Observation Encounters and Subsequent Nursing Facility Stays

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ABSTRACT

Background: Medicare coverage of skilled nursing facility (SNF) care requires that beneficiaries have a 3-night inpatient stay in the prior 30 days to be eligible. Time spent by beneficiaries receiving hospital-based observation services does not count toward this requirement.

Objectives: To examine the frequency of Medicare beneficiary discharge from hospital-based observation services to SNFs and its impact on Medicare coverage.

Study Design: Retrospective cohort study.

Methods: We performed a beneficiary-level analysis using a 20% nationally representative sample of community-dwelling fee-for-service Medicare beneficiaries from 2010, examining all discharges from hospital-based observation services. We assessed differences in beneficiary and encounter characteristics and post discharge utilization rates of covered and non-covered SNFs.

Results: In 2010, 195,068 community-dwelling beneficiaries received hospital-based observation services. Beneficiaries were overwhelmingly (96.5%) discharged back to the community without home health services. Only 1.2% (2319) were discharged to non-covered SNFs, while 0.6% (1196) were discharged to covered SNFs. Patients discharged to SNFs experienced longer lengths of stay (LOS) than those discharged back to the community (34.9 hours vs 25.5 hours; P <.01). Approximately one-fourth of beneficiaries discharged to SNFs had an observation LOS of 48 hours or more.

Conclusions: While only a small minority of community-dwelling Medicare beneficiaries who received hospital-based observation services in 2010 were discharged to an SNF not covered by Medicare, the implications for these patients and the associated costs deserve attention. These findings have important implications for Medicare's observation service and 2-midnight policies.

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Hospital-based observation services allow short-term evaluation, treatment, and assessment of patients as an alternative to inpatient admission. Recently, there has been a steady increase in the number of observation units and in the utilization and duration of observation services.[1,2] In limited studies, observation encounters have been found to be associated with decreased Medicare and hospital costs, decreased overall hospital length of stay (LOS), and increased patient satisfaction.[3,4]

More recently, however, concerns have been raised about the potential unintended consequences of increased use of observation services, including whether Medicare beneficiaries may be left responsible for costly post discharge nursing care following an observation encounter—the subject of a recent lawsuit against the federal HHS.[5] Under current Medicare regulations, observation services are billed as outpatient treatment, not inpatient care. One of the main requirements for Medicare coverage of post acute care in a skilled nursing facility (SNF) is a 3-day hospital admission. Time spent by patients in observation is not counted toward the required 3-day inpatient stay,[6] and consequently, beneficiaries may bear prohibitively high out-of-pocket costs.

The frequency of discharge from observation services to SNFs and the characteristics of beneficiaries who receive SNF care after observation services are currently unknown. We used a nationally representative sample of community-dwelling Medicare fee-for-service (FFS) beneficiaries to evaluate patterns and predictors of care after observation services, and to estimate the potential financial impact on beneficiaries; such data are necessary to assess the impact of the 3-day rule on beneficiaries and the potential costs related to the use of observation services.

METHODS

Databases

We performed a retrospective cohort study of FFS Medicare beneficiaries receiving observation services in 2010 us-

ing a 20% nationally representative sample from the CMS Chronic Conditions Data Warehouse. Beneficiaries were included if they had at least 1 observation service encounter.

Observation encounters were linked to an administrative Medicare file that specifies beneficiaries' daily location of care: hospital, SNF, community with home health services, community without services, and deceased. This timeline file is created from Medicare inpatient claims, SNF claims, home health claims, the Long-Term Care Minimum Data Set (MDS), and the Outcome and Assessment Information Set.

Take-Away Points

Medicare coverage of skilled nursing facility (SNF) care requires that beneficiaries have a 3-night inpatient stay in the prior 30 days to be eligible—time spent in hospital–based observation does not count toward this requirement. In 2010, only 1.2% of community-dwelling Medicare beneficiaries who received hospital-based observation services were discharged to an SNF not covered by Medicare. Beneficiaries were overwhelmingly (96.5%) discharged back to the community.

- This study addresses concerns that have been raised about potential unintended consequences of increased use of observation services, including whether Medicare beneficiaries may be left responsible for costly, post discharge nursing care following an observation encounter—the subject of a lawsuit against the HHS.
- These findings have important implications for Medicare's observation service and 2-midnight policies for a covered inpatient stay.

Patient Selection

The study cohort was constructed by identifying beneficiaries who met Medicare's criteria for payment for observation services.[7] In the 20% sample from 2010, 241,929 beneficiaries received observation services. We limited our analysis to beneficiaries who were community dwelling prior to their observation service (n = 209,613) and for beneficiaries with multiple encounters, we utilized the first service. We further limited our analysis to beneficiaries who were enrolled in Medicare Parts A and B for the full study period or covered until their date of death (n = 195,143) and discharged alive from their index encounter (n = 195,068). After exclusions, 195,068 beneficiaries remained in our cohort.

Defining the Outcome

We assessed the rate of SNF utilization directly following hospital-based observation services. Post observation discharge destinations included return to the community without home health services, return to the community with home health services, or discharge to an SNF. Discharge to an SNF outcomes were further separated to delineate stays that were covered by Medicare and stays that were not covered by Medicare.

Descriptive Variables

Demographic and clinical variables from administrative files, including age, gender, race, dual status, and presence of end-stage renal disease, were used to describe the sample. Beneficiaries' chronic conditions were identified using Chronic Conditions Data Warehouse condition flags,[8] and the following 14 conditions were used: dementia (Alzheimer's disease, related disorders, or senile dementia), atrial fibrillation, cancer (breast, colorectal, lung, prostate), chronic kidney disease, chronic obstructive pulmonary disease, depression, diabetes, glaucoma, congestive heart failure, ischemic heart disease, osteoporosis, arthritis (rheumatoid or osteoarthritis), hip fracture, and cerebrovascular disease (stroke or transient ischemic attack).

Cost Variables

Medicare Part A deductible and coinsurance amounts and the beneficiary deductible liability amounts were obtained from the 20% Medicare SNF Standard Analytic File. The presence or absence of supplemental Medicaid coverage was obtained from the Medicare Master Beneficiary Summary File.

Analytic Plan

We described the characteristics of the sample and evaluated unadjusted differences in beneficiary characteristics, characteristics of the stay, and discharge settings using *t* tests and χ^2 tests.

For beneficiaries discharged to Medicare-covered SNFs following index observation stay—and eligible for Medicare coverage due to the fact that they previously met Medicare eligibility requirements for coverage—beneficiary liability was calculated by combining the Medicare Part A deductible and coinsurance amounts with the beneficiary blood deductible liability amount.

Because available data only capture Medicare costs, the estimated financial impacts of current policy on non–Medicare-covered SNF costs following observation stays were calculated by classifying beneficiaries discharged to non–Medicare-covered SNF stays following index observation stay, into 3 subgroups: 1) those with full Medicaid coverage, 2) those with partial Medicaid coverage, and 3) those with no Medicaid coverage. We were unable to accurately estimate the financial impact of Medicaid coverage due to the lack of availability of 2010 Medicaid financial data. For the purposes of this analysis, those

Table 1. Patient Characteristics

	All		Non–Medicare-Covered SNF		Medicare-Covered SNF		Community With Home Healthcare		Community Without Home Healthcare	
Average Length of Stay (in hours)	25.7		34.8		35.2		28.0		25.5	
	n	**%**	**n**	**%**	**n**	**%**	**n**	**%**	**n**	**%**
Overall	195,068	100.0%	2319	1.2%	1196	0.6%	3302	1.7%	188,251	96.5%
Age, years										
<65	38,994	20.0%	153	6.6%	109	9.1%	288	8.7%	38,444	21.1%
65-74	61,728	31.6%	241	10.4%	225	18.8%	654	19.8%	60,608	30.6%
75-84	60,294	30.9%	700	30.2%	423	35.4%	1174	35.6%	57,997	29.2%
85+	34,052	17.5%	1225	52.8%	439	36.7%	1186	35.9%	31,202	16.3%
Sex										
Male	114,965	58.9%	1672	72.1%	795	66.5%	2198	66.6%	110,300	58.6%
Female	80,103	41.1%	647	27.9%	401	33.5%	1104	33.4%	77,951	41.4%
Race										
White	165,615	84.9%	2126	91.7%	1042	87.1%	2871	86.9%	159,576	81.8%
Black	20,854	10.7%	127	5.5%	108	9.0%	280	8.5%	20,339	11.0%
Other	8599	4.4%	66	2.8%	46	3.8%	151	4.6%	8336	43.7%
Dual status										
Non-dual	150,474	77.1%	1570	67.7%	843	70.5%	2546	77.1%	145,515	73.4%
Dual	44,594	22.9%	749	32.3%	353	29.5%	756	22.9%	42,736	23.8%
ESRD										
Non-ESRD	189,175	97.0%	2278	98.2%	1140	95.3%	3235	98.0%	182,522	94.0%
ESRD	5893	3.0%	41	1.8%	56	4.7%	67	2.0%	5729	32.1%
Comorbid conditions										
0-1	40,273	20.6%	191	8.2%	44	3.7%	360	10.9%	39,678	56.0%
2	38,462	19.7%	307	13.2%	93	7.8%	496	15.0%	37,566	18.7%
3	37,852	19.4%	434	18.7%	136	11.4%	556	16.8%	36,726	18.7%
4	31,067	15.9%	442	19.1%	196	16.4%	589	17.8%	29,840	15.7%
5+	47,414	24.3%	945	40.8%	727	60.8%	1301	39.4%	44,441	23.6%

ESRD indicates end-stage renal disease; SNF, skilled nursing facility.

with full Medicaid coverage were assumed to have no financial liability, and for those without Medicaid coverage, we assumed beneficiaries might have been liable for up to 100% of the costs for care. As such, cost estimates for this group were derived using average SNF LOS for this beneficiary group and reported average cost per day for a semi-private SNF room in 2010.[9] For the small group of beneficiaries with partial Medicaid coverage, we did not have sufficient information to make any financial estimates.

All analyses were performed using SAS version 9.1 (SAS Institute, Cary, North Carolina). This study was considered exempt from review by the Yale University Human Investigations Committee.

RESULTS

Description of the Overall Sample

In 2010, 195,068 community-dwelling beneficiaries received observation services and met study criteria, representing 3.2% of community-dwelling Medicare FFS beneficiaries. The mean age was 72.5 years (SD = 13.3) with beneficiaries distributed across all age groups (Table 1). The majority of beneficiaries were white (84.9%), male (58.9%), and of non-dual status (77.1%). Overall, the average time spent in observation status averaged 25.7 hours, but varied substantially (SD = 17.2) (Table 2). Those discharged to SNFs experienced longer LOS in observation than those discharged back to the community (34.9 hours

Table 2. Beneficiary Length of Stay in Observation, and Discharge Destinations

	All	Non–Medicare-Covered SNF	Medicare-Covered SNF	Community With Home Healthcare	Community Without Home Healthcare
Average LOS in hours (SD)	25.7 (17.2)	34.8 (27.6)	35.2 (29.5)	28.0 (17.0)	25.5 (16.9)
LOS ≥48 hours, %	9.2%	24.6%	23.7%	13.5%	8.9%

LOS indicates length of stay; SNF, skilled nursing facility.

vs 25.5 hours; P <.01). Approximately one-fourth of beneficiaries discharged to SNFs had observation LOS of 48 hours or more.

Disposition Following Observation Encounters

Following the index observation encounter, beneficiaries were overwhelmingly (96.5%) discharged back to the community without home health services (Table 1); less than 2% (1.7%) of beneficiaries were discharged back to the community with home health services. The remaining beneficiaries in our sample—only 1.8%—were discharged to an SNF. Less than 1% (0.6%) of the sample were discharged to an SNF with the stay covered by Medicare, while 1.2% were discharged to an SNF with their stay not covered by Medicare.

Beneficiaries discharged to a non-covered SNF tended to be older compared with beneficiaries discharged to a covered facility (82.5 years vs 80.1 years; P <.01). Beneficiaries discharged to a covered SNF also tended to have more comorbid conditions (P <.01), with 60.8% having at least 5 comorbid conditions compared with those discharged to a non-covered SNF—of whom 40.8% had at least 5 comorbid conditions.

Financial Impact on Beneficiaries

Of the 1196 beneficiaries in our sample who were discharged to a Medicare-covered SNF, LOS and Medicare payment records for services provided in 2010 were obtained for 1188 beneficiaries. These beneficiaries had an average LOS in observation of 35.3 hours (SD = 29.6 hours), and their average LOS in the SNF was 19.0 days (SD = 15.4 days) in 2010 for the stay immediately following their observation service encounter. On average, beneficiaries were liable for $1414.84 (SD = $827.11) beyond their Medicare SNF coverage.

Of the 2319 beneficiaries who received observation services and were discharged to a non–Medicare-covered SNF, 989 beneficiaries had full Medicaid coverage and 41 beneficiaries had partial Medicaid coverage. No financial analysis was done for these Medicaid subgroups.

For the 1289 beneficiaries discharged to a non–Medicare-covered SNF without Medicaid coverage, the average length of observation services was 34.1 hours (SD = 21.0 hours). Beneficiaries had an average SNF LOS of 44.1 days (SD = 63.9 days) following their observation service encounter. Given that the average cost per day for a semi-private SNF room in 2010 was $205,[9] these beneficiaries may have been liable for up to 100% of the $9040.50 estimated payments for care.

DISCUSSION

In this sample of community-dwelling Medicare beneficiaries receiving observation services in 2010, 1.2% were discharged from observation services to an SNF that was not covered by Medicare; this represents 0.04% of the community-dwelling Medicare population. Less than 2% of those receiving observation services were discharged to home with home health, suggesting that this is a rare substitution.

There was considerable variation in time spent in observation. Beneficiaries who were discharged to SNFs had a LOS nearly 10 hours longer than those who were discharged to the community, and were more likely to have observation services exceeding 48 hours. Because beneficiaries discharged to an SNF tend to be older, their observation encounters may involve the integration of diverse elements of health andsocialcare services. This combination of factors is likely to result in longer LOS at a time when LOS in observation services and inpatient encounters are increasingly under scrutiny.

While CMS currently recommends that observation LOS not exceed 48 hours, current policy does not prohibit a longer stay. Responding to the growth in long-stay observation cases (those greater than 48 hours) which have increased from 8% of all observation cases in 2006 to 12% in 2008, and concerns regarding the protection of beneficiaries as well as hospital requests for guidance, CMS introduced a policy change in fiscal year 2014.[10] In the Acute Inpatient Prospective Payment System rule, CMS revised its guidance on inpatient admissions by stating that an inpatient admission is generally appropriate if the physician anticipates that the stay requires a duration of at least 2 midnights (meanwhile, the Medicare coverage

of SNF stays still requires a prior 3-day inpatient stay). This rule change will likely result in more short-stay observation admissions and decrease the number of long-stay observation cases. In light of our finding that nearly a quarter of the 2319 beneficiaries in our sample that were discharged to a non–Medicare-covered SNF have observation stays of 48 hours or more, limiting the number of long-stay observation cases may decrease the number of beneficiaries adversely affected by the 3-day rule required for SNF coverage.

Although our study finds that only a small percentage of beneficiaries are affected by Medicare's SNF coverage rules, for those affected, the costs may be substantial. Beneficiaries discharged to an SNF not covered by Medicare have a longer LOS than those beneficiaries discharged to a Medicare-covered SNF. This may indicate that the former group of beneficiaries are more similar to long-term care beneficiaries than they are to those beneficiaries receiving SNF services. That being said, the daily costs of care can quickly accumulate, particularly for those without supplemental insurance. Future research should more rigorously assess the receiving of observation services by Medicare beneficiaries, including their clinical needs and the financial ramifications of those needs.

The benefits and consequences of an observation encounter will vary across beneficiaries and their individual needs. Therefore, it is necessary to provide beneficiaries with adequate information to make informed choices. Medicare provides publicly available guidance to beneficiaries, and 1 state already requires hospitals to provide notice to patients placed in observation services and to explain the implications thereof.[11,12] As observation service utilization continues to increase, it will become increasingly imperative to include patients in the decision-making process.

Limitations

The findings from this analysis should be viewed in the context of a number of limitations. First, our sample did not include beneficiaries who were initially placed in observation but later converted to an inpatient stay. Second, identification of beneficiaries discharged to a noncovered SNF relied upon an MDS assessment submitted to Medicare by nursing facilities. We applied a generous 5-day window following discharge from observation to identify these MDS assessments; while MDS assessments are required on admission for all residents in certified nursing homes, regardless of source of payment, it is possible that some facilities may not have completed forms for all beneficiaries, thereby underestimating our results. Third, SNF LOS data were limited to 2010, and consequently, there may be some beneficiaries with a truncated LOS, thereby also underestimating time spent in the SNF and associated costs. Finally, we are unable to definitively determine the level of financial liability for those with full or partial Medicaid coverage due to the lack of Medicaid data availability and the possibility of retrospective coverage. Our financial analysis also does not account for any supplemental private insurance. As such, our financial impact analysis should be viewed as composed of estimates only, and may not reflect actual beneficiary out-of-pocket expenses.

CONCLUSIONS

To date, individual and anecdotal data presented by the public media about negative potential unintended consequences of observation encounters have lacked evidence regarding the number of Medicare beneficiaries who are actually impacted. These findings quantify the potential adverse impact of being placed in observation and then subsequently being discharged to SNFs.

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