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# Evaluation report

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Home Again 21-Month Outcome  
Evaluation  
(January 1, 2008-September 30,2009)

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## Executive Summary

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In January of 2007, The Health Foundation of Central Massachusetts funded a proposal submitted by a collaborative of homeless service providers, named the Comprehensive Homeless Assessment and Intervention Network (CHAIN), to plan and then pilot test a Housing First-type approach to addressing chronic homelessness in Worcester, Massachusetts. Members of CHAIN include: Central Massachusetts Housing Alliance, Community Healthlink, Dismas House, Henry Lee Willis Community Center, Jeremiah's Inn, and PIP Shelter/South Middlesex Opportunity Council. The planned project was named "Home Again," and was modeled and evaluated over the course of 21 months (January 1, 2008-September 30, 2009). The primary goal of the project was to reduce the number of adults in Worcester who were chronically homeless, or on the verge of becoming chronically homeless.

The impact of Home Again was assessed by an evaluation team from the Boston University School of Public Health. The purpose of the evaluation was to determine whether participation in Home Again was more beneficial than participation in "Standard Care"; that is, the services that are otherwise available through homeless service providers in the Worcester area. Specifically, the evaluation assessed whether participation in Home Again was associated with increased likelihood of remaining housed for a 6-month follow-up period, decreased alcohol use, decreased use of hospital emergency health services, improved mental health, and increased social support for participants. The evaluation also assessed whether participants felt satisfied with Home Again services.

This report provides detailed information about the methodology and results of the 21-month outcome evaluation. The evaluation used a rigorous randomized controlled design, valid and reliable assessment measures, and had an excellent follow-up rate with participants in both the Home Again and Standard Care groups.

### Key Findings:

- Home Again participants were 2.5 times as likely as individuals receiving Standard Care to achieve and maintain housing over six months. (97% v. 38%,  $p < .001$ ).
- Home Again clients' use of hospital emergency health services, decreased by an average of 1.46 visits per three months during the evaluation period. By contrast, Standard Care clients' reported an increase of 0.62 visits per three months.
- The mental health of participants in both groups improved from baseline to the 6-month follow-up, but the mental health of the clients in Home Again improved more.
- Home Again participants were nearly twice as likely as participants receiving Standard Care to have good social support (34% vs. 19%). In general, people with good social support are more likely to have good physical and mental health, and are better equipped to reduce unhealthy substance use, than people with poor social support.
- In keeping with project expectations, 69% of Home Again clients reported alcohol use during the 6-month follow-up interview, compared to 42% of Standard Care clients ( $p < .05$ ).

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- Home Again participants reported very high satisfaction with the services that they received.

Conclusions based on this evaluation are that Home Again was successful in improving housing tenure for participants during the 6-month evaluation period, and that the project was more effective than Standard Care in this regard. In addition, Home Again appears to have positively affected participants' mental health and social support, and decreased their use of emergency health services. For these reasons, continuation and expansion of the program is warranted.

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## Background and Purpose

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### The Scope of the Problem

Homelessness impacts the health and well-being of millions of people in the United States. It is estimated that 3.5 million people in the U.S. experience homelessness each year [1]. In Worcester, a census of homeless individuals identified over 1,400 people in 2009, and local agencies that serve the homeless estimate that there are approximately 2,000 homeless individuals in the area over the course of one year [2].

Several studies have found that homelessness is associated with increased risk for several important health concerns, and death [3-5]. Mortality rates among homeless adults are 3 or more times that of the general population [6, 7]. In addition, homeless people face higher-than-average risk of respiratory, skin, and dental problems, depression and substance abuse, chronic health problems such as hypertension, diabetes and peripheral vascular disease, communicable diseases, and physical and sexual violence (including homicide) [3, 8, 9]. Importantly, individuals who experience homelessness typically have extremely limited access to primary and preventive health care services, but use acute health services at high rates [10-12].

Homelessness is also costly for society. The federal government spends approximately \$2.4 billion annually on homeless services programs. Providing emergency shelter to a single homeless individual in Massachusetts costs the state approximately \$1,000 a month. A recent analysis of the cost of homelessness in Seattle, Washington, found that the average homeless adult incurred public costs of over \$4,000 per month [13].

There is a small subset (~10%) of the homeless population that uses substantially more health care and other services than other homeless individuals—those who are “chronically homeless.” HUD defines chronic homelessness as those who are “an unaccompanied homeless individual with a disabling condition who had either been continuously homeless for a year or more or has had at least four episodes of homelessness in the past three years” [14].

### What services are available to homeless people in Worcester, Massachusetts?

In Worcester, when an individual seeks help to end his or her homelessness, he or she typically comes to the Homeless Outreach and Advocacy Project (HOAP) at Community Healthlink. HOAP conducts a comprehensive assessment of their needs, and enters them into a local system of services that we refer to in this report as “Standard Care.” Standard Care services comprise outreach services, case management, referral to local emergency shelters, and other appropriate services including temporary housing.

Recently, a new model of services has been tested and adopted by approximately 150 cities in the United States [15]. This strategy, known as Housing First, provides permanent subsidized housing, case management, and individualized health services to homeless clients. This approach directly challenges the notion that homeless individuals must first achieve “housing readiness” before entering housing. At least four randomized controlled trials have found that the Housing First approach is effective [16-19]. These studies have demonstrated that chronically homeless people who participate in Housing First programs are more likely to remain housed, less likely to

use emergency health services, less likely to be in jail, and less likely to be admitted to mental health facilities than chronically homeless people who receive standard services [16-19].

Although the Housing First approach has worked for homeless individuals in cities including New York, Denver, Seattle, San Francisco, and Chicago, it was not a foregone conclusion that it would be successful in Worcester, or that it would offer a substantial improvement over standard services here [12, 13, 16, 20]. There were two main reasons why Worcester might have been different than the other cities where Housing First had worked. First, because of the relatively robust human services system in Worcester, the usual care provided might have been as helpful as (or superior to) to the Housing First approach. It was also possible that the homeless population in Worcester was different from the homeless populations in other cities because of geographic and cultural factors, which meant that in theory there was a possibility that Worcester-based homeless people were for some reason at higher-than-average risk of being unable to maintain permanent housing. An additional reason for conducting the evaluation in Worcester was that some local elected officials, civic leaders, and activists perceived that sobriety was an appropriate precondition for housing, and they questioned whether Housing First would be an effective intervention in Worcester.

For these reasons, in January of 2007, The Health Foundation of Central Massachusetts funded a proposal submitted by a collaborative of homeless service providers, named the Comprehensive Homeless Assessment and Intervention Network (CHAIN), to plan and then evaluate a Housing First approach to addressing chronic homelessness. Members of CHAIN include: Central Massachusetts Housing Alliance, Community Healthlink, Dismas House, Henry Lee Willis Community Center, Jeremiah's Inn, and PIP Shelter/South Middlesex Opportunity Council. The planned project was named "Home Again," and was modeled and evaluated over the course of 21 months (January 1, 2008 – September 30, 2009). The primary goal of the project was to reduce the number of adults in Worcester, Massachusetts who were chronically homeless, or on the verge of becoming chronically homeless.

The impact of Home Again was assessed by an evaluation team from the Boston University School of Public Health. The purpose of the evaluation was to determine whether participation in Home Again was more beneficial to chronically homeless individuals in Worcester, Massachusetts, than the standard services that were otherwise available. Specifically, the evaluation assessed whether participation in Home Again was associated with increased likelihood of remaining housed for a 6-month follow-up period, decreased alcohol use, decreased use of hospital emergency department services, improved mental health, and increased social support for participants. The evaluation also assessed whether participants felt satisfied with Home Again services.

This report provides detailed information about the methodology and results of the 21-month outcome evaluation.

## Description of the Intervention: Housing First vs. Standard Care

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Home Again is a “Housing First-style” intervention; it is modeled after other successful Housing First programs in other cities, with some minor modifications that make it suitable for Worcester, Massachusetts. Home Again was tested and evaluated against what might reasonably be called the “standard care” for homeless individuals in Worcester in 2008-09. It should be noted that approximately one half of the Home Again participants were housed in scattered sites and the other half in a congregate site. For the purpose of this report, we use the term “Standard Care” to refer to the local system of services that comprises outreach, emergency shelter, and in some cases, temporary housing that is typically predicated on achieving and maintaining sobriety.

Table 1 (below) details the major differences and similarities between Home Again and Standard Care in Worcester. Notably, while case management is central to both approaches, the ratio of case managers to clients is 1 to 10 in Home Again, while it is as high as 1 to 70 or more in Standard Care. The potential of Home Again to succeed rests on the low case manager to client ratio, because Home Again case managers work directly with each client to achieve permanent housing early in their engagement with services. In Home Again, the goal is for clients to move into permanent subsidized housing within a few months of program engagement. In Standard Care, it is not atypical for clients to wait years for permanent housing.

In Home Again, case managers accompany clients as they search for a place to live, and in some cases, are able to direct them towards housing units, some of which were owned by agencies represented on the Home Again Steering Committee. In Standard Care, case managers do not accompany clients on housing searches and do not generally have housing stock to offer to clients. Further, in Home Again, case managers will deliver the exact services that the client needs in the most efficient way possible; for example, they will drive to the client’s home to meet with them, drive them to their appointments, or supply them with taxi vouchers. Clients in Standard Care typically must find their own transportation to appointments. Perhaps most importantly, in Home Again, case management services are provided even after the client is housed. Clients in Standard Care who are housed may not necessarily continue to receive needed case management services.

Perhaps the most widely-known feature of Home Again is that clients need not be sober (*i.e.*, refrain from drinking alcohol or using drugs) in order to participate. Instead, case management and other services are provided to clients in order for them to develop a harm-reduction action plan and achieve a healthy lifestyle. In Standard Care, most clients are required to achieve sobriety before they are eligible for housing—and to maintain sobriety when housed.

**Table 1. Home Again details compared to Standard Care**

Feature	Home Again	Standard Care
Case management	✓	✓
Case manager: client ratio	1:10	1:≥70
Case management appointments at home	✓	⊗
Sobriety/abstinence is not required to receive housing*	✓	⊗
No mental health treatment pre-requisite for housing	✓	⊗
Mental Health treatment at home	✓	⊗
Permanent subsidized housing	✓	⊗
Average wait for permanent housing	<3 months	>2-5 years (unless client can afford market-rate housing)
Case management support after housed	✓	No, unless specific housing program provides it
Housing retained during temporary departure (e.g. treatment facility or incarcerated)	✓	⊗

✓ = the program has this feature

⊗ = the program does not have this feature

\* note that there is one exception: sobriety is not required of Standard Care individuals who obtain market housing

## Evaluation Design and Methods

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### Evaluation design

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The outcome evaluation of Home Again used a randomized controlled design to assess changes in housing status, substance abuse, mental health, physical health, use of emergency health care services, self-care skills, and social support among those in Home Again as compared to those receiving Standard Care. Sixty homeless individuals were enrolled and randomized to receive either Home Again or Standard Care services. A trained interviewer administered baseline assessment surveys, and follow-up surveys at three and six months following baseline to all participants. Enrollment and follow-ups occurred on a “rolling” basis—that is, individuals entered the program and were followed-up on a first-come, first-served basis rather than all at the same time. This evaluation research study was approved by the Human Subjects Committees at the Boston University School of Public Health and the University of Massachusetts Medical School.



## Sample

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The study sample was drawn from the population of homeless individuals living in Worcester who requested services from Community Healthlink, the lead administrative and fiscal agent for the grant which funded Home Again. The recruitment procedure was as follows: homeless individuals requesting services were asked if they were interested in participating in an evaluation study. If so, they were screened for eligibility. Individuals were considered eligible for the study if they met the HUD definition for being chronically homeless (see background section), or if they were considered to be at a high risk for becoming chronically homeless (see Table 2). People were considered at high risk if they had been incarcerated as an adult, met the federal poverty guidelines, were over age 29, and had been homeless for 9 months or less. In total, 60 people were enrolled in the study: 40 chronically homeless individuals and 20 homeless individuals at high-risk of becoming chronically homeless. Of these, 29 people were randomized to Home Again, and 31 were randomized to Standard Care.

**Table 2. Who was eligible for the study?**

	<b>Eligibility criteria</b>
Chronically homeless (N=40)	<ul style="list-style-type: none"> <li>• Not seeking to live with dependent children</li> <li>• With a disabling condition</li> <li>• Either continuously homeless for <math>\geq 12</math> months OR has had at least four episodes of homelessness in the past three years</li> </ul>
High-risk for becoming chronically homeless (N=20)	<ul style="list-style-type: none"> <li>• Not seeking to live with dependent children</li> <li>• Have been incarcerated as an adult</li> <li>• Meet the federal poverty guidelines</li> <li>• Age 30 or older</li> <li>• Homeless <math>&lt; \text{or} = 9</math> months</li> </ul>

The demographic characteristics of the sample are detailed in Table 3. Eighty-three percent of the sample were male. Over half (57%) were White, 17% were Hispanic, 22% were Black, and less than 5% were multiracial or other. The average age of individuals in the evaluation sample was 48 years. Forty-three percent did not have a high school diploma or equivalent, 33% had graduated from high school, and approximately 25% of participants received some education after high school. These demographic characteristics are consistent with HUD data on the homeless population in the U.S., and with previous studies that estimate that the majority of homeless individuals are men who are 31 to 50 years old [21].

**Table 3. Participant Demographics at Baseline**

Characteristic	Baseline % (n)		
	Full Sample	Home Again	Standard Care
Total	100% (60)	100% (29)	100% (31)
<u>Gender</u>			
Male	83% (50)	86% (25)	81% (25)
Female	17% (10)	14% (4)	19% (6)
<u>Age (yrs.)</u>			
Mean	48	48	47
<u>Race</u>			
White	57% (34)	52% (15)	61% (19)
Hispanic	17% (10)	21% (6)	13% (4)
Black	22% (13)	24% (7)	19% (6)
Other	5% (3)	3% (1)	6% (2)
<u>Education</u>			
< HS Diploma	43% (26)	34% (10)	52% (16)
HS Diploma/GED	33% (20)	41% (12)	26% (8)
> HS Diploma	24% (14)	24% (7)	23% (7)

### Randomization

The randomization procedure was as follows. Prior to the start of the evaluation, 60 envelopes were prepared. Each envelope contained an index card with either the word “intervention” or “standard care.” The envelopes were randomized in blocks of four, stacked, and delivered to the Home Again data collection site. As each new individual enrolled in the evaluation study, and after they completed their baseline interview, the project coordinator (Bradley<sup>1</sup>) would check the next envelope in the stack and report the individual’s assignment to the case management supervisor (Rodriguez<sup>2</sup>). The individuals themselves were not told which group they were in, nor that the evaluation was testing a Housing First-type intervention against Standard Care services. (They were told that they were enrolled in an evaluation of “a new type of helping service for homeless individuals compared to the regular services.”) The randomization procedure resulted in 29 individuals being assigned to Home Again and 31 to Standard Care.

<sup>1</sup> Leah Bradley, Home Again Project Coordinator, Community Healthlink

<sup>2</sup> Gladys Rodriguez, Home Again case manager, Community Healthlink

## Data Collection Procedures

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The evaluation protocols were reviewed and approved by the Institutional Review Board (IRB) at the University of Massachusetts Medical School and the Boston University School of Public Health (BUSPH). Data were collected by a trained case manager (Rodriguez), who completed project survey forms with each participant in an individualized interview setting. All participants completed a 129-item baseline interview survey and a 153-item follow-up interview survey. The follow-up survey was administered twice; three and six months after the baseline. Interview surveys took approximately one hour to complete. Participants received \$15 for completing the baseline interview, \$20 for the three month interview, and \$25 for the six month interview. Completed interview surveys were transported back to BUSPH by a research assistant where they were cleaned and hand-entered into a database.

## Measures

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A complete list of measures used on the baseline and follow-up assessment surveys is provided in Table 7. A brief description of each of the outcome measures utilized for this evaluation report, including psychometric properties, is contained in this section.

Housing tenure was assessed via a single original item: “Are you currently homeless?” Participants who indicated that they were homeless were asked subsequent questions about how long they had been homeless, where they had spent the previous night, how long they had been staying in that location, how long ago it was when they most recently had a permanent home, and why they were no longer able to stay there. For Home Again clients, responses to the homelessness question were verified by the staff person collecting data (Rodriguez), because she had personal working knowledge of each person’s housing status. Standard Care clients’ responses were also verified by Ms. Rodriguez, who was able to determine from the pattern of responses to the question set whether an individual was housed or homeless at the time of the assessment.

Alcohol and Drug Use were assessed using selected questions from the Addiction Severity Index [22]. Questions asked about alcohol and drug use in the past 30 days and over the client’s lifetime. Example questions from the alcohol and drug sections include, “In the past 30 days, how many days did you use any alcohol at all?” and “Over your lifetime, how many years have you regularly used heroin?” This measure has good validity and reliability ( $\alpha = 0.62-0.81$ ).

Problem drinking was assessed using the CAGE questionnaire in reference to the preceding 90 days [23]. The CAGE comprises four questions, including, “Have you ever felt you should cut down on your drinking?” This measure is scored from 0-4 and a score of 2 or more indicates a problem with alcohol. The CAGE questionnaire has good validity and reliability ( $\alpha = 0.52-0.90$ ).

Mental Health was assessed using the Modified Colorado Symptom Index [24]. The index contains 14 items which ask about how often in the past month an individual has experienced a variety of mental health symptoms including, loneliness, depression, anxiety, and paranoia. Participants respond to each item using a Likert-scale from 0-4 (0-not at all, 1-once, 2-several

times during the month, 3-several times a week, 4-at least every day). An index score for this scale is calculated by summing each response. Higher scores indicate higher likelihood of mental health problems. We used the scores on this index in a continuous manner for some analyses, and we also created a cutpoint to use this variable dichotomously. The cutpoint selected was 30, where those with a score above 30 were classified as having good mental health, and those below with having fair to poor mental health. This cutpoint and classification scheme has been used in a prior study [24]. This instrument has a reported  $\alpha = 0.85-0.90$ .

Health care services use was assessed using two questions adapted from the Behavioral Risk Factor Surveillance System Survey (BRFSS) questionnaire [25]. Participants were asked, “During the past three months, how many times did you visit a doctor, nurse or healthcare clinic of any kind, including the emergency room?” and “During the past three months how many times did you visit an emergency room or urgent care center?”. Responses were analyzed continuously. A comprehensive study on the reliability and validity of the BRFSS by Nelson et al. reported that the original BRFSS questions were moderately to highly reliable and valid [26].

Social support was measured with the Interpersonal Support Evaluation List (ISEL-12) [27]. The ISEL-12 is composed of a list of 12 statements and participants report how true each statement is for them based on a Likert scale of 1-4 (1-definitely false, 2-probably false, 3-probably true, 4-definitely true). For the purposes of this study, items #8 and 12 were deleted because they referenced home and housing. The ISEL-12 is typically used as a continuous measure. For the purpose of this evaluation, scores ranged from 10-40. Because we wanted to create a binary variable representing either “good” or “poor” social support, we selected to look at those with the best possible social support in this sample (*i.e.*, those in the top 25%) against those with less good social support (*i.e.*, those in the bottom 75%). For this scale, Cronbach’s  $\alpha = 0.80- 0.90$ .

Participant satisfaction was assessed through three open-ended (*i.e.*, free response) questions on the three and six month follow up surveys. Participants were also asked to rank their satisfaction on a scale of 1-5 (1-very dissatisfied, 5-very satisfied).

## Statistical analysis

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All analyses were conducted using SAS version 9 (SAS Institute, North Carolina). The first step was to assess the comparability of the intervention (Home Again) and standard care (Standard Care) groups at baseline. The two groups were compared on age, gender, race, education, citizenship, marital status, primary language and employment. There were no differences in any of these factors between the two groups at baseline, which is an indication that the randomization procedure was successful. Next, outcomes of interest reported on the six month follow-up were compared by randomization group. These analyses were conducted both uncontrolled and adjusting for baseline levels of the conditions of interest. For example, when assessing alcohol use at the six month follow-up point, differences in alcohol use among participants were assessed in each group, and then re-assessed controlling for the baseline level of alcohol use. Finally, changes from baseline to follow-up for particular outcomes of interest were assessed in order to determine whether those changes were greater among Home Again or Standard Care participants. For example, if it was observed that the mental health of participants in both groups improved during the six months of this evaluation period, it was then determined

if the participants in Home Again improved more than the participants in Standard Care on this outcome. For all analyses, statistical significance was set to the  $p < .05$  level. Because this evaluation study was not originally powered to detect statistically significant differences on all outcomes of potential interest, there was an attempt to identify (and present) differences of clinical relevance as well as those that achieved statistical significance.

## Results

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Six-month follow-up data was obtained from 100% (29) of the individuals who were assigned to the Home Again group, and 84% (26) of those in the Standard Care group. The five individuals who were not able to be followed in the Standard Care group either declined to participate ( $n=3$ ), or could not be contacted ( $n=2$ ).

## Housing

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At baseline, 100% of participants in the study were homeless. On average, individuals reported that they had been homeless six times since age 18, and that they had been homeless this time for three years. A substantial majority (68%) were staying at an emergency shelter, while 13% reported staying on the street.

At the six month follow-up, 97% of the participants in Home Again had achieved and maintained housing, as compared with 38% of participants in Standard Care ( $p < .001$ ). In other words, Home Again participants were 2.5 times as likely as individuals receiving Standard Care to achieve and maintain housing over six months. It should be noted that approximately half of the Home Again participants were housed in scattered sites and the other half in a congregate site.

Participants in Home Again were equally able to achieve and maintain housing regardless of their alcohol use or mental health status. In contrast, participants in Standard Care were not as likely to be housed at follow-up if they used alcohol or had poor mental health.

**Table 4. Percent of sample housed at six month follow up, by randomization group and by risk factors of interest**

	Intervention	Standard Care	p-value
Total	97%	38%	$p < .001$
No alcohol use at baseline	94%	64%	--
Any alcohol use at baseline	100%	20%	--
Poor mental health at baseline	100%	29%	--
Good mental health at baseline	95%	42%	--

## Alcohol Use

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At the six month follow-up, participants in Home Again were no more likely than individuals in Standard Care to have a problem with alcohol (38% vs. 40%), even adjusting for their level of alcohol use at baseline.

Sixty-nine percent of Home Again participants reported any alcohol use in the past month on the 6-month follow-up survey. Only 42% of Standard Care clients reported any alcohol use in the past month. This difference was statistically significant, adjusting for baseline level of alcohol use ( $p < .05$ ).

**Table 5. Proportion of clients using alcohol, or with alcohol problems, at follow-up (N=55)**

	Intervention	Standard Care	Relative Risk
Total	100% (29)	100% (26)	n/a
Used alcohol at all	69% (20)	42% (11)	1.8 (1.1 - 2.9)
Had an alcohol problem	38% (11)	40% (10)	0.9 (0.6 - 1.6)

## Health Care Services

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At the six month follow-up, Home Again and Standard Care participants were equally likely to report that they had used health care services in the preceding three months, even controlling for their baseline level of health care usage (85% vs. 74%). While Home Again clients were slightly less likely than Standard Care clients to report that they had used a hospital emergency department or urgent care center, specifically, in the preceding three months (31% vs. 36%), this difference was not statistically significant. The average number of emergency visits clients in each group reported that they made in the three months preceding the 6-month follow-up survey was assessed; Home Again clients reported an average of 1.46 fewer visits than they had reported at baseline, and Standard Care clients reported an increase of 0.62 visits as compared to their baseline use. Again, the difference was not statistically significant, but this could be due to the small sample size.

To summarize the information presented in the table below, Home Again participants reported 58 unique emergency visits in the three months preceding their baseline survey, and only 19 visits in the three months preceding their 6-month follow-up survey. On the other hand, Standard Care clients reported 61 unique emergency visits in the three months preceding their baseline survey, and 74 visits in the three months preceding their six month follow-up survey.

**Table 6. Number of emergency health care visits in the past three months, by randomization group (N=55)**

	Baseline		6-month follow-up	
	Home Again # visits	Standard Care # visits	Home Again # visits	Standard Care # visits
Emergency health care use, past 3 months	58	61	19	74

### Mental Health

In both groups, clients' scores on the mental health index decreased from baseline to the six month follow-up, which means that their mental health status improved. While the mental health of participants in both groups improved from baseline to the six month follow-up, the mental health of the clients in Home Again improved more. In the Home Again group, the mean average score decreased almost 4 points from baseline to follow-up, whereas in the Standard Care group the mean average score decreased 2.31 points. In other words, the mean index score of the participants in Home Again decreased 70% more than the mean index score of participants receiving Standard Care. While the difference in the degree of change between the participants in the two groups did not reach statistical significance, it is nevertheless an indicator that Home Again may have had a positive impact on clients' mental health.

### Social Support

"Social support" is a term used to describe the extent of an individual's social connectedness, or the number and quality of their social relationships. In other words, a person with many close friends or family members upon whom he/she can depend has good social support. At the six month follow-up, Home Again participants were nearly twice as likely as participants receiving Standard Care to have good social support (34% vs. 19%). Home Again participants' score on the social support scale increased substantially from baseline to the six month follow-up (from 26.4 points to 28.7 points), while the social support score for individuals receiving Standard Care did not change during that time.

### Participant Satisfaction

Participants reported very high satisfaction with the services they received at both the three and six month follow-up surveys. On a scale from 1-5, where 5 was best, Home Again clients gave the program a 4.8 after three months, and 4.9 after six months of participation. Quotes from participants about their satisfaction with the program include:

*"I have a home...and I'm not drinking as much."*

*"I've enjoyed waking up in my own apartment, getting mental health services. My quality of life has improved."*

*“I have an apartment. I have a team behind me...I have people helping me out. If I have a problem, people here will help me.”*

*“I was out of housing for a long time and I can see the mistakes I’ve made. I’m learning now to make better choices.”*

*“It is making a difference in my life to be housed. I plan on going back to school and I’m no longer a walking zombie on the streets anymore.”*

## Discussion

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This evaluation established that participants in Home Again were significantly more likely to be housed after six months of receiving services than those in Standard Care. Impressively, 97% of those in Home Again achieved and maintained housing after six months, while only 38% of those in Standard Care were housed. In terms of housing tenure, Home Again was equally successful for those with or without alcohol problems, and those with or without mental health problems.

In addition, Home Again appears to have reduced the number of emergency health care visits among enrolled individuals during the six month period of evaluation, while those in Standard Care reported a slight increase in the number of hospital emergency health care visits during this same time. While the small sample size meant that this difference did not reach statistical significance, the data are suggestive of a positive impact of Home Again on reduced emergency health care use.

Participants in both Home Again and Standard Care appeared to experience an improvement in mental health during the six months of the evaluation, but those in Home Again improved more than those in Standard Care. While the difference was small, this result supports the conclusion that, on the whole, Home Again was more beneficial than Standard Care for a range of outcomes. Importantly, this difference was detected after only six months of participation in Home Again. Six months is an extraordinarily short period of time for an intervention to offset the health and behavioral risk factors related to chronic or nearly-chronic homelessness. A longer-term follow-up period may have provided even more sizable differences between the two experimental groups.

Participants in Home Again reported dramatically improved social support over the six month evaluation period, while the social support of those in Standard Care remained constant. Social support is critically important to the health and well-being of people in general [28], and homeless people specifically [29-32]. Prior research has demonstrated that good social support reduces depression and suicidality among homeless people [29], improves access to and use of helping services such as substance abuse services and outpatient medical care [29-31], and reduces the risk of drug and sexual risk taking behaviors [30]. Therefore, the impact of Home Again on participants’ social support is an important and noteworthy achievement.

While individuals in Home Again utilized substance abuse treatment services and self-help alcohol use groups (e.g, AA) during the evaluation period, and some may have decreased their substance use, participation in Home Again did not appear to have an impact on alcohol use for participants overall. This finding can be explained in several ways. First, participants in Home



Again may have been more honest in their reporting of alcohol use than participants in Standard Care at the 6-month assessment. Standard Care participants may have been aware that most housing programs require sobriety. Consequently, they may have reported no alcohol use on the evaluation survey hoping that it would increase their chance of placement in a housing program. Second, Home Again does not require participants to be sober, and it is not a primary goal of the project to have participants achieve sobriety after six months of housing. Home Again takes the position that alcohol use is neither illegal nor harmful if consumed in healthy quantities, and that many housed people consume alcohol both at healthy and unhealthy levels. Therefore, Home Again focuses on providing housing first and incorporating alcohol use reduction behavior change strategies gradually and over time. Therefore, it is also possible that the follow-up period (six months) was insufficient to detect changes in alcohol use that may be detected after continued engagement in Home Again.

The impact of Home Again on several additional outcomes that have not been described in this report was also assessed, including on non-prescription drug use, self-esteem, and individuals' capacity to care for themselves in some specific ways (*i.e.*, find transportation, apply for a job). No impact of the project on these outcomes was found, either because the reported prevalence at baseline was too low for a difference to be observed (*e.g.*, for drug use), because the outcome did not change substantially from baseline to follow-up, or because the changes from baseline to follow-up were approximately equivalent for Home Again and Standard Care participants.

Major strengths of this evaluation are the rigorous randomized controlled design, the excellent six month follow-up rates (*i.e.*, low loss-to-follow-up), and use of valid, reliable measures to assess many of the outcomes of interest. In addition, this evaluation was subject to at least three limitations. First, all data were self-reported. While many of the outcomes of interest were verified by the data collection administrator (Rodriguez), there were others that could not be substantiated (*e.g.*, alcohol use, mental health, social support). If under- or over-reporting occurred equally for all participants in this evaluation, regardless of their group assignment, it would not affect the direction of the results. However, if the members of one group were more likely than members of the other to either under- or over-report a particular condition (*e.g.*, alcohol use, emergency health care use), the results may reflect that systematic bias. Second, it was not possible to assess with precision the number and type of supporting services delivered to each enrolled individual. Although clients were asked to report the services that they received, such as job training, counseling, drug and alcohol counseling, and health services, and their responses were cross-checked against a database of service delivery maintained by Community Healthlink (CHL), there was a fair amount of inconsistency between clients' self-reports of service utilization and the CHL database. Future evaluation efforts will measure clients' service utilization with better precision. Assessment of housing tenure and other outcomes of interest within Home Again by level and type of service utilization received would be beneficial. A third limitation of this evaluation was that the sample size was small. A number of outcomes differed for those in Home Again and Standard Care, but the differences were not statistically significant. The lack of statistical significance for these results may be due to the small sample size; it is possible that with larger numbers of individuals in each group, the differences that were detected would have reached statistical significance. Finally, it is noteworthy that there were five individuals with whom we were unable to complete the six month follow-up assessment in the Standard Care group, although it is unlikely that this threatened the validity of our results. While loss-to-follow-up can be a concern if numerous individuals are unable to be assessed at follow-up, or if the reasons for evaluation drop-out may be related to the outcome of interest, in this case

only 8% of the sample was lost-to-follow-up, and the reasons for evaluation drop-out did not appear to be systematic nor related to the outcomes of interest.

## Conclusions

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The results of this evaluation demonstrate that Home Again had a positive impact on participants' ability to remain housed, regardless of their level of alcohol use or mental health status. Home Again was more effective than Standard Care in helping participants remain housed over the six month evaluation period. In addition, Home Again appears to have had positive effects on participants' mental health and social support, and to have decreased participants' use of emergency health care services. Participation in Home Again does not appear to have had an impact on participants' alcohol use during the first six months that they were enrolled. Home Again was a tremendous success with participants, who indicated that they were extremely satisfied with all aspects of service delivery. For these reasons, continuation and expansion of the program is warranted.

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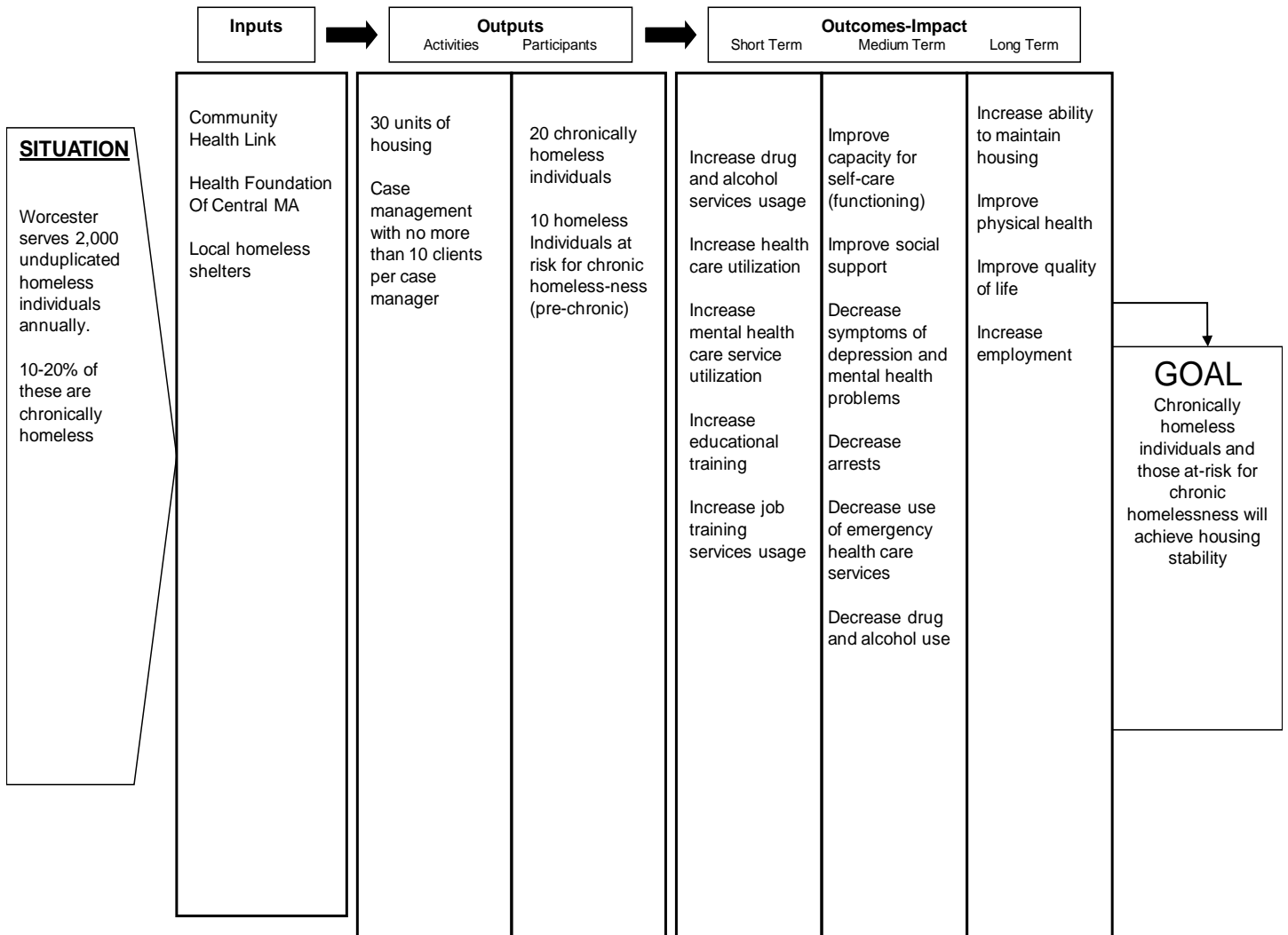
## Appendices

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A. Logic Model

B. Measures

**Appendix A: Home Again Project Logic Model**



## Appendix B

Table 7. Home Again Evaluation Measures Used

Construct	Name of Measure	Citation	Number of items	Modifications	Validity/ Reliability of the instrument
Demographics	n/a	Original	6	n/a	n/a
Housing	n/a	Original	12	n/a	n/a
Choice in Housing**	n/a	Nelson, G, Sylvestere, J, Aubry, T, et al. (2007). Housing Choice and Control, Housing Quality, and Control over Professional Support as Contributors to the Subjective Quality of Life and Community Adaptation of People with Severe Mental Illness. <i>Adm Policy Ment Health</i> . 34: 89-100.	23	n/a	n/a
Alcohol & Drug Use	Addiction Severity Index Lite	McLellan, AT, Cacciola, JS, Alterman, AI, Rikoon, SH & Carise, D. (2006). The Addiction Severity Index at 25: origins, contributions and transitions. <i>American Journal of Addiction</i> . 15 (2) (113-24).	3	questions #1-13 in alcohol and drug section of instrument used	Alcohol: $\alpha=$ 83-0.87; Drug: 0.62-0.81
Alcohol Use	CAGE	Ewing JA. (1984). Detecting Alcoholism: the CAGE Questionnaire. <i>Journal of the American Medical Association</i> , 252: 1905-1907.	4	none	$\alpha=$ 0.52-0.90
Drug Use	Sub-scale of the PDSQ	Zimmerman, M. and Mattia, J.I., 2001. The Psychiatric Diagnostic Screening Questionnaire: Development, reliability and validity. <i>Comprehensive Psychiatry</i> 42, pp. 175-189	6	n/a	$\alpha=$ 0.89
Mental Health	Modified Colorado Symptom Index	Conrad KJ, Matters MD, Yagelka J, et al: Reliability and validity of a Modified Colorado Symptom Index in a national homeless sample. <i>Mental Health Services Research</i> 3:141-153, 2001	14	none	$\alpha=$ 0.85-0.90; test-retest reliability: 0.71
Medical Status	Taken from the BRFSS	Centers for Disease Control and Prevention [25]. <i>Behavioral Risk Factor Surveillance System Survey Questionnaire</i> . Atlanta, Georgia: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, 2007.	5	n/a	n/a
Services Received	Treatment Services Review	McLellan A.T., Alterman A.I., Cacciola, J., Metzger D. & O'Brien, C.P. (1992). A new measure of substance abuse treatment: Initial studies of the Treatment Service Review. <i>Journal of Nervous and Mental Disease</i> , 180, 101-110.	35	Some items deleted	n/a

Construct	Name of Measure	Citation	Number of items	Modifications	Validity/ Reliability of the instrument
Self-Esteem	Rosenberg's Self-Esteem Index	Rosenberg, Morris. 1989. <i>Society and the Adolescent Self-Image</i> . Revised edition. Middletown, CT: Wesleyan University Press.	10	none	$\alpha = 0.74-0.80$ ;
Self-Care	Brief Instrumental Functioning Scale	Sullivan G., Dumenci L., Burnam A., Koegel P. (2001). Validation of the Brief Instrumental Functioning Scale in a Homeless Population . <i>Psychiatr Serv</i> 52:1097-1099.	6	none	$\alpha = 0.86$
Social Support	Interpersonal Support Evaluation List (ISEL-12]	Cohen, S., & Hoberman, H. (1983). Positive events and social supports as buffers of life change stress. <i>Journal of Applied Social Psychology</i> , 13, 99-125. Electronic version available: <a href="http://www.psy.cmu.edu:16080/~scohen/">http://www.psy.cmu.edu:16080/~scohen/</a>	12	Questions #8 and 12 were deleted	$\alpha = 0.80-0.90$ test-retest reliability intraclass correlation coefficients (ICC): 0.631-0.847
Quality of Life	Quality of Life Scale (QOLS)	Burckhardt CS, Woods SL, Schultz AA, Ziebarth DM (1989). Quality of life of adults with chronic illness: A psychometric study. <i>Research in Nursing and Health</i> , 12, 347-354.	16	none	$\alpha = 0.82-0.92$

\*\*measure used for three and six month follow-up only