



Harnessing Health Care Systems to Enhance Supportive Housing

How Denver's Housing to Health Program Reaches Participants with Unmet Health Care Needs

Sarah Gillespie, Devlin Hanson, and Anna Doñate
URBAN INSTITUTE

Sarah Stella, Tom Gray, and Rachel Everhart
DENVER HEALTH AND HOSPITAL AUTHORITY

June 2025

Homelessness is rapidly increasing in the United States, particularly for people experiencing chronic homelessness, a status that includes long-term or repeated episodes of homelessness and the presence of a disability.¹ On a single night in 2024, 158,585 people across the country were experiencing chronic homelessness, a 38 percent increase since before the COVID-19 pandemic began in early 2020 (de Sousa and Henry 2024). Because housing and health are inextricably linked, this trend represents a serious challenge for both the housing and health care sectors. In this brief we discuss Denver's Housing to Health program, a compelling model for how hospitals can partner with housing providers to end homelessness while improving health care outcomes. We describe the program's theory of change, the health care needs of people who were eligible for the program, and the unique role that Denver Health and Hospital Authority ("Denver Health") played as an implementation partner. We also detail how hospital and housing partners worked together to identify and serve people experiencing homelessness with many unmet health care needs in the program.

A number of chronic health conditions are disproportionately prevalent among people experiencing homelessness, from physical health conditions such as heart and lung disease to mental health and substance use disorders (Zlotnick and Zerger 2009). Lack of housing results in significant health and

safety harms (Mayer et al. 2024) and is associated with large increases in mortality (Bradford and Lozano-Rojas 2024; Fowle and Routhier 2024). People experiencing homelessness also face barriers to receiving needed health care services; they more often use acute care, such as hospitals and emergency departments (EDs), have more frequent and longer hospitalizations, and have higher rates of unplanned readmission compared with housed individuals (Kushel et al. 2001).

Supportive housing is an evidence-based solution to homelessness which has been repeatedly proven to effectively end homelessness and increase housing stability for people with the greatest needs (Cunningham et al. 2021; Goering et al. 2014; Raven, Niedzwiecki, and Kushel 2020). High-quality supportive housing programs provide permanent, affordable, and safe housing plus intensive wraparound services, such as case management and connections to clinical providers, all focused on maintaining housing stability. In Denver, a randomized controlled evaluation of the Denver Supportive Housing Social Impact Bond (Denver SIB) found that supportive housing also facilitates access to and engagement in needed health care services while reducing utilization of expensive emergency services (Hanson and Gillespie 2024). Notably, people in supportive housing had an average of 10 more office-based visits for a psychiatric diagnosis, four more prescription medications, and eight fewer emergency department (ED) visits over two years as compared with a control group. Across health care and other outcomes, participants had almost \$7,000 less in total annual per person costs associated with emergency services than the control group (Gillespie et al. 2021). About half of Denver SIB's total per person annual cost was offset by these cost avoidances. Evidence from the Denver SIB and other studies demonstrates the need to scale supportive housing to people experiencing both chronic homelessness and unmet health care needs in order to realize the best outcomes for people and most effective use of public funds.

How Denver Partners Expanded Supportive Housing to Address Unmet Health Care Needs

Based on the SIB's success, Denver launched the Housing to Health program, a supportive housing program that serves people who are experiencing chronic homelessness, have frequent interactions with the criminal legal system, and have unmet health care needs. To focus on people with unmet health care needs, the program used previous Denver SIB eligibility criteria for homelessness and arrests (see Cunningham et al. 2021) plus the additional criterion of two or more emergency department visits in the previous year at Denver Health, Denver's primary safety net health system. The Housing to Health program aims to achieve similar outcomes to the Denver SIB, including increased outpatient visits and decreased avoidable ED visits and inpatient admissions. The net impact of these changes in health care utilization could result in lower costs for Medicaid, particularly because Colorado expanded its Medicaid program under the Affordable Care Act in 2014 in ways that increased coverage and access to services for people experiencing homelessness (DiPietro, Artiga, and Gates 2014). In theory, these cost offsets could allow for greater Medicaid investment in health-related social needs like supportive housing services, helping to scale an evidence-based and cost-effective model to end homelessness and improve health care outcomes (see Housing to Health's theory of change in table 1).

TABLE 1

The Denver Housing to Health Program’s Theory of Change for Health Care Utilization and Costs

Inputs	<ul style="list-style-type: none"> ▪ Housing vouchers primarily in single-site supportive housing building ▪ Modified Assertive Community Treatment services
Activities	<p><i>Services</i></p> <ul style="list-style-type: none"> ▪ Provide modified Assertive Community Treatment services <p><i>Health</i></p> <ul style="list-style-type: none"> ▪ Connect participants to health care services <p><i>Housing</i></p> <ul style="list-style-type: none"> ▪ Refer and conduct outreach to eligible participants ▪ Engage and house participants
Outputs	<ul style="list-style-type: none"> ▪ Number of participants located, engaged, and housed ▪ Housing exits and reasons for exits
Outcomes	<p><i>Housing</i></p> <ul style="list-style-type: none"> ▪ Increased housing stability <p><i>Health</i></p> <ul style="list-style-type: none"> ▪ Increased outpatient mental health and substance use services ▪ Increased outpatient primary care ▪ Increased home and community-based services ▪ Increased prescription medications ▪ Decreased avoidable emergency department visits ▪ Decreased avoidable inpatient and residential stays ▪ Decreased avoidable ambulance rides ▪ Decreased total health care costs
Impact	<ul style="list-style-type: none"> ▪ Increased Medicaid funding for supportive housing services

Source: Authors’ analysis of Denver’s Housing to Health program.

We described the Housing to Health program, partners, and participants in detail in a previous report (see Gillespie, Hanson, and Oneto 2024). In this brief we focus on the health care needs of participants before they entered the program and the unique role Denver Health played as an implementation partner. This aspect of the program offers a compelling model for how hospitals can partner with housing providers to end homelessness while improving health care outcomes.

Identifying People with Unmet Health Care Needs

The intended population for the Housing to Health program is people experiencing chronic homelessness who have had frequent interactions with the criminal legal system and who are also at high risk for avoidable, high-cost health services paid for through Medicaid. To reach the intended participants, the program’s eligibility criteria are as follows: (1) eight or more arrests in Denver over

three years, including at least three arrests for which the officer recorded a transiency status because the person had no address or was staying at a shelter; (2) at least one arrest or law-enforcement contact where the officer recorded a transiency status in the past year; (3) two or more emergency department visits in the past year at Denver Health; and (4) experiencing homelessness at the time of engagement.

At the start of the project, more than 3,700 people were identified through an administrative data query as meeting the first of these criteria. Of those, about 2,000 met the second criterion, and of those, more than 400 met the third criterion and were therefore eligible for randomization to the program. Homelessness was verified by providers during initial engagement with eligible participants. The eligibility list is updated one or twice a year to add newly eligible people. (More information on the process by which the eligibility list is created and people are referred to the program is available in Hanson, Gillespie, and Oneto [2022].) By July 2024, a little over two years since the program launched, 536 people had been randomized to the evaluation and 89 percent of those were matched to Medicaid claims from the three years before randomization. Table 2 describes the demographic characteristics of the 477 people matched to Medicaid claims from the three years before randomization.

TABLE 2
Demographic Characteristics of Housing to Health Participants before Randomization

Characteristic	Mean
<i>Age^a</i>	
18–24	0%
25–34	23%
35–44	31%
45–54	22%
55–64	18%
65 and older	5%
<i>Sex</i>	
Female	18%
Male	82%
<i>Race^b</i>	
Black / African American	22%
Hispanic/Latino	24%
White/Caucasian	40%
American Indian / Alaska Native	5%
Asian	1%
Pacific Islander	0%
Other	8%
<i>Ethnicity</i>	
Not Hispanic	74%
Hispanic/Latino	26%
<i>Medicaid eligibility/enrollment</i>	
Dual eligible	11%
Third-party liability	5%
Enrolled in Medicaid	97%

Sources: Demographic, enrollment/eligibility, and encounter and claims data are from the Colorado Department of Health Care Policy and Financing and are for 2019 to 2024.

Notes: The sample includes all participants randomized before July 1, 2024, who were located in the Colorado Department of Health Care Policy and Financing's data (477 out of 520 people randomized). The data cover the three years before randomization based on each person's randomization date.

^a Participants' average age was 44.3.

^b We were missing race/ethnicity information for 38 people.

Diagnoses of mental health conditions and substance use disorders are highly prevalent among the Housing to Health population, 80 percent of whom had a mental health condition diagnosis and 94 percent of whom had a substance use disorder diagnosis in Medicaid claims in the three years before randomization. Eighty-six percent had a chronic physical health condition (the most common being hypertension). Other prevalent health challenges include wounds (80 percent), neurological disorders (70 percent), brain injury (42 percent), and poisoning (39 percent), which is often an indicator of drug overdose in this population (table 3).

TABLE 3
Participants' Health Care Needs, Service Utilization, and Costs in the Three Years before Randomization

	Share of population	Average utilization
Health needs		
Substance use disorder	94%	N/A
Mental health condition	80%	N/A
Any chronic physical condition ^a	86%	N/A
Current smoker	83%	N/A
Neurological disorder	70%	N/A
Brain injury	42%	N/A
Wounds	80%	N/A
Poisoning (including overdose)	39%	N/A
Emergency department	95%	33.3 visits
Physical health	95%	26.9 visits
Behavioral health	67%	6.4 visits
Ambulance	88%	23.7 days
Inpatient visits^b	64%	3.1 admits
Inpatient days		21.6 days
Primary care	64%	3.9 visits
Physical health specialist	69%	17.7 visits
Mental health outpatient	62%	14.1 visits
Substance use disorder outpatient	56%	37.1 visits
Other physical health outpatient care ^c	92%	21.8 visits
Behavioral health withdrawal	41%	2.8 admits
Withdrawal days	N/A	10 days
Behavioral health residential	6%	5.7 days
Prescriptions	79%	24.4 fills
Nursing facility	3%	1.9 admits
Home and community-based services	2%	2.2 days
Average total fee-for-service cost	N/A	\$19,947

Sources: Encounter and claims data are from the Colorado Department of Health Care Policy and Financing and are for 2019 to 2024.

Notes: N/A = not applicable. The sample includes all participants randomized before July 1, 2024, who were located in the Colorado Department of Health Care Policy and Financing data (477 out of 520 people randomized). The data cover the three years before randomization based on each person’s randomization date. For each type of service, we present the share of participants who received at least one claim or encounter of that type before program entry; for some types of services, we also present the share of participants by number of visits to better illustrate the distribution of service utilization.

^a Chronic conditions are defined as asthma (17 percent), chronic obstructive pulmonary disease (10 percent), congestive heart failure (2 percent), hypertension (39 percent), diabetes (15 percent), cirrhosis (4 percent), hepatitis (1 percent), HIV/AIDS (4 percent), and periodontal disease (2 percent).

^b Inpatient visits include physical and behavioral health inpatient visits. Sixty-two percent of participants had a physical health inpatient visit and 16 percent had a behavioral health inpatient visit.

^c Other physical health outpatient care includes a wide variety of health care services (e.g., imaging, labs, and durable medical equipment).

People eligible for the Housing to Health program were utilizing EDs and ambulances at high rates before randomization, averaging 33 ED visits and 24 ambulance rides over three years. Almost two-thirds had an inpatient hospital admission (this includes psychiatric admissions) before randomization, with an average of three admissions for a total of 22 inpatient days over three years.

At baseline, people eligible for the Housing to Health program had also utilized some outpatient services—including primary care, specialist care, outpatient mental and physical health care, and prescription medications—though a significant share of participants had not used any outpatient care. For example, more than a third of eligible people had no primary care visits in the three years before randomization and more than a third had no outpatient mental health visits.

Notably, despite their many health care needs, other types of services, including behavioral health residential treatment, nursing facility care, and home- and community-based services, were rare among people eligible for Housing to Health. On average, fee-for-service claims paid by Medicaid totaled approximately \$8,300 per participant in the year before they entered the study.

Many of the Housing to Health population’s health care needs are more prevalent than the needs observed in the prior Denver SIB supportive housing population (as described in Hanson and Gillespie 2024). In particular, people eligible for the Housing to Health program are more likely to have diagnosed substance use disorders, neurological disorders, and brain injuries. The significant health care utilization and cost of care observed for participants prior to randomization demonstrate the potential positive impact the Housing to Health program could have in shifting utilization toward more outpatient care and reducing the net cost to Medicaid, based on the theory of change for supportive housing.

Partnering with Denver Health’s Safety Net

To meet its goal of reaching and serving people with many unmet health care needs, Denver Health had several roles as a Housing to Health partner from the beginning of project conceptualization, including as a data analytics partner and an implementation partner. Denver Health is an integrated urban safety net health care system serving the Denver metropolitan region. It includes a Level 1 regional trauma center, a 555-bed hospital, an emergency department, and a network of 10 community health centers

and 19 school based clinics. Denver Health provides full-spectrum addiction treatment services through its Center for Addiction Medicine, and it provides correctional care services, administers the 911 emergency medical response system for the City and County of Denver, and delivers public health clinics and programs. Denver Health uses a single electronic health record system, Epic, which supports integrated clinical care and the performance improvement Denver Health conducts as a learning health system.

Denver Health's reach is expansive. In 2022, the system cared for more than 240,000 patients (about a third of the population of Denver County) who had more than 20,000 inpatient admissions and more than 1.1 million ambulatory visits. Denver Health serves a large Medicaid population, including a large and growing number of people experiencing homelessness throughout the region. In 2022, the system identified 8,549 unique patients experiencing homelessness accounting for 34,993 visits across the integrated health system (Denver Health 2022). On a single day in 2022, 22 percent of hospitalized patients on medical or surgical services at Denver Health were experiencing literal homelessness (Mistry et al. 2024). Denver Health screens for health-related social needs in the inpatient and outpatient settings and has developed a registry in its electronic health record system to better identify and facilitate population-level interventions for patients experiencing homelessness.² Denver Health partners with community-based organizations to address its patients' health-related social needs. Through its community partnerships, the health system has invested in recuperative care and transitional housing for some of its patients most at risk of experiencing barriers to health care and negative health outcomes. These frequent connections with people experiencing homelessness and with community-based providers serving this population made Denver Health a valuable implementation partner for the Housing to Health program.

The Denver Health team that facilitated the hospital's partnership with Housing to Health included a site director, who is a hospitalist with expertise in health care for people experiencing homelessness and health systems improvement and who led implementation efforts at Denver Health; a part-time coordinator, who is primarily responsible for conducting outreach to participants, collaborating with housing service providers to support connections to the program, and tracking and monitoring data; and a data analytics team, which supported determination of people's program eligibility based on their utilization of the Denver Health ED and created and maintained electronic health records reports to support outreach to eligible patients throughout the Denver Health system.

Building System Engagement

To build engagement throughout the health system before the Housing to Health project launched, the Denver Health implementation team met with interdisciplinary stakeholders, including departmental leaders and clinical staff, in the hospital, the ED, the detoxification facility, outpatient behavioral health services, and other clinics (comprehensive care, corrections transitions, etc.) that served patients experiencing homelessness. These meetings served to introduce the Housing to Health program, explain its goals and outreach processes, set expectations, identify opportunities for integration and

necessary adaptations between care settings, and solicit feedback, questions, and concerns from stakeholders.

Supporting Data Analytics

To support data analytics for the project, Denver Health formalized data sharing through a data use agreement with the Urban Institute, the independent evaluator of Housing to Health. A limited dataset was shared at the start of the project to help create the list of eligible people based on the number of ED visits at Denver Health. To do this, Denver Health received a list of potentially eligible people from the City of Denver, then matched this list to Denver Health patient records, with a final match rate of 94 percent. When matching the records, Denver Health determined people's eligibility by querying and summarizing ED visits over the previous 12 months. Denver Health repeats this process twice a year using an updated list of potentially eligible people provided by the City.

Reaching Out to and Engaging Patients

After matching City of Denver police data and Denver Health ED data to determine people's eligibility, the Urban Institute evaluation team coordinated final screening and random assignment based on the Housing to Health evaluation plan. Information on people referred to the program was shared with the Housing to Health supportive housing providers and Denver Health. To help supportive housing providers locate and reach out to people referred to the program, the Denver Health coordinator accessed a Denver Health electronic health record report twice a day (morning and afternoon) on weekdays to identify anyone on the list who was currently in the hospital, ED, or detoxification center. Over time, this process was optimized so that the coordinator received automatic notifications generated by the electronic health record when an eligible individual was in care at Denver Health. He also reviewed reports summarizing upcoming primary or specialty care visits across the Denver Health system approximately five times a month and conducted telephone outreach to unlocated participants using the contact information in the electronic health records.

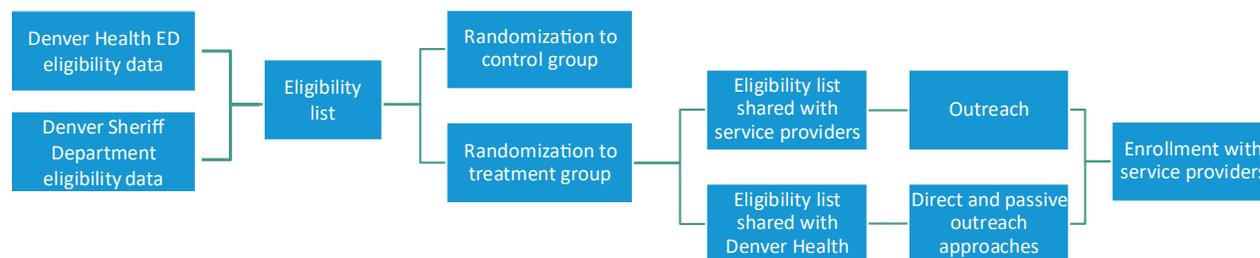
If a referred person was identified in an acute care setting in the Denver Health system (e.g., the ED, hospital, or detoxification center), the Denver Health coordinator attempted to reach them to provide information about the supportive housing program, using either a direct or passive outreach process, depending on the patient's preference and needs (appendix A). Before approaching the patient, the coordinator briefly reviewed their chart and contacted a provider on their care team (usually the attending physician) to introduce himself, notify them that outreach would be taking place, and ensure their clinical condition was appropriate for outreach at that time.

In acute care settings, outreach was typically done in person. The Denver Health coordinator located the patient in their hospital or ED room, introduced himself, and shared brief information about the supportive housing program. If the patient was interested in speaking with a supportive housing provider to learn more about the program, the coordinator collected a release of information to obtain their permission to share their information with the provider and sought to make a warm handoff (an immediate, in person connection) to a Housing to Health program provider.

Once the patient signed the release of information, the coordinator facilitated a phone call between the patient and the supportive housing provider to make an introduction and plan next steps. Commonly, the provider would immediately come to meet the patient at the hospital bedside to begin enrollment paperwork and assist with coordination of discharge. After making the initial warm handoff, the coordinator shared the patient’s signed release of information and any additional information with the provider via encrypted email. If a patient was approached in an acute care setting and did not want to sign a release of information and be directly and immediately connected with a supportive housing provider, the Denver Health coordinator shifted to a passive outreach process in which they provided the patient with a letter with information about the Housing to Health program and how to connect with the supportive housing program at a later time. The coordinator also sent passive outreach letters to patients with upcoming clinic or other appointments across the Denver Health system to let them know they had been referred to the Housing to Health program and how to contact a supportive housing provider.

Figure 1 illustrates the eligibility and referral processes for the Housing to Health program and the roles of program partners. See appendix A for a full illustration of the Denver Health workflow for Housing to Health participants, including patient identification, outreach, and warm handoff.

FIGURE 1
Housing to Health Eligibility and Referral Pathway



Source: Authors’ analysis.

Notes: ED = emergency department.

As of February 2025, 186 of the 273 people (68 percent) randomized to the Housing to Health program were seen in the Denver Health system after randomization. Using the outreach and engagement process described above, 48 of these participants (26 percent) were initially located and directly connected with supportive housing providers through a warm handoff by the Denver Health coordinator. Approximately half of people who had an initial connection via a warm handoff from the hospital were encountered and reached in the ED, with others reached through the detoxification facility and in inpatient and outpatient settings (table 4). In addition to warm handoffs, during this period the Denver Health coordinator also provided a total of 33 passive outreach letters to referred patients, 27 (82 percent) of whom later contacted a supportive housing provider and were enrolled in the program.

Ongoing Coordination with Supportive Housing Providers

Even after the initial connection was made, Denver Health maintained close coordination and communication with the program’s supportive housing providers. For patients who had warm handoffs to the program via signed releases of information, Denver Health shared their information with supportive housing providers when they had new ED or hospital admissions at Denver Health, especially when they had lost contact with providers. These “reconnections” of patients to supportive housing providers included a facilitated phone call between the patient and service provider and a warm handoff to care teams. Supportive housing staff described having the Denver Health coordinator “on speed dial” to quickly connect with him about Housing to Health patients. “There’s always a response [from the Denver Health coordinator] within 10 minutes,” one housing navigator described, “and the level of communication between Denver Health and [supportive housing staff] is really, really impressive.”³

By February 2025, the Denver Health coordinator had facilitated 62 “reconnections” to supportive housing providers for 37 patients, playing an important role in supporting participant retention and housing stability throughout the program (table 4). These reconnections happened most often in the ED and detoxification facility, and 41 percent of these patients were reconnected from the hospital to the program more than one time, even up to seven times for one patient.

TABLE 4
Housing to Health Participants Identified and Warm Handoffs Conducted at Denver Health by Department, 2022–24

Denver Health department	Initial warm handoffs completed via ROI	Share of total initial warm handoffs completed	Reconnections completed	Share of total reconnections completed
Detoxification	8	16.7%	23	37.1%
ED	25	52.1%	25	40.3%
Hospitalization	12	25.0%	14	22.6%
Outpatient	3	6.3%	0	0.0%
Total	48	100.0%	62	100.0%

Source: Authors’ analysis of Denver Health and Hospital Authority records.

Notes: N=186 Housing to Health participants. ROI = release of information. Initial warm handoffs happen once for each patient. Reconnections can happen multiple times for each patient. Sixty-two reconnections were made for 37 patients during this period, with 41 percent of patients having more than one reconnection.

Lessons Learned and Next Steps

Given the health care utilization patterns of people experiencing homelessness, hospitals have an important role to play in the homelessness response system. Denver Health’s safety net health system serves a large Medicaid population with unmet health-related social needs, including a large and growing population of people experiencing homelessness. Denver Health also has a long track record of partnering with the City of Denver and community-based providers to coordinate care for people

experiencing homelessness, which made the health care system an ideal implementation partner for the Housing to Health program.

Patients referred by Denver Health to the Housing to Health program had high acuity and medical complexity, often with tri-morbidity (i.e., a physical health condition, behavioral health condition, and substance use disorder). Despite this, many were not engaging with other homelessness assistance providers in the community. This is consistent with previous analysis showing that only about 50 percent of patients Denver Health identified as homeless in 2021 were accessing homelessness services through the regional continuum of care, the coordinating body for homelessness assistance services (Stella et al. 2024), and supports the importance of hospitals as housing access points.

The Housing to Health program also highlights the importance of cross-sector data sharing for effectively identifying patients who are eligible for housing and services at the point of care and facilitating timely outreach to housing providers, enabling their participation in care coordination during hospitalization and at discharge. Streamlining the intake process through automatic notifications in the electronic health records when an eligible person was in care at Denver Health, rather than manually monitoring reports, supported timely outreach to participants.

Staff from Housing to Health supportive housing providers described Denver Health’s critical role in what was often the most challenging part of the referral pathway: making initial contact with someone on the eligibility list. One housing navigator noted this was particularly important during cold months when clients were harder to locate and reach outdoors: “Outreach in winter was hard. Most of our connections came from within Denver Health once it started to get cold outside.” Providers also recognized the rapport Denver Health had with people likely to be eligible for the Housing to Health program, because of the services the hospital offers across the city, and how this facilitated participant connections with the supportive housing program.

It was really hard when, if we located someone and we couldn’t get them in a bridge [housing placement], and sometimes they would go back [to the street] and just be a leaf in the wind. But then we’d get a call from [the coordinator] at Denver Health.
—Housing to Health supportive housing staff member

The roles of the Denver Health program director and coordinator as program partners underscore the importance of “embedded intermediaries”⁴ in building effective housing-health partnerships. Working from within the health care system, this dedicated team worked to build trusting relationships with a variety of both internal and external stakeholders and provided the system expertise needed to successfully implement workflows to reach eligible patients across a number of diverse health care

settings. Early and ongoing engagement with internal stakeholders was critical for identifying invested partners throughout the Denver Health system, surfacing and addressing barriers to implementation, and adapting workflows to ensure feasibility and alignment with patient care. The coordinator supported outreach and facilitated warm handoffs to the housing services providers, working closely with Denver Health care teams to ensure outreach did not interfere with medical care or prolong length of stay. Flexible processes that allow for active as opposed to passive referrals also enabled the Denver Health team to meet people where they were.

Denver Health described how participation in the Housing to Health initiative enabled hospital staff to support patients more holistically by addressing a major driver of avoidable health care utilization and poor health outcomes through the connection to stable housing and wraparound services. Having an opportunity to directly connect at-risk patients to supportive housing before or at discharge allowed Denver Health to go beyond offering a list of community resources that are often difficult to access to meaningfully connect people to housing providers, improving both housing and health outcomes.

The opportunity to connect at-risk patients directly to Housing to Health—often enabling them to enter bridge housing immediately after discharge—buoyed hospital staff and increased optimism about patients' outcomes. One care team member whose patient was connected to the program during a hospital stay remarked, "It is hard to describe how grateful and ecstatic he was about his housing connection. And that joy was contagious. We regularly took a moment for a brief 'hooray' during rounds in the days leading up to his discharge. We gave him a big high five on day of discharge!"

The Housing to Health program has increased all partners' desire to continue building a strong housing and hospital partnership. One leader from a supportive housing provider explained, "The partnership with Denver Health is definitely good for our homeless system. It certainly adds to [this program]. But I think more than that, the relationship in general and getting them more involved, I mean they are the safety net health provider. So, involving them in anything homeless-service related, and housing specifically, is really awesome." On the hospital side, the site director for the Housing to Health program echoed this sentiment: "I think the ability to innovate together, to brainstorm cool stuff that is now possible that we couldn't even think about before, it gives me a lot of optimism...so it's been such a great collaboration with many ripple effects."

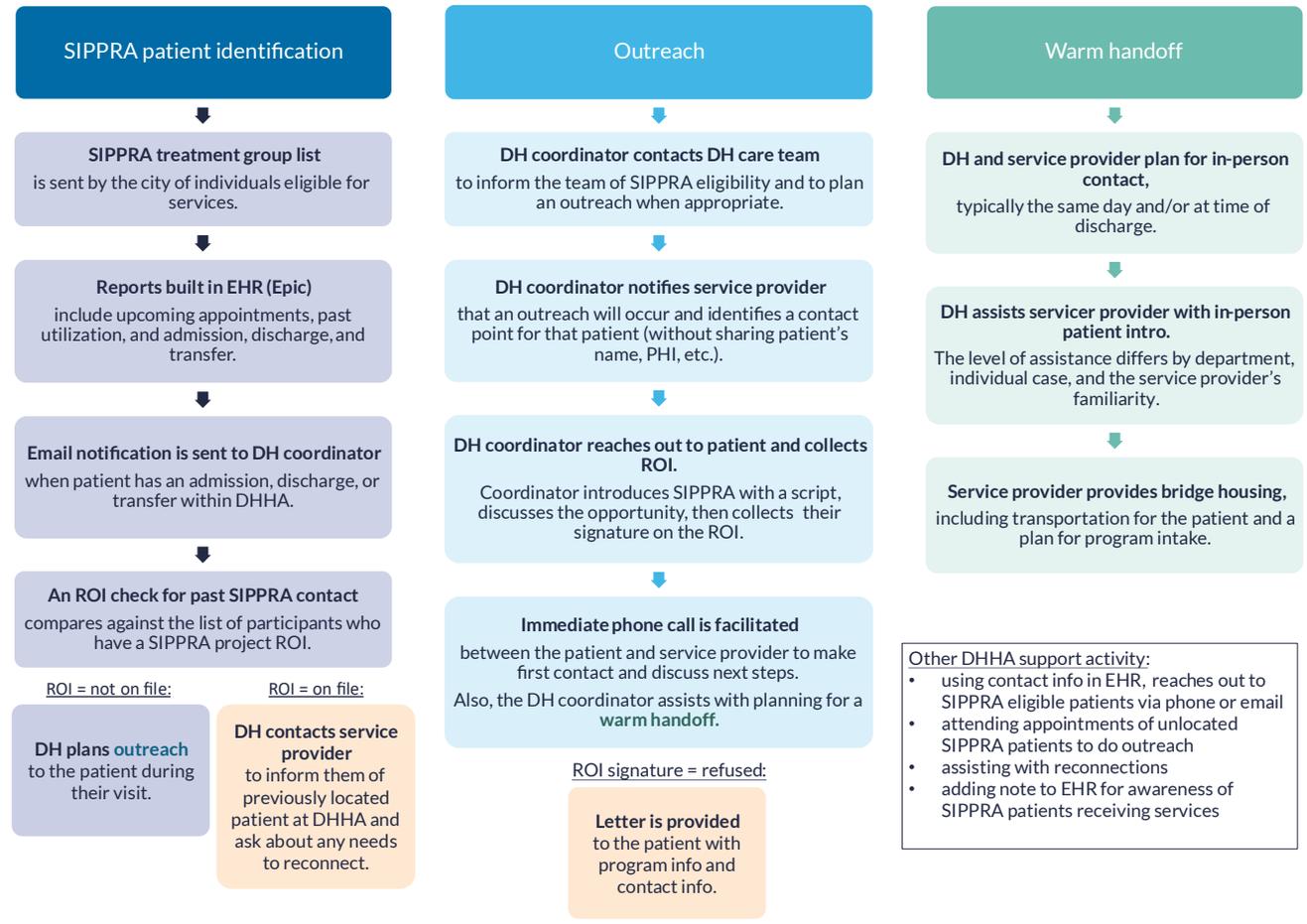
Conclusion

This brief describes a compelling model for housing and hospital partnerships and is part of the ongoing, mixed-methods evaluation of the Housing to Health program. At the end of the evaluation, we will release findings from the randomized controlled trial, including estimates of the impact of supportive housing on health care utilization and the net cost, or cost reductions, to Medicaid as compared with a control group receiving homelessness assistance services as usual in the community. The evaluation aims to build evidence of cost-effective strategies to scale evidence-based models of supportive housing to turn the curve on increasing homelessness and meet the immense health care needs of people experiencing chronic homelessness.

Appendix A. Detailed Referral Practices in the Housing to Health Program

FIGURE A.1

Denver Health Workflow for Housing to Health Connections



Source: Authors' analysis.

Notes: DH = Denver Health; DHHA = Denver Health and Hospital Authority; EHR = electronic health record; PHI = protected health information; ROI = release of information; SIPPPRA = Social Impact Partnership to Pay for Results Act.

Notes

- ¹ For the US Department of Housing and Urban Development’s definition of chronic homelessness, see “Definition of Chronic Homelessness,” HUD Exchange, accessed May 15, 2025, <https://www.hudexchange.info/homelessness-assistance/coc-esg-virtual-binders/coc-esg-homeless-eligibility/definition-of-chronic-homelessness/#:~:text=Has%20been%20homeless%20and%20living,of%20not%20living%20as%20described.>
- ² To read more about Denver Health’s EHR-based registry of patients experiencing homelessness, see Stella and coauthors (2024).
- ³ Quotations from Denver supportive housing stakeholders appearing throughout this brief are from early implementation interviews conducted by the Urban Institute in June 2023.
- ⁴ To read more about embedded intermediaries and other components of effective housing and health initiatives, see “Stuart M. Butler and Marcella Maguire, “Building Connective Tissue for Effective Housing-Health Initiatives,” Brookings, May 3, 2022, <https://www.brookings.edu/articles/building-connective-tissue-for-effective-housing-health-initiatives/#:~:text=They%20need%20%E2%80%9Cconnective%20tissue%E2%80%9D%E2%80%94an%20infrastructure%20supporting%20frequent%20and,an%20even%20climate%20change%20will%20require%20cross-sector%20solutions.>

References

- Bradford, W. David, and Felipe Lozano-Rojas. 2024. “Higher Rates of Homelessness are Associated with Increases in Mortality from Accidental Drug and Alcohol Poisonings.” *Health Affairs* 43 (2): 242–9. <https://doi.org/10.1377/hlthaff.2023.00951>.
- Cunningham, Mary K., Devlin Hanson, Sarah Gillespie, Michael Pergamit, Alyse D. Oneto, Patrick Spauster, Tracey O’Brien, Liz Sweitzer, and Christine Velez. 2021. *Breaking the Homelessness-Jail Cycle with Housing First: Results from the Denver Supportive Housing Social Impact Bond Initiative*. Washington, DC: Urban Institute.
- de Sousa, Tanya, and Meghan Henry. 2024. *The 2024 Annual Homelessness Assessment Report (AHAR) to Congress. Part 1: Point-In-Time Estimates of Homelessness*. Washington, DC: US Department of Housing and Urban Development, Office of Community Planning and Development.
- Denver Health. 2022. *Report to the City 2022*. Denver: Denver Health.
- DiPietro, Barbara, Samantha Artiga, and Alexandra Gates. 2014. “Early Impacts of the Medicaid Expansion for the Homeless Population.” Washington, DC: KFF.
- Fowle, Matthew Z., and Giselle Routhier. 2024. “Mortal Systemic Exclusion Yielded Steep Mortality-Rate Increases in People Experiencing Homelessness, 2011–20.” *Health Affairs* 43 (2): 226–33. <https://doi.org/10.1377/hlthaff.2023.01039>.
- Gillespie, Sarah, Devlin Hanson, and Alyse D. Oneto. 2024. “Scaling Supportive Housing as a Health Care Solution: Early Findings from the Denver Housing to Health Pay for Success Project.” Washington, DC: Urban Institute.
- Gillespie, Sarah, Devlin Hanson, and Alyse D. Oneto. 2022. “Denver Housing to Health (H2H) Pay for Success Project: Research Design.” Washington DC: Urban Institute.
- Gillespie, Sarah, Devlin Hanson, Josh Leopold, and Alyse D. Oneto. 2021. *Costs and Offsets of Providing Supportive Housing to Break the Homelessness-Jail Cycle: Findings from the Denver Supportive Housing Social Impact Bond Initiative*. Washington, DC: Urban Institute.
- Goering, Paula, Scott Veldhuizen, Aimee Watson, Carol Adair, Brianna Kopp, Eric Latimer, Geoff Nelson, et al. 2014. *National Final Report: Cross-Site At Home/Chez Soi Project*. Calgary, AB: Mental Health Commission of Canada.
- Hanson, Devlin, and Sarah Gillespie. 2024. “‘Housing First’ Increased Psychiatric Care Office Visits and Prescriptions While Reducing Emergency Visits.” *Health Affairs* 43 (2): 209–17. <https://doi.org/10.1377/hlthaff.2023.01041>.

- Kushel, Margot B., Eric Vittinghoff, and Jennifer S. Haas. 2001. "Factors Associated with the Health Care Utilization of Homeless Persons." *Journal of the American Medical Association* 285 (2): 200–6. <https://doi.org/10.1001/jama.285.2.200>.
- Mayer, Michael, Yesenia Meija Urieta, Linda S. Martinez, Miriam Komaromy, Ursel Hughes, and Avik Chatterjee. 2024. "Encampment Clearings and Transitional Housing: A Qualitative Analysis of Resident Perspectives." *Health Affairs* 43 (2): 218–25. <https://doi.org/10.1377/hlthaff.2023.01040>.
- Mistry, Neelam, Julie Knoeckel, Lauren McBeth, Amanda Johnson, Erin Bredenber, Katie Raffel, John Cunningham, Ellen Sarcone, Gregory Misky, and Sarah A. Stella. 2024. "Prevalence of Homelessness among Hospitalized Patients: A Point-in-Time Survey." *Journal of Hospital Medicine* 19 (1): 45–50. <https://doi.org/10.1002/jhm.13241>.
- Raven, Maria C., Matthew J. Niedzwiecki, and Margot Kushel. 2020. "A Randomized Trial of Permanent Supportive Housing for Chronically Homeless Persons with High Use of Publicly Funded Services." *Health Services Research* 55 (2): 797–806. <https://doi.org/10.1111/1475-6773.13553>.
- Stella, Sarah A., Rebecca Hanratty, Arthur J. Davidson, Laura J. Podewils, Laura Elliott, Amy Keith, and Rachel Everhart. 2024. "Improving Identification of Patients Experiencing Homelessness in the Electronic Health Record: A Curated Registry Approach." *Journal of General Internal Medicine* 39 (16): 3113–19. <https://doi.org/10.1007/s11606-024-08909-1>.
- Zlotnick, Cheryl, and Suzanne Zerger. 2009. "Survey Findings on Characteristics and Health Status of Clients Treated by the Federally Funded (US) Health Care for the Homeless Programs." *Health & Social Care in the Community* 17 (1): 18–26. <https://doi.org/10.1111/j.1365-2524.2008.00793.x>.

About the Authors

Sarah Gillespie is associate vice president of the Housing and Communities Division at the Urban Institute. Her research focuses on ending homelessness. She is a coprincipal investigator of the Denver Housing to Health evaluation and was the project director for the Denver Supportive Housing Social Impact Bond Initiative. She is also principal investigator of the evaluation of Denver's STAR and Co-Responder programs and other evaluations of alternatives to arrest for people experiencing homelessness.

Devlin Hanson is a principal research associate in the Family and Financial Well-Being Division at the Urban Institute. She is a labor economist specializing in rigorous impact evaluations whose research focuses on housing and child welfare. She is coprincipal investigator for the Denver Housing to Health evaluation, and she led the impact study of the Denver Supportive Housing Social Impact Bond Initiative. She also leads a multisite randomized controlled trial of housing vouchers for homeless families involved in child welfare.

Anna Doñate is a research assistant in the Housing and Communities Division. Her work is focused within the Preventing and Ending Homelessness practice area.

Sarah Stella is a hospitalist in the Department of Medicine at Denver Health and associate professor of medicine at the University of Colorado School of Medicine. Her academic interests relate to improving health outcomes at the intersection of housing and health. Stella is the site director of the Denver Housing to Health program.

Tom Gray is a research projects coordinator in the Office of Research at Denver Health and the coordinator for the Denver Housing to Health program.

Rachel Everhart is the associate director of research and analytics at Denver Health. She supports data analytics and integration for the Denver Housing to Health program.

Acknowledgments

This brief was funded by the City and County of Denver as part of the Social Impact Partnerships to Pay for Results Act independent evaluator grant for the Denver Housing to Health project, and by Arnold Ventures. We are grateful to them and to all our funders, who make it possible for Urban to advance its mission.

The views expressed are those of the authors and should not be attributed to the Urban Institute, its trustees, or its funders. Funders do not determine research findings or the insights and recommendations of Urban experts. Further information on the Urban Institute’s funding principles is available at urban.org/fundingprinciples.

The authors acknowledge the partners who made this brief and the supportive housing program possible, including leadership and key staff from the City and County of Denver, the US Department of the Treasury, the Corporation for Supportive Housing, the Colorado Coalition for the Homeless, WellPower, and Denver Health and Hospital Authority.



500 L'Enfant Plaza SW
Washington, DC 20024
www.urban.org

ABOUT THE URBAN INSTITUTE

The Urban Institute is a nonprofit research organization founded on one simple idea: To improve lives and strengthen communities, we need practices and policies that work. For more than 50 years, that has been our charge. By equipping changemakers with evidence and solutions, together we can create a future where every person and every community has the power and opportunity to thrive.

Copyright © June 2025. Urban Institute. Permission is granted for reproduction of this file, with attribution to the Urban Institute.