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CASE STUDY

A Community Partnership to House and Care for Complex Patients

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Rising homelessness, especially among older adults, has significant ramifications for our health care system. People experiencing homelessness tend to experience worse health and poorer access to needed health care than do people with stable housing. Commonwealth Care Alliance (CCA), a not-for-profit payer and provider that offers health plans to people dually eligible for Medicare and Medicaid, sought to address homelessness among its beneficiaries through a partnership with a local community-based housing organization, Hearth. This partnership led to many CCA beneficiaries gaining access to permanent supportive housing in a setting that allowed CCA and Hearth to monitor and address their medical, social, and behavioral needs. It also provided an opportunity to examine health care utilization and cost trends associated with permanent supportive housing. The authors' experience demonstrates that a community-based partnership can effectively address homelessness among older adults with significant medical needs and that permanent supportive housing may contribute to meaningful reductions in health care expenditures.

KEY TAKEAWAYS

» Homelessness is an important and growing driver of poor health, especially among older adults. Partnerships between health care organizations and community-based housing organizations can help address the health and housing needs of people experiencing homelessness. In these partnerships, aligned mission and complementary expertise are key. For instance, although both

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Commonwealth Care Alliance (CCA) and Hearth provide specialized care for older adults, CCA brings medical expertise, whereas Hearth brings housing resources, supportive services, and knowledge of home safety.

- Risk-bearing health care organizations — including payers, care delivery providers, and integrated organizations such as CCA — have increased flexibility to spearhead and finance initiatives that address homelessness for their members.

- Enrolling older adults experiencing homelessness in permanent supportive housing provided by Hearth — a model that integrates supportive services dedicated to aging populations with housing or housing assistance and is complemented by clinical teams — was associated with reduced health care utilization and spending.

The Challenge

Housing and health are intimately connected. People experiencing homelessness — those without access to reliable and regular nighttime shelter — are more likely to suffer from physical and behavioral illness and have higher per-capita health spending than those with stable housing.[1,2] Providing permanent supportive housing for people experiencing homelessness has been shown to improve self-reported quality of life and health outcomes, particularly in specific subpopulations, such as people with HIV/AIDS.[3-7] Data suggest that some housing interventions (such as permanent supportive housing, which combines housing assistance with supportive services, such as case management, counseling, and employment assistance for homeless persons with disabilities) may also reduce health care costs for certain populations.[8-10] In this case study, we describe a partnership model to provide permanent supportive housing for older adults experiencing homelessness.

Based in Massachusetts, Commonwealth Care Alliance (CCA) is a not-for-profit, community-based payer and provider, offering health plans and care delivery services to individuals who are dually eligible for Medicaid and Medicare. Most people eligible for CCA health plans have complex medical, behavioral health, and social needs. Among CCA beneficiaries younger than 65 years, 75% have a physical or behavioral health disability, 68% have serious and persistent mental illness, and 31% have a substance use disorder. Among CCA beneficiaries 65 years of age or older, 69% are nursing home certifiable, yet more than 90% live independently at home; 65% have four or more chronic medical conditions; 59% have a physical or behavioral health disability; and 59% speak English as a second language. CCA contracts with the federal and state governments and is accountable for the total cost of health care for approximately 40,000 beneficiaries.

Over the past 20 years, the U.S. Centers for Medicare & Medicaid Services (CMS) has supported programs to merge Medicare and Medicaid dollars and design care models for dually eligible patients. In 2004, CCA was a founding health plan in the launch of Senior Care Options, a dual-eligible demonstration in Massachusetts that was approved by CMS. CCA also participates in One Care, the dual-eligible demonstration in Massachusetts for people younger than 65 years of age,

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which originated through the CMS Financial Alignment Initiative. Additionally, as part of a Section 1115 waiver, CMS allowed Massachusetts to use federally dispersed, state-distributed Medicaid funds for expanded services and global capitation for dually eligible patients. Consequently, MassHealth (the state Medicaid agency) allowed certain organizations, including CCA, to provide services not traditionally reimbursed in a fee-for-service model, such as medically tailored meals and the supportive services component of permanent supportive housing.

Dually eligible populations are an important segment of high-need, high-cost patients with complex medical and social needs, including housing instability (ranging from difficulty paying rent on a regular basis to absence of a permanent living arrangement). Although data specifically tracking housing needs and homelessness among CCA beneficiaries are limited, we estimate that at least 5% to 10% of CCA beneficiaries are actively experiencing homelessness (e.g., an internal analysis of available quantitative and qualitative data demonstrated that 8% of members younger than 65 years of age were experiencing homelessness in 2019, although lack of collected documentation among health system providers and insurance claims impairs data accuracy). Housing instability, and homelessness in particular, materially impacts CCA's ability to ensure that beneficiaries' medical needs are adequately met. Some medications (e.g., insulin) require refrigeration; many chronic conditions are worsened by exposure to harsh environments (physical environments, such as New England winters, and the consequences of living in high-poverty, high-crime areas); and behavioral conditions are more challenging to treat without stable housing.[11] These challenges lead to and exacerbate poor health and increase the probability of acute health events, which leads to preventable ED visits and hospitalizations.

These problems are compounded in the growing population of homeless older adults (defined as those 50 years of age and older). The number of adults aged 65 and older who are experiencing homelessness is expected to triple over the next decade.[12] People experiencing homelessness who are aged 50 or older experience accelerated onset of aging-related conditions, such as cognitive impairment, functional impairment, falls, and frailty, at rates higher than adults with an average age of 80 years in the general population.[13] Thus, this population has a unique combination of needs, including those arising from chronic conditions, substance use and behavioral health problems, and geriatric conditions.

Although permanent supportive housing has been shown to improve housing stability for many populations,[14] little is known about whether housing programs that integrate housing with health care and behavioral services reliably reduce unnecessary health care utilization in the growing population of homeless older adults.

CCA employs community health workers and housing specialists to support beneficiaries experiencing housing instability to obtain housing. Unfortunately, like much of the United States, Massachusetts has significantly fewer public housing units than needed to meet demand. Meanwhile, the Social Security Act prohibits the use of Medicaid funds to pay directly for housing (e.g., rent payments),[15] curtailing the ability of health plans like CCA to fund housing. In recent years, CMS has allowed exceptions for some housing-related costs, but paying for room and board remains prohibited,[16] an area of concern and controversy among stakeholders and experts.[17,18]

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The Goal

CCA sought to improve the ability to care for beneficiaries experiencing housing instability, particularly older adults experiencing homelessness. Given the complex needs of this population, the goal was to provide permanent housing with dedicated and integrated health and social services for beneficiaries, such that they could access a range of supports, including on-site medical care at their housing facility.

Prior research suggests that permanent supportive housing improves health outcomes and may reduce total health care costs.[14,19] Consequently, we sought to evaluate health care utilization and costs among older CCA beneficiaries who experienced homelessness and subsequently enrolled in permanent supportive housing.

The Execution

CCA partnered with a local community-based organization with resources and expertise to provide permanent supportive housing for older beneficiaries.

Hearth, Inc. is a 30-year-old not-for-profit affordable housing developer and senior services provider dedicated to ending elder homelessness. Hearth works with governmental and nongovernmental partners to provide affordable housing for seniors. All housing operated by Hearth provides clinical and nonclinical services that support residents, allowing them to age with dignity surrounded by a community of peers. People 50 years old and older who are experiencing homelessness are eligible to receive housing services through Hearth. Hearth receives funding through program service revenue; municipal, state, and federal agencies; grants; and philanthropy.

Background

Leaders of CCA and Hearth met in the early 2000s through the Massachusetts advocacy community. Hearth staff, when learning that CCA started a health plan for dually eligible seniors in 2004, began enrolling eligible and interested residents into the CCA plan. Hearth staff realized the benefit of the CCA model to their residents. CCA provides home-based services to augment primary care, including behavioral health care, community health workers to address social determinants of health, care management, nurses and nurse practitioners to attend to medical concerns and geriatric conditions, and home-based primary care for homebound beneficiaries. The organizations' leaders at that time, Robert J. Master, MD, at CCA, and Elisabeth Babcock, PhD, at Hearth, recognized a shared mission for their overlapping population. The two organizations began working together around 2004, with Hearth providing permanent supportive housing units for qualifying CCA beneficiaries and CCA providing Hearth with per-beneficiary payments to support a portion of Hearth's on-site supportive services (which cost a total of $74.48 per resident per day, in 2021 dollars), including on-site nursing, social work, and program/activity management. The average cost to maintain Hearth housing units in 2021 is estimated to be an additional $76 per unit per day, funded through a combination of grants and philanthropic donations. CCA's funds come

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from the Medicaid component of its combined premium that covers long-term supports and services but do not contribute to beneficiaries' room and board (housing unit) costs.

Workflows

The CCA-Hearth partnership has two distinct pathways that: (1) connect CCA beneficiaries who are experiencing homelessness with Hearth (Figure 1); and (2) connect Hearth residents with the CCA health plan insurance.

CCA to Hearth

CCA beneficiaries who receive care delivery services directly from CCA (approximately two-thirds of all CCA health plan beneficiaries) are assigned a CCA-employed Care Partner (e.g., a telephonic nurse case manager). Care Partners assess medical, social, and behavioral health needs, including

FIGURE 1

Process for Enrolling a Commonwealth Care Alliance (CCA) Beneficiary into the Hearth Permanent Housing Support Program

CCA's Care Partners screen beneficiaries for social determinants of health and match beneficiaries with services to address them. Housing Specialists are trained to guide members through the affordable housing application and acquisition process. For members who qualify for Hearth housing, Housing Specialists support beneficiaries submitting applications to the organization. Capacity at Hearth and difficulties in the affordable housing application process limit all eligible beneficiaries from being placed in Hearth housing.

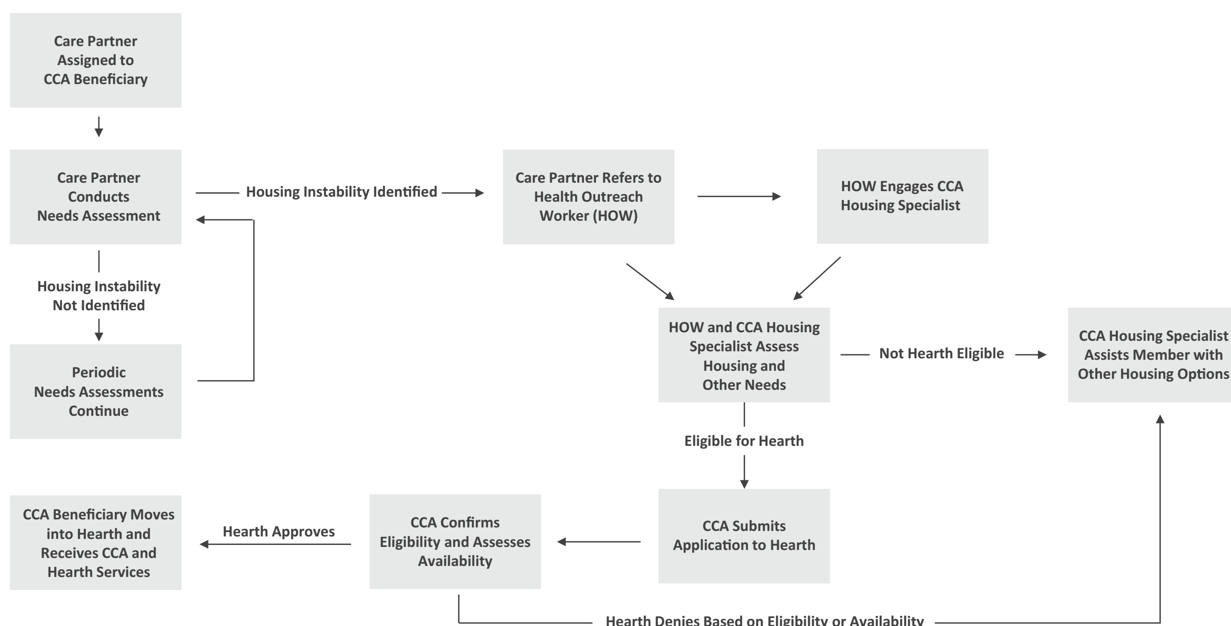

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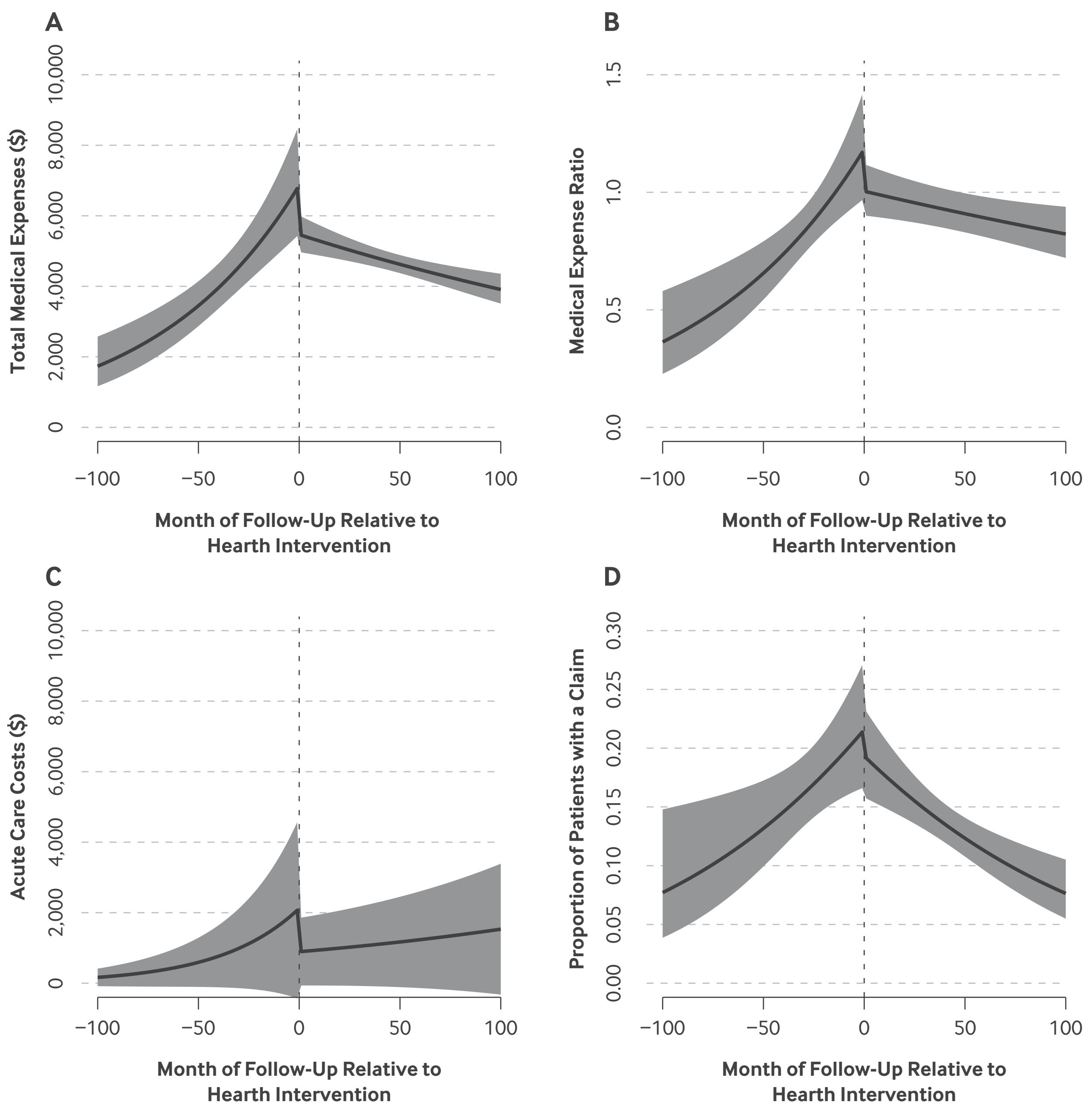
FIGURE 2

Health Care Cost Trends Associated with Hearth Intervention for Commonwealth Care Alliance Patients

Each of the curves seen in A–D reflects the estimated mean values across time from the generalized estimating equation model with a 95% confidence interval band. Month 0 represents the time at which patients became housed through Hearth, which will have occurred some time between 2004 and 2019 for each participant. In each panel, the intervention coincided with an acute decrease in the outcome followed by a plateau or reversal in the preintervention trend. Notes: in B, Medical Expense Ratio refers to the ratio between medical expenses and insurance premiums. In C, Acute Care Costs refers to utilization expenses related to ED and inpatient claims in each month. Likewise, in D, in Proportion of Patients with a Claim, the numerator was the number of members who had an ED or inpatient claim in each month. The denominator for both Medical Expense Ratio and Proportion of Patients with a Claim changed over time as members enrolled and churned over the period.



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housing instability and risk of housing instability, on, at minimum, an annual basis. If housing instability is identified, the Care Partner submits a referral for additional support from CCA's community health workers (Health Outreach Workers, who are nonclinical members of CCA teams that assist with social determinants of health and are experts in community-based resources). Approximately 10 requests per day are sent from Care Partners to Health Outreach Workers to support beneficiaries with housing needs.

> *Reaching beneficiaries who experience housing instability is often challenging. Many have limited access to mobile phones (e.g., while CCA beneficiaries are eligible for government-sponsored mobile phones through their Medicaid benefit, phone companies who offer these phones need an address to which to mail the phones, impairing access for people who do not have a consistent address).*

A CCA Housing Specialist engages with the beneficiary in the community to help him or her understand available services for that individual and help the beneficiary gain or retain housing. If the beneficiary is eligible for a Hearth facility — has a housing voucher, meets age criteria, and could benefit from supportive housing — the Housing Specialist refers the beneficiary to Hearth. Hearth confirms or denies eligibility and availability. If approved, the beneficiary moves into Hearth housing and continues to receive CCA services in addition to the on-site services provided by Hearth. Care Partners can do home visits with these beneficiaries at Hearth facilities.

Hearth to CCA

Hearth residents receive help from Hearth staff to understand available social services, community resources, and health insurance options. The Hearth team educates their residents on what health plans they are eligible for and assists in enrolling the resident in the health plan of their choice. If the resident selects CCA as the health plan, CCA provides its care model services to the resident-beneficiary; 17% of Hearth residents today are enrolled in a CCA health plan.

The Team

CCA's interdisciplinary care teams include Care Partners (nurse case managers), Health Outreach Workers (community health workers), Nurses, Nurse Practitioners, Physicians, and Behavioral Health Specialists.

Hearth's housing supports team (for all Hearth residents, including CCA beneficiaries) includes Program Managers, Resource Specialists, an Activities Coordinator, Clinical Case Managers, Adult Community Clinical Services Clinicians, Peer Support Specialists, Nurse Case Managers, and Personal Care Homemakers.

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Hurdles

The CCA-Hearth partnership faced several obstacles, starting with the identification of beneficiaries experiencing homelessness. For instance, as CCA continued to grow and evolve, the records systems — including the electronic health record, care management platform, and medical claims — captured varying levels of information specifically pertaining to housing instability and homelessness. Although implementation of standardized screening for social determinants of health helps, accuracy is limited by the persistence of historical documentation practices (e.g., paper records) and by inconsistent workflows between CCA and the external systems of other providers that serve CCA beneficiaries. Additionally, beneficiaries can feel shame about their housing instability and do not share their circumstances, and documented addresses for members are frequently misleading (e.g., members will provide the address of a relative or friend in order to receive CCA mailings even though they do not have a fixed residence).

Reaching beneficiaries who experience housing instability is often challenging. Many have limited access to mobile phones (e.g., although CCA beneficiaries are eligible for government-sponsored mobile phones through their Medicaid benefit, phone companies who offer these phones need an address to which to mail the phones, impairing access for people who do not have a consistent address). Further, phone theft and damage among people experiencing homelessness are common. Care Partners who work closely with beneficiaries may reach beneficiaries through knowledge of beneficiaries' support networks of family or friends. When beneficiaries engage with the health care system, CCA is alerted through real-time notification of ED visits using admission-discharge-transfer feeds and uses these opportunities to engage with members in hospital settings and to assess for the evolution in social determinants of health.

Even when CCA Care Partners can get in touch with a beneficiary who is eligible to be placed on a waiting list for permanent housing, many beneficiaries are unable to complete the application and enrollment processes without assistance. CCA Housing Specialists can guide those who need help with the application process and other housing-related needs. Housing Specialist tasks include supporting enrollees with their applications for public or private housing (e.g., encouraging enrollees to pick up and complete housing applications and follow through on housing waiting lists). In addition, Housing Specialists guide enrollees through mediation of conflicts with landlords; identify potential causes of eviction and work with enrollees to mitigate them; accompany enrollees to court for housing issues; and connect clients with homelessness prevention programs. For those experiencing homelessness who apply for housing vouchers and/or placement, long waiting periods for housing vouchers and limited availability of housing units lead to discouragement and attrition. The demand for permanent housing for older adults far exceeds the supply at Hearth. For those who would otherwise be eligible for placement at Hearth and for whom housing is not available, Hearth provides applicants with support in their housing search and some services to those who achieve placement in the community.

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When specific problems do arise with individual CCA members in Hearth housing, close communication between Hearth staff and CCA care teams allows for many issues to be resolved quickly with a phone call, helping to prevent attrition.

“ *Alignment of financial incentives between health care and permanent supportive housing is paramount to success and a frequent hurdle to partnerships such as this one. Organizations that bear financial risk for total cost of care (i.e., payers, ACOs, and at-risk care delivery providers) may be more driven — and more able — to invest in housing initiatives for people experiencing homelessness.*

Although communication between the teams is robust (CCA Care Partners provide work cell phone numbers to partners such as Hearth), defining which entity provides which services can be challenging. Both supportive housing services and comprehensive care models can be expensive, and flexibility, adaptability, and true integration of partner organizations, and preventing duplicate costs and services, are both important and difficult.

Alignment of financial incentives between health care and permanent supportive housing is paramount to success and a frequent hurdle to partnerships such as this one. Organizations that bear financial risk for total cost of care (i.e., payers, ACOs, and at-risk care delivery providers) may be more driven, and more able, to invest in housing initiatives for people experiencing homelessness. Organizations that rely on fee-for-service payments, in contrast, may be less incentivized to invest in housing programs given the relative lack of both potential financial upside and prospectively dedicated resources to finance such investments.

Partnerships among community-based organizations, health plans, and care delivery providers require shared power and accountability, and few successful models exist.[20] These partnerships require accurate and shareable data, established performance expectations and metrics, technical assistance, and reliable financial accounting to enable success. Fundamental differences in data collection and storage between CCA and Hearth have been a consistent obstacle to interoperable databases and real-time analytics.

Among the greatest obstacles to addressing homelessness among CCA members are structural barriers, including the limited supply of permanent supportive housing units and the challenges to access it. Placement in a Hearth facility relies on receipt of a housing voucher and/or federal housing assistance, but only one in four households eligible for federal low-income housing assistance receives it.[21,22] Increased public funding for permanent supportive housing — at local, state, and national levels — is required to better meet the needs of people experiencing homelessness. Broader public investment in permanent supportive housing in Massachusetts would also help scale our partnership model and allow us to reach more older adults in need of comprehensive care and housing.

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Metrics

More than 300 CCA beneficiaries have been housed in Hearth facilities since the CCA-Hearth partnership began in 2004, although dependable data are limited to recent years (when Hearth transitioned to electronic records). Records show that, of the 65 CCA beneficiaries who were housed at Hearth between 2015 and 2019, 100% remained stably housed with Hearth after 1 year of moving into a Hearth facility. At least 58% have remained housed at Hearth for 5 years or more (those no longer living in Hearth facilities left because of moving to long-term care, moving to other housing, or death).

To evaluate the potential impact on health and costs of care, we obtained a deidentified list of the 65 CCA beneficiaries housed in Hearth facilities between 2015 and 2019. We were able to verify CCA enrollment and obtain medical claims for 57 beneficiaries, with some claims going back to the inception of CCA's health plan in 2004. Using CCA claims data, we assessed longitudinal trends in total medical expenses (TME), medical expense ratio (MER; ratio of medical expenses to insurance premiums), and acute care (ED or inpatient) claims and expenditure. To examine the association between housing and these outcomes, we considered the housing start date as the date of intervention. The availability of claims data before and after the intervention for each member was highly variable because of changes in membership at CCA, requiring statistical modeling (Appendix). A generalized estimating equation approach was used to account for longitudinal correlations (i.e., dependencies within patients) and to produce unbiased population estimates.[23]

> *Records show that, of the 65 CCA beneficiaries who were housed at Hearth between 2015 and 2019, 100% remained stably housed with Hearth after 1 year of moving into a Hearth facility. At least 58% have remained housed at Hearth for 5 years or more.*

The 57 CCA beneficiaries for whom claims data were available were included in this analysis. These 57 individuals were enrolled in Hearth housing for an average of 30 weeks at the time of the analysis. In 2018 (a year chosen for most complete claims data available on the greatest number of beneficiaries both enrolled in CCA and living in Hearth at a point in time), 52 CCA beneficiaries were housed in Hearth facilities and had an average age of 70 years. They had significant comorbidities, including diabetes (58%), HIV/AIDS (12%), substance use disorder (31%), congestive heart failure (37%), chronic obstructive pulmonary disease (35%), and chronic kidney disease (65%); see the Appendix for characteristics of the study population.

The results of the analysis are depicted in Figure 2 (see Appendix for more detailed methods and results).

According to our model, the intervention — permanent supportive housing at Hearth for CCA members — was associated with a reversal of a preintervention upward trend in TME, MER, and the proportion of patients with a claim for acute care. TME was growing on average by about $79 (95% CI, $39–$118) per member per month 1 year prior to the intervention. One year after

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Hearth housing was begun, TME was decreasing on average by approximately \$18 (95% CI, \$8–\$28) per member per month, for a net difference before versus after housing of \$96 (95% CI, \$55–\$136; $P < .001$) per member per month, which annualizes to about \$1,153 of potential TME savings per member per year (Figure 2A). Acute care costs were growing on average by approximately \$38 (95% CI, −\$14 to \$91) per member per month 1 year prior to the intervention. One year after Hearth housing, the expenses were increasing on average by only about \$5 per member per month, for a net difference before versus after housing of about \$33 (95% CI, −\$15 to \$81; $P = .180$) per member per month, which annualizes to an estimated \$399 of potential acute care-related savings per member per year (Figure 2C). Our model also estimates annualized net reductions of 16.7% (95% CI, 7.8%–25.5%; $P < .001$) in the MER (Figure 2B) and 4.0% (95% CI, 1.9%–6.2%; $P < .001$) in the probability of having an acute care claim (Figure 2D). (The P-values above correspond to a hypothesis test that uses a Wald test statistic with a null hypothesis that the confidence interval of the difference contains zero.)

This analysis has several limitations, common to many evaluations of care delivery interventions. First, our sample size was relatively small. Second, without randomization or a control group, this evaluation is susceptible to bias, including the potential for these results to be attributable in part to regression to the mean as opposed to the direct impact of the intervention. Third, given a multi-component intervention, parsing out the effects of housing, associated supportive services, the CCA care model, and other variables is challenging. Finally, we were unable to meaningfully assess any effects of the intervention on health outcomes given data limitations.

Notwithstanding these limitations, available data do suggest that this housing intervention may have yielded at least partial cost offsets in the form of reduced health care use and spending, consistent with prior studies.[24]

Where to Start

To launch their own housing initiatives, health care organizations should:

- Identify a local housing organization that can serve as a community partner, ideally one that provides or is open to offering supportive services.
- Craft a partnership that aligns incentives around stable housing and improved health for beneficiaries. Define responsibilities and resource commitments from each organization to achieve common goals.
- Develop workflows to facilitate referrals of members experiencing housing instability.
- Develop a process for sharing data to track participant housing status and health care utilization.
- Develop clear process, performance, and outcomes metrics for the partnership (e.g., measure retention rates and longitudinal trends in health care cost metrics; resident, organization, and provider experience [e.g., net promoter score]; and time from housing referral to housing).

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Appendix

Notes on the Modeling Methods Used

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