

Unintended Consequences of Observation Stay Use May Disproportionately Burden Medicare Beneficiaries in Disadvantaged Neighborhoods



Geographic variation in health care access, utilization, and quality—and health outcomes—is well documented. This evidence suggests that policy interventions should potentially target specific geographic locations identified on the basis of need. Since 1970, residential segregation by income in the United States has increased—accelerating even faster after 2000—and bolstering the argument for neighborhood-focused health policy intervention.¹ There have been several efforts to identify communities with high socioeconomic disadvantage and to assess whether such disadvantages can be linked to adverse health outcomes. For example, primary care service areas with higher levels of socioeconomic disadvantage have worse outcomes, including higher rates of ambulatory care-sensitive hospitalizations, low-birth weight, and mortality.² Similarly, residents in disadvantaged neighborhoods have higher hospital readmission rates.³ In short, there is a growing body of literature demonstrating that neighborhood-level disadvantage is associated with barriers to care and poor outcomes.

The latest such example from Sheehy et al,⁴ in this issue of *Mayo Clinic Proceedings*, finds that Medicare beneficiaries residing in the most disadvantaged neighborhoods (as defined by area deprivation index) are more likely to have an observation stay, have a repeated observation stay within 30-days, and experience long-term reobservation (which they define as multiple repeated observation stays within 30-days). They find that after adjusting for demographics, morbidity, and hospital characteristics, patients who live in the most

disadvantaged areas (the top 15% by area deprivation index) had 13% higher odds of having a repeated observation stay within 30 days. Roughly 14% of the 16,400 observation stays with at least one 30-day reobservation also had multiple reobservations during that period. There was substantial geographic variation in these trends, and the level of neighborhood deprivation was positively associated with the odds of long-term reobservation.

Observation stays are intended to give clinicians additional time to evaluate and manage patients while a decision is made as to whether the patient can be discharged or admitted as an inpatient. Since 2005, advances in clinical practice and pressure to avoid payment denials for inappropriate inpatient admissions have led to growth—and variation between hospitals—in the use of observation stays.⁵ Evidence of racial or ethnic disparities in the use of observation stays within hospitals also exists.⁶ The findings from Sheehy et al⁴ suggest that area-level factors—specifically measures of socioeconomic deprivation—are an important and previously unexamined determinant of the variation and disparities in the use of observation stays. The implications of this for Medicare beneficiaries and policymakers are mixed. On the one hand, observation stays can be a cost-effective way to keep patients safe.⁷ On the other hand, higher observation stay use among disadvantaged populations might reflect reduced access to primary care and social support, and it might also have important financial implications for patients.

For billing purposes, Medicare considers observation stays to be outpatient care,

See also page 2644

despite the stays more closely resembling short inpatient admissions. Thus, rather than paying a fixed inpatient deductible, individuals enrolled in traditional Medicare are responsible for 20% coinsurance.⁸ In 10% of cases, observation stays cost Medicare beneficiaries more out of pocket than they would have paid had they been admitted as inpatients.⁹ Repeated observation stays compound this problem, because there is no cap on the outpatient coinsurance amount as there is with the inpatient deductible. Indeed, more than 25% of Medicare beneficiaries with multiple observation stays within 60 days incur higher total out-of-pocket costs than had they been admitted as inpatients.¹⁰ In this context, the findings from Sheehy et al⁴ are especially concerning because they demonstrate that the financial burden of observation stays is disproportionately concentrated among Medicare beneficiaries in the most disadvantaged communities. Although beneficiaries with supplemental coverage (ie, Medigap) are largely insulated from these costs, individuals in socioeconomically disadvantaged communities are less likely to purchase this additional coverage—although Sheehy et al⁴ did not investigate this point. Finally, beyond the out-of-pocket costs associated with the observation stay itself, there is the concern that post-acute care in a skilled nursing facility is not covered, because observation stays fail to satisfy Medicare's 3-day inpatient stay requirement.⁸ Thus, individuals in the most disadvantaged communities are also more likely to lack this coverage when they need it.

This study documents a strong association between observation stay use and the area deprivation index; however, the factors that determine this relationship are unclear, and the study itself has some limitations. For example, one key limitation is the potential for non-random sample inclusion. Because residents who live in areas with high deprivation have higher baseline rates of observation stays, they are also more likely to be included in the denominator for reobservation than residents from other neighborhoods. To address this concern,

analyzing counts of observation stays using the entire Medicare population might have been more appropriate. Similarly, instead of assessing reobservation as a binary outcome, the authors could have used a categorical outcome of emergency department use, inpatient admissions, reobservation, and no hospital use to better disentangle utilization patterns.

The authors argue that observation stays might be relatively sensitive to socioeconomic factors because residents in disadvantaged neighborhoods are more likely to be discharged without fundamental social supports (eg, housing, transportation) or adequate access to ambulatory care, medications, and other necessary health care resources. We would suggest not only that the lack of social supports can lead to subsequent observation stays, but also that it can lead to patients being observed rather than discharged during the index stay, because the clinician might not trust that the patient will be able to arrange timely follow-up care in the community. Further study is needed to identify such factors and to develop and implement interventions to modify them.

While interpreting the findings of this study, we must also be mindful about the role of individual versus neighborhood effects. High neighborhood deprivation is driven by factors—structural racism chief among them—that encourage the outward migration of individuals with higher socioeconomic status and the inward migration of those with lower socioeconomic status. Amidst such evolving economic segregation, it is difficult to control for unobserved individual characteristics and to isolate the true neighborhood effect. Sheehy et al⁴ estimated the neighborhood effect accounting for factors such as race, disability, and Medicaid eligibility; however, factors such as educational status, marital status, social support, and high-risk health behaviors are not included in their models. A recent meta-analysis of 1170 empirically focused neighborhood effects studies published in the last 24 years documented that most reports fail to appreciate these fundamental identification problems, leaving the independent

effect of neighborhood contexts on health unclear.¹¹

Still, this study adds to the growing body of literature that marginalized patients in the health care system are likely to be cumulatively and disproportionately disadvantaged by the interplay of structural factors and health policies. Although more work is needed in this area, these findings from Sheehy et al⁴ provide further evidence in support of proposed reforms to observation stay policy, including capping the out-of-pocket cost of observation stays at the level of the inpatient deductible and allowing observation stays to count toward the 3-day stay requirement for skilled nursing facility coverage. In light of these findings regarding long-term reobservation, we would go so far as to suggest that the total out-of-pocket cost for observation stays occurring within 60-days (ie, the Medicare inpatient benefit period) should be capped at the level of the inpatient deductible.

Momotazur Rahman, PhD
David J. Meyers, PhD

Department of Health Services, Policy, and Practice
Brown University

Brad Wright

Department of Family Medicine
University of North Carolina at Chapel Hill
Chapel Hill, NC

Potential Competing Interests: The authors report no competing interests.

Correspondence: Address to Momotazur Rahman, PhD, Department of Health Services, Policy, and Practice, Brown University, 121 South Main Street, S-6, Providence,

RI 02912 (momotazur_rahman@brown.edu; Twitter: @momotazur).

ORCID

Momotazur Rahman:  <https://orcid.org/0000-0002-8592-3511>

REFERENCES

1. Reardon SF, Bischoff K, Owens A, Townsend JB. Has income segregation really increased? Bias and bias correction in sample-based segregation estimates. *Demography*. 2018;55(6):2129-2160.
2. Butler DC, Petterson S, Phillips RL, Bazemore AW. Measures of social deprivation that predict health care access and need within a rational area of primary care service delivery. *Health Serv Res*. 2013;48(2 Pt 1):539-559.
3. Jencks SF, Schuster A, Dougherty GB, Gerovich S, Brock JE, Kind AJH. Safety-net hospitals, neighborhood disadvantage, and readmissions under Maryland's All-Payer Program: An observational study. *Ann Intern Med*. 2019;171(2):91-98.
4. Sheehy AM, Powell WR, Kaikow FA, et al. Thirty-day re-observation, chronic re-observation, and neighborhood disadvantage. *Mayo Clin Proc*. 2020;85(12):2644-2654.
5. Silver B, Rahman M, Wright B, et al. Effects of Medicare medical reviews on ambiguous short-stay hospital admissions. *Health Serv Res*. 2018;53(6):4747-4766.
6. Wright B, Zhang X, Rahman M, Abir M, Ayyagari P, Kocher KE. Evidence of racial and geographic disparities in the use of Medicare observation stays and subsequent patient outcomes relative to short-stay hospitalizations. *Health Equity*. 2018;2(1):45-54.
7. Baugh CW, Schuur JD. Observation care—high-value care or a cost-shifting loophole? *N Engl J Med*. 2013;369(4):302-305.
8. Wright B, Dusetzina SB, Upchurch G. Medicare's variation in out-of-pocket costs for prescriptions: The irrational examples of in-hospital observation and home infusion. *J Am Geriatr Soc*. 2018;66(12):2249-2253.
9. Office of Inspector General. Vulnerabilities remain under Medicare's 2-midnight hospital policy. Washington, DC: Department of Health and Human Services; 2016. Available at: <https://oig.hhs.gov/oei/reports/oei-02-15-00020.asp>. Accessed October 4, 2020.
10. Kangovi S, Cafardi SG, Smith RA, Kulkarni R, Grande D. Patient financial responsibility for observation care. *J Hosp Med*. 2015;10(11):718-723.
11. Oakes JM, Andrade KE, Biyoow IM, Cowan LT. Twenty years of neighborhood effect research: An assessment. *Curr Epidemiol Rep*. 2015;2(1):80-87.