

# THE PREVENTIVE EFFECT OF HOUSING FIRST ON HEALTH CARE UTILIZATION AND COSTS AMONG CHRONICALLY HOMELESS INDIVIDUALS

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## BACKGROUND AND OBJECTIVES

The goal of this study is to examine the effect of the Housing First model on expenditures by MassHealth, Massachusetts' Medicaid program. Housing First offers chronically homeless individuals immediate housing as a foundation for the delivery of a range of other supportive services (e.g., mental health and/or substance use disorder services and social service supports). The Massachusetts Housing and Shelter Alliance (MHSA) administers two statewide Housing First initiatives: the Home and Healthy for Good (HHG) program, which has served over 1,100 formerly chronically homeless individuals since 2005, and the Social Innovation Financing Pay for Success (PFS) program, which has served over 800 formerly chronically homeless individuals since 2015. This study population includes (1) individuals who participated in either of these permanent supportive housing programs, were enrolled in MassHealth, and met other study inclusion criteria described below and (2) a control group of chronically homeless individuals who were not enrolled in a Housing First program.

## STUDY METHODS AND MEASURES

### Methods

This study combines MHSA and MassHealth administrative claims data to compare MassHealth expenditures of members with a history of chronic homelessness before and after the provision of Housing First services (the "intervention" cohort) with expenditures for a matched group of members who are chronically homeless but have not received Housing First services (the "comparison" or control cohort). Members in the intervention cohort were identified by MHSA and MassHealth as participants in a Housing First program; these members were then matched 1:1 to a group who were similar in terms of age, gender, and health<sup>2</sup> and who were also enrolled in MassHealth and identified as chronically homeless.

The researchers compared prior health care utilization (often referred to as health resource utilization, or HRU) and health care costs across the two groups. For members who participated in Housing First (the intervention cohort), the date the participant was first exposed to the intervention (the "index" date) was defined as the date of enrollment in Housing First. The index date for chronically homeless members in the comparison cohort was a randomly generated date. The baseline study period includes the two years pre-index date. Outcomes are evaluated from the index date until the one-year post-index date, referred to as the follow-up period.

## KEY FINDINGS

- Individuals enrolled in permanent supportive housing programs had **significantly lower** total per-person per-year health care costs, on average, than a similar group of chronically homeless individuals (\$25,614 vs. \$30,881, on average).<sup>1</sup>
- Individuals enrolled in permanent supportive housing programs received **significantly more** mental health services than a similar group of chronically homeless individuals. However, the cost of the higher average utilization of mental health services among those enrolled in permanent supportive housing was **more than offset** by their **lower utilization** of inpatient and emergency department services relative to a similar group of chronically homeless individuals.
- The study suggests that the **preventive effect** of permanent supportive housing may lead to a reduction in overall health care utilization and costs.

FIGURE 1. STUDY COHORTS — INCLUSION CRITERIA



FIGURE 2. BASELINE VS. FOLLOW-UP STUDY PERIOD



In order to be included in the study, participants in both cohorts had to be continuously eligible for MassHealth from two years prior to the index date (baseline period) to one year after the index date (follow-up period). In addition, only individuals who received services from the Community Support Program for People Experiencing Chronic Homelessness (CSPECH) were included in the intervention cohort.<sup>3</sup>

### Measures

Baseline characteristics for the matching between the cohorts and subsequent analysis included consideration of member demographics, physical and mental health comorbidities, health care resource utilization (HRU), and health care costs. HRU and cost patterns were evaluated during the follow-up period. HRU is classified into the following categories:

- Inpatient visits
- Inpatient days
- Emergency room (ER) visits
- Mental health visits
- Other visits

Costs are classified into the following categories:

- Pharmacy
- Medical
- Inpatient
- ER
- Mental health
- Other

### RESULTS

Of the 1,342 members in the Housing First intervention cohort and the 44,022 members in the comparison cohort, 690 from each cohort met the study eligibility requirements and were matched. The intervention cohort had lower per patient per year (PPPY) utilization of inpatient and emergency department services in the year after the Housing First intervention than the comparison cohort, despite having higher rates of mental health visits. **Overall, the intervention cohort had significantly lower total PPPY health care costs than the comparison cohort (\$25,614 vs. \$30,881, on average).**

This trend is also reflected in the differences in medical costs between groups. Total medical and pharmacy costs were almost \$5,000 higher for the comparison cohort in the follow-up period, with the difference occurring primarily because the group's average inpatient costs were almost \$9,000 higher. Even though the intervention cohort incurred more mental health-related costs (\$18,240 vs. \$13,529), **the savings from lower use of costly inpatient services were enough to keep the total costs for these members below those of the chronically homeless comparison group.**

The comparison cohort had a rate of all-cause inpatient and emergency department visits more than 10% higher than the intervention cohort's rate. However, the difference of greatest magnitude between the two groups was in mental health encounters, with 80% of members in the intervention cohort having at least one mental health visit in the first full year after the intervention, compared with 53% of members in the comparison group. **This would suggest that while members in the intervention group are receiving more mental health services than the comparison cohort, these services may have had a preventive effect that led to lower use of emergency and inpatient hospital services.**

### CONCLUSION

The findings from this study demonstrate the effectiveness of a housing and supportive services program in reducing total health care utilization and costs for medical and behavioral health services provided to chronically homeless MassHealth members. In this analysis, the Housing First participants were enrolled in CSPECH, a Medicaid-funded program that provides community-based support services for chronically homeless individuals in Massachusetts. Under CSPECH, housing agencies can claim reimbursements from MassHealth for supportive services rendered to chronically homeless individuals but not for housing. The evidence from this study suggests that expansion of Housing First and supportive service programs like CSPECH may produce health care cost savings for enrolled individuals and also potentially have preventive effects of more consistent access to mental health services.

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1 This study focused on changes in health care utilization and costs and did *not* consider the costs of the housing itself as part of the analysis.

2 This match relied on a process called propensity score matching. The health measure used is known as the Charlson Comorbidity Index. This index reviews diagnosis codes captured in claims data to develop a health score for an individual.

3 CSPECH is administered by MassHealth and is the program through which many of the Housing First participants included in this study received supportive services. Since CSPECH is provided as a service to MassHealth members who have acquired housing, none of these individuals were included in the chronically homeless comparison group.