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Skilled Nursing Facility Value-Based Purchasing Failed To Achieve Hospital Readmission Reductions And Other Targets

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ABSTRACT **Medicare's Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program is the largest pay-for-performance initiative ever implemented to improve care in SNFs. The program ties SNF performance in reducing thirty-day hospital readmissions among Medicare fee-for-service beneficiaries admitted from the hospital for postacute care to financial rewards or penalties of up to 2 percent of annual Medicare fee-for-service payments to SNFs. Using 2011–21 data from the Medicare Provider Analysis and Review files and other sources, we conducted a difference-in-differences analysis to determine whether the SNF VBP Program was successful in reducing thirty-day readmissions among the target population. Our analysis compared patient outcomes over time in SNFs in the highest quartile of Medicare-paid bed-days (which would be most sensitive to the financial impacts of the program) with those in the lowest quartile. We found that the program had no impact on thirty-day hospital readmissions, thirty-day mortality rates, SNF length-of-stay, or 100-day community discharge rates overall or in specific SNF subgroups during the period 2015–21. In light of changes made to the SNF VBP Program in fiscal year 2024, ongoing monitoring and additional research will be critical to efforts that assess the program's impact and inform SNF quality improvement policies and programs in the years ahead.**

Approximately one in five Medicare beneficiaries receive postacute care in a skilled nursing facility (SNF) after hospital discharge.[1] Hospital readmission is common and costly in this population,[2] often leading to a cycle of increasing disability.[3] The Hospital Readmissions Reduction Program is a value-based payment program from the Centers for Medicare and Medicaid Services (CMS) that is focused on reducing thirty-day hospital readmission rates among Medicare fee-for-service beneficiaries.[4] It has been successful in reducing thirty-day readmissions,[5,6] lending credence to the idea that a similar value-based payment program for SNFs providing postacute care could likewise succeed.

In 2014, Congress passed the Protecting Access to Medicare Act, which required CMS to implement the SNF Value-Based Purchasing (SNF VBP) Program, starting in 2015.[7] The program, which is mandatory for all CMS-certified SNFs, aims to reduce thirty-day hospital readmissions among Medicare fee-for-service beneficiaries who enter SNFs for postacute care. It is structured in a four-year cycle that advances annually, consisting of a baseline period, followed two years later by a performance period, followed two years later by a financial penalty or

bonus being assessed. For example, in the first cycle, 2015 was the baseline year, 2017 was the performance period, and 2019 was the year when SNFs received either financial penalties or bonuses, depending on their performance. SNFs can receive bonuses either by having better performance than their peers in the baseline period (high achievement) or by improving their readmission rates between the baseline and performance periods (high improvement). The program takes whichever score (achievement or improvement) is higher as the SNF's performance score and calculates a payment adjustment. Most SNFs receive up to a 2 percent penalty or bonus on their fee-for-service revenues; some SNFs receive an incentive that is larger than 2 percent. Early evidence suggests that most facilities have received penalties, but no study to our knowledge has evaluated the program's effect on readmissions or potential unintended consequences.[8,9]

We sought to determine whether the SNF VBP Program was successful in reducing hospital readmissions and whether there were unintended consequences of the program, including increases in mortality rates after hospital discharge, increases in SNF length-of-stay, or decreases in rates of successful community discharge from SNFs. We also evaluated the extent to which the program's effect on readmissions varied across SNFs with different characteristics.

Study Data And Methods

DATA SOURCES We used 100 percent Medicare Provider Analysis and Review (MedPAR) files from the period January 1, 2011, through December 31, 2021, to identify qualifying SNF stays and hospital readmissions. We also used MedPAR data to identify comorbid diagnoses of all beneficiaries in the sample, including those younger than age sixty-five and those ages sixty-five and older, and to describe characteristics of their hospital and SNF stays. Comorbidities were identified using inpatient diagnoses with a one-year lookback and defined using the Charlson-Deyo Comorbidity Index, a risk-adjustment score based on health conditions. Among those identified as having a qualifying SNF stay, we used the Medicare Master Beneficiary Summary File to verify enrollment in fee-for-service Medicare; describe demographic characteristics, including dual eligibility and Medicare eligibility categories; and identify dates of death. We used data from LTCFocus, Nursing Home Care Compare, and Medicare cost reports to describe the characteristics of SNFs in our sample.

SAMPLE All analyses were at the SNF stay level. We identified eligible SNF stays using the same inclusion and exclusion criteria as used by the SNF VBP Program. To ensure fidelity to CMS's selection of SNF stays, risk-adjustment methodology, and removal of planned readmissions in the measurement of readmissions in the SNF VBP Program, we followed published technical reports[10–14] and obtained code from a federal contractor evaluating the program for CMS. Beneficiaries were included in the sample if they had been continuously enrolled in fee-for-service Medicare for the full year before their proximal inpatient visit, during that visit, and at least one month afterward. The sample included beneficiaries ages sixty-five and older, as well as those younger than age sixty-five. Beneficiaries who survived their hospitalizations and were admitted to SNFs within one day of hospital discharge were included. Consistent with the SNF VBP Program, all hospitalizations except those in federal hospitals and those with a principal diagnosis of medically treated cancer, rehabilitation, or pregnancy were included. We excluded SNF stays that included long-term acute care hospital or inpatient rehabilitation facility stays between the hospital and SNF stays or after SNF discharge. We also excluded stays when the beneficiary received care in multiple SNFs within thirty days of hospital discharge, as this utilization pattern complicates efforts to attribute readmissions to a specific SNF. We excluded swing beds, as they are in hospitals rather than nursing facilities.[15] Finally, we excluded SNF stays of beneficiaries who left against medical advice, who were missing data, and whom Medicare did not cover (see online appendix exhibit A1 for details on exclusion criteria and data).[16]

OUTCOMES Our primary outcome was all-cause thirty-day inpatient readmission; consistent with the readmission definition in the SNF VBP Program, we excluded planned readmissions.[12] The readmission measure applies to a SNF regardless of whether the beneficiary is still in the SNF when readmitted to the hospital, as long as the readmission occurs within thirty days of discharge from the proximal inpatient visit (the "index hospitalization"). Hospital readmissions are eligible to be included as index hospitalizations in this program if they are followed by another readmission within thirty days. We also measured three potential unintended consequences of the program. First, given that some hospital readmissions may be lifesaving, we measured thirty-day mortality rates after hospital discharge to determine whether mortality rates were associated with reduced hospital readmissions. We also evaluated a combined mortality and readmission endpoint at thirty days. Second, we evaluated SNF length-of-stay to identify trends that could suggest systematic delay in

SNF discharge in an effort to prevent hospital readmissions. Third, we measured whether reduced hospital readmissions were associated with increased successful community discharge rates from SNFs. *Successful community discharge* was defined according to CMS's definition: discharge from a SNF within 100 days of hospital discharge, with the patient remaining home for at least thirty days without returning to the hospital, returning to the SNF, or dying.[17]

EXPOSURE Using data from MedPAR and LTCFocus, we determined the percentage of Medicare-paid bed-days at the SNF level; this variable was the exposure. SNFs with a very high percentage of Medicare-paid bed-days receive a relatively high portion of their revenue from Medicare and therefore have more to gain or lose from a 2 percent financial incentive than those with a low percentage of Medicare-paid bed-days. We divided our SNF sample into quartiles according to their percentage of Medicare-paid bed-days, and we compared SNFs in the highest quartile of Medicare-paid bed-days for 50 percent or more of the years in our analysis with those in the lowest quartile for the same period. We found that SNFs tended to remain in the same quartile of Medicare-paid bed-days over time (appendix exhibits A2 and A3);[16] specifically, 76.9 percent of SNFs in the highest quartile remained there for the entire study period, and 84.0 percent of those in the bottom quartile remained there for the entire period.

ADDITIONAL VARIABLES OF INTEREST We examined the demographic characteristics of the study population, including age, sex, race and ethnicity, and Medicare-Medicaid dual eligibility. We determined the percentage of beneficiaries in the sample who were Medicare-eligible based on disability or end-stage renal disease. Using diagnoses from any hospitalization in the past year, we calculated the Kim Frailty Index to identify frailty[17] and identified beneficiaries with diagnoses of dementia. We also quantified the number of acute hospitalizations in the previous year.

Using the MedPAR data, we measured the following additional characteristics for risk adjustment in our difference-in-differences model: hospital length-of-stay, whether there was an intensive care unit (ICU) stay (and length of ICU stay if present), principal discharge diagnosis categorized by the Agency for Healthcare Research and Quality Clinical Classifications System, and surgical category if surgery was performed during the stay.

SUBGROUPS Using LTCFocus, we identified SNF ownership type, number of beds, and nursing direct care hours. We calculated the net operating margin using the Healthcare Cost Report Information System Cost Reports. We evaluated the impact of the SNF VBP Program on specific subgroups of SNFs, stratifying by for-profit and not-for-profit status, whether the facility was part of a chain, the number of direct care hours provided by nursing staff, and the net operating margin.

ANALYTIC APPROACH Because the SNF VBP Program was rolled out to more than 97 percent of all SNFs in 2015, there was no natural and contemporaneous comparison group of SNFs. Therefore, we compared SNFs on the basis of their exposure to the financial incentive, which we measured as having a large versus small percentage of revenue at risk in the program. Using a two-way fixed linear probability model, we used a difference-in-differences approach to compare SNFs in the highest quartile of Medicare-paid bed-days with those in the lowest quartile before and after the SNF VBP Program was implemented in 2015. Our sample included four years before the rollout of the program and six years after. To evaluate the difference-in-differences assumption of parallel trends before the intervention, we plotted thirty-day hospital readmission rates for SNFs in the highest and lowest quartiles of Medicare-paid bed-days. We then modeled annual readmissions during the period 2011–15 as a function of year, highest versus lowest quartile of Medicare-paid bed-days, and the interaction between year and readmission rates in an unadjusted logistic regression with fixed effects for SNF.

To risk-adjust the difference-in-differences analysis, we used the same adjustment factors used in the SNF VBP Program (appendix exhibit A4).[16] We also included SNF fixed effects in the final model. We clustered errors at the county level.

SENSITIVITY ANALYSES We conducted several sensitivity analyses. First, to more consistently classify SNFs in the top and bottom quartiles of Medicare-paid bed-days, we restricted our analysis to SNFs in the top or bottom quartile of Medicare-paid bed-days for every year of the analysis, rather than for 50 percent or more of the years. Second, we changed the implementation year to 2014, as the program was announced in that year and SNFs may have started making changes before the program rollout in 2015. Third, we tested our results alternately including and excluding the COVID-19 pandemic period (2020 and 2021), as SNF referral patterns and readmission rates may have changed significantly during the pandemic. Fourth, we restricted the sample to SNFs with more than twenty-five Medicare fee-for-service beneficiary stays per year, as SNFs with fewer stays may exhibit more variability in hospital readmission rates. Fifth, we in-

cluded SNF rurality as a covariate in the models, as SNFs with high Medicare-paid bed-days were more likely to be located in urban areas. Finally, some evidence suggests that SNFs in preferred relationships with hospitals may demonstrate higher quality and lower costs or receive lower-risk beneficiaries for postacute care.[18,19] Therefore, we incorporated paired hospital and SNF fixed effects to control for potential differences in SNFs' hospital referral networks. Analyses were completed in SAS, version 9.4, and R, version 12.1. The study was considered exempt by the University of Pennsylvania Institutional Review Board.

LIMITATIONS We acknowledge several limitations. Because of the limited availability of code used by CMS or contractors for calculating risk adjustment and how it may change from year to year, our calculated readmission rates might not perfectly mirror these rates, despite our stringent adherence to published technical reports. Also, we did not evaluate how the financial incentives and outcomes of the SNF VBP Program may have varied across specific subgroups of beneficiaries, but we plan to do so in subsequent analyses.

Study Results

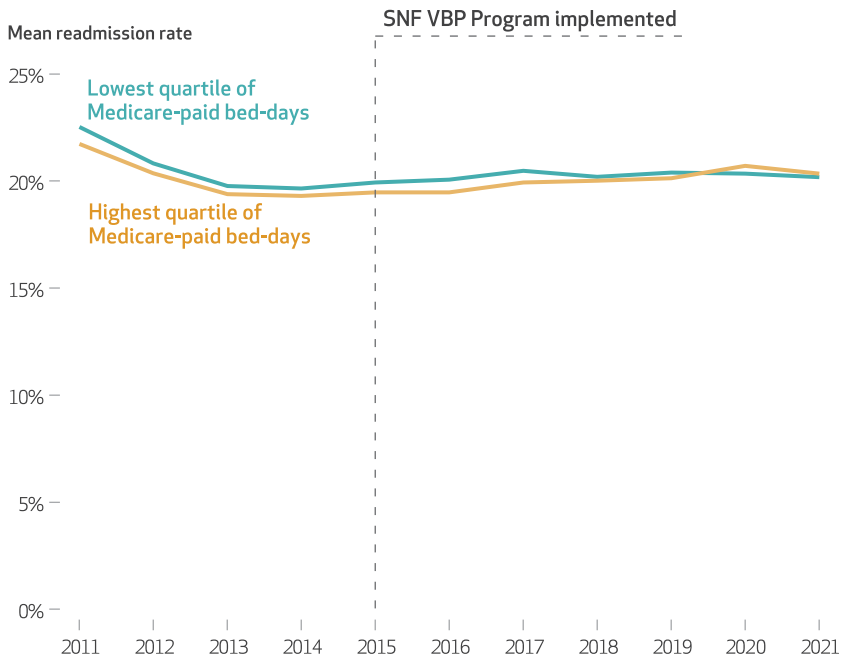
Our analytic sample included 17,383,401 qualifying SNF stays. These stays occurred in 17,018 SNFs; this is larger than the total number of SNFs in the US in any given year because of SNF closures and openings during the period (appendix exhibit A1).[16] Visual inspection of the plot and a nonsignificant interaction term ($p = 0.3381$) supported parallel pre trends (exhibit 1). During the post period (2015–21), most beneficiaries were age eighty or older, female, and non-Hispanic White (exhibit 2). There were large subpopulations who were dually eligible (32.3 percent), were frail (38.0 percent), or had a diagnosis of dementia (28.9 percent). In the 2015 baseline year, there were 15,423 SNFs observed, with 3,699 SNFs in each of the lowest and highest quartiles of Medicare-paid bed-days (exhibit 3). The average number of Medicare-paid bed-days in the highest quartile was 233.8, or 19.2 percent of all bed-days. In the lowest quartile, the average was 32.7 Medicare-paid bed-days, or 2.3 percent of all bed-days. Beneficiaries who received postacute care in SNFs with high and low bed-days had similar rates of ICU stays; also, the largest difference in the prevalence of hospital discharge diagnoses was sepsis (13.7 percent of low-bed-day beneficiaries versus 9.8 percent of high-bed-day beneficiaries; appendix exhibit A5).[16] SNFs with low bed-days were more than twice as likely as those with high bed-days to be located in rural areas (36.9 percent versus 15.3 percent) (exhibit 3). SNFs with low bed-days also had a lower Nursing Home Care Compare star rating (3.3 versus 3.9), were less likely to be for-profit (66.4 percent versus 70.4 percent), and were larger, on average (107.5 beds versus 98.5), compared to SNFs with high bed-days.

During the study period, observed thirty-day hospital readmission rates across all SNFs decreased slightly, from 22.2 percent to 20.5 percent (appendix exhibit A6),[16] whereas thirty-day mortality rates decreased from 2011 to 2019 and then increased in 2020 and declined slightly in 2021. Median SNF lengths-of-stay remained about the same throughout the study period, and successful 100-day community discharge rates increased from 53.3 percent in 2011 to 58.0 percent in 2021 (appendix exhibit A6).[16] SNF-level mean rates of thirty-day mortality and 100-day successful community discharge and median SNF length-of-stay, stratified by highest versus lowest quartile of Medicare-paid bed-days, are in appendix exhibits A7–A9.[16]

In the adjusted difference-in-differences anal-

EXHIBIT 1

Mean 30-day hospital readmission rates among Medicare fee-for-service beneficiaries for skilled nursing facilities (SNFs) in the lowest and highest quartiles of Medicare-paid bed-days, 2011–21



SOURCE Authors' analysis of data from the Medicare Provider Analysis and Review files, Medicare Master Beneficiary Summary File, and LTCFocus, 2011–21. **NOTES** Data represent visits in SNFs in the lowest and highest quartiles of Medicare-paid bed-days in at least 50% of years observed ($n = 9,140,109$ stays in 7,357 SNFs). Visits in 2021 were restricted to those with a proximal hospitalization discharge date on or before December 1, 2021, to allow for full 30-day follow-up. SNF VBP is the Skilled Nursing Facility Value-Based Purchasing Program.

EXHIBIT 2

Demographic characteristics of Medicare fee-for-service beneficiaries at the time of a skilled nursing facility (SNF) stay, by quartile of Medicare-paid bed-days, 2015–21

Characteristics	Full cohort (10,516,355 stays in 16,661 SNFs)	Quartile of Medicare-paid bed-days: Lowest (*n* = 2,459,616 stays)	Quartile of Medicare-paid bed-days: Highest (*n* = 2,459,096 stays)
Age, mean years	79.0	77.2	80.4
Age (years), %			
Younger than 65	8.8	13.1	5.4
65–74	23.8	26.0	22.0
75–79	14.9	14.0	15.6
80 or older	52.5	46.9	57.0
Male, %	39.3	42.6	36.9
Race and ethnicity, %			
American Indian or Alaska Native	0.5	0.7	0.4
Asian or Pacific Islander	1.7	1.5	1.7
Black or African American	10.5	13.3	8.1
Hispanic	4.5	5.0	4.0
Non-Hispanic White	81.9	78.5	84.8
Other	0.6	0.5	0.6
Unknown	0.5	0.5	0.5
Dual eligibility, %	32.3	46.9	18.6
Medicare eligibility category, %			
Disability	24.0	31.4	17.5
End-stage renal disease	5.5	7.0	3.9
Kim Frailty Index,[a] mean	0.2	0.2	0.2
Frailty, %	38.0	43.5	31.9
Dementia, %	28.9	34.1	23.6
No. of acute hospitalizations in prior year, mean	2.3	2.4	2.2
No. of comorbidities,[b] mean	2.2	2.4	2.1

SOURCE Authors' analysis of data from the Medicare Provider Analysis and Review files, Medicare Master Beneficiary Summary File, and LTCFocus, 2015–21. **NOTE** Data represent visits in SNFs in the lowest and highest quartiles of Medicare-paid bed-days in at least 50% of years observed. [a]A validated measure of risk for adverse health outcomes developed in a cohort of community-dwelling Medicare beneficiaries. [b]Comorbidities were identified as described in the text.

yses, we found no statistically significant differences between SNFs in the highest and lowest quartiles of Medicare-paid bed-days with respect to changes in thirty-day hospital readmission rates, thirty-day mortality rates, combined thirty-day readmission and mortality rates, SNF length-of-stay, or 100-day successful community discharge rates after the SNF VBP Program was implemented (exhibit 4, appendix exhibits A10–A12).[16] Our results did not qualitatively change in any SNF subgroups of interest (appendix exhibit A13)[16] or in sensitivity analyses using alternative specifications (appendix exhibit A14).[16]

Discussion

We found that the SNF VBP Program did not result in significant changes in thirty-day hospital readmission rates among SNFs with differential exposure to the program's financial incentives. We also did not find evidence of adverse outcomes in the form of increased thirty-day mortality rates, increased SNF length-of-stay, or decreased 100-day successful community discharge rates. These findings are novel, as our study was first national analysis of the SNF VBP Program to our knowledge.

Why was the program unsuccessful in achieving its primary aim? Several factors may have limited its impact. First, SNFs may be unable to influence thirty-day hospital readmissions. SNFs also may lack the resources, training, or consistency in staffing to invest in efforts to reduce hospital readmissions. We have previously shown that it is exceptionally uncommon for SNFs with high hospital readmission rates at baseline to be able to improve these rates sufficiently to avoid financial penalties.[8] SNFs that are financially struggling at baseline and then receive a financial penalty may be in a particularly poor position to modify hospital readmission rates. Because the average SNF length-of-

EXHIBIT 3

Characteristics of skilled nursing facilities (SNFs) in the US, by quartile of Medicare-paid bed-days, 2015

Characteristics	Full cohort (n = 15,423 SNFs)	Quartile of Medicare-paid bed-days	
		Lowest (n = 3,669 SNFs)	Highest (n = 3,669 SNFs)
Annual no. of Medicare-paid bed-days per facility, mean	112.4	32.7	233.8
Percent of Medicare-paid bed-days, mean	8.7	2.3	19.2
Net operating margin,[a] mean %	−0.1	−1.5	1.8
Rural location,[a] %	27.1	36.9	15.3
SNF overall star rating,[a] mean	3.5	3.3	3.9
SNF ownership type: for-profit,[a] %	69.2	66.4	70.4
No. of beds,[a] mean	108.5	107.5	98.5
Nursing Facility Case-Mix Index,[a,b] mean	1.30	1.24	1.34
SNF is chain owned, %	58.1	50.7	61.3
Nursing direct care hours, mean no.	3.7	3.4	4.3
Observed 30-day readmission rate,[c] mean %	19.4	18.5	19.4
Observed 30-day mortality rate,[c] mean %	7.8	9.0	7.4
Observed 30-day combined readmission and mortality rates,[c] mean %	24.3	24.1	23.4
Observed SNF length-of-stay, median days	24.5	25.0	23.0
Observed SNF length-of-stay ≥21 days, mean %	57.3	57.8	56.1
Observed 100-day successful community discharge rate,[d] mean %	54.5	52.6	58.8

SOURCE Authors' analysis of data from the Medicare Provider Analysis and Review files, Medicare Master Beneficiary Summary File, LTCFocus, Medicare Nursing Home Care Compare, and Skilled Nursing Facility cost reports, 2015. **NOTES** Data represent visits in SNFs in the lowest and highest quartiles of Medicare-paid bed-days in at least 50% of years observed. The SNF Value-Based Purchasing Program was first implemented in 2015 (baseline). Mean outcome values in this table were calculated at the SNF level. Rates were calculated per SNF and then averaged. [a]Variable contains 2–11% missing data. [b]A measure of the relative intensity of care for residents admitted to each SNF during a calendar year, reported by LTCFocus. The higher the score, the more severe the average acuity profile of SNF residents. [c]Observed in the 30 days after inpatient discharge. [d]Defined as discharge from a SNF within 100 days of hospital discharge, with the patient remaining home for at least thirty days without returning to the hospital, returning to the SNF, or dying.

EXHIBIT 4

Estimated changes in beneficiary outcomes after the implementation of the Skilled Nursing Facility (SNF) Value-Based Purchasing Program, 2015–21 versus 2011–14

Outcomes	Linear probability estimate	95% CI
30-day hospital readmission	0.002	−0.002 0.006
30-day mortality	0.003	−0.002, 0.008
30-day combined hospital readmission and mortality	0.004	−0.001, 0.009
SNF length-of-stay, days	−1.76	−3.69, 0.16
100-day successful community discharge	−0.004	−0.010, 0.001

SOURCE Authors' analysis of data from the Medicare Provider Analysis and Review files, Medicare Master Beneficiary Summary File, and LTCFocus, 2011–21. **NOTES** All analyses were conducted at the SNF-stay level. n = 8,742,157 stays in 7,357 SNFs, in which the SNF was in the highest versus lowest quartile of Medicare-paid bed-days in at least 50% of years observed, and patient-level data had no missing covariates. Models were adjusted for patient age at the time of the SNF stay, sex, the length of the proximal inpatient visit, days of intensive care unit stay in the proximal inpatient visit, Medicare eligibility category, number of hospitalizations in the year before inpatient discharge, principal discharge diagnosis categorized by the Agency for Healthcare Research and Quality Clinical Classifications System, surgery type if surgery was reported in proximal hospitalization, weighted Charlson-Deyo Comorbidity Index score, and whether the hospital of the proximal inpatient visit participated in a Centers for Medicare and Medicaid Services quality improvement program. Results for binary outcomes reflect differences in the predicted probability of each outcome for patients who stayed in SNFs in the highest versus lowest quartile of Medicare-paid bed-days after the start of the SNF Value-Based Purchasing Program (2015–21) compared with stays before the program (2011–14). An estimate of 0.002 represents an increase of 0.2 percentage points in the predicted probability of the outcome. Readmission and mortality outcomes were observed in the 30 days after inpatient discharge. Successful community discharge is defined in the exhibit 3 notes.

stay for Medicare beneficiaries is less than thirty days,[1] SNFs seeking to earn bonuses in the SNF VBP Program may need to develop robust post-discharge monitoring and hospital readmission avoidance programs in the community. The extent to which SNFs have the capacity to develop such programs is unknown.

Second, the magnitude of the incentives in the SNF VBP Program might not be sufficient to motivate change. SNFs commonly report that they are financially struggling and have negative profit margins.[20] The Medicare Payment Advisory Commission reported that SNFs had an average total margin of –1.4 percent across all payers and lines of business in 2021.[1] With this level of financial distress among SNFs, it may seem that a 2 percent increase or reduction in all Medicare Part A revenues could make the difference between operating at a profit and operating at a loss. However, recent evidence suggests the cost report data submitted by SNFs to CMS are incomplete, with up to 68 percent of nursing home profits hidden through "tunneling" into payments to related parties under common ownership.[21] Further, although the impact of Medicare payments for SNF care may be high compared with that of Medicaid payments, Medicaid accounts for a much higher volume of SNF care than Medicare. Even SNFs in the highest quartile of Medicare-paid bed-days in our sample averaged only 19.2 percent of their bed-days paid by Medicare. In other words, more than 80 percent of the care they delivered was for residents not affected by the SNF VBP Program.

Third, it is possible that there had not been enough years of SNF VBP Program bonuses and penalties to have had an impact on the quality of care during the study period. The program's first financial rewards and penalties were issued in 2019. To compensate for unprecedented challenges facing SNFs during the COVID-19 pandemic, CMS gave all SNFs the same performance score and incentive payment for the fiscal year 2022 program year, resulting in few years of actual financial bonuses and penalties based on performance to date.

Nevertheless, our findings extend and confirm those of previous studies of policy initiatives aimed at improving nursing home quality through the use of financial incentives.[22] For example, an analysis of nursing home pay-for-performance initiatives in eight state Medicaid programs during 2001–09 found that they did not consistently improve the quality of care.[23] Similarly, a 2009–12 pay-for-performance program implemented as part of a CMS demonstration for Medicare-reimbursed postacute care in three states did not systematically affect any of the quality metrics.[24]

The magnitude of the incentives in the SNF VBP Program might not be sufficient to motivate change.

In prior work, we found that 12.3 percent of SNFs had large enough improvements in readmission rates that their improvement scores (rather than achievement scores) were used to calculate their performance.[10] Understanding how SNFs such as these were able to improve, particularly if low performing at baseline, could inform ongoing and future efforts to incentivize high-quality care in SNFs.

A CMS final rule effective in FY 2024 modified the SNF VBP Program to incorporate a health equity adjustment beginning in FY 2027. This change in the risk-adjustment methodology was intended reduce disparities in health outcomes in dual-eligible populations.[25] In addition, the rule expands the suite of quality measures used in the SNF Value-Based Purchasing Program beyond hospital readmission rates.[26] For example, under the rule, health care–associated infections requiring hospitalization, total nurse staffing hours per resident day, and total nursing staff turnover will be added to the quality metrics beginning in FY 2026. The rule requires community discharge rates, falls with major injury, a "discharge function" score, and number of hospitalizations per 1,000 beneficiary days to be added in FY 2027. In FY 2028, the all-cause thirty-day readmission rate measure will be replaced with a measure based on the rate of "within-stay potentially preventable" readmissions.[27] After these changes, additional research will be needed to determine whether and the extent to which the SNF VBP Program is effective in improving the quality of care in SNFs.

Conclusion

The SNF VBP Program as originally implemented had no significant impact on hospital readmissions. By expanding the program's quality metrics beyond hospital readmissions, the FY 2024 rule from CMS has the potential to align incentives with aspects of SNF operations that SNF leadership may perceive to be under their direct control; thus, it may help drive significant

quality improvement. Ongoing monitoring and additional research will be critical to assessing the impact of SNF VBP Program and to informing SNF quality improvement policies and programs in the years ahead. ■

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NOTES

1 Medicare Payment Advisory Commission. A data book: health care spending and the Medicare program [Internet]. Washington (DC): MedPAC; 2024 Jul. Section 8, Post-acute care; [cited 2025 Apr 17]. Available from: https://www.medpac.gov/wp-content/uploads/2024/07/July2024_MedPAC_DataBook_Sec8_SEC.pdf
2 Burke RE, Whitfield EA, Hittle D, Min SJ, Levy C, Prochazka AV, et al. Hospital readmission from post-acute care facilities: risk factors, timing, and outcomes. J Am Med Dir Assoc. 2016;17(3):249–55.
3 Flint LA, David DJ, Smith AK. Rehabbed to death. N Engl J Med. 2019;380(5):408–9.
4 Centers for Medicare and Medicaid Services. Hospital Readmissions Reduction Program (HRRP) [Internet]. Baltimore (MD): CMS; [last updated 2024 Sep 10; cited 2025 Apr 17]. Available from: https://www.cms.gov/medicare/payment/prospective-payment-systems/acute-inpatient-pps/hospital-readmissions-reduction-program-hrrp
5 Gupta A. Impacts of performance pay for hospitals: the Readmissions Reduction Program. Am Econ Rev. 2021;111(4):1241–83.
6 Ferro EG, Secemsky EA, Wadhera RK, Choi E, Strom JB, Wasfy JH, et al. Patient readmission rates for all insurance types after implementation of the Hospital Readmissions Reduction Program. Health Aff (Millwood). 2019;38(4):585–93.
7 Centers for Medicare and Medicaid Services. The Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program [Internet]. Baltimore (MD): CMS; [last modified 2025 May 1; cited 2025 May 20]. Available from: https://www.cms.gov/medicare/quality/nursing-home-improvement/value-based-purchasing
8 Burke RE, Xu Y, Rose L. Skilled nursing facility performance and readmission rates under value-based purchasing. JAMA Netw Open. 2022;5(2):e220721.
9 Daras LC, Vadnais A, Pogue YZ, DiBello M, Karwaski C, Ingber M, et al. Nearly one in five skilled nursing facilities awarded positive incentives under value-based purchasing. Health Aff (Millwood). 2021;40(1):146–55.
10 Smith L, West S, Coots L, Ingber M, Reilly K, Feng Z, et al. Skilled Nursing Facility Readmission Measure (SNFRM) NQF #2510: all-cause risk-standardized readmission measure, draft technical report [Internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; 2015 Mar [cited 2025 Apr 17]. Available from: https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/nursinghomequalityinits/downloads/snfrm-technical-report-3252015.pdf
11 RTI International. Skilled Nursing Facility Readmission Measure (SNFRM) NQF #2510: all-cause risk-standardized readmission measure, technical report supplement [Internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; 2017 Apr [cited 2025 Apr 17]. Available from: https://www.cms.gov/files/document/snfrm-technical-report-supplement updated-analytic-results 04262017508cpdf
12 Baker B, Billings K, Daras LC, DiBello M, He F, Ingber M, et al. Skilled Nursing Facility 30-Day All-Cause Readmission Measure (SNFRM) NQF #2510: all-cause risk-standardized readmission measure, technical report supplement [Internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; 2019 Apr [cited 2025 Apr 17]. Available from: https://www.cms.gov/Medicare/Quality-Initiatives-Patient-Assessment-Instruments/Value-Based-Programs/SNF-VBP/Downloads/SNFRM-TechReport Supp-2019-.pdf
13 Spivack S, Myers C, Dolce LC, Barbo A, Lan Z, Altaf F, et al. 2022 measure updates and specifications report: Skilled Nursing Facility Value-Based Purchasing Program: Skilled Nursing Facility 30-Day All-Cause Readmission Measure—performance period of the FY 2023 SNF VBP program year [Internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; 2022 Aug [cited 2025 Apr 17]. Available from: https://www.cms.gov/files/document/snfrmausreport2022.pdf
14 Grady JN, Vigliotti VS, Zhou S, Liang C, Hu R, Rushkin M, et al. 2023 measure updates and specifications report: Skilled Nursing Facility Value-Based Purchasing Program: Skilled Nursing Facility 30-Day All-Cause Readmission Measure—version 2.0 [Internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; 2023 Aug [cited 2025 Jan 22]. Available from: https://www.cms.gov/files/document/2023-snfrm-measure-updates-report.pdf
15 Centers for Medicare and Medicaid Services. Swing bed providers [Internet]. Baltimore (MD): CMS; [last updated 2024 Sep 10; cited 2025 Apr 17]. Available from: https://www.cms.gov/medicare/payment/prospective-payment-systems/skilled-nursing-facility-snf/swing-bed-providers
16 To access the appendix, click on the Details tab of the article online.
17 Centers for Medicare and Medicaid Services. Publication of the Discharge to Community—Post Acute Care measures for the Inpatient Rehabilitation Facility, Long-Term Care Hospital, and Skilled Nursing Facility Quality Reporting Programs [Internet]. Baltimore (MD): CMS; 2019 May 30 [cited 2025 Apr 17]. Available from: https://www.cms.gov/medicare/quality-initiatives-patient-assessment-instruments/ltch-quality-reporting/downloads/faq-for-discharge-to-community-post-acute-care-measures.pdf
18 Huckfeldt PJ, Weissblum L, Escarce JJ, Karaca-Mandic P, Sood N. Do skilled nursing facilities selected to participate in preferred provider networks have higher quality and lower costs? Health Serv Res. 2018; 53(6):4886–905.
19 McHugh JP, Rapp T, Mor V, Rahman M. Higher hospital referral concentration associated with lower-risk patients in skilled nursing facilities. Health Serv Res. 2021;56(5): 839–46.
20 American Health Care Association. State of the nursing home sector: survey of 441 nursing home pro-

viders highlights persistent staffing and economic crisis [Internet]. Washington (DC): AHCA; 2024 Mar [cited 2025 Apr 17]. Available from: https://www.ahcancal.org/News-and-Communications/Fact-Sheets/FactSheets/AHCA%20State%20of%20the%20Sector%202024.pdf
21 Gandhi A, Olenski A. Tunneling and hidden profits in health care [Internet]. Cambridge (MA): National Bureau of Economic Research; 2024 Mar [revised 2024 Sep; cited 2025 Apr 17]. (NBER Working Paper No. 32258). Available from: https://www.nber.org/system/files/working_papers/w32258/w32258.pdf
22 Grabowski DC, Chen A, Saliba D. Paying for nursing home quality: an elusive but important goal. J Am Geriatr Soc. 2023;71(2):342–8.
23 Werner RM, Konetzka RT, Polsky D. The effect of pay-for-performance in nursing homes: evidence from state Medicaid programs. Health Serv Res. 2013;48(4):1393–414.
24 Grabowski DC, Stevenson DG, Caudry DJ, O'Malley AJ, Green LH, Doherty JA, et al. The impact of nursing home pay-for-performance on quality and Medicare spending: results from the Nursing Home Value-Based Purchasing demonstration. Health Serv Res. 2017;52(4):1387–408.
25 Centers for Medicare and Medicaid Services. Medicare program; prospective payment system and consolidated billing for skilled nursing facilities; updates to the Quality Reporting Program and Value-Based Purchasing Program for federal fiscal year 2024; corrections. Fed Regist. 2024;89(70):25144–7.
26 Centers for Medicare and Medicaid Services. Skilled Nursing Facility Value-Based Purchasing Program: frequently asked questions (FAQs) [Internet]. Baltimore (MD): CMS; 2023 Mar [cited 2025 Apr 17]. Available from: https://www.cms.gov/files/document/snfvbpfaqsmarch2023.pdf
27 Acumen. Skilled Nursing Facility Within-Stay Potentially Preventable Readmission (SNF WS PPR) measure for the Skilled Nursing Facility Value-Based Purchasing (SNF VBP) Program [Internet]. Baltimore (MD): Centers for Medicare and Medicaid Services; 2023 Mar [cited 2025 Apr 17]. Available from: https://www.cms.gov/files/document/snfvbp-snfwsppr-draft-technical-measure-specification.pdf