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Sharp Rise In Medicare Enrollees Being Held In Hospitals For Observation Raises Concerns About Causes And Consequences

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Abstract

When it is not clear that an ill patient needs to be hospitalized, he or she may be placed “under observation” in a hospital for further evaluation and short-term treatment. These hospital observation services, often a kind of halfway point between emergency department treatment and full inpatient admission, have become a hotly debated policy issue and subject of lawsuits. Using Medicare enrollment and claims data nationwide, we documented a rising trend in the prevalence and duration of hospital observation services in the fee-for-service Medicare population during 2007–09, accompanied by a downward shift in inpatient admissions. As a result, the ratio of observation stays to inpatient admissions increased 34 percent, from an average of 86.9 observation stay events per 1,000 inpatient admissions per month in 2007 to 116.6 in 2009. Medicare beneficiaries were increasingly subjected to hospital observation care and treated as outpatients instead of inpatients, which can expose them to greater out-of-pocket expenses if they are eventually admitted to skilled nursing facilities. Additionally, the nearly one million beneficiaries receiving observation services each year were, on average, being held in observation for a longer period of time per episode—some for longer than seventy-two hours. The prevalence of observation services varied greatly across geographic regions and hospitals. This may be an unintended consequence of Medicare payment policies designed to constrain hospital admissions. Additional research is needed to pinpoint the drivers and consequences of this phenomenon, as is more clarity in clinical practice and Medicare policy guidelines regarding observation care.

The decision to admit a patient to the hospital is not always straightforward. When the need for hospitalization is in doubt, it is proper to place the patient under observation for further evaluation and short-term treatment. However, this practice is not without controversy. Because time in the hospital under observation is considered outpatient rather than inpatient, it is not counted toward the three-day inpatient stay requirement that, among other requirements, qualifies a Medicare beneficiary for subsequent skilled nursing facility care.¹ Thus, although observation services are often appropriate, the extended use of such services could have unintended consequences for some Medicare beneficiaries by limiting access to skilled nursing care and subjecting them to higher out-of-pocket spending.^{2–5}

These concerns have led to a recent congressional briefing⁶ and a class-action lawsuit against the Department of Health and Human Services, which authorizes observation services.⁷ Medicare advocacy groups are particularly vocal on this issue, decrying hospital

observation care as a “damaging” and “unethical” practice that, they contend, should be fixed or stopped altogether.^{6,8}

Despite the ongoing debate, there is a notable lack of systematic information on the issue of hospital observation services. It is unclear how frequently Medicare beneficiaries are placed under observation in hospitals, how long they are held for observation in a typical encounter, and whether the prevalence and duration of observation care has been increasing in recent years, as some suggest. Moreover, although it is central to understanding the overall scope of the issue, the extent of geographic and interhospital variations in the prevalence of observation use is unknown.

To fill these gaps in the empirical evidence base, we used complete Medicare enrollment as well as inpatient and outpatient Medicare claims data spanning a thirty-six-month period, 2007–09, to generate the first comprehensive analysis of hospital observation service use among fee-for-service Medicare beneficiaries nationwide.

What Is Observation Care?

According to current Medicare regulations, *observation care* is “a well-defined set of specific, clinically appropriate services, which include ongoing short-term treatment, assessment, and reassessment that are furnished while a decision is being made regarding whether patients will require further treatment as hospital inpatients or if they are able to be discharged from the hospital.”⁹ Treated as outpatient care, observation services are covered under Medicare Part B but only when explicitly ordered and documented by a physician. Such services must also be reasonable and necessary to be covered.

Medicare policy guidance further stipulates that observation services should rarely span more than forty-eight hours.⁹ Usually, it suggests, the decision whether to discharge or admit a patient can be made within twenty-four hours. However, because Medicare does not cap the duration of observation care, the provision of observation services is not limited in practice. Thus, some patients may be held for observation as hospital outpatients for more than forty-eight hours.

Observation services can be provided in emergency departments or inpatient nursing units. They are seen as a “halfway point” between emergency department treatment and full inpatient admission.¹⁰ More than one-third of US emergency departments have observation units,¹¹ which evaluate patients in an outpatient environment for a brief period of time before a doctor makes a final decision regarding how to proceed.^{10,12}

Following a timely diagnosis and short-term treatment under observation, many patients are discharged safely, avoiding an unwanted, unnecessary, and costly hospital inpatient stay. Thus, observation care—if appropriately determined and rendered—serves an essential clinical function with obvious benefits for patients.^{10,13}

In practice, however, determining what constitutes “reasonable and necessary” observation services can often be complicated and controversial.^{14–16} Beyond the general statutory definition of *observation care*, current Medicare policy and regulations provide few specific guidelines that can assist clinical decision making. Ultimately, it is up to the physician on duty to make the clinical judgment.

Study Objectives

In this article we document recent trends in the nationwide prevalence of hospital observation services among fee-for-service Medicare beneficiaries during 2007–09. We also

describe variation in the prevalence of observation services across hospitals and geographic regions at the national, state, and Hospital Referral Region levels. We report results that provide a timely and comprehensive picture of hospital observation services for Medicare beneficiaries to inform ongoing policy discussions in this area. These results raise questions about the impact of hospital observation services on patients' access to necessary care.

Study Data And Methods

Data Sources

We used 100 percent Medicare outpatient claims data (for institutional providers) to identify hospital observation stays among beneficiaries over the three-year period 2007–09. We also used 100 percent Medicare inpatient claims data to track the volume of hospital in-patient admissions relative to outpatient observation stays over the same period. Both types of claims include information on claim date, diagnoses, services provided, charges, and reimbursements.

For outpatient observation services, observation hours per stay are reported. Also available is the place of service and provider information, which allows aggregation of data to the hospital level for comparisons between hospitals.

From the 100 percent Medicare enrollment data (also known as the “denominator” file) for the same period, we obtained information about each Medicare beneficiary's date of birth, sex, race or ethnicity, program eligibility (Parts A and B, and periods of enrollment in managed care), vital status (date of death), and place of residence (state, county, and ZIP code). All Medicare enrollment records and claims contain unique identifiers for each beneficiary, which permits a “crosswalk” between the data sets. Use of the 100 percent data from multiple sources avoids selection-bias issues that typically arise in analyses of smaller samples.

Study Population

We constructed our study population on a monthly basis, including all fee-for-service Medicare beneficiaries who were age sixty-five or older and alive throughout a given calendar month over the thirty-six-month period, as identified from the enrollment file for each year. We excluded from the monthly denominator individuals who were younger than age sixty-five on the first day of the current month, those enrolled in Medicare managed care programs in the current month, and those who died in the current month.

In each month, approximately twenty-nine million beneficiaries—or 60 percent of all individuals registered in the annual Medicare enrollment file—met all inclusion criteria for this analysis. It should be noted that there was a slight drop in the monthly number of fee-for-service Medicare beneficiaries eligible for this study over the analysis period, driven largely by the shift to managed care enrollment (see Appendix Table 1 for details).¹⁷

Identification Of Hospital Observation Stays

We followed official rules and coding instructions in the *Medicare Claims Processing Manual* to identify observation stays. These depend on both revenue center codes and the Healthcare Common Procedure Coding System classification.⁹

Pertaining to the time period of our study, an observation stay was identified when a revenue code of “general classification category” (code 0760) or “observation room” (code 0762) appeared in conjunction with a procedure code of “hospital observation service, per hour” (code G0378) or “direct admission of patient for hospital observation care” (code G0379) in a beneficiary's outpatient claim.

Where an observation stay was identified, we also counted the total hours for which observation services were provided, as reported in the “service units” field of the claim.

Analytic Approach

We counted observation stays per eligible beneficiary per calendar month. We then calculated a number of monthly measures pertaining to hospital observation services. These included prevalence—the number of people with an observation stay out of every 1,000 Medicare beneficiaries; average duration (in hours) per observation-stay episode; and the ratio of observation stays to inpatient admissions, as the number of observation care episodes for every 1,000 admissions.

All measures were first aggregated to the national level and then were stratified by patient demographics (age, sex, and race or ethnicity), providers (hospitals), and geography (state and Hospital Referral Region). Using the ZIP code to Hospital Referral Region crosswalk files available from the *Dartmouth Atlas of Health Care* website,¹⁸ we aggregated all measures to the Hospital Referral Region level.

We used descriptive statistics to track the monthly trends in the prevalence and duration of hospital observation stays, and we examined their variations across geographic regions and hospitals.

Limitations

Our analysis was descriptive and intended to provide a broad picture of hospital observation services use in the fee-for-service Medicare population nationwide. It thus was not our intention to determine the underlying causes of hospital observation care or forces driving the observed trends in observation use over the study period. Nor did we attempt to assess the potential impact of hospital observation stays on beneficiaries’ access to skilled nursing facility care or their out-of-pocket expenses for services received but not covered by Medicare.

Moreover, we did not follow beneficiaries over time to determine how being held for observation in a hospital could affect their discharge disposition or subsequent health outcomes such as functional status, hospital admission, and mortality, which would require tracking individuals as they transition through acute and post-acute care settings. To tackle each of these complex issues would go beyond the scope of the current analysis.

Study Results

Nationally, two to three of every thousand Medicare beneficiaries were placed under observation in hospitals in any given month during 2007–09 (Exhibit 1). The prevalence of observation stays rose from an average of 2.3 per 1,000 beneficiaries per month in 2007 to 2.9 in 2009.

In contrast, the monthly number of beneficiaries with an inpatient admission per 1,000 beneficiaries declined slightly over the same period, from an average 23.9 per 1,000 beneficiaries in 2007 to 22.5 in 2009 (Appendix Figure 1).¹⁷ As a result, the ratio of observation stays to inpatient admissions increased 34 percent (Exhibit 2), from an average of 86.9 observation stay events per 1,000 inpatient admissions per month in 2007 to 116.6 in 2009.

Number Of Observation Stays

Annually, we identified 814,692 hospital observation stays involving 742,888 unique fee-for-service beneficiaries in 2007, as compared with 1,019,881 observation stays for 918,180

beneficiaries in 2009—increases of 25 percent and 24 percent, respectively. Increases in hospital observation stays were seen across all racial/ethnic groups (Appendix Table 2).¹⁷

Number Of Hours In Observation

The number of hours a beneficiary was held for observation per episode also increased by more than 7 percent over the thirty-six-month tracking period (Exhibit 3), from an average of 26.2 hours in 2007 to 28.2 hours in 2009. Among beneficiaries with an observation stay in any given month, nearly 50 percent spent at least twenty-four hours in observation, close to 40 percent spent more than twenty-four but fewer than forty-eight hours on observation, and more than 10 percent were placed under observation for forty-eight or more hours (Appendix Figure 2).¹⁷

Relatively few beneficiaries—less than 3 percent each month—were held for observation for more than seventy-two hours (Appendix Figure 2).¹⁷ However, their absolute number more than doubled, from an average of 1,025 each month in 2007 to 2,258 each month in 2009 (data not shown).

Accumulating all observation hours per person annually (some had multiple observation stays in a year), we identified 23,841 beneficiaries who were held in observation for seventy-two hours or more during 2007, compared to 44,843 beneficiaries in 2009—an 88 percent increase (data not shown).

Patient Demographics

Across all demographic subgroups, there was a steady increase in the use of hospital observation services during the period 2007–09, in terms of both the monthly number of beneficiaries per 1,000 with an observation stay and the number of observation stays relative to inpatient admissions per 1,000 (Exhibit 4). The average number of hours spent in observation per episode also increased.

AGE—Specifically, hospital observation stays were more prevalent among older Medicare beneficiaries, who also tended to spend more hours in observation than did younger beneficiaries. However, the ratio of observation stays to inpatient admissions decreased with age, because there were more inpatient admissions among older beneficiaries (data not shown).

SEX—Women received observation care more often than men, and they also tended to spend slightly longer in observation than men.

RACE OR ETHNICITY—The prevalence of observation stays differed little between whites and blacks; however, it was lower among Hispanics and lowest among Asians and other minorities. The ratio of observation stays to inpatient admissions was lowest among blacks because they had the highest prevalence rate of inpatient admissions among all racial/ethnic groups (data not shown). On average, blacks also spent more hours in observation than did other groups.

Regional Differences

There were substantial regional variations in the prevalence of hospital observation use among Medicare beneficiaries. In 2009, for instance, the monthly average number of beneficiaries with an observation stay per 1,000 beneficiaries varied more than sevenfold across the states, ranging from 0.8 in New York to 5.9 in West Virginia (Exhibit 5). The variation was even greater at the Hospital Referral Region level (Appendix Figure 3) and at the hospital level (Appendix Figure 4).¹⁷

Discussion

Using Medicare enrollment and claims data nationwide, we systematically documented recent trends in the prevalence and duration of hospital observation services among fee-for-service Medicare beneficiaries during 2007–09. Our results indicate that Medicare beneficiaries were increasingly subjected to hospital observation care and, consequently, treated as outpatients instead of inpatients. Additionally, the nearly one million beneficiaries receiving observation services each year were, on average, being held in observation for a longer period of time per episode.

Our counts of observation stays should be taken as conservative estimates because we followed official instructions regarding the coding and reporting of hospital observation services, as strictly stipulated in the *Medicare Claims Processing Manual*.⁹ To our knowledge, the accuracy of Medicare claims data (self-reported by providers) is less than perfect. There were claims that would seem to be related to observation care but did not meet all of the required coding criteria. Thus, we did not count them as observation stays.

Furthermore, in practice, ample room exists for ambiguity in the proper adjudication and documentation of observation services. Thus, the actual prevalence of hospital observation services use among beneficiaries may be higher than reported here.

The rising trend of hospital observation services is consistent with a broader ongoing shift of Medicare-covered health care services from inpatient to outpatient settings, fueled in part by Medicare policy measures for cost containment, such as efforts to crack down on avoidable hospital readmissions.¹⁹ Even though hospital observation care involves a relatively small percentage of all fee-for-service beneficiaries and a small share of total Medicare costs, the substantial increases in both the prevalence and duration of hospital observation stays over a three-year period warrant attention and continuous monitoring.

Policy Changes

We speculate that several recent Medicare policy changes may have contributed to the trends in observation services reported here. Since 2004 the Centers for Medicare and Medicaid Services has authorized what is known as Condition Code 44, under which hospitals may retroactively change a patient's status from inpatient to outpatient with observation services if the utilization review committee determines, and the attending physician concurs, that an inpatient admission was not medically necessary.²⁰ This change must be made prior to discharge or release, while the patient is still in the hospital. In such cases, the entire episode of care would be treated as outpatient, invalidating the inpatient admission.

Another change involves the Medicare Recovery Audit Contractor program, which was authorized by the Medicare Modernization Act of 2003 so that the Centers for Medicare and Medicaid Services could conduct a pilot project aimed at detecting and correcting improper over- and underpayments in the Medicare fee-for-service program.²¹ In 2006 Congress mandated that the status of the Recovery Audit Contractor program be changed from a demonstration to a permanent, nationwide program.²²

Presumably, both policy changes—especially the latter—may have motivated hospitals and physicians to reduce inpatient admissions, especially of patients whose prognosis might be thought to require only short-term treatment.²³ Facing more stringent criteria for inpatient admissions and uncertainties over the prospects of retroactive payment denial, physicians may choose to place their patients under observation more often than they would otherwise.

Our finding of declining hospital inpatient admissions over the study period is consistent with this interpretation.

Substitution Of Outpatient For Inpatient Care?

Moreover, our analysis revealed a rising ratio of observation stays relative to inpatient admissions. This suggests that there may be a substitution of outpatient observation services for inpatient admissions.

We speculate that this trend may have been exacerbated further by the enactment of the Affordable Care Act of 2010, under which hospitals with higher-than-expected readmission rates will be penalized. Because patients with observation stays were treated as outpatients rather than inpatients, their admissions would not count as readmissions. This remains an important question to be examined over the next several years.

Effects On Beneficiaries

Although we could not ascertain potential adverse consequences of hospital observation stays for beneficiaries, our descriptive results did confirm the increasing prevalence and duration of observation services use among Medicare beneficiaries. Thus, concerns over the issue of hospital observation services warrant attention by policy makers.

In particular, our analysis reveals that among beneficiaries who had an observation stay, only half were “resolved” from observation care within twenty-four hours—a time window deemed most appropriate by Medicare policy guidance.⁹ Furthermore, in each year we identified a sizable number of beneficiaries who were held for observation for an extended period of time—beyond forty-eight or even seventy-two hours. These cases should be the focus of further scrutiny so that their clinical circumstances can be better understood.

Need For Clarity In Practice And Guidance

The increasing use of hospital observation services also calls for efforts to add clarity and transparency in both clinical practice and Medicare policy guidelines with regard to short-term treatments in hospitals, including observation care. Beneficiaries who are held for observation in a hospital are technically classified as outpatients. This can be confusing, especially when they spend one or more nights in the hospital on observation care.

Further confusion can result if the patient was initially admitted as an inpatient but later considered an outpatient. In these circumstances, Medicare regulations require physicians and hospital staff to notify patients about their status change and financial liability due to that change. However, these requirements are not always properly followed in actuality, and patients and families might not really understand what they are being told.^{7,24}

To reduce confusion about hospital observation care, advocates have tried to help Medicare beneficiaries understand such paradoxical questions as, “When is a hospital inpatient stay not an inpatient hospital stay?”^{25,26} The Centers for Medicare and Medicaid Services has also urged beneficiaries to ask their doctors or hospital staff whether they are an inpatient or an outpatient whenever they are in the hospital for more than a few hours.¹

More concerted efforts—involving policy makers, physicians, and hospital staff—are needed to help beneficiaries navigate the complex process of hospital care, especially when being treated as hospital outpatients receiving observation services.

Geographic And Interhospital Variations

Lastly, our analysis revealed substantial variation in the use of hospital observation services both geographically, across states and Hospital Referral Regions, and between hospitals. Further investigation is needed to increase our understanding of how local health care markets and hospital characteristics influence the rate of observation service use.

We expect some of this variation to be driven by the same forces repeatedly identified by the Dartmouth investigators, including the supply of hospital beds in a given market and regional differences in medical care intensity.^{27–30} However, the role of regulatory stringency and punitive financial sanctions experienced by others in the market should also be considered, since these factors could also influence physicians' and hospitals' decisions to hold patients for observation.

Conclusion

The use of hospital observation services by Medicare beneficiaries increased in prevalence and duration during the period 2007–09. Like overall Medicare expenditures, the prevalence of observation services varies greatly across regions and facilities nationwide. The full implications of this trend cannot be determined from this descriptive analysis.

However, it is reasonable to be concerned that observation services may create barriers for access to postacute skilled nursing facility care, especially for those having been held for observation for an extended period of time. The dual trends of increasing hospital observation services and declining inpatient admissions suggest that hospitals and physicians may be substituting observation services for inpatient admissions—perhaps to avoid unfavorable Medicare audits targeting hospital admissions.

The appropriateness of hospital observation care will certainly continue to be debated by numerous stakeholders as the Affordable Care Act is fully implemented. Hospitals and physicians will remain sensitive to financial incentives inherent in Medicare payment policies. Policy makers will work to contain Medicare costs and ensure that beneficiaries have adequate access to high-quality care. These two sets of pressures may drive even greater use of observation services.

At the same time, Medicare beneficiaries and their advocates will want access to the most appropriate care, at reasonable out-of-pocket expense to themselves. This complex reality underscores the need for further research to understand all the dimensions of the observation services issue.

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Exhibit 1.

Prevalence Of Hospital Observation Services: Number Of Medicare Beneficiaries With An Observation Stay Per 1,000 Beneficiaries Per Month, 2007–09

SOURCES Centers for Medicare and Medicaid Services, 100 percent Medicare enrollment file and Medicare (Part A) outpatient claims data, 2007–09. **NOTE** The trends shown are statistically significant ($p < 0.01$) according to t -tests using linear regression.

Exhibit 2.

Ratio: Number Of Hospital Observation Stays Per 1,000 Inpatient Admissions Per Month, 2007–09

SOURCES Centers for Medicare and Medicaid Services, 100 percent Medicare (Part A) inpatient and outpatient claims data, 2007–09. **NOTE** The trends shown are statistically significant ($p < 0.01$) according to t -tests using linear regression.

Exhibit 3.

Duration Of Hospital Observation Stays: Average Number Of Hours Per Observation Episode Per Month, 2007–09

SOURCE Centers for Medicare and Medicaid Services, Medicare (Part A) outpatient claims data, 2007–09. **NOTE** The trends shown are statistically significant ($p < 0.01$) according to t -tests using linear regression.

Exhibit 5.

Interstate Variations In The Monthly Number Of Medicare Beneficiaries With An Observation Stay Per 1,000 Beneficiaries, 2009

SOURCES Centers for Medicare and Medicaid Services, 100 percent Medicare enrollment file and Medicare (Part A) outpatient claims data, 2007–09. **NOTE** Rates shown are monthly averages per state, weighted by the total number of at-risk beneficiaries per month in each state.

Exhibit 4

Use Of Hospital Observation Services Among Medicare Beneficiaries, By Age, Sex, And Race/Ethnicity, 2007–09

	Monthly number with an observation stay per 1,000 beneficiaries ^a			Monthly number of observation stays per 1,000 inpatient admissions ^d			Average number of hours in observation per episode ^b		
	2007	2008	2009	2007	2008	2009	2007	2008	2009
Age (years)									
65–74	1.81	1.98	2.20	97.19	108.70	126.57	24.88	25.74	26.50
75–84	2.70	3.02	3.46	84.71	95.34	114.39	26.52	27.61	28.54
85+	3.20	3.67	4.29	74.29	84.84	104.84	28.38	29.73	30.68
Sex									
Male	2.15	2.37	2.65	82.92	93.07	109.63	25.17	26.13	27.00
Female	2.43	2.71	3.11	89.71	101.12	121.72	26.91	28.05	28.95
Race/ethnicity									
White	2.35	2.61	2.95	88.62	99.76	118.54	26.12	27.15	27.98
Black	2.42	2.67	3.18	74.29	82.52	102.67	27.40	28.76	30.11
Hispanic	2.10	2.31	2.61	81.94	91.38	108.63	26.59	27.60	29.39
Asian	1.20	1.43	1.68	81.18	96.67	119.82	26.21	27.43	28.41
Other	1.34	1.51	1.71	75.89	87.40	105.47	24.78	26.09	26.56
All									
Total	2.31	2.56	2.91	86.87	97.75	116.64	26.22	27.28	28.18

SOURCES Centers for Medicare and Medicaid Services, 100 percent Medicare enrollment file and Medicare (Part A) inpatient and outpatient claims data, 2007–09. **NOTE** Overall differences in all reported numbers are statistically significant ($p < 0.01$) both across subcategories of each demographic variable and over time.

^a Monthly averages per demographic group in each year, weighted by the total number of at-risk beneficiaries per month per group.

^b Monthly averages per demographic group in each year, weighted by the total number of observation stays per month per group.