Post-Acute Care Performance: Variation in Skilled Nursing Facility (SNF) Cost and Use by Medicare ACOs in 2022

Institute for Accountable Care

KEY TAKEAWAYS

- Skilled nursing facility (SNF) expenditures are an important driver of spending in traditional Medicare. In 2022, SNFs provided 1.8 million Medicare-covered stays to 1.3 million FFS beneficiaries for $29B, or **roughly $16,000 per stay.**
- There is **substantial variation in the cost and quality of services provided by SNFs**, both within and across markets.
- Accountable Care Organizations (ACOs) have distinguished themselves by reducing unnecessary SNF services, driving down the average cost per case. Our analysis found that in 2022, Medicare **ACO SNF stays were, on average, 1.6 days shorter and $968 less expensive than non-ACO SNF stays.**
- Despite stronger overall post-acute care performance by ACOs compared to non-ACOs, there is **wide variation in SNF spending across individual ACOs.**
- SNF spending variation creates significant **opportunity for ACOs to reduce the use of unnecessary post-acute care** through partnerships with efficient, high-quality SNFs, and formation of preferred SNF networks.
- **ACOs often lack reliable information about SNF performance** and could benefit from more comprehensive analysis based on 100% of SNFs Medicare admissions.

BACKGROUND

Skilled nursing facilities (SNFs) provide short-term skilled nursing care and rehabilitation services to patients recovering from acute illness, typically following a hospitalization. As an important driver of Medicare fee-for service (FFS) spending, SNF expenditures totaled $29 billion in 2022, reflecting 1.8 million stays by 1.3 million FFS beneficiaries,[1] or roughly $16,000 per stay. Excess post-acute care spending has long been a topic of concern for ACOs.

SNFs have strong financial incentives to admit and retain Medicare patients. Traditional Medicare FFS per-diem payments and reimbursement rates are higher compared to Medicare Advantage plans or Medicaid for the first 100 days of SNF care.[2]

Within this sector, for-profit SNFs—which account for over 70% of facilities serving Medicare patients and 79% of Medicare SNF spending—earned significantly higher margins (22%) in 2022 compared to non-profit SNFs (1.1%). MedPAC projects FY 2024 SNF margins will be 16%.[1]

To effectively manage the total cost of care for their patients, accountable care organizations (ACOs) should understand and facilitate the appropriate level of post-acute care services for patients and use SNFs accordingly. Early research shows ACOs lowered Medicare spending on PAC by reducing SNF use and length of stay (LOS).[3,4] ACO-affiliated hospitals, especially those with partner SNFs, are more effective at reducing SNF spending, LOS, and readmission rates compared to other hospitals.[4,5] However, not all ACOs have preferred SNF networks,[6] SNF participation in most ACOs is limited,[7] and recent data on ACO performance in managing SNF costs is sparse.

We analyzed the performance of Medicare SNFs in 2022 using data from more than 13,500 facilities to illustrate the wide variation in wage-standardized spending per stay, average length of stay, and efficiency (see Appendix I for our methodology). SNF efficiency is measured as the ratio of observed to expected (O/E) spending for each SNF stay and aggregated at the facility level. Expected costs are calculated using a national regression model that accounts for beneficiary and facility characteristics. The O/E ratio is a useful proxy for efficiency in delivering care—e.g., when observed costs exceed expected costs, the resulting ratio is greater than 1.0, reflecting lower efficiency.

RESULTS

VARIATION IN MEDICARE SPENDING, LENGTH OF STAY AND EFFICIENCY ACROSS US SNFs

There is wide variation in Medicare spending and efficiency across SNFs nationally, as shown in Figure 1. While the average SNF cost traditional Medicare $16,044 per stay in 2022, the distribution across SNFs ranged from $10,215 (5th percentile) to $27,358 (95th percentile). Similarly, the average SNF had a 27.1 day average LOS for its Medicare beneficiaries—five percent of SNFs had an average LOS of less than 15 days (5th percentile) while five percent of SNFs had an average LOS above 40 days (95th percentile).

Finally, the relative efficiency of US SNFs ranged from 0.63 to 1.45. These data show that an ACO can save $5,500 per case by sending a patient to a moderately efficient SNF (25th percentile) instead of a moderately inefficient SNF (75th percentile).

Figure 1. Distribution of 2022 Medicare Performance Measures Across US SNFs

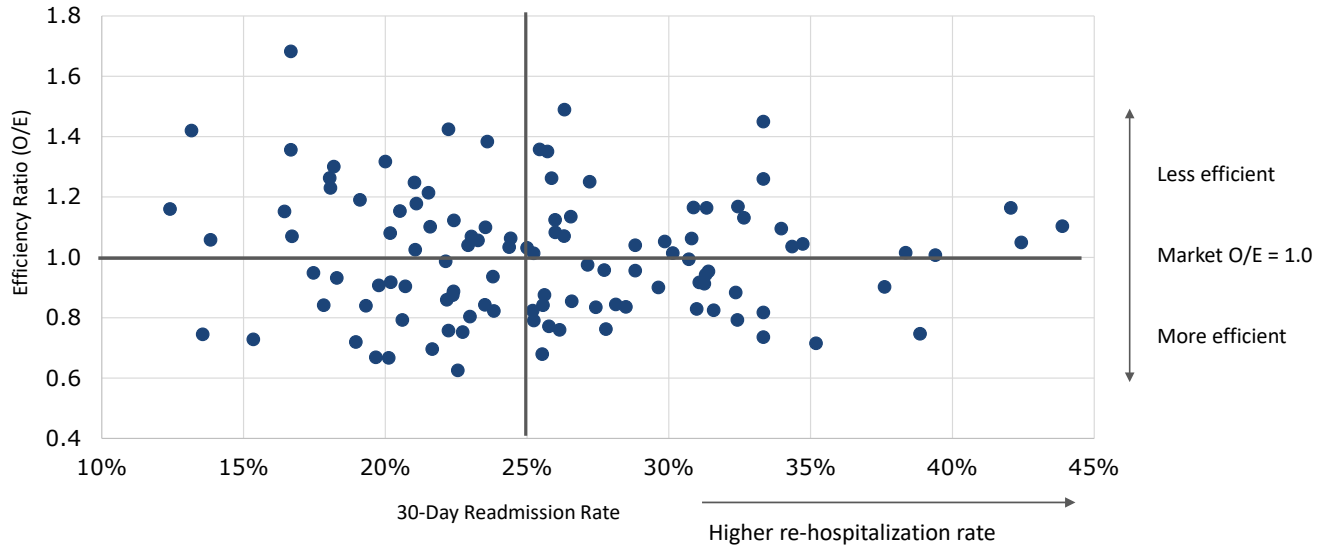
Percentile	Average Cost per Stay (1)	Average Length of Stay (ALOS)	Efficiency Ratio (O/E)
95th	$27,358	40.2	1.45
90th	$22,959	37.0	1.32
75th	$18,906	32.3	1.14
Median	$15,729	27.6	0.97
25th	$13,229	23.2	0.82
10th	$11,304	18.7	0.70
5th	$10,215	15.0	0.63
US Average	**$16,044**	**27.1**	**1.00**

1) SNF cost per stay is wage-standardized Medicare allowed amount.

There is substantial local SNF spending variation. To illustrate this, we examined Medicare performance at 113 SNFs in a large Midwestern market during 2022. Figure 2 provides a scatter plot showing each SNF's efficiency ratio and 30-day readmission rate. Efficiency ratios range from 0.63 to 1.68, while 30-day hospital readmission rates range from 12% to 45% (relative to the market's mean readmission rate of 26%).

In this example, the top performing SNFs are in the lower left quadrant of the graph and would likely be attractive candidates for preferred partnerships with ACOs. These data illustrate the broad potential savings opportunity for organizations that shift care from less efficient to more efficient SNFs.

Figure 2. SNF Cost Efficiency Ratio and Readmission Rate by SNF in a Midwest Market (2022)



VARIATION IN ACO SPENDING PER SNF STAY

We also examined the extent to which ACOs are using the more efficient SNFs in their markets, and the relative efficiency of the SNF care received by their beneficiaries.

Figure 3. Average SNF Stay Costs & Efficiency Ratios by National Cohort (2022)

National Population (Medicare FFS)	Number of SNF Stays	Average LOS	SNF Stay Costs Observed (O)	SNF Stay Costs Expected (E)	SNF Stay O/E Ratio	SNF Stay + 30 Day Post-Discharge Costs Observed (O)	SNF Stay + 30 Day Post-Discharge Costs Expected (E)	SNF Stay + Post-Discharge O/E Ratio
All ACO	508,285	26.0	$15,410	$15,906	0.97	$23,559	$24,100	0.98
All Non-ACO	849,184	27.6	$16,378	$16,066	1.02	$24,642	$24,157	1.02
All FFS	1,275,534	27.1	$16,044	$16,021	1.00	$24,263	$24,139	1.01

Note: All costs are wage-standardized and include Medicare and beneficiary paid amounts.

Our analysis of 2022 Medicare claims data found that ACO SNF stays are, on average, shorter (by 1.6 days) and less expensive (by $968) than non-ACO SNF stays (Figure 3).

The SNF post-discharge period is an important time window to consider because it can reflect the trade-off between short-term savings (e.g. reduced LOS) and long-term costs (e.g. increased readmissions). For example, the average length of stay was lower for ACO stays than non-ACO stays (26.0 < 27.6), resulting in lower SNF stay costs ($15,410 vs. $16,378).

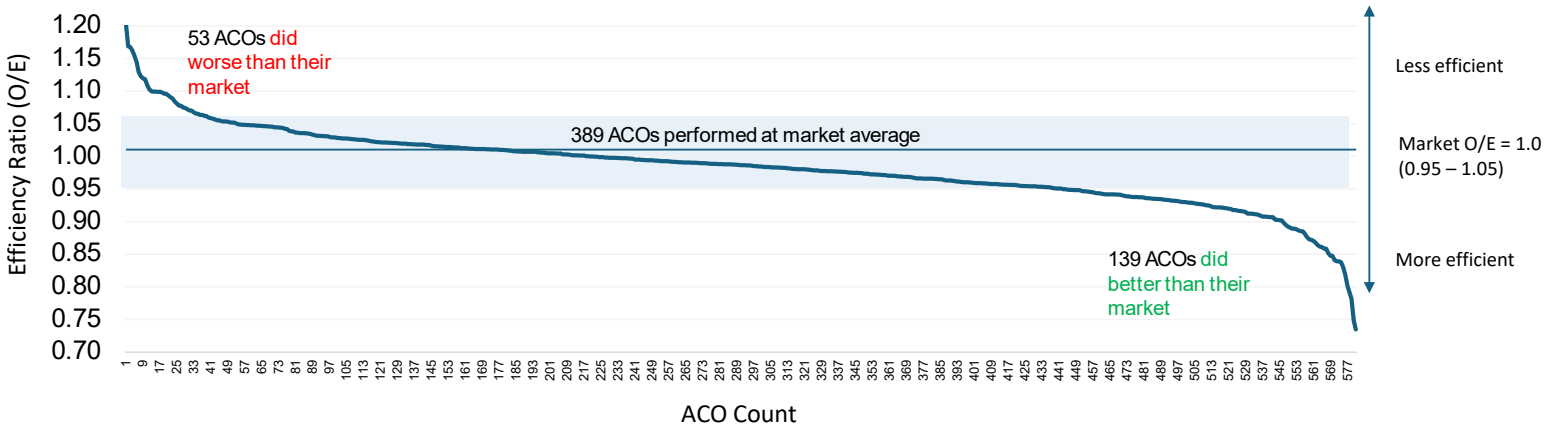
In addition, mean spending for ACO SNF stays plus spending in the 30 days after SNF discharge was nearly $1,100 less than for non-ACO stays ($23,559 vs. $24,642), suggesting that ACOs are able to reduce LOS and unnecessary costly care such as rehospitalizations in the post-discharge period.

Variation across ACOs. Despite lower spending for ACO SNF stays overall, there is large variation in SNF spending across the 581 MSSP and DCE ACOs.

We looked at each ACO's overall observed to expected cost ratio for their beneficiaries' 2022 SNF stays. To facilitate meaningful comparisons, all expected costs (and ratios) are normalized to the respective ACO markets so that an O/E ratio of 1.0 indicates performance equal to the market (all FFS) average. If we assume a buffer so that an observed to expected cost ratio between 0.95 – 1.05 is on par with market average, then approximately 25% of ACOs outperform their market (O/E ratio less than 0.95), while 10% underperform (O/E ratio greater than 1.05; Figure 4).

Nonetheless, the 65% of ACOs performing at the market average may have substantial opportunity for improvement. To start, ACOs will want to understand the performance of the SNFs they utilize relative to all SNFs in their market.

Figure 4. Medicare ACO Efficiency Ratios - SNF Spending per Stay (2022)



n=581 ACOs

IMPLICATIONS FOR ACOS

Given wide variation in SNF performance, ACOs need a data-driven post-acute care strategy. Partnering with high-quality SNFs can help with developing shared care pathways/protocols, communicating care planning, and improving care transitions. Steps to help ACOs identify preferred SNFs and build a network include:

- **Understanding local market dynamics.** The referral volume an ACO can bring to a SNF is a key factor in building partnerships.[6] However, even ACOs with market power can face barriers, depending on the number, quality and geographic spread of SNFs in their markets. Understanding one's competitive landscape (for ACOs, hospitals, and SNFs), as well as the level of collaboration (e.g. trust, information-sharing, problem-solving) within existing relationships[8] is important to a network strategy.

- **Collaborating with hospitals.** Hospitals have substantial influence over their patients discharge disposition, and ACOs need to partner with them to manage care transitions and post-acute care utilization effectively. In a NAACOS/IAC 2019 survey of 77 ACOs with preferred SNF networks, poor hospital discharge processes were listed as a top challenge by both physician- and hospital-led ACOs. Additionally, we found that high ACO performers were more likely to participate in the 3-day SNF waiver than low ACO performers.

- **Aligning incentives.** Direct SNF participation in value-based care models has been limited, and prior research shows that most ACOs do not allocate shared savings to partner SNFs.[6,9] Given the decreasing trend in SNF utilization, and a continued push towards value-based care—including the 2026 mandatory bundle payment program for hospitals (Transforming Episode Accountability Model)—new financial incentives or arrangements may be needed for sustainable partnerships.

- **Obtaining more comprehensive data.** Many ACOs have relatively small numbers of patients admitted to many of the SNFs their patients use, making it difficult to accurately measure SNF performance. One approach is to ask potential SNFs partners to share comprehensive data about their spending and quality. Another option is to work with a third party to compile SNF spending and quality data based on 100% of their Medicare FFS admissions.

If you are interested in learning more about ACO and SNF performance in your market, please contact us at: analytics@institute4ac.org.

APPENDIX I

Methods

We analyzed 100% of Medicare FFS SNF stays (i.e. all Medicare FFS beneficiaries who had a SNF Part A stay). We used 100% of traditional Medicare claims for 2019-2022. Swing bed costs are included.

For each SNF stay, we calculate:

- Observed and expected stay costs (allowed amounts)
- Observed to expected stay cost ratio (as a proxy for efficiency)
- Medicare spending in the 30, 60, and 90 days immediately following SNF discharge
- Post SNF discharge costs by care setting
- Key utilization measures (e.g., emergency room visits)
- SNF-specific quality measures (e.g., 30-day readmissions, ED visits, falls)

All costs are wage-standardized and include Medicare and beneficiary paid amounts (i.e., allowed amounts). Expected costs are calculated using a national ordinary least squares regression model. The model incorporates beneficiary risk factors, SNF stay-specific variables, facility attributes, and regional elements.

Construction of SNF Stay

SNF care often includes multiple claims that must be combined to construct a complete stay. Claims are combined under the following circumstances:

- Two adjacent SNF claims that end and begin on the same or next day are combined whether they involve a single SNF or different SNFs.
- Claims are also combined for interrupted stays. These are claims from the same SNF that are up to three days apart (including discharge day). This allows for brief interruptions in a patient's SNF stay (for example an overnight stay in a hospital) without disruption to the Medicare coverage of that stay.

An indexing system was created to avoid double counting events across stays. For beneficiaries with multiple SNF stays in a year, a stay and its post-discharge period must conclude before the next stay is considered. Cost and utilization from stays that don't "count" are reflected in post-discharge costs for the previous SNF stay.

Exclusions

- Stays of 100 days or longer are excluded. Claims with negative or zero costs are also omitted.
- Beneficiaries are required to have continuous part A and B during each calendar year and are excluded if they have one or more months of Medicare Advantage. Beneficiaries with SNF stays containing post-discharge periods that extend into the subsequent year must remain continuously enrolled in that year. Coverage is required in the previous year for SNF stays starting on January 1st or 2nd.
- Inpatient costs exclude indirect medical education (IME) and disproportionate share hospital (DSH) payments. This ensures a precise reflection of costs incurred specifically during the SNF stay or post-discharge period.

REFERENCES

1. Medicare Payment Advisory Commission. Report to the Congress: Medicare Payment Policy. MedPAC. 2024;Washington, DC.
2. Medicare Payment Advisory Commission. Report to the Congress: Medicare Payment Policy. MedPAC. 2023;Washington, DC.
3. McWilliams JM, Gilstrap LG, Stevenson DG, Chernew ME, Huskamp HA, Grabowski DC. Changes in Postacute Care in the Medicare Shared Savings Program. JAMA Internal Medicine. 2017;177(4):518-526. doi:10.1001/jamainternmed.2016.9115
4. Colla CH, Lewis VA, Stachowski C, Usadi B, Gottlieb DJ, Bynum JPW. Changes in Use of Postacute Care Associated With Accountable Care Organizations in Hip Fracture, Stroke, and Pneumonia Hospitalized Cohorts. Medical Care. 2019;57(6):444. doi:10.1097/MLR.0000000000001121
5. Winblad U, Mor V, McHugh JP, Rahman M. ACO-Affiliated Hospitals Reduced Rehospitalizations From Skilled Nursing Facilities Faster Than Other Hospitals. Health Aff (Millwood). 2017;36(1):67-73. doi:10.1377/hlthaff.2016.0759
6. Kennedy G, Lewis VA, Kundu S, Mousqués J, Colla CH. Accountable Care Organizations and Post-Acute Care: A Focus on Preferred SNF Networks. Med Care Res Rev. 2020;77(4):312-323. doi:10.1177/1077558718781117
7. Tong N. ACOs want increased participation of post-acute care providers. Published February 21, 2024. Accessed March 22, 2024. https://www.fiercehealthcare.com/providers/acos-want-increased-participation-long-term-and-post-acute-care-providers
8. McHugh JP, Zinn J, Shield RR, et al. Strategy and Risk-Sharing in Hospital-Post-Acute Integration. Health Care Manage Rev. 2020;45(1):73-82. doi:10.1097/HMR.0000000000000204
9. Singletary E, Roiland R, Harker M, Taylor, Jr DH, Saunders R. Value-based payment and skilled nursing facilities: supporting SNFs during covid-19 and beyond. Duke Margolis Center for Health Policy. Published online May 13, 2021. https://healthpolicy.duke.edu/sites/default/files/2021-05/Margolis%20SNF.pdf