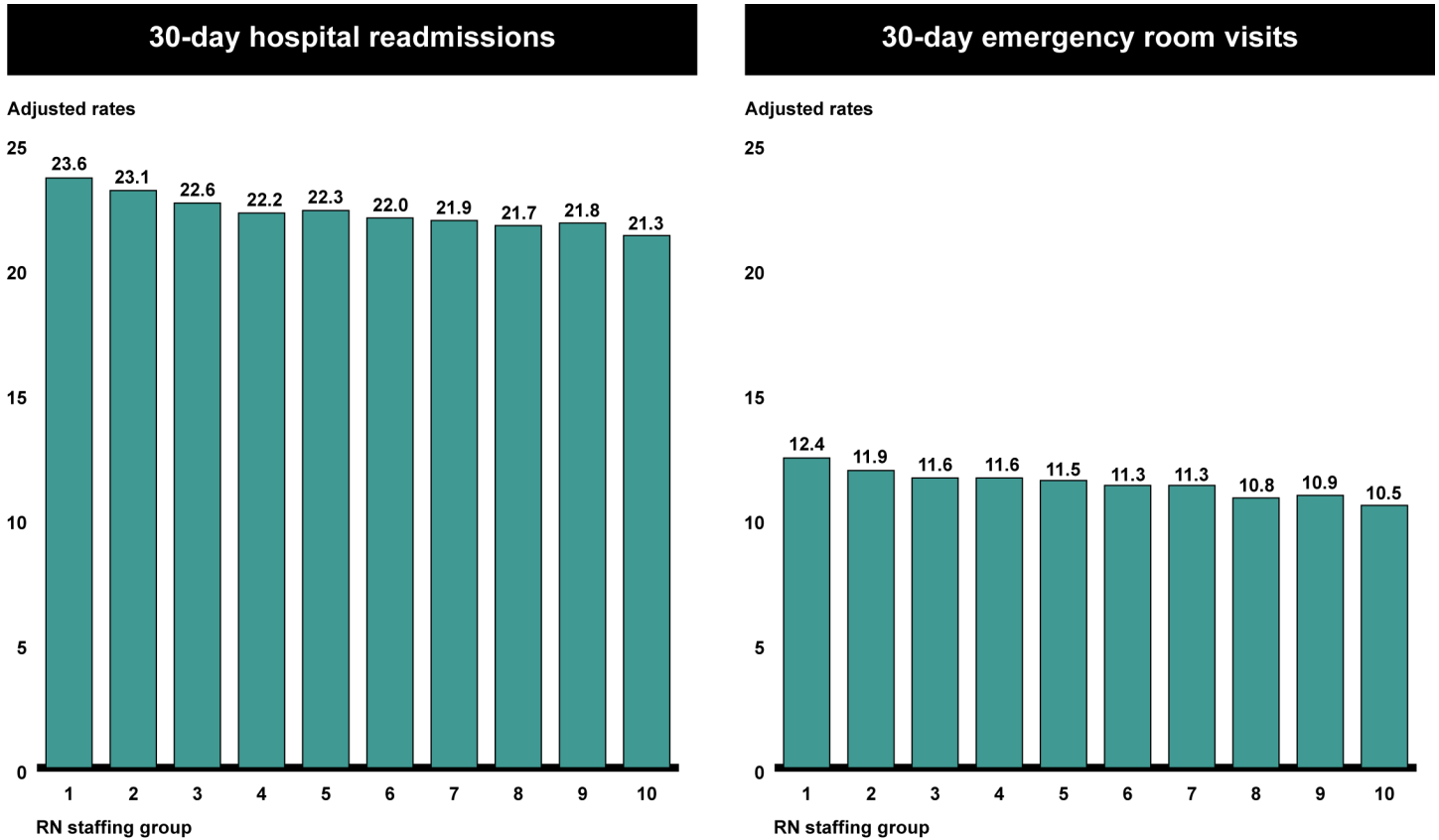


Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-21-408

**Data table for Figure 5: Percent of Skilled Nursing Facility (SNF) Admissions with Hospital Readmissions and Emergency Room Visits within 30-Days of SNF Admission by Registered Nurse (RN) Staffing Group, 2018**

|  |  | 30-day hospital readmissions | 30-day emergency room visits |
|---|---|---|---|
| RN staffing group | 1 | 23.0 | 12.4 |
|  | 2 | 22.8 | 11.9 |
|  | 3 | 22.2 | 11.6 |
|  | 4 | 21.9 | 11.6 |
|  | 5 | 21.6 | 11.5 |
|  | 6 | 21.7 | 11.3 |
|  | 7 | 22.0 | 11.3 |
|  | 8 | 21.4 | 10.8 |
|  | 9 | 21.2 | 10.9 |
|  | 10 | 21.3 | 10.5 |

# Medicare Spent an Estimated $5 Billion on Potentially Preventable Critical Incidents, Indicating Absence of Strong SNF Payment Incentives to Reduce Them

Our analysis of CMS critical incidents and Medicare payment data found that Medicare spent about an estimated $5.2 billion on potentially preventable critical incidents in 2018, mostly for hospital readmissions that occurred within 30 days of the SNF admissions.[48] Specifically, of the approximately 1.7 million SNF admissions in 2018, about 22 percent resulted in a hospital readmission within 30 days of the SNF admission date, for a total of about 377,000 readmissions. Medicare spending on these readmissions was about $5.04 billion, based on an average payment rate of $13,367 per readmission. Similarly, 10 percent of SNF admissions had an ER visit within 30 days of the SNF admission date, for a total of about 169,250 ER visits. Medicare spending on these ER visits was about $125 million based on an average payment rate of $741 per ER visit. This spending is inconsistent with CMS's responsibility to be a prudent purchaser of health services, since CMS considers the hospital readmissions to be potentially preventable.[49]

CMS currently has a program to incentivize SNFs to lower their hospital readmission rates.[50] By law, under the SNF VBP program, SNFs may experience decreases of up to 2 percent in the daily payment rates that Medicare makes for care that SNFs are expected to provide if they do not control their hospital readmission rates. However, the law does not

---

[48]Potentially preventable readmissions are unplanned readmissions. They do not include planned readmissions such as for maintenance chemotherapy and rehabilitation because these readmissions are expected to occur. (CMS does not determine a similar measure for ER visits since ER visits by definition are unplanned).

[49]As noted earlier, CMS does not determine whether ER visits are potentially preventable.

[50]This program does not pertain to ER visits.

authorize additional reductions.[51] As our analysis shows, despite these reductions SNFs generated over $5 billion in additional Medicare spending on hospital readmissions.

In addition, the 2 percent reduction may not be sufficient to incentivize SNFs with lower RN staffing to increase their staffing because the additional staffing costs they would have to incur (particularly for RN staff) could outweigh the 2 percent reduction in payments. For example, in 2018, a SNF in the third lowest average annual RN staffing groups had 85 SNF admissions for which it received total daily Medicare payments of about $1.4 million. About 21 percent of these SNF admissions resulted in a hospital readmission. The SNF therefore experienced a 2 percent reduction in its 2020 payments totaling about $25,000. If the SNF hired at least one additional RN to improve its staffing and thus reduce its rate of readmissions, it would need to spend about $75,000—which according to the Bureau of Labor Statistics was the median annual salary of an RN as of May 2020. The additional staffing cost is triple the 2 percent reduction in its payments. Thus, the SNF could decide that it would be more cost-effective to have its payments reduced than to hire additional staff, which limits the effectiveness of the current payment reductions.[52] CMS could use the existing mechanism of the SNF VBP program to incentivize SNFs in making the needed reductions in their rates of critical incidents to achieve CMS's targeted level of savings. For example, with authority from Congress, CMS could withhold more than 2 percent of SNF aggregate payments, and implement steeper reductions for SNFs that generate a high proportion of the additional spending on hospital readmissions.

---

[51]The Consolidated Appropriations Act, 2021 authorizes the Secretary to apply up to ten additional quality measures in the SNF Value-Based Purchasing program on or after October 1, 2023. Pub. L. No. 116-260, div. CC, title I, § 111, 134 Stat. 1182, 2945 (2020). CMS is currently evaluating which measures might be appropriate to consider within this authority. However, the Act does not make any changes to the 2 percent withhold or the thresholds for redistribution of the withheld payments to SNFs. CMS officials confirmed that the only payment reductions that CMS makes are those that are required under the SNF VBP program.

[52]A recent study, partly funded by CMS, also concluded that payment incentives (and, by the same token payment reductions) under the SNF VBP program were unlikely to motivate SNFs to hire more skilled RN staff, although higher levels of RN staffing were associated with better performance (incentive payments) in the SNF program. In comparison, substitution of RN staff with lower skilled staff such as LPNs was associated with worse performance (payment reductions). See L.C. Daras, et al. "Nearly One In Five Skilled Nursing Facilities Awarded Positive Incentives Under Value-Based Purchasing", *Health Affairs*, vol. 40, no. 1 (Jan. 27, 2021).

Research has shown, and CMS has acknowledged, that reducing hospital readmissions is important for quality of care and patient safety as well as reducing the cost of care and generating cost savings to Medicare. Specifically, CMS stated that it developed the hospital readmission measure that is used in the SNF VBP in response to research that found hospital readmissions to SNFs were expensive and, in addition to being costly, readmission to a hospital interrupts a SNF patient's therapy and care plans, causes anxiety and discomfort, and exposes the patient to hospital-acquired adverse events such as health care associated-infections.[53] Without more robust payment incentives Medicare will likely continue to incur excess spending, thereby limiting its ability to be a prudent purchaser of health care services, and medically frail SNF residents may continue to suffer potential harm from these critical incidents.

While it may not be feasible for all SNFs to totally eliminate their potentially preventable critical incidents—that is, eliminate all of the readmissions and ER visits—in a given year, our analysis shows that even small incremental improvements could yield large savings. For example, if all SNFs—including those with lower RN staffing—had reduced their rates of critical incidents by 2 percentage points in 2018, Medicare could have avoided almost 34,000 hospital readmissions and ER visits, thus saving the program about $476 million in 2018. See appendix V for more information on savings that could be generated for the Medicare program based on reductions in the rates of critical incidents at SNFs.

## Conclusions

CMS has taken certain steps to improve reporting and rating of nurse staffing levels in SNFs on the Care Compare website. However, our review found opportunities for improvement in both of these areas. For example, because the agency does not report ratings information on SNF weekend staffing levels, this limits beneficiaries' ability to make informed choices among SNFs that may have the same staffing rating but different levels of weekend staffing. Similarly, because CMS does not provide a comparison of SNF's RN and total staffing hours to specific quality of care thresholds, staffing ratings may not allow beneficiaries to understand

---

[53]RTI International, *Skilled Nursing Facility Readmission Measure (SNFRM) NQF #2510: All-Cause Risk-Standardized Readmission Measure Draft Technical Report,* CMS Contract No. HHSM-500-2013-13015I Task Order HHSM-500-T0001 (March 2015).

whether SNFs are providing the minimum staffing needed to avert quality of care problems. Further, by assessing the feasibility of incorporating into its Five-Star System ratings information about weekend staffing levels and quality of care staffing thresholds, CMS would be better positioned to ensure that Care Compare is fully meeting its stated goal of helping consumers easily understand nursing home quality and distinguish between high- and low-performing SNFs.

Moreover, existing payment reductions that CMS implements for SNFs that do not control their hospital readmission rates may not be strong enough. For example, since nurse salaries account for a large share of total operating costs, reductions in staffing can generate profits that outweigh the 2 percent payment reductions required under the SNF Value-Based Purchasing program. Without stronger payment incentives for quality care, Medicare may continue to incur excess spending because of potentially preventable critical incidents for residents receiving care at SNFs.

# Matter for Congressional Consideration

Congress should consider directing the Secretary of HHS to implement additional reductions in payments to SNFs that generate Medicare spending on potentially preventable critical incidents—hospital readmissions and ER visits that occur within 30 days of the SNF admissions—either through the SNF Value-Based Purchasing program or some other vehicle, including, as needed, making any appropriate modifications to enable HHS to take action.

# Recommendations for Executive Action

We are making the following three recommendations to CMS:

The Administrator of CMS should report weekend decreases in RN and total nurse staffing levels on the Care Compare website. (Recommendation 1)

The Administrator of CMS should report minimum RN and total nurse staffing thresholds below which SNF residents are at increased risk of quality problems—such as thresholds that are similar to those identified in the CMS staffing study—on the Care Compare website. (Recommendation 2)

The Administrator of CMS should assess the feasibility of incorporating into the Five-Star System staffing ratings information on weekend decreases in RN and total nurse staffing levels, and minimum RN and total nurse staffing thresholds below which SNF residents are at increased risk of quality problems—such as those that were identified in the CMS staffing study. (Recommendation 3)

# Agency Comments and Our Evaluation

We provided a draft of the report to HHS for its review and comment. HHS provided written comments, which are included in appendix VI. HHS also provided technical comments, which we addressed as appropriate. HHS concurred with the first recommendation to report weekend decreases in RN and total nurse staffing levels on the Care Compare website. HHS did not concur with the second recommendation and stated it concurred with the third but raised concerns, as discussed below.

Specifically, HHS did not concur with the draft report's second recommendation to report on the Care Compare website minimum RN and total nurse staffing thresholds below which SNF residents are at increased risk of quality problems—such as those identified in the CMS staffing study.  HHS stated that staffing measures on Care Compare are currently tied to quality because staffing ratings were recently adjusted to reflect the relationship between staffing and hospitalizations. HHS also noted that that the thresholds identified in the CMS staffing study may no longer be appropriate because the study was completed in 2001—prior to the collection of PBJ data—and that updating the study would be an expensive and resource-intensive undertaking. As we discussed in the report, researchers and stakeholders have long recommended the need for minimum staffing thresholds for SNFs, including the Nursing Home Commission's 2020 report, which calls for CMS to commission a study to establish these standards if no recent research exists. We acknowledge the agency's concerns about the age of the CMS staffing study. We are not recommending that CMS use the thresholds in this study and we have revised the wording of the recommendation to focus on the importance of establishing minimum thresholds similar to those in the staffing study. However, as we also discussed in the report, these thresholds have been widely endorsed. Additionally, as one stakeholder noted, updating them may result in higher thresholds since resident acuity has changed since the study was published. We recognize that establishing minimum staffing thresholds may be resource-intensive. However, doing so will provide Medicare beneficiaries with important information on the quality of care

provided at SNFs, which would be consistent with the Commission's recommendation as well as CMS's goals to provide beneficiaries with an easy way to understand nursing home quality and distinguish between high- and low-performing nursing homes.

In its letter, HHS stated it concurred with the third recommendation to assess the feasibility of incorporating information on weekend RN and total nurse staffing levels into the Five-Star System staffing ratings. However, HHS noted that, to determine minimum RN and total nurse staffing thresholds below which SNF residents are at increased risk of quality problems, HHS would need to conduct an extensive analysis, as discussed above. Nevertheless, as discussed in our report, SNFs can receive a 3-star rating yet have staffing levels that fall below the CMS staffing study thresholds. Without information on minimum thresholds needed to provide quality care, beneficiaries will be limited in their ability to make fully informed choices about quality of care when selecting a SNF.

Finally, in its technical comments on a draft of this report, CMS stated the CMS staffing study did not identify minimum staffing levels; rather, the study identified a threshold where, once met, there were no additional levels of quality observed. However, the CMS staffing study itself, along with researchers and other organizations, refer to these thresholds as minimum levels. Additionally, CMS stated that GAO mischaracterized its case-mix methodology, which does not calculate a measure or benchmark, but rather, calculates the average level of staffing experienced by facilities with residents of similar acuity in the 2001 staffing study. However, in its general comments to GAO, HHS stated that each facility's staffing measure is adjusted based on the expected level of staff needed given the number and acuity of residents in the facility. By definition, the expected level of staff needed (or case-mix staffing) is therefore a facility-specific measure and not an average. Further, as we note in the report, other researchers who have published extensively on SNF staffing issues have also used this measure to assess the adequacy of nurse staffing in SNFs. As a result, we did not revise our draft to address these concerns.

As agreed with your offices, unless you publicly announce the contents of this report earlier, we plan no further distribution of it until 30 days from its 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 staffs have any questions about this report, please contact me at (202) 512-7114 or farbj@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix VII.

Jessica Farb
Director, Health Care

# Appendix I: Characteristics of Skilled Nursing Facilities (SNF) with Low Average Staffing and Decreased Weekend Staffing

This appendix provides details of our analyses to describe the characteristics of SNFs that had low average annual staffing (nurse staff hours per resident per day), and large weekend decreases for registered nurse (RN) and total nurse staffing in 2019.[1] Table 3 shows the characteristics of SNFs in the lowest and highest average annual staffing groups for RN staffing. Table 4 shows the characteristics of SNFs in groups with the lowest and highest percentage of weekend decreases in RN staffing. Table 5 shows the characteristics of SNFs in the lowest and highest average annual staffing groups for total nurse staffing. Table 6 shows the characteristics of SNFs in groups with the lowest and highest percentage weekend decreases in total staffing.

**Characteristics of SNFs with low average RN staffing.** Our analysis of 2019 payroll-based journal (PBJ) staffing data showed that SNFs in the lowest RN staffing group (lowest 10 percent in terms of RN staffing) were more likely to have certain characteristics compared to SNFs in the highest RN staffing group (highest 10 percent)—see table 3. For example, a higher proportion of SNFs in the lowest RN staffing group

- were of for-profit ownership,[2]

- were located in the South,[3] and

- were medium in size (contain 51 to 100 beds).

---

[1]Total nurse staffing includes RNs, licensed practical nurses, and nurse aides.

[2]We have previously reported that for-profit SNFs generally have less nurse staffing than those of nonprofit or government ownership. See GAO, *Skilled Nursing Facilities: CMS Should Improve Accessibility and Reliability of Expenditure Data*, GAO-16-700 (Washington, D.C.: Sept. 7, 2016).

[3]For the purposes of our report, we used the United States Census Bureau definition for geographical regions.

**Table 3: Characteristics of Skilled Nursing Facilities (SNF) with Lowest and Highest Registered Nurse (RN) Staffing and Percentage Differences, 2019**

In percent

| SNF characteristic | Proportion of SNFs with the lowest RN staffing (lowest 10 percent) | Proportion of SNFs with the highest RN staffing (highest 10 percent) |
| --- | --- | --- |
| For-profit ownership | 87 | 33 |
| Southern region | 70 | 13 |
| Medium size (51 to 100 beds) | 69 | 29 |
| 10 to 20 years in operation | 27 | 14 |
| Medicare and Medicaid certification (compared to Medicare only) | 100 | 88 |
| Freestanding (compared to hospital-based) | 99 | 90 |

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-21-408

Note: Percentage differences between the highest and lowest staffing groups are affected by rounding. Additionally, SNFs with any missing characteristic data—about 4 percent—are not included.

Some stakeholders we interviewed also generally stated that SNFs with low average staffing tended to have these characteristics, particularly for-profit SNFs. One stakeholder we interviewed told us that staff represent the highest operating cost for SNFs, which creates a profit incentive to provide less staffing. Other stakeholders' research found that low staffing is more likely to be associated with for-profit SNFs than with nonprofit or government-owned SNFs, which our analysis supports.[4] However, one stakeholder also stated that staffing problems are industry-wide: for-profit facilities may have lower staffing relative to other ownership types, but nonprofit SNFs that provide relatively higher staffing do not necessarily provide enough staffing to ensure quality outcomes.

**Characteristics of SNFs with Decreased Weekend RN Staffing.** More SNFs in the group with the greatest RN weekend staffing decreases (bottom 10 percent) compared to SNFs in the group with the smallest decreases (top 10 percent) were larger in size,

- located in the western region, and

---

[4]D.C. Grabowski, D.G. Stevenson, and F.Geng, "Daily Nursing Home Staffing Levels Highly Variable, Often Below CMS Expectations," *Health Affairs*, vol. 38, no. 7, (2019).

- had been operating 10 to 20 years.

However, certain characteristics that distinguished SNFs with low average staffing—including for-profit ownership and Medicare and Medicaid certification—were not observed for SNFs with large decreases in staffing over the weekend. (See table 4.)

**Table 4: Characteristics of Skilled Nursing Facilities (SNF) with Highest and Lowest Percentage Decreases in Registered Nurse (RN) Average Annual Weekend Hours per Resident Day, 2019**

In percent

| SNF characteristic | Proportion of SNFs with the largest RN weekend decreases (highest 10 percent) | Proportion of SNFs with the smallest RN weekend decreases (lowest 10 percent) |
|---|---|---|
| Large size (more than 100 beds) | 54 | 38 |
| Western region | 19 | 5 |
| 10 to 20 years in operation | 23 | 14 |

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-21-408

Note: Percentage differences between the highest and lowest staffing groups are affected by rounding. Additionally, SNFs with missing characteristic data are not included.

**Characteristics of SNFs with Low Average Total Nurse Staffing.**
Compared with SNFs in the highest staffing group for total nurse staffing, SNFs in the lowest staffing group for total nurse staffing were more likely to be

- of for-profit ownership, and
- located in the South, although to a markedly less degree that was true for RN staffing. Specifically, there was a 7 percentage point difference in the proportion of SNFs in the lowest and highest staffing groups for total nurse staffing, compared to a 57 percentage point difference for RN staffing. This suggests that SNFs in the lowest staffing group for total nurse staffing may be substituting RN staff for other type of staff so that their total nurse staffing is not as different in the lowest and highest staffing groups.

**Table 5: Characteristics of Skilled Nursing Facilities (SNF) with Lowest and Highest Total Nurse Staffing and Percentage Differences, 2019**

In percent

| SNF characteristic | Proportion of SNFs with the lowest total nurse staffing (lowest 10 percent) | Proportion of SNFs with the highest total nurse staffing (highest 10 percent) |
|---|---|---|
| For-profit ownership | 87 | 29 |
| Southern region | 35 | 28 |
| Medium size (51 to 100 beds) | 63 | 31 |
| Medicare and Medicaid certification (compared to Medicare only) | 100 | 87 |
| Freestanding (compared to hospital-based) | 100 | 89 |

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-21-408

Note: Percent differences between the highest and lowest staffing groups are affected by rounding. Additionally, SNFs with missing characteristic data are not included.

**Characteristics of SNFs with Decreased Weekend Total Nurse Staffing.** The characteristics of SNFs with the largest decrease in total nurse staffing on weekends were different from SNFs with the largest decreases in RN staffing on weekends—see table 6. For example, more SNFs with the largest decreases in total nurse staffing on weekends were

- located in the western region, and
- had been operating more than 30 years.

**Table 6: Characteristics of Skilled Nursing Facilities (SNF) with Highest and Lowest
Total Nurse Weekend Decreases and Percentage Differences, 2019**

In percent

| SNF characteristic | Proportion of SNFs with the highest total nurse weekend decreases (highest 10 percent) | Proportion of SNFs with the lowest total nurse weekend decreases (lowest 10 percent) |
|---|---|---|
| Western region | 38 | 8 |
| More than 30 years in operation | 54 | 37 |

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-21-408

Note: Percentage differences between the highest and lowest staffing groups are affected by
rounding. Additionally, SNFs with missing characteristic data are not included.

# Appendix II: Scope and Methodology

This appendix describes the scope and methodology used to examine three of our four objectives: (1) the extent to which skilled nursing facility (SNF) staffing levels compared with federal and other staffing measures in 2019; (2) the relationship (if any) between staffing and critical incidents; and (3) the extent to which Medicare incurred additional spending on critical incidents in 2018 and the implications for Medicare SNF payment policy. The appendix also describes the methodology used to determine the characteristics of SNFs that had low average annual staffing or large decreases in weekend staffing.

## Examining How SNF Staffing Levels Compared With Federal and Other Staffing Measures

To determine how SNF nurse staffing levels compared with federal and other staffing measures, we analyzed publicly available payroll-based journal (PBJ) quarterly staffing data from CMS. These data provide detailed staffing information from all Medicare-certified SNFs for various types of staff, including registered nurses (RN), licensed practical nurses, and nurse aides. We analyzed data from 2018 and 2019—the most recently available data available at the time of our analysis. Specifically,

- We analyzed PBJ quarterly data for 2018 and 2019 for about 14,423 of the approximately 15,500 SNFs nationwide (93 percent) that had reported staffing data for at least three of the four quarters in each year. We calculated actual nurse hours per resident day by dividing the reported daily staffing hours by the daily number of residents for each nurse type: RN, licensed practical nurse, and nurse aide, as well as for total nurse staffing for each SNF (the sum of these 3 nurse types).[1]

- We then compared daily actual SNF staffing to three staffing measures—the federal requirement for RN staffing, CMS case-mix

---

[1]Hours per resident day is a commonly used measure of the ratio of staff to residents that CMS uses for reporting SNF staffing on Care Compare. In this report, we also use the term 'staffing levels' to refer to hours per resident day.

staffing hours for each SNF that are based on its residents' need, and quality-related staffing hours thresholds that were identified in a CMS staffing study as being the minimum staffing hours needed to avert quality problems.[2] We calculated the percent of days in each year that SNFs' actual staffing hours met each of the three staffing measures and grouped SNFs into the following four categories: frequently met (80 percent or more of days in 1 year), somewhat frequently met (50 percent to 79 percent of days), somewhat infrequently met (20 percent to 49 percent of days), and infrequently met (19 percent or less of day).[3]

- We also calculated average staffing hours for each nurse type by day of week across all SNFs and determined the extent to which staffing hours dropped on the weekend. To adjust reported staffing for differences in the case-mix across SNFs, we used quarterly case-mix hours—specific nursing hours per resident day that CMS calculates based on residents' medical needs in each SNF—as reported on Care Compare. We followed the agency's methodology to develop standardized case-mix adjusted staffing levels as outlined in CMS's technical user's guide.[4]

In addition, we interviewed seven stakeholders knowledgeable about SNF staffing and quality issues including key researchers, advocates for long term care facilities and for consumers of long term care, and representatives of the Medicare Payment Advisory Commission. While not necessarily representative of all perspectives on these topics, our selected stakeholders represent leading and diverse views, and have published extensively on issues related to our reporting objectives. We also interviewed CMS officials and reviewed the Nursing Home Commission's recommendations on nursing home staffing and quality of care.[5]

---

[2]See *Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes.*
[3]These categories have been used in other research on SNF staffing. For example, see Grabowski DC, Stevenson DG, Geng F. *Daily Nursing Home Staffing Levels Highly Variable, Often Below CMS Expectations (2019).*

[4]Centers for Medicare and Medicaid Services, *Design for Nursing Home Compare Five-Star Quality Rating System: Technical User's Guide* (July 2020).

[5]MITRE, *Coronavirus Commission on Safety and Quality in Nursing Homes: Commission Final Report,* PRS Release Number 20-2382 (September 2020).

## Relationship Between Staffing and Rate of Critical Incidents

To determine the relationship between staffing and rates of critical incidents, we first grouped SNFs by deciles (10 percent increments) based on their average annual case-mix adjusted RN and total nurse staffing (from PBJ data). We then calculated the average rate of these critical incidents for each of the ten RN and total staffing groups and compared the rates of critical incidents in the lowest staffing group with that of the highest staffing group.

## Examining the Extent to Which Medicare Incurred Additional Spending on Critical Incidents

To determine the additional spending that Medicare incurred for critical incidents in 2018, we used data obtained from CMS as well as publicly available data on critical incidents from the Care Compare website. Specifically:

- We obtained data from CMS on short-stay SNF admissions in 2018 that had a potentially preventable hospital readmission or emergency room (ER) visit (or both) within 30 days of the SNF admission date.[6] (The resident-level data was the most recently available complete data at the time of our analysis). We next examined 2018 Medicare claims data to determine total and average Medicare payments for these readmissions and ER visits.

- We used data obtained from CMS, Medicare claims data, and publicly available CMS data from Care Compare to calculate Medicare total spending in 2018 and potential savings from reductions in the rates of readmission and ER visits for each individual SNF.[7] We calculated total Medicare spending by first multiplying each SNF's actual rates of readmissions and ER visits respectively by its total number of SNF admissions and summing these across all SNFs. We then multiplied the total number of readmissions and ER visits by the average

[6]Short-stay residents are those who have a SNF stay that is 100 days or less.

[7]Starting April 2016, CMS began including data on the rates of potentially preventable hospital readmissions and ER visits for each SNF based on Medicare claims data and used these data in its quality ratings of SNFs on Care Compare. CMS reports data on the actual rates as well as risk-adjusted rates of these measures. Risk-adjusted (or expected) rates take into account differences in residents' demographic and clinical characteristics across SNFs.

respective payment for each that we had calculated from Medicare claims data.

- To estimate potential savings from reductions in the rates of critical incidents, we developed several options.

  - Under one option, we calculated the total number of readmissions and ER visits that would have been avoided if these rates were reduced by 2 percentage points across all SNFs. We then multiplied the number of readmissions and ER visits that would have been avoided by the average payment for each that we had calculated from Medicare claims data and summed them to estimate total savings for readmissions and ER visits combined.

  - Under another option, we determined the number of readmissions and ER visits that would have been avoided if SNFs actual rates of readmissions and ER visits did not exceed their predicted or risk-adjusted rates that CMS had developed based on the demographics and other characteristics of each SNF's residents.[8] We estimated savings for all SNFs whose actual rates exceeded their risk adjusted rates, as well as savings for a subset of SNFs in the lower RN staffing groups that we had developed for earlier analyses in this report. We focused on these staffing groups because of our finding that the rate of critical incidents is generally higher for SNFs in the lower RN staffing groups than for SNFs in the higher RN staffing groups. Therefore, it would be appropriate to direct efforts to SNFs in the lower RN staffing groups to incentivize them to improve their RN staffing and rates of critical incidents. Specifically,

    - For all SNFs, we multiplied the 'excess' rate for each SNF by its number of SNF admissions to derive the excess number of readmissions and ER visits for each SNF. We then summed the total number of excess readmissions across all SNFs and multiplied the total by the average payment for a hospital readmission that we

---

[8]Rates of potentially preventable critical incidents can vary across SNFs due to risk factors that are beyond the SNFs' control—for example, differences in the severity of residents' medical conditions or demographics. To properly compare SNFs, CMS adjusts for this variation by calculating risk-adjusted rates of critical incidents. CMS does this by examining potentially preventable critical incidents that occurred across all SNFs in a given year and running a regression to identify the risk factors that predict the probability of these critical incidents occurring for an individual SNF based on the characteristics of its residents. SNFs whose actual rates of critical incidents exceed their risk-adjusted rates are considered to provide poorer quality care while those whose actual rates are below their risk-adjusted rates are considered to provide higher quality care.

had calculated from Medicare claims data. We did the same for ER visits. We then summed the total excess payments for hospital readmissions and ER visits combined.

- For SNFs in the lower RN staffing groups, we summed total excess payments for hospital readmissions and ER visits combined for SNFs in the lower RN staffing groups.

See appendix V for the results of the analysis for the second option.

## Examining the Characteristics of SNFs with Low Average Annual Staffing or Large Decreases in Weekend Staffing

In addition, to determine the characteristics of SNFs that had low average annual staffing and large decreases in weekend staffing for RN and total nurse staffing in 2018 and 2019, we used CMS's "Provider Info" and "Provider-of-Service" files—publicly-available files on the CMS website. Specifically:

- We examined available data on SNF characteristics, such as ownership type (for-profit, nonprofit, or government) and bed size (the number of certified beds within each SNF). We grouped SNFs by deciles (10 percent increments) based on their average annual staffing, adjusted for case-mix, from lowest to highest staffing.

- We then compared the characteristics of SNFs in the lowest staffing group with those in the highest staffing group. Similarly, to determine characteristics of SNFs with large decreases in weekend staffing, we grouped SNFs into deciles based on their weekend staffing decreases, and compared the characteristics of SNFs in the group with the largest (average) weekend staffing decreases with those of SNFs in the group with the smallest average weekend staffing decreases.

For all data used in these analyses, we interviewed knowledgeable officials and reviewed related CMS documentation. Based on these steps, we determined that the data were sufficiently reliable for the purposes of this report.

# Appendix III: Additional Analysis of Skilled Nursing Facility Staffing Levels and Measures

Table 7 provides information on the average staffing levels at skilled nursing facilities (SNFs) in 2018 and 2019 for each nurse type, measured as hours per resident day. Figure 6 shows the percent change in hours per resident day from month to month for each nurse type, measured as the percent difference between months.

Figures 7 and 8 show the frequency with which total nurse staffing at SNFs met Center for Medicare & Medicaid Services' (CMS) Case-mix Measures and CMS staffing study thresholds, respectively.

**Table 7: Average Adjusted Hours per Resident Day at Skilled Nursing Facilities (SNF) by Nurse Type and Total Nurse Staffing, 2018 and 2019**

| Calendar year | Registered nurse | Licensed practical nurse | Nurse aide | Total nurse staffing |
|---|---|---|---|---|
| 2018 | 0.62 | 0.87 | 2.31 | **3.80** |
| 2019 | 0.64 | 0.87 | 2.29 | **3.80** |

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-21-408

Note: Hours per resident day is a commonly used measure of the ratio of staff to residents that CMS uses for reporting SNF staffing on Care Compare.

**Figure 6: Monthly Percentage Change in Hours per Resident Day at Skilled Nursing Facilities (SNF), by Nurse Type and Total Nurse Staffing, 2018–2019**



Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-21-408

**Data table for Figure 6: Monthly Percentage Change in Hours per Resident Day at Skilled Nursing Facilities (SNF), by Nurse Type and Total Nurse Staffing, 2018–2019**
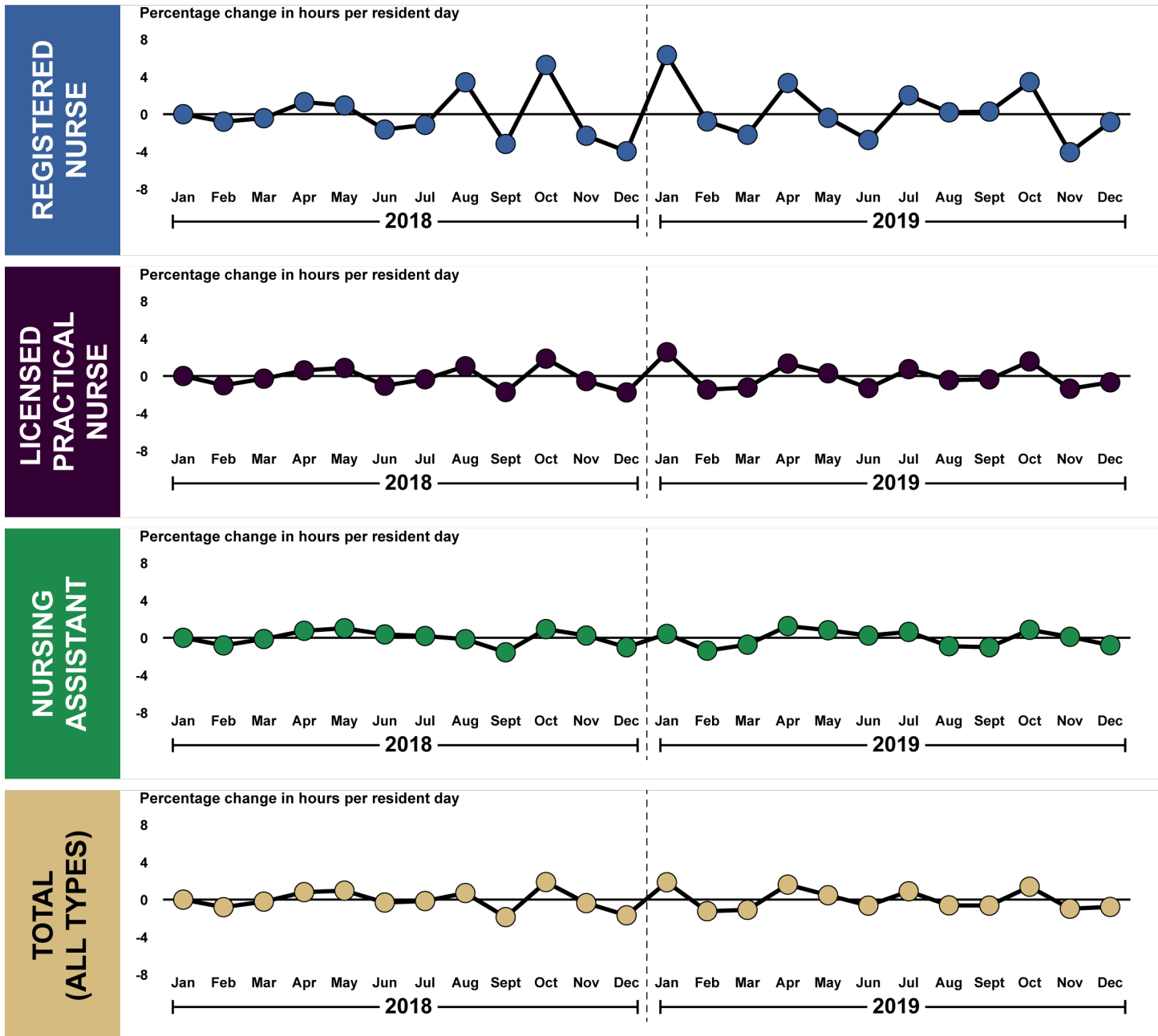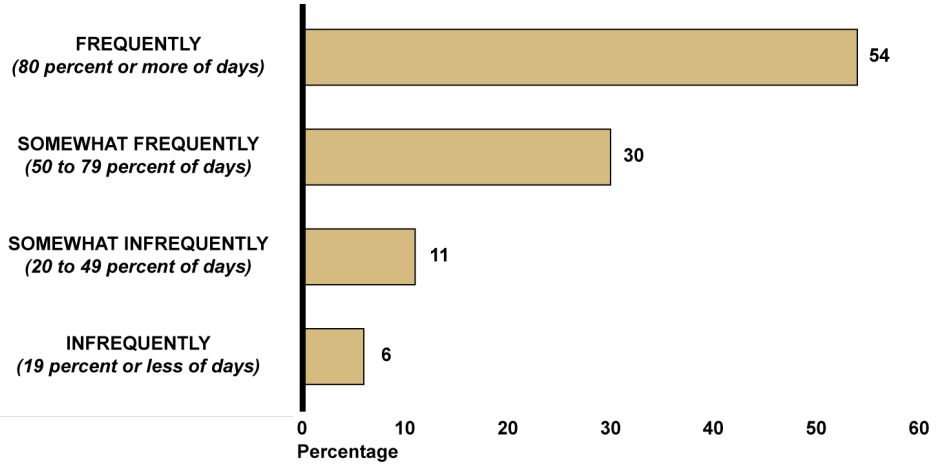
| Month | Average monthly % change HPRD | Average monthly % change HPRD | Average monthly % change HPRD | Average monthly % change HPRD |
|---|---|---|---|---|
| | **RN** | **LPN** | **NA** | **Total** |
| Jan-18 | NA | NA | NA | NA |
| Feb-18 | -0.87 | -1.01 | -0.84 | -0.84 |
| Mar-18 | -0.43 | -0.32 | -0.16 | -0.24 |
| Apr-18 | 1.11 | 0.47 | 0.72 | 0.70 |
| May-18 | 0.89 | 0.82 | 1.03 | 0.95 |
| Jun-18 | -1.61 | -1.03 | 0.37 | -0.29 |
| Jul-18 | -1.23 | -0.39 | 0.18 | -0.19 |
| Aug-18 | 3.45 | 1.06 | -0.14 | 0.70 |
| Sep-18 | -3.27 | -1.71 | -1.54 | -1.87 |
| Oct-18 | 5.29 | 1.91 | 0.92 | 1.86 |
| Nov-18 | -2.23 | -0.51 | 0.27 | -0.32 |
| Dec-18 | -4.00 | -1.80 | -1.01 | -1.68 |
| Jan-19 | 6.62 | 2.62 | 0.45 | 1.91 |
| Feb-19 | -0.86 | -1.41 | -1.37 | -1.26 |
| Mar-19 | -2.24 | -1.28 | -0.75 | -1.11 |
| Apr-19 | 3.29 | 1.27 | 1.23 | 1.56 |
| May-19 | -0.38 | 0.29 | 0.83 | 0.49 |
| Jun-19 | -2.74 | -1.31 | 0.25 | -0.61 |
| Jul-19 | 2.03 | 0.69 | 0.61 | 0.86 |
| Aug-19 | 0.24 | -0.44 | -0.90 | -0.61 |
| Sep-19 | 0.20 | -0.35 | -0.98 | -0.65 |
| Oct-19 | 3.67 | 1.56 | 0.83 | 1.40 |
| Nov-19 | -4.10 | -1.35 | 0.12 | -0.94 |
| Dec-19 | -1.17 | -0.83 | -0.75 | -0.85 |

Note: Hours per resident day is a commonly used measure of the ratio of staff to residents that CMS uses for reporting SNF staffing on Care Compare.

**Figure 7: Percentage of Skilled Nursing Facilities That Met Centers for Medicare & Medicaid Services (CMS) Case-Mix Staffing Measures for Total Nurse Staffing in 2019**



Source: GAO analysis of CMS data. | GAO-21-408

**Data table for Figure 7: Percentage of Skilled Nursing Facilities That Met Centers for Medicare & Medicaid Services (CMS) Case-Mix Staffing Measures for Total Nurse Staffing in 2019**

|  | Percentage |
|---|---|
| Frequently (80 percent or more of days) | 54 |
| Somewhat frequently (50 to 79 percent of days) | 30 |
| Somewhat infrequently (20 to 49 percent of days) | 11 |
| Infrequently (19 percent or less of days) | 6 |

Note: CMS calculates case-mix staffing measures for each individual skilled nursing facility based on the severity of their residents' medical conditions.

**Figure 8: Percentage of Skilled Nursing Facilities That Met Centers for Medicare & Medicaid Services (CMS) Quality-Related Thresholds for Total Nurse Staffing in 2019**
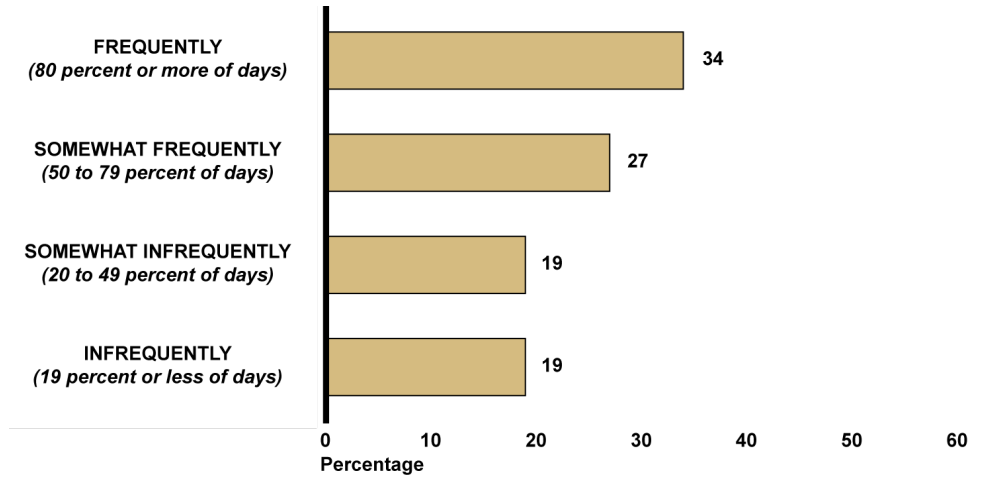


Source: GAO analysis of CMS data. | GAO-21-408

**Data table for Figure 8: Percentage of Skilled Nursing Facilities That Met Centers for Medicare & Medicaid Services (CMS) Quality-Related Thresholds for Total Nurse Staffing in 2019**

|  | Percentage |
| --- | --- |
| Frequently (80 percent or more of days) | 34 |
| Somewhat frequently (50 to 79 percent of days) | 27 |
| Somewhat infrequently (20 to 49 percent of days) | 19 |
| Infrequently (19 percent or less of days) | 19 |

Note: CMS conducted a Congressionally-mandated study, Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes, which in 2001 identified minimum staffing thresholds—the hours per resident day below which residents are at substantially increased risk of quality problems.

# Appendix IV: Use of Contract Nurse Staff by Skilled Nursing Facilities, 2019

Our analysis of 2019 payroll-based journal staffing data reported to the Centers for Medicare & Medicaid Services showed that the use of contract staff (temporary staff from contracting agencies employed in lieu of permanent staff) for all nurse types combined was relatively low on average across all skilled nursing facilities (SNF)—no more than 5 percent. However, this rate varied across SNFs, ranging from no contract staffing to over 25 percent for each of the different nurse types. Moreover, at least 2,694 SNFs (about 19 percent) used contract staff at rates of more than 5 percent, and of these, at least 270 SNFs (about 2 percent) used contract staff at rates of more than 25 percent across all nurse types (see table 8).

**Table 8: Skilled Nursing Facility (SNF) Use of Contract Staff by Nurse Type, 2019**

| Rate of contract staff use | Number and percentage of SNFs for each nurse type[a] | | | |
|---|---|---|---|---|
| | Registered nurse | Licensed practical nurse | Nurse aide | All nurse types |
| 0 – 5% | 12,470 (86%) | 11,786 (82%) | 11,866 (82%) | 11,729 (81%) |
| 5.1 – 10 | 895(6) | 953 (7) | 1,022 (7) | 1,243(9) |
| 10.1 - 15 | 414 (3) | 509 (4) | 571 (4) | 641 (4) |
| 15.1 - 20 | 240 (2) | 356 (2) | 357 (2) | 324 (2) |
| 20.1 - 25 | 140 (1) | 233 (2) | 225 (2) | 216 (2) |
| 25.1 or more | 266 (2) | 586 (4) | 382 (3) | 270 (2) |

Source: GAO analysis of Centers for Medicare & Medicaid Services data. | GAO-21-408

Note: Contract staff are temporary staff from contracting agencies employed in lieu of permanent staff.

[a]Some percentages may not total to 100 percent because of rounding.

# Appendix V: Optional Methodologies to Determine a Targeted Level of Savings for Medicare

This appendix describes potential Medicare savings that would have resulted in 2018 if skilled nursing facilities' (SNF) actual rates of critical incidents did not exceed their risk-adjusted or predicted rates. The appendix also provides an illustration of why existing payment incentives that CMS has under the SNF Value-Based Purchasing (VBP) program may not be sufficient to incentivize SNFs to improve their staffing and rates of critical incidents.

## Examining Potential Medicare Savings from Reducing Actual Rates of Critical To Their Risk-Adjusted Rates

<u>Potential Savings from Reducing Actual Rates of Critical Incidents to Risk-Adjusted Rates for All SNFs</u>

Under this option, we examined potential Medicare savings if SNFs (whose actual rates of critical incidents were higher than CMS's risk-adjusted rates) were to reduce their actual rates to their risk-adjusted rates of critical incidents. CMS develops risk-adjusted rates based on a regression model that examines potentially preventable critical incidents occurring in a given year across all SNFs, and predicts the probability of their occurrence for individual SNFs based on the characteristics of the SNF's residents.[1]

SNFs whose actual rates are higher than their risk-adjusted rates generate 'excess' hospital readmissions and emergency room (ER) visits. Our analysis showed that Medicare could have saved about $426 million in 2018 if all SNFs had reduced their actual rates of critical incidents to their risk-adjusted rates. Almost half of the approximately 12,800 SNFs

---

[1]CMS develops these risk-adjusted rates to account for variation in rates of critical incidents across SNFs that may be due to factors beyond their control, such as SNFs' resident demographics and severity of medical conditions.

for whom data were available had actual rates of critical incidents that exceeded their risk-adjusted rates, resulting in about 30,400 excess readmissions and almost 26,540 excess ER visits.

Potential Savings from Reducing Actual Rates of Critical Incidents to Risk-Adjusted Rates for SNFs in Lower Registered Nurse Staffing Groups

Under this option, we examined potential savings if SNFs in the lower registered nurse (RN) staffing groups reduced their rates of critical incidents to their risk-adjusted rates. As we described earlier in this report, the rates of critical incidents are related to RN staffing. Specifically, SNFs in the lower RN staffing groups had higher rates of critical incidents than SNFs in the higher RN staffing groups. Further, a higher proportion of SNFs in the lower RN staffing groups had rates of critical incidents that exceeded their risk-adjusted rates. For example, the proportion of SNFs whose actual rates of hospital readmissions exceeded their risk-adjusted rates in the lowest RN staffing group was 54 percent compared to 42 percent in the highest RN staffing group. Therefore, it might be appropriate to focus on SNFs in the lower RN staffing groups. We found that if SNFs in the lower five RN staffing groups had reduced their rates of critical incidents to their risk adjusted rates, Medicare could have saved about $204 million in 2018.

## Illustration of Potential Insufficiency of Existing Payment Incentives to Reduce Rates of Critical Incidents

As described earlier in this report, under the SNF VBP, CMS is required to make reductions of up to 2 percent in SNFs Medicare payments depending on how well they control their rates of hospital readmissions. However, despite these payment decreases, our analysis showed that about half of SNFs had excess hospital readmissions. Excess readmissions occur when actual readmission rates exceed SNFs' risk-adjusted readmission rates. For example, we found that one SNF in the lowest RN staffing group experienced a payment reduction of about $153,000 although it generated almost $414,000 in excess Medicare payments for readmissions. To fully offset this amount, the SNF would need to have a payment reduction of about 5.4 percent (see table 9). Similarly, another SNF in the lowest RN staffing group had a payment reduction of about $86,000 although it generated about $273,000 in excess Medicare payments for readmissions. To fully offset this amount, the SNF would need to have a payment reduction of 6.3 percent.

**Table 9: Examples of Medicare Payment Reduction under Skilled Nursing Facilities (SNF) Value-Based Purchasing Program, Compared to Medicare Payments for Excess Hospital Readmissions, 2018**

| | SNF A | SNF B |
|---|---|---|
| **Total payments to SNF** | **7.6 million** | **4.3 million** |
| Payment reduction under SNF Value-Based Purchasing program (2 percent) | 153,000 | 86,000 |
| Actual rate of hospital readmissions | 27.6% | 33.3 |
| Risk-adjusted rate of hospital readmissions | 20.8% | 25.3 |
| **Total number of excess hospital readmissions** | **31** | **20** |
| Average Medicare payment for a hospital readmission | 13,367 | 13,367 |
| **Total Medicare payments for excess hospital readmissions** | **414,000** | **273,000** |
| Payment reduction needed to offset excess spending | 5.4% | 6.3% |

Source: GAO analysis of Centers for Medicare & Medicaid Services (CMS) data. | GAO-21-408

Notes:

Payment decreases are for fiscal year 2020, based on the extent to which SNFs reduced their rates of hospital readmissions in fiscal year 2018 compared to fiscal year 2016.

As required by law, CMS implemented a SNF Value-Based Purchasing Program in 2018. CMS is required to withhold 2 percent of adjusted daily payments across all SNFs each year and redistribute a certain portion of those withheld payments back to SNFs as incentive payments based on their performance in controlling the number of hospital readmissions occurring within 30 days of discharge from a prior hospital stay to a SNF. All SNFs that are paid under Medicare's prospective payment system are included in the program.

We defined excess hospital readmissions as hospital readmissions that occur when actual hospital readmission rates exceed SNFs' risk-adjusted readmission rates.

# Appendix VI: Comments from the Department of Health and Human Services

DEPARTMENT OF HEALTH & HUMAN SERVICES

OFFICE OF THE SECRETARY

Assistant Secretary for Legislation
Washington, DC 20201

June 14, 2021

Jessica Farb
Director, Health Care
U.S. Government Accountability Office
441 G Street NW
Washington, DC 20548

Dear Ms. Farb:

Attached are comments on the U.S. Government Accountability Office's (GAO) report entitled,
"*MEDICARE: Additional Reporting on Key Staffing Information and Stronger Payment Incentives
Needed for Skilled Nursing Facilities*" (Job code 103789/GAO-21-408).

The Department appreciates the opportunity to review this report prior to publication.

Sincerely,

Jeff Hild
Acting Assistant Secretary for Legislation
Principal Deputy Assistant Secretary for Legislation

Attachment

<u>**GENERAL COMMENTS FROM THE DEPARTMENT OF HEALTH & HUMAN
SERVICES ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT
REPORT ENTITLED — MEDICARE:  ADDITIONAL REPORTING ON KEY
STAFFING INFORMATION AND STRONGER PAYMENT INCENTIVES NEEDED
FOR SKILLED NURSING FACILITIES (GAO-21-408)**</u>


The Department of Health and Human Services (HHS) appreciates the opportunity to review and
comment on the Government Accountability Office's (GAO) draft report. HHS is charged with
developing and enforcing quality and safety standards across the nation's health care system, a
responsibility that the Agency takes seriously.

CMS has long identified staffing as a vital component of a nursing home's ability to provide
quality care, and CMS has used staffing data to more accurately and effectively gauge its impact
on quality of care in nursing homes. Through our Payroll Based Journal (PBJ) system, CMS is
holding nursing homes accountable for their staffing levels through more accurate staffing
reporting. This monitoring system allows CMS to track nursing home staffing levels through
payroll and other verifiable and auditable data. Since 2016, CMS has required nursing homes to
electronically submit direct care staffing information on a quarterly basis.

Sections 1819 and 1919 of the Social Security Act establish federal requirements for Medicare-
and Medicaid-certified nursing homes. Among other requirements, nursing homes must provide
24-hour licensed nursing services, which are sufficient to meet nursing needs of its residents and
must use the services of a registered professional nurse at least eight consecutive hours a day,
seven days a week. To oversee nursing home compliance with these federal requirements, CMS
works in partnership with State Survey Agencies (SSAs), as these agencies are responsible for
surveying nursing homes for compliance. CMS shares staffing data with SSAs, including a list of
nursing homes that have potentially insufficient staffing coverage on weekends and after-hours,
so they are able to better prioritize and target their surveys appropriately. Prior to the COVID-19
pandemic, SSAs were conducting a portion of their unannounced surveys after-hours and on
weekends using lists provided by CMS to focus on possible staffing problems during those
times. In addition, when conducting standard or complaint surveys, the SSAs would also
investigate compliance with the nursing services staffing requirements at 42 C.F.R. § 483.35.
Appropriate enforcement actions would be taken against those facilities that failed to provide the
required nurse staffing. By targeting surveys, CMS has been able to engage in better and stronger
enforcement of requirements to ensure sufficient staffing.

CMS is dedicated to empowering consumers, their families, and their caregivers by giving them
the resources they need to make informed decisions, and key to this effort is the Care Compare
website, which replaced Nursing Home Compare on December 1, 2020. Care Compare offers a
wide variety of data related to nursing home quality, including nurse and non-nurse staffing data
for individual nursing homes, presented in a format that allows consumers to fully compare
differences between facilities. Care Compare was designed based on research and stakeholder
feedback, and offers the features and functions that most appeal to consumers. A facility's
quality rating for staffing levels is one of three performance measures that make up a facility's
overall rating under CMS's Nursing Home Five-Star Quality Rating System, which is posted on
Care Compare.

**GENERAL COMMENTS FROM THE DEPARTMENT OF HEALTH & HUMAN
SERVICES ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT
REPORT ENTITLED — MEDICARE:  ADDITIONAL REPORTING ON KEY
STAFFING INFORMATION AND STRONGER PAYMENT INCENTIVES NEEDED
FOR SKILLED NURSING FACILITIES (GAO-21-408)**

The Nursing Home Five-Star Quality Rating System helps consumers make meaningful
distinctions among high and low-performing nursing homes, compare nursing homes more
easily, and identify areas that they may want to ask the nursing home about. It also helps nursing
homes identify areas for improvement. To calculate staffing ratings, each facility's staffing
measure is adjusted based on the expected level of staff needed given the number and acuity of
the residents in the facility. This is done to ensure facilities consider the needs of each resident,
in addition to the number of residents in the facility. In April 2018, CMS began using the PBJ
data to calculate staffing measures used in the Five Star Quality Rating System and announced
that it would automatically downgrade a nursing home's Staffing star rating to the lowest one-
star if it reported no registered nurse (RN) hours for at least seven days within a quarter. In April
2019, CMS strengthened its staffing rating by basing nursing home ratings on the relationship
between staffing and hospitalizations. CMS now downgrades the Staffing star rating if no
registered nurse hours are reported for at least four days within a quarter, and increased the
threshold a facility must exceed to obtain a five-star staffing rating.[1] CMS data shows that
facilities continue to strive to improve their staffing levels past the threshold to achieve a four-
star staffing quality rating.

The GAO mentions the "CMS Staffing Study"[2]  as a basis for establishing minimum staffing
thresholds for reporting on Care Compare. However, the GAO misinterpreted the thresholds
identified as the study actually identified a maximum level of staffing that does not need to be
exceeded, rather than a minimum level of staffing required. As the CMS Staffing Study found
that the quality decreased and risk for poor outcomes increased as staffing levels declined from
the threshold mentioned, CMS used this study to establish the threshold for facilities to obtain a
Five-Star Staffing Rating. While the importance of staffing to the provision of quality care is
known, this study was issued in 2001. The thresholds mentioned in the study may no longer be
appropriate due to changes in the provision of care and levels of patient acuity over the last 20
years. This study was also conducted prior to the implementation of the PBJ system, which
provides a more accurate and reliable estimate of the care hours provided by staff categories. The
PBJ data could inform updated research regarding appropriate nursing home staffing thresholds
and requirements.

Further, GAO references CMS's case-mix adjustment, which is the average level of staffing
experienced by facilities with residents of similar levels of acuity, to support the need for
establishing a minimum RN and total nurse staffing thresholds. As this is an average, GAO's
characterization of this as a standard to measure nursing homes against is misleading.  However,
it may be possible to identify a minimum level of staffing that would be required to meet each

---

[1] CMS Center for Clinical Standards and Quality/Quality, Safety & Oversight Group, Memo to State Survey Agency
Directors, Ref: QSO-19-08-NH, *April 2019 Improvements to Nursing Home Compare and the Five Star Quality
Rating System* (March 5, 2019)
[2] CMS, *Report to Congress: Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes Phase II Final
Report.* Baltimore, MD: CMS; 2001.

<u>**GENERAL COMMENTS FROM THE DEPARTMENT OF HEALTH & HUMAN
SERVICES ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT
REPORT ENTITLED — MEDICARE: ADDITIONAL REPORTING ON KEY
STAFFING INFORMATION AND STRONGER PAYMENT INCENTIVES NEEDED
FOR SKILLED NURSING FACILITIES (GAO-21-408)**</u>

resident's needs, such that staffing levels below this minimum threshold are at increased risk of
quality problems. However, in order to determine whether a minimum threshold would be
appropriate due to the impact on quality of care and outcomes, CMS would need to conduct an
extensive study before determining minimum RN and total nurse staffing thresholds.

HHS thanks the GAO for its efforts on this issue and looks forward to working collaboratively
on this and other issues in the future. GAO's recommendations and HHS's responses are below.

<u>**Recommendation 1**</u>
The Administrator of CMS should report weekend decreases in RN and total nurse staffing levels
on the Care Compare website.

<u>**HHS Response**</u>
HHS concurs with reporting weekend nurse staffing levels on the Care Compare website. HHS is
committed to increasing transparency of staffing information and empowering consumers, their
families, and their caregivers to make informed decisions when selecting a SNF.

<u>**Recommendation 2**</u>
The Administrator of CMS should report minimum RN and total nurse staffing thresholds below
which SNF residents are at increased risk of quality problems—such as those that were identified
in the CMS Staffing Study—on the Care Compare website.

<u>**HHS Response**</u>
HHS non-concurs. Resident safety and quality of care is HHS's top priority. Staffing measures
in the Five Star Quality Rating System currently identify declines in quality on facilities' Care
Compare pages, as noted above. However, the CMS Staffing Study referenced in this
recommendation was issued in 2001, and the thresholds mentioned in the study may no longer be
appropriate. The study was also conducted prior to the implementation of the PBJ system. While
we value the GAO's input on this critical issue, to implement such a recommendation, CMS
would need to conduct an extensive study and analysis, which would require significant funding
and resources, so we do not concur with this recommendation at this time.

<u>**Recommendation 3**</u>
The Administrator of CMS should assess the feasibility of incorporating into the Five-Star
System staffing ratings information on weekend decreases in RN and total nurse staffing levels,
and minimum RN and total nurse staffing thresholds below which SNF residents are at increased
risk of quality problems—such as those that were identified in the CMS Staffing Study.

<u>**HHS Response**</u>
HHS concurs with the recommendation to assess the feasibility of incorporating weekend nurse
staffing levels into the Five-Star Quality Rating System. However, as stated above, in order to

**GENERAL COMMENTS FROM THE DEPARTMENT OF HEALTH & HUMAN
SERVICES ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT
REPORT ENTITLED — MEDICARE: ADDITIONAL REPORTING ON KEY
STAFFING INFORMATION AND STRONGER PAYMENT INCENTIVES NEEDED
FOR SKILLED NURSING FACILITIES (GAO-21-408)**

determine minimum RN and total nurse staffing thresholds below which SNF residents are at
increased risk of quality problems, CMS would need to conduct an extensive study and analysis,
which would require significant funding and resources to update the CMS Staffing Study. The
Study was issued in 2001 and the thresholds mentioned in the study may no longer be
appropriate. The study was also conducted prior to the implementation of the PBJ system.
Additionally, as described above, the Five-Star Quality Rating System already demonstrates how
residents are at increased risk of quality problems as staffing levels decline.

# Text of Appendix VI: Comments from the Department of Health and Human Services

June 14, 2021

Jessica Farb Director, Health Care

U.S. Government Accountability Office 441 G Street NW

Washington, DC 20548

 Dear Ms. Farb:

Attached are comments on the U.S. Government Accountability Office's (GAO) report entitled, "MEDICARE: Additional Reporting on Key Staffing Information and Stronger Payment Incentives Needed for Skilled Nursing Facilities" (Job code 103789/GAO-21-408).

The Department appreciates the opportunity to review this report prior to publication.

Sincerely,

Jeff Hild

Acting Assistant Secretary for Legislation

Principal Deputy Assistant Secretary for Legislation

Attachment

## GENERAL COMMENTS FROM THE DEPARTMENT OF HEALTH & HUMAN SERVICES ON THE GOVERNMENT ACCOUNTABILITY OFFICE'S DRAFT REPORT ENTITLED — MEDICARE: ADDITIONAL REPORTING ON KEY STAFFING INFORMATION AND STRONGER PAYMENT INCENTIVES NEEDED FOR SKILLED NURSING FACILITIES (GAO-21-408)

The Department of Health and Human Services (HHS) appreciates the opportunity to review and comment on the Government Accountability Office's (GAO) draft report.

HHS is charged with developing and enforcing quality and safety standards across the nation's health care system, a responsibility that the Agency takes seriously.

CMS has long identified staffing as a vital component of a nursing home's ability to provide quality care, and CMS has used staffing data to more accurately and effectively gauge its impact on quality of care in nursing homes. Through our Payroll Based Journal (PBJ) system, CMS is holding nursing homes accountable for their staffing levels through more accurate staffing reporting. This monitoring system allows CMS to track nursing home staffing levels through payroll and other verifiable and auditable data. Since 2016, CMS has required nursing homes to electronically submit direct care staffing information on a quarterly basis.

Sections 1819 and 1919 of the Social Security Act establish federal requirements for Medicare- and Medicaid-certified nursing homes. Among other requirements, nursing homes must provide 24-hour licensed nursing services, which are sufficient to meet nursing needs of its residents and must use the services of a registered professional nurse at least eight consecutive hours a day, seven days a week. To oversee nursing home compliance with these federal requirements, CMS works in partnership with State Survey Agencies (SSAs), as these agencies are responsible for surveying nursing homes for compliance. CMS shares staffing data with SSAs, including a list of nursing homes that have potentially insufficient staffing coverage on weekends and after-hours, so they are able to better prioritize and target their surveys appropriately. Prior to the COVID-19 pandemic, SSAs were conducting a portion of their unannounced surveys after-hours and on weekends using lists provided by CMS to focus on possible staffing problems during those times. In addition, when conducting standard or complaint surveys, the SSAs would also investigate compliance with the nursing services staffing requirements at 42 C.F.R. § 483.35. Appropriate enforcement actions would be taken against those facilities that failed to provide the required nurse staffing. By targeting surveys, CMS has been able to engage in better and stronger enforcement of requirements to ensure sufficient staffing.

CMS is dedicated to empowering consumers, their families, and their caregivers by giving them the resources they need to make informed decisions, and key to this effort is the Care Compare website, which replaced Nursing Home Compare on December 1, 2020. Care Compare offers a wide variety of data related to nursing home quality, including nurse and non-nurse staffing data for individual nursing homes, presented in a format that allows consumers to fully compare differences between facilities. Care Compare was designed based on research and stakeholder feedback, and offers the features and functions that most appeal to consumers. A facility's quality rating for staffing levels is one of three performance measures that make up a facility's overall rating under CMS's Nursing Home Five-Star Quality Rating System, which is posted on Care Compare.

The Nursing Home Five-Star Quality Rating System helps consumers make meaningful distinctions among high and low-performing nursing homes, compare nursing homes more easily, and identify areas that they may want to ask the nursing home about. It also helps nursing homes identify areas for improvement. To calculate staffing ratings, each facility's staffing measure is adjusted based on the expected level of staff needed given the number and acuity of the residents in the facility. This is done to ensure facilities consider the needs of each resident, in addition to the number of residents in the facility. In April 2018, CMS began using the PBJ data to calculate staffing measures used in the Five Star Quality Rating System and announced that it would automatically downgrade a nursing home's Staffing star rating to the lowest one-star if it reported no registered nurse (RN) hours for at least seven days within a quarter. In April 2019, CMS strengthened its staffing rating by basing nursing home ratings on the relationship between staffing and hospitalizations. CMS now downgrades the Staffing star rating if no registered nurse hours are reported for at least four days within a quarter, and increased the threshold a facility must exceed to obtain a five-star staffing rating.[1] CMS data shows that facilities continue to strive to improve their staffing levels past the threshold to achieve a four-star staffing quality rating.

The GAO mentions the "CMS Staffing Study" [2] as a basis for establishing minimum staffing thresholds for reporting on Care Compare. However, the GAO misinterpreted the thresholds identified as the study actually identified a maximum level of staffing that does not need to be exceeded, rather than a minimum level of staffing required. As the CMS Staffing Study found that the quality decreased and risk for poor outcomes increased as staffing levels declined from the threshold mentioned, CMS used this study to establish the threshold for facilities to obtain a Five-Star Staffing Rating. While the importance of staffing to the provision of quality care is known, this study was issued in 2001. The thresholds mentioned in the study may no longer be appropriate due to changes in the provision of care and levels of patient acuity over the last 20 years. This study was also conducted prior to the implementation of the PBJ system, which provides a more accurate and reliable estimate of the care hours provided by staff categories. The PBJ data could inform updated research regarding appropriate nursing home staffing thresholds and requirements.

Further, GAO references CMS's case-mix adjustment, which is the average level of staffing experienced by facilities with residents of similar levels of acuity, to support the need for establishing a minimum RN and total nurse staffing thresholds. As this is

---

[1] CMS Center for Clinical Standards and Quality/Quality, Safety & Oversight Group, Memo to State Survey Agency Directors, Ref: QSO-19-08-NH, *April 2019 Improvements to Nursing Home Compare and the Five Star Quality Rating System* (March 5, 2019)
[2] CMS, *Report to Congress: Appropriateness of Minimum Nurse Staffing Ratios in Nursing Homes Phase II Final Report*. Baltimore, MD: CMS; 2001.

an average, GAO's characterization of this as a standard to measure nursing homes against is misleading.  However,  it may be possible to identify a minimum level of staffing that would be required to meet each resident's needs, such that staffing levels below this minimum threshold are at increased risk of quality problems. However, in order to determine whether a minimum threshold would be appropriate due to the impact on quality of care and outcomes, CMS would need to conduct an extensive study before determining minimum RN and total nurse staffing thresholds.

HHS thanks the GAO for its efforts on this issue and looks forward to working collaboratively on this and other issues in the future. GAO's recommendations and HHS's responses are below.

## Recommendation 1

The Administrator of CMS should report weekend decreases in RN and total nurse staffing levels on the Care Compare website.

## HHS Response

HHS concurs with reporting weekend nurse staffing levels on the Care Compare website. HHS is committed to increasing transparency of staffing information and empowering consumers, their families, and their caregivers to make informed decisions when selecting a SNF.

## Recommendation 2

The Administrator of CMS should report minimum RN and total nurse staffing thresholds below which SNF residents are at increased risk of quality problems—such as those that were identified in the CMS Staffing Study—on the Care Compare website.

## HHS Response

HHS non-concurs.  Resident safety and quality of care is HHS's top priority. Staffing measures in the Five Star Quality Rating System currently identify declines in quality on facilities' Care Compare pages, as noted above. However, the CMS Staffing Study referenced in this recommendation was issued in 2001, and the thresholds mentioned in the study may no longer be appropriate. The study was also conducted prior to the implementation of the PBJ system. While we value the GAO's input on this critical issue, to implement such a recommendation, CMS would need to conduct an extensive study and analysis, which would require significant funding and resources, so we do not concur with this recommendation at this time.

## Recommendation 3

The Administrator of CMS should assess the feasibility of incorporating into the Five-Star System staffing ratings information on weekend decreases in RN and total nurse staffing levels, and minimum RN and total nurse staffing thresholds below which SNF residents are at increased risk of quality problems—such as those that were identified in the CMS Staffing Study.

## HHS Response

HHS concurs with the recommendation to assess the feasibility of incorporating weekend nurse staffing levels into the Five-Star Quality Rating System.  However, as stated above, in order to determine minimum RN and total nurse staffing thresholds below which SNF residents are at increased risk of quality problems, CMS would need to conduct an extensive study and analysis, which would require significant funding and resources to update the CMS Staffing Study. The  Study was issued in 2001 and the thresholds mentioned in the study may no longer be appropriate. The study was also conducted prior to the implementation of the PBJ system. Additionally, as described above, the Five-Star Quality Rating System already demonstrates how residents are at increased risk of quality problems as staffing levels decline.

# Appendix VII: GAO Contact and Staff Acknowledgments

## GAO Contact

Jessica Farb, (202) 512-7114, farbj@gao.gov

## Staff Acknowledgments

In addition to the contact named above, Karen Doran, Assistant Director;
Iola D'Souza, Assistant Director; Ashley Dixon; Alexandre Massey; Caitlin
Scoville; Richard Lipinski; and Julie Flowers made key contributions to
this report. Also contributing were Jennifer Whitworth and Vikki Porter.

## GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

## Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through our website. Each weekday afternoon, GAO posts on its website newly released reports, testimony, and correspondence. You can also subscribe to GAO's email updates to receive notification of newly posted products.

## Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's website, https://www.gao.gov/ordering.htm.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

## Connect with GAO

Connect with GAO on Facebook, Flickr, Twitter, and YouTube.
Subscribe to our RSS Feeds or Email Updates. Listen to our Podcasts.
Visit GAO on the web at https://www.gao.gov.

## To Report Fraud, Waste, and Abuse in Federal Programs

Contact FraudNet:

Website: https://www.gao.gov/about/what-gao-does/fraudnet

Automated answering system: (800) 424-5454 or (202) 512-7700

## Congressional Relations

Orice Williams Brown, Managing Director, WilliamsO@gao.gov, (202) 512-4400,
U.S. Government Accountability Office, 441 G Street NW, Room 7125,
Washington, DC 20548

## Public Affairs

Chuck Young, Managing Director, youngc1@gao.gov, (202) 512-4800
U.S. Government Accountability Office, 441 G Street NW, Room 7149
Washington, DC 20548

## Strategic Planning and External Liaison

Stephen J. Sanford, Managing Director, spel@gao.gov, (202) 512-4707
U.S. Government Accountability Office, 441 G Street NW, Room 7814,
Washington, DC 20548