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Is every day at home a good day?

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As health systems, insurers, and policy makers strive to transition to models of care that reward high-quality care, particularly for those with serious illness, the need for person-centered claims-based quality measures grows. A measure of days at home could fill this void. Days at home has good face validity, as most older adults express a strong preference to spend time out of hospitals and nursing homes at the end of life and to avoid burdensome transitions of care between settings.^{1,2} Furthermore, because this measure could be captured using claims data, it could be used as a quality measure across settings of care, from Accountable Care Organizations (ACOs) to Medicare Advantage plans to palliative care programs.

Two recent papers, by Freed et al. and Shen et al., attempt to validate a days at home measure, with both raising questions on the challenges and implications of using this measure.^{3,4} Freed et al. examine variation at the ACO-level in days at home among a cohort with serious illness, finding an average of 349 days at home per person-year, with an interquartile variation of 5.3 days/year (4.2 days/year when risk-adjusted). Although this is a statistically significant difference, is it clinically significant, particularly in this population with serious illness? Notably, even hip fracture, the condition associated with the largest reduction in days at home, results in only one less day at home per year on average. Given the relatively low variation in the Freed et al. study, it is unclear if days at home adds new information relative to measures of hospital admissions or total Medicare expenditures. The Medicare Payment Advisory Commission reached a similar conclusion in writing that “(w)ith so little variation across local market areas...the Commission questions the immediate utility of the [Home and Community Days] measure in its current form”.⁵

In examining the characteristics associated with days at home, these papers also raise the question of what is currently driving variation in the measure, and if implementing it could have adverse consequences. Freed et al. finds that ACOs with the lowest quartile of days at home are more likely to care for Black and Hispanic older adults with serious illness, those in urban regions, and those in regions with a greater supply of hospital beds. If ACOs are penalized for days at home, could that widen racial and ethnic disparities by penalizing ACOs that serve communities of color. Shen et al. similarly finds a weak but significant association of unmanaged pain and symptoms with fewer days at home among a cohort in

a palliative care program. Employing this measure more broadly among older adults with serious illness could mean that payers and health systems would be more likely to bolster efforts to manage symptoms to increase days at home. Alternatively, it is possible that payers and health systems avoid individuals with conditions more likely to result in a high pain and symptom burden.

In raising the question of the relationship between days at home and pain and symptoms, Shen and colleagues draw attention to challenge of relying on a days at home measure: a count of days at home says nothing about quality of care or life during those days. It is unclear in the Shen et al. study if those with better pain management at home have more days at home, or if those with less pain regardless of management are those who can stay in the home. We propose that if measures of days at home are to be promoted, they should be tied to rigorous quality of care at home measures, including both the presence of care needs and level of unmet needs, functional assessments, and responsiveness of care. The hospice Consumer Assessment of Healthcare Providers and Systems (CAHPS) offers an example of how this sort of comprehensive patient or proxy-reported quality data could be operationalized.⁶

Measures of days at home should also be coupled with comprehensive measures on the impacts of family and friend caregivers of shifting care from institutional settings to the home. Family caregivers, who are disproportionately women and persons of color, experience substantial costs of caregiving, both in terms of hours spent caring and missed wages or education.⁷ Family caregivers not only supplement services like skilled home health without pay, but also report that they are not adequately trained or prepared for these roles.^{8,9} An emphasis on days at home without considering who is providing care during these days risks further incentivizing a transfer of costs from the healthcare system to family caregivers, and broadening gender and racial inequities.

It is also important to consider what unintended consequences could result from an emphasis on days at home, particularly those that result from how the measure is specified. While Shen and colleagues consider days not at home to be those in observation, inpatient, skilled nursing facilities, and with emergency room visits (with each emergency room stay considered to be half a day away from home), Freed and colleagues do not include emergency room visits and observation stays in their measure of days at home. Observation stays are a highly controversial and growing form of hospital admission under the outpatient benefit. Although the intention is that they are to be used for individuals with less-acute needs, prior research has demonstrated that they are strongly driven by region and patient demographics, with beneficiaries who are older and from racial and ethnic minority groups more likely to be admitted under observation status.¹⁰ They are particularly financially burdensome for patients because they are subject to outpatient cost-sharing, not fully covered under traditional Medicare as an inpatient stay.¹¹ Furthermore, other policies that have sought to reduce inpatient hospitalizations have resulted in increasing use of observation stays and emergency room visits.¹² A days at home measure that does not include observation stays could result in this same effect. Furthermore, emphasizing days at home could miss opportunities where hospitalizations or nursing facility care is desired

by patients and families.^{13, 14} As described above, counter-balancing measures need to be carefully considered to ensure that facility-based care is not overly discentivized.

There are multiple unanswered questions for researchers to answer before a days at home measure is widely deployed. First, further work to compare the definitions of days at home and the resulting characteristics and drivers of varying definitions is important to know what specific definition we should be relying on. This work should consider how this measure relates to other claims-based measures. For example, it is possible that days of home pragmatically functions as the inverse of hospital days. If this is the case, it is uncertain how much value this more complex measure truly adds. Researchers need to pay special attention to how race, ethnicity, and socioeconomic context are associated with days at home to not risk deepening disparities. Researchers additionally need to measure the average caregiving reliance and costs for individuals with serious illness spending more days at home, to fully assess the costs of days at home vs. institutional settings.

These measurement challenges around incorporating a count of days at home for older adults with serious illness highlight an underlying tension around quality of care for this population: it is difficult to avoid unnecessary and undesired treatments while also not inappropriately withholding access to potentially beneficial, desired, and yet costly care. Navigating this tension requires careful consideration of the details of how a days at home measure is specified, such as the treatment of emergency department stays and observation visits, as well as additional counter-balancing measures capturing quality of home-based care and patient and caregiver experience. Finally, if measurements around days at home are tied to cost savings, how will these savings be allocated? Will they remain in the inpatient setting, or will they be allocated to bolster home-based services and caregiver supports? Answering these questions is imperative to ensure that increasing days at home results in improvements in quality of life, not merely a change in setting and services.

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