

Medicaid and the Future of Health Care Hot-Spotting

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Policy Points

- > When evaluating hot-spotting, it's important to focus on the impact on the health and well-being of vulnerable populations, not just cost savings.
- > Hot-spotting may have greatest potential among people with persistently high-cost health conditions, such as developmental disabilities and behavioral health disorders.

ABSTRACT

A recently published randomized clinical trial of the Camden Coalition's hot-spotting model, which uses teams to identify and manage the care of high-frequency hospital users, found no impact on hospital readmission rates. The limitations and implications of the trial have been widely discussed. This brief looks at the significance of the trial results and at the experiences of a completed New Jersey Medicaid ACO demonstration that also used a hot-spotting approach, for Medicaid, the principal source of coverage for the nation's most medically and socially complex patients. The author considers questions relevant to Medicaid agencies, such as whether targeting patients with repeated hospitalizations makes sense; if care management is sufficient; and what outcomes we should expect hot-spotting interventions to improve.

INTRODUCTION

The [Camden Coalition of Healthcare Providers](#) is the most well-known developer of the hot-spotting model in which care teams identify and intensively manage the care of patients who frequent emergency departments and inpatient wards. Hot-spotting seeks to address not just the medical needs of these complex patients, but also social drivers of health, such as coordinating with supportive housing providers and navigating enrollment in disability income and supplemental food programs.

The model's promise to improve the health of high-need patients and reduce avoidable hospital spending has garnered attention from state Medicaid policymakers. In fact, the coalition hot-spotting model was developed with the New Jersey Medicaid delivery system in mind and was instrumental to the launch in 2011 of the New Jersey [Medicaid ACO demonstration project](#). While its accomplishments are noteworthy,¹ the New Jersey ACO model did not achieve documented savings, foreshadowing a renewed debate about the viability of the model.

That debate began in earnest in January with the *New England Journal of Medicine (NEJM)* article reporting on a gold-standard randomized clinical trial (RCT) of the Camden model.² The new study showed that it had no impact on patient 180-day hospital readmission rates. Some criticized the *NEJM* study (including me), noting, among other things, that its focus was limited mainly to a single outcome while other metrics were equally or perhaps more important.³⁻⁵ But with publication in one of the nation's most prestigious journals by a team of exceptional investigators, it could not be dismissed.

Although discussions of the limitations and implications of the RCT are important, they thus far have offered little concrete guidance for Medicaid officials and stakeholders. However, as the principal source of coverage for the nation's most medically and socially complex patients, Medicaid must be front and center in devising solutions to the problems brought into relief by the hot-spotting debate. The experiences of the now-completed New

Jersey Medicaid ACO demonstration and the negative RCT findings make it timely to reflect on fundamental assumptions of hot-spotting and its implications for Medicaid.

Does targeting patients with repeated hospitalization make sense?

It is well known that a small proportion of the population accounts for an outsized share of medical spending. This is especially true in Medicaid. A New Jersey study by my colleague Derek DeLia showed that the 1% most costly Medicaid enrollees accounted for 29% of total spending, and the top 10% generated nearly three-fourths of spending.⁶

The coalition care management teams recruited patients experiencing repeated hospitalization, rather than focusing only on patients with specific clinical conditions (although the intervention does have some patient inclusion and exclusion criteria). This approach has practical

WHAT CAN MEDICAID LEARN FROM HOT-SPOTTING RESEARCH?



Hot-spotting care management interventions

are hampered by inadequate community resources, such as lack of affordable housing.



When evaluation hot-spotting, it's important to focus on

the health and well-being of vulnerable populations, not mainly on cost savings.



Although most patients identified for hot-spotting when they have peak hospital utilization tend to reduce their use over time,

emergency department "super users," as well as high inpatient users, still may benefit from hot-spotting strategies.



Hot-spotting may have the greatest potential among

people with persistently high-cost health conditions, such as developmental disabilities and behavioral health disorders.

Cantor J. C., Medicaid and the Future of Health Care Hot-Spotting, The Milbank Memorial Fund Blog, March 2020.





Should a homeless person with serious mental illness who is housed and enters behavioral health treatment but does have fewer hospitalizations be seen as a failure? Certainly not. We do not demand that new medical treatments have a positive return on investment to Medicaid; why should we do so for innovative care management?

appeal: the comparatively large group of repeat hospital users enables efficient identification and engagement of patients eligible for hot-spotting right at their bedsides.

This approach assumes that high hospital use is likely to persist over time and that it can be remediated through care management addressing not just clinical but also social determinants of health. But the RCT showed that with or without intensive intervention, the repeat hospital users they studied “regressed to the mean,” i.e., became more average hospital users over time. In fact, the study outcome, 180-day rehospitalization rates, declined by 38% in both the intervention and control study arms.

It is important to look not just at the degree of natural *decline* in hospital resource use, but at *levels* of hospital use and costs over time following that decline. In statewide New Jersey hospitalization data, we found that costs among hospital high users do, in fact, remain high even after an initial period of decline.⁷ Patients with at least two hospital stays in the previous six months in 2009 experienced regression to the mean of roughly the same order of magnitude as the hot-spotting study. Importantly, virtually all of the decline occurred very quickly, within a few months, after which costs remained relatively high, about \$6,000 per quarter (2011 dollars), over a two-year follow-up period. This demonstrates that intensive care management has room to reduce costs over a long period, beyond the time frame studied by the RCT. Our study also showed that emergency department “super users” (defined as six or more visits in six months) also may benefit from hot-spotting intervention, with much less reversion to average costs and roughly the same long-term cost profile as inpatient high-users.

We also found that behavioral health and developmental disorder diagnoses were associated with less regression to the mean, offering perhaps more opportunity to benefit from intensive care management.

Should hot-spotting be more targeted by diagnosis or other characteristics?

The population of high-users of health care is diverse. The aforementioned DeLia study showed that individuals staying in the top 1% of the spending distribution over long periods are nearly all in the aged, blind or disabled eligibility group, and they disproportionately are diagnosed with developmental disability, central nervous system conditions, and psychiatric disorders. Developmental disability, in particular, stood out as an important predictor of persistently high cost. The social supports and services needs that hot-spotting is designed to facilitate may be particularly important for these patient groups. The hot-spotting RCT was not large enough to determine whether a more targeted approach may have yielded more promising findings, although other studies hint that targeting specific groups of high-risk patients may be effective. More study of this question should be of high priority.

Is care management sufficient?

The coalition hot-spotting model depends on rapid referral to existing community resources coupled with advocacy for filling gaps in available social supports such as food, housing, or income assistance. The trial showed the treatment group was not meaningfully more likely to receive public benefits, and the fundamental question remains: Can even a comprehensive approach

to care management work if there are systemic barriers to enrollment in social service programs? The inadequacy of community resources to address the social determinants of health surely hampers the effectiveness of models like the coalition's hot-spotting and remains one of the most vexing challenges for improving the health and well-being of high-needs patients.

What outcomes should we expect hot-spotting interventions to improve?

Over the past two decades, the dominant paradigm for health care improvement has been the "triple aim," seeking interventions that improve patient experiences and population health while reducing avoidable costs.⁸ The third of the aims—reducing costs—has great appeal to stakeholders worried about taming Medicaid budgets, prompting broad support for the model. The idea of making people better off while reducing cost is irresistible. Rehospitalization, the outcome selected for the hot-spotting RCT, reflects this view, as it is costly and potentially avoidable. But for the population targeted by the intervention, underutilization of essential services can also be a big problem. High rates of untreated or undertreated substance misuse and mental health disorders can be especially challenging and costly to address. Should a homeless person with serious mental illness who is housed and enters behavioral health treatment but does have fewer hospitalizations be seen as a failure? Certainly not. We do not demand that new medical treatments have a positive return on investment to Medicaid; why should we do so for innovative care management? Indeed, our view of the viability of hot-spotting might be quite different if all three of the aims, including improving experiences and outcomes, were weighted equally.

The outcome of the New Jersey Medicaid ACO demonstration vindicates this view. As noted, shared savings were not achieved in the demonstration. However, successor legislation, which replaced the ACOs with "regional health hubs," affirms their contribution as vital community resources equipped with organizational and integrated data resources to distinctly support public health priorities identified by Medicaid and other state agencies (e.g., addressing opioid use and maternal and

infant mortality). Each regional hub will be responsible for strengthening local health information exchanges and developing population health improvement plans. Upon state approval of the plans, they will be eligible for financial support from Medicaid. As such, while retaining concerns about cost, the regional health hubs embrace the other two of the triple aims: improving well-being among these vulnerable populations.

LOOKING AHEAD

The publication of a rigorous randomized trial of health care hot-spotting led to appropriate reflection and reconsideration of this dramatic shift in approach to complex care. Embedded in New Jersey Medicaid and its experimentation with ACOs, some lessons from the hot-spotting experience are apparent. It is important to broaden beyond a narrow focus on the savings, the third aim of the triple aim. If the health and well-being of patients is the goal, positive financial return on investment is not the right standard. This broader perspective calls for more appropriate indicators of success. Rehospitalization is one possible metric, but more patient-centered measures such as achieving stable housing and engaging in essential care are no less important.

The experience of the hot-spotting model also raises many questions, such as whether more targeted approaches can be more effective and what metrics are most likely to reflect achievable improvements in complex patient populations. Medicaid is the right platform to address these questions. There is a long tradition of demonstration and experimentation in Medicaid, including through 1115 waivers, but that tradition often has not yielded the rigorous or timely evidence that is needed to advance complex care. Fortunately, the Centers for Medicare and Medicaid Services and the Medicaid and CHIP Payment and Access Commission are focusing on advancing more fruitful evaluation strategies.⁹ Achieving rapid learning using rigorous techniques may push Medicaid stakeholders out of their comfort zone. The experience of the Camden Coalition hot-spotting model underscores the need to do just that.

NOTES

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