



## Washington State's Housing and Essential Needs Program

### *Impacts on Housing Status, Use of Food Assistance, Arrests, Incarcerations, and Health Outcomes*

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**T**HE HOUSING AND ESSENTIAL NEEDS (HEN) program was implemented in November 2011 and was one of three programs to replace the Disability Lifeline (DL) cash assistance program (formerly known as General Assistance). Prior research on the effects of terminating General Assistance (GA) cash assistance in other states suggests an associated increase in housing instability. For example, a study in Pennsylvania found a doubling of utility shut-offs and evictions and an almost five-fold increase in the number of former GA recipients living with relatives or friends.<sup>1</sup> Similarly, a study in Michigan found the proportion of GA recipients who were homeless increased from 2 percent to 25 percent in the seven months following termination of the program.<sup>2</sup> The HEN program was developed to buffer vulnerable clients from the potential impact of losing cash assistance by providing support such as rent and utility assistance. The DSHS Economic Services Administration identifies and refers enrollees in the Medical Care Services program who may be candidates for the HEN program.<sup>3</sup> Local housing providers then determine if these individuals are eligible for the HEN program because they are currently homeless or at imminent risk of becoming homeless.

Although the HEN program is only a year old, state policy makers are currently in the process of making decisions about what services to provide this population under Health Care Reform. In light of this, the Department of Commerce asked the DSHS Research and Data Analysis Division (RDA) to evaluate the impact of HEN services on measures of well-being over a six-month follow-up period.<sup>4</sup> To do so, we used the DSHS Integrated Client Database to construct two statistically well-matched comparison groups—one from the same time period during which the HEN program was operating (the “concurrent group”) and another from the prior year before the HEN program was created (“retrospective group”). We then compared outcomes for those who received HEN services to the statistically matched comparison groups who had similar baseline characteristics but did not receive HEN services.

### Key Findings

Compared to both comparison groups, we find that HEN recipients over a six-month follow-up period:

- Experienced greater housing stability.
- Remained connected to Basic Food assistance at significantly higher rates.
- Were less likely to be incarcerated in a state Department of Corrections facility.

<sup>1</sup> Pennsylvania Co. Joint Study of Act 75: The impact of welfare reform. Harrisburg, PA: Act 75 Interagency Evaluation Subcommittee, Department of Labor and Industry, Department of Public Welfare, Department of Revenue and Community Affairs, the Governor's Office of Policy Development, and the Governor's Office of the Budget; 1984.

<sup>2</sup> See McDonald B, Parks S, Conyers G, Mutchler W. The Impact on Individuals and Communities of the Reductions in Social Services in Michigan in 1991-1992. Lansing, MI: Michigan League for Human Services ; 1993.

<sup>3</sup> To be eligible for MCS, individuals must 1) have countable incomes below \$339 a month and 2) demonstrate they are incapacitated and unable to work for at least 90 days due to a mental or physical impairment based on medical evidence reviewed by DSHS at least every 12 months.

<sup>4</sup> A longer follow-up period was not possible due to a lag in the availability of administrative data used to measure outcomes.



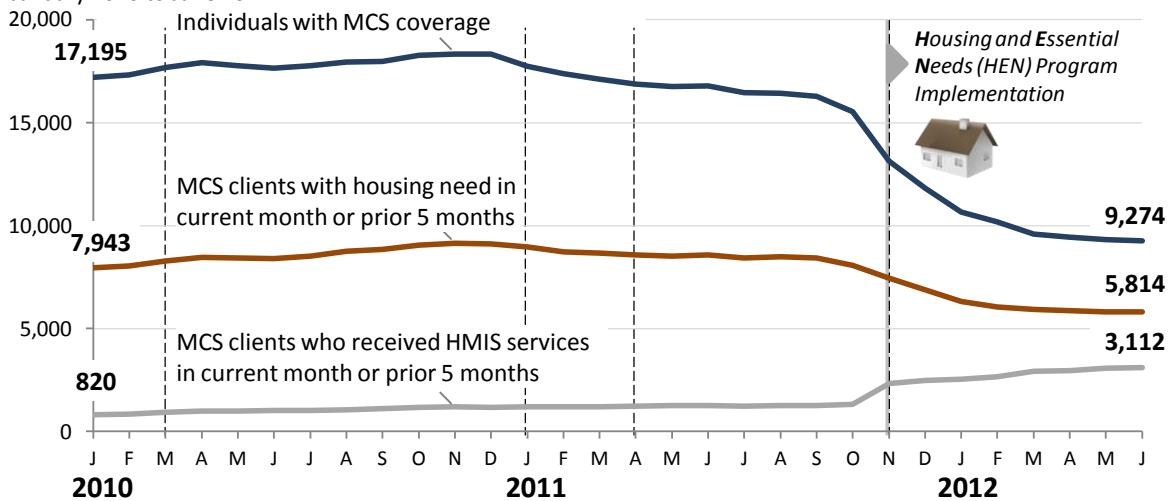
## TRENDS | Sharp drop in MCS enrollment but concomitant rise in housing assistance

To describe the ramp-up of the HEN program, it is helpful to put use of HEN services into the context of broader MCS caseload and housing need trends. Elimination of DL-U cash assistance in November 2011 was followed by a steep decline in the MCS caseload.<sup>5</sup> The subsequent decline of the MCS caseload was associated with an increase in the proportion of the MCS caseload needing housing assistance. This finding is not surprising, given that elimination of the DL-U cash grant and creation of the HEN program shifted incentives for enrollment towards clients needing housing support.

The ramp-up of the HEN program was associated with a large increase in the proportion of MCS clients with housing needs who received assistance recorded in the Homeless Management Information System (HMIS). To illustrate this ramp-up, we chart the proportion of the MCS caseload with an indication of housing need<sup>6</sup> in the past 6 months who received HMIS-recorded housing assistance (including HEN) within the prior 6 months. Based on this measure of penetration, the proportion of MCS clients receiving recent housing assistance increased from 16 percent in October 2011 to 54 percent in June 2012.

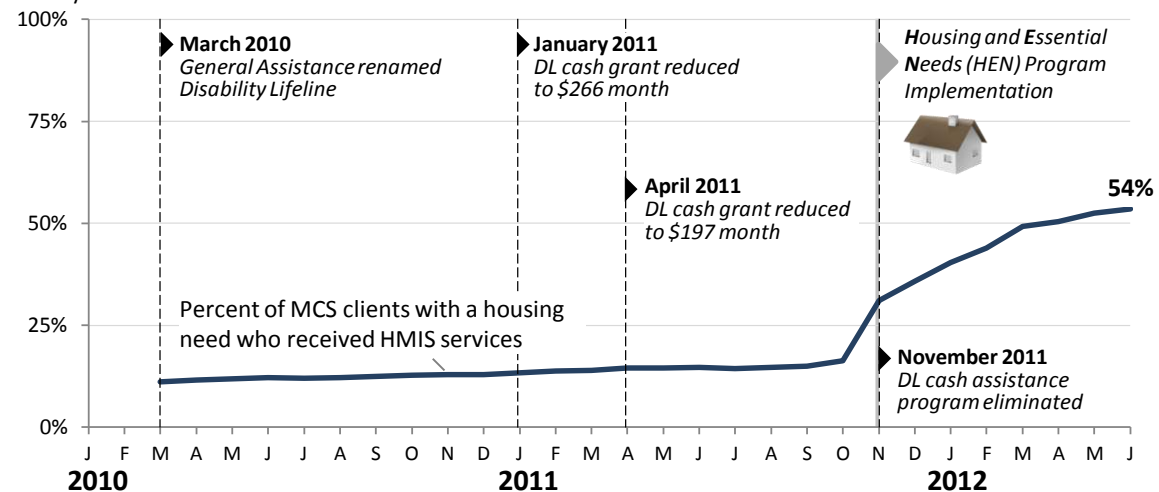
### Trends in MCS Enrollment, Housing Need, and Housing Assistance

January 2010 to June 2012



### HMIS-recorded housing assistance penetration, among those with housing need (6-month look-back)

January 2010 to June 2012



<sup>5</sup> RDA report number 11.187, *The Impact of Recent Policy Changes on Medical Care Services Clients*, compares the experiences of a cohort of 15,544 individuals enrolled in MCS in October 2011 to two earlier cohorts selected based on MCS enrollment in October 2009 and October 2010. By contrast, this report examines the outcomes of 661 MCS enrollees who received HEN during its initial months of implementation compared to two matched comparison groups, one of which had the opportunity to receive HEN (concurrent group) and the other not (retrospective group).

<sup>6</sup> Housing need is defined using the criteria developed in: Shah, MF, et al. (2012). *Identifying Homeless and Unstably Housed DSHS Clients in Multiple Service Systems*, Olympia, WA: Research and Data Analysis Division, <http://publications.rda.dshs.wa.gov/1457/>.

## EVALUATION DESIGN

### Step 1. Define the study population

The first step was to carefully define the selection criteria for inclusion in the “treatment” (HEN) group and the two comparison groups. In particular, we needed to ensure that individuals in the comparison group sampling pool had similar experiences in the twelve months prior to HEN implementation and that they did not receive services similar to HEN in the follow-up period. To demarcate the 12-month pre-period from the six-month follow-up period, each client was assigned an index month (described in step 3 below). After conducting preliminary analyses comparing HEN recipients to each of the comparison group sampling pools on key measures in the baseline period, the study population was restricted to adults who:

1. Had MCS coverage and an identified housing need between November 2011 and January 2012 (or November 2010 and January 2011 for the retrospective comparison group),
2. Were identified as homeless in the DSHS Automated Client Eligibility System (ACES) in at least one of the three months prior to the index month, and
3. Did not receive housing assistance recorded in the Homeless Management Information System (HMIS) in the second or third month prior to the index month.<sup>7</sup>

In addition, we imposed a restriction that candidates for inclusion in the two comparison groups could not have received any housing assistance recorded in HMIS in the six-month follow-up period that includes the index month. (More details on the selection criteria for inclusion in the treatment group and the two comparison group sampling pools can be found in the Technical Notes on page 7).

### Step 2. Identify comparison group sampling frames

The possibility of unmeasured differences between program participants and non-participants—often referred to as “selection bias”—is an inherent challenge in evaluating the program in the absence of an experimental design with random assignment. This is because individuals who received HEN assistance may be different in critical but unmeasured ways from similar individuals who did not participate in the HEN program. For example, statistically similar non-recipients may have family to rely on for temporary housing or may prefer living in “tent cities” over formal housing assistance. To test the sensitivity of our findings to such potential bias, we constructed both a “concurrent” and a “retrospective” comparison group. From an evaluation perspective, the advantage of the retrospective comparison group is that it did not have the opportunity to receive housing assistance through HEN because the program did not yet exist. If the concurrent and retrospective comparison groups show similar experiences, it gives us greater confidence that measured differences in outcomes relative to the treatment group yield valid inferences about HEN program impacts.

### Step 3. Define the index month and follow-up period

An index month was assigned to individuals in the treatment group as well as their peers in each of the comparison group sampling frames. For the HEN treatment group, the index month was the first month in the November 2011 to January 2012 period that the client received HEN services. However, if a HEN recipient had received assistance recorded in HMIS in the month prior to their first month receiving HEN, that prior month became their index month. We excluded individuals from the study population if they had received HMIS services in the second or third month prior to their index month. These decisions meant that neither the HEN recipients nor their peers in either comparison group received housing assistance recorded in HMIS in the three months prior to their index month.

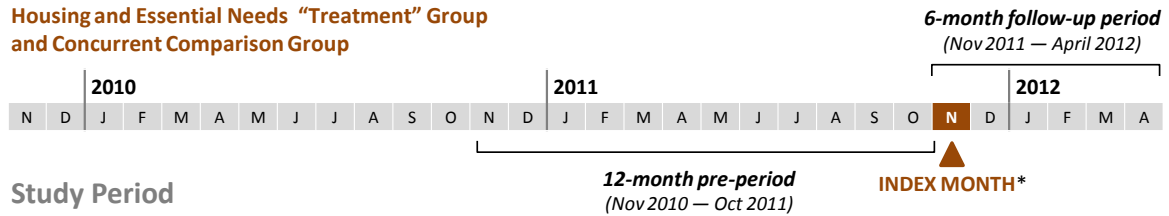
For the concurrent comparison group sampling frame, index months were randomly assigned prior to the matching process to mirror the distribution of index months for the HEN group. The same approach was taken to assign index months to individuals in the retrospective sampling frame, with the exception that their index months occurred exactly one year earlier (between October 2010 and January 2011).

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<sup>7</sup> Combined with moving back the index month for individuals who received HMIS-recorded services the month prior to receive HEN (see Step 3), this restriction ensured that neither individuals in the treatment nor the comparison groups were receiving HMIS-recorded housing assistance in the three months prior to the index month.

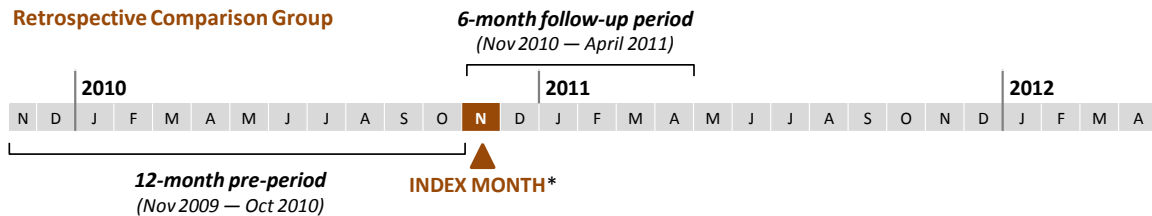
## Evaluation Timeline

### Housing and Essential Needs “Treatment” Group and Concurrent Comparison Group



## Study Period

### Retrospective Comparison Group

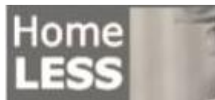


\*This timeline shows an example for individuals who had a November index month. As explained in Step 3 on page 3, individuals could have index months in October, November, December, or January. The follow-up period would end in June 2012 for someone with a January 2012 index month.

## Step 4. Create statistically matched comparison groups and compare outcomes

Even with the initial restrictions imposed on the study population (Step 1), some key differences remained between groups. The baseline characteristics that were associated with greater likelihood of engagement in HEN services included: being in poorer physical health; being recently engaged in alcohol/drug treatment; being diagnosed with depression or anxiety; being African American; living in counties with low-to-moderate urban density (as opposed to rural or densely urban counties); and not having been recently arrested. Given that these baseline differences remained after the initial study population selection criteria were imposed, we used statistical processes to create comparison groups that were well-matched at baseline.

To construct each of the two comparison groups, we used logistic regression to estimate propensity scores for both HEN recipients and individuals in the comparison group sampling frames. This method leverages observable individual-level information to estimate the probability that someone would be a HEN recipient. Propensity scores were then used to match each HEN recipient with the person in the comparison group sampling frame who was most similar to them on a variety of measures. The table presented in the Appendix shows the results of the matching processes for both comparison groups in terms of similarity to HEN recipients on key baseline measures. This helps demonstrate that the two comparison groups were highly similar to the HEN group at baseline.



### What’s a p-value and why does it matter?

In this report, p-values are used to gauge the statistical significance of difference between HEN recipients and the two comparison groups on key measures both at baseline and follow-up. By convention, p-values *less than or equal to* 0.05 indicate statistical significance. That is, there is no more than a 5 percent probability that the difference observed between two groups is due simply to chance.

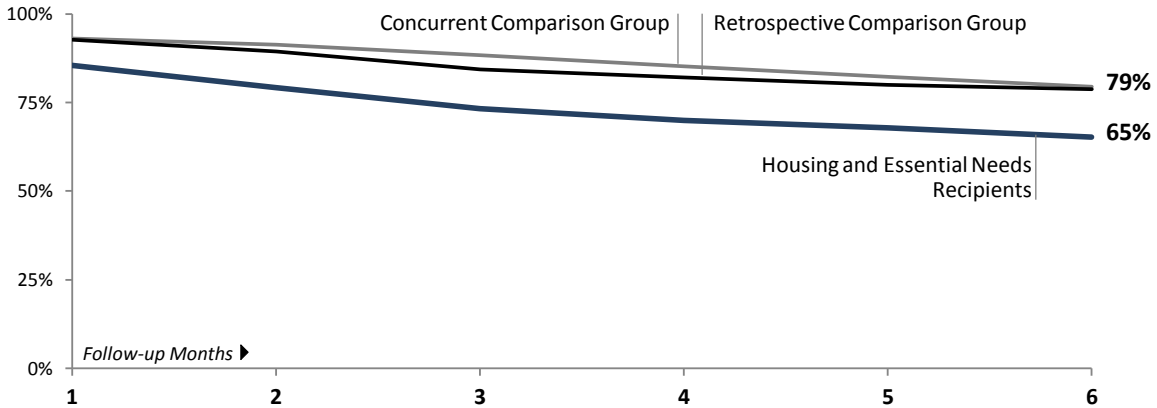
In general, p-values for between-group differences following one-to-one matching are *greater than* 0.05 (see Appendix). This demonstrates that the matching process identified comparison group members that are similar to HEN recipients at baseline. This makes us more confident that statistically significant differences in follow-up outcomes between HEN recipients and the comparison groups can be attributed to the receipt of HEN benefits rather than to pre-existing differences.

## HOUSING | HEN recipients significantly less likely to experience housing instability

By definition, all of the HEN recipients and none of the comparison group members in the study population received housing assistance recorded in HMIS in the follow-up period. Thus, the measure we use to assess housing instability in the six-month follow-up period does not include HMIS-recorded assistance. It does capture housing instability as identified in information systems used for public assistance eligibility determination, medical services, and behavioral health services. The vast majority of housing instability is identified through the DSHS Automated Client Eligibility System (ACES), which is used to determine eligibility for cash, food, and medical assistance.

Given that 1) DSHS caseworkers only update information on clients' living arrangements in ACES during eligibility (re)determination visits, and 2) the study population is restricted to individuals who were "homeless" in ACES in one of the three months prior to the index month, it is encouraging that HEN recipients are significantly less likely than either comparison group to experience housing instability in each of the six follow-up months. By six months, we find that 65 percent of the HEN group experienced housing instability compared to 79 percent of both the concurrent and retrospective comparison groups ( $p < .0001$  for both comparisons).

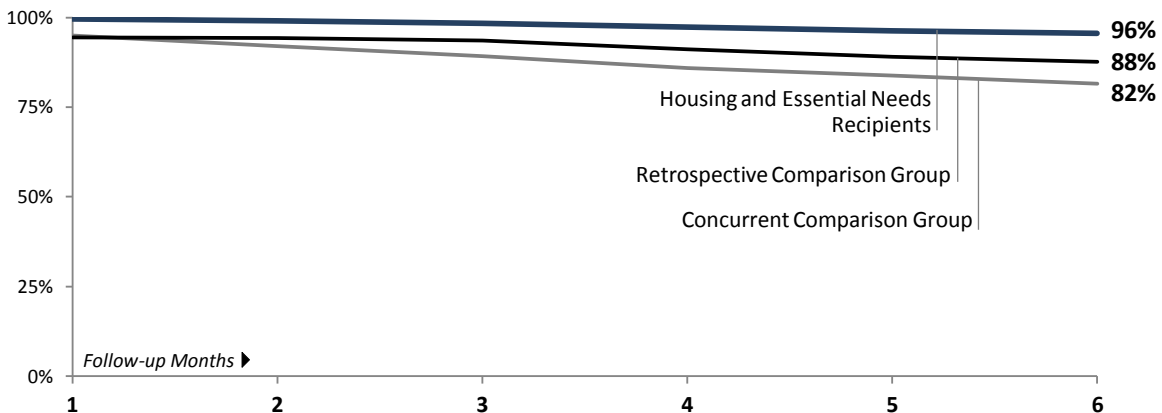
### Housing Instability



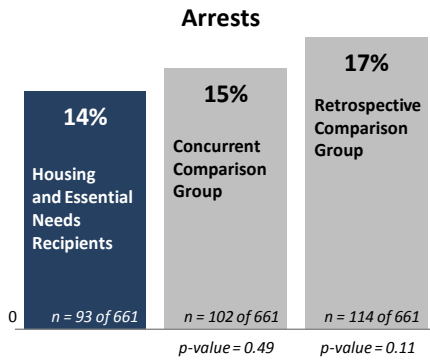
## FOOD ASSISTANCE | HEN recipients more likely to remain connected to Basic Food

The federally funded Basic Food program is intended to ensure that low-income individuals do not go hungry. HEN recipients were more likely to remain connected to Basic Food assistance in each of the six follow-up months. At the end of 6 months, 96 percent of the HEN group was receiving Basic Food, compared to 82 percent of the concurrent comparison group ( $p < .0001$ ) and 88 percent of the retrospective comparison group ( $p < .0001$ ).

### Basic Food Receipt

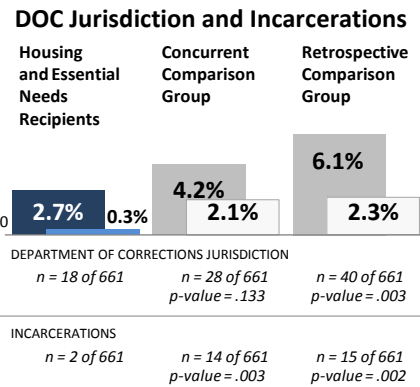


## CRIMINAL JUSTICE | Fewer HEN recipients were arrested or incarcerated



### Arrests

Rates of arrest for felonies and gross misdemeanors, as recorded in Washington State Patrol data,<sup>8</sup> were slightly lower for HEN recipients (14 percent) compared to both the concurrent comparison group (15 percent;  $p=.49$ ) and retrospective comparison group (17 percent;  $p=.11$ ). However, the differences between HEN recipients and each of the comparison groups did not reach statistical significance.



### Involvement with Department of Corrections

We examined the percent of each group that was incarcerated in a Department of Corrections (DOC) facility at some point over the six-month follow-up period. The number of individuals incarcerated is low across all three groups, so it is striking that we detect a statistically significant difference between HEN recipients and each of the comparison groups. While 0.3 percent of HEN recipients ( $n=2$ ) were incarcerated in the follow-up period, 2.1 percent of the concurrent comparison group ( $n=14$ ;  $p=.003$ ) and 2.3 percent of the retrospective comparison group ( $n=15$ ;  $p=.002$ ) were incarcerated. We also examined the percent of each group under DOC jurisdiction, which includes both incarcerations and community supervision, and observed a similar pattern (18 individuals from the HEN group compared to 28 in the concurrent group and 40 in the retrospective group).<sup>9</sup>

## HEALTH OUTCOMES | Findings suggest more follow-up time may be needed

We also looked at emergency department (ED) use and mortality and found no significant differences between HEN program participants and the comparison groups. We found no deaths in any of the three groups in the six-month follow-up period. In terms of ED use, all groups showed comparable declines from baseline utilization levels on a per-member, per-month basis. We did find that HEN recipients spent significantly more time—in terms of average number of coverage months over the six-month follow-up period—than the concurrent comparison group on disability-related medical coverage (1.1 months compared to 0.9 months;  $p=0.05$ ) and on MCS medical coverage (4.2 months compared to 3.3 months;  $p<.0001$ ). HEN recipients also spent more time on disability-related medical coverage when compared to the retrospective comparison group (1.1 months compared to 0.4 months;  $p<.0001$ ). The higher likelihood of retaining MCS medical coverage is an encouraging result in the context of the anticipated expansion of Medicaid under Health Care Reform. Maintaining MCS coverage prior to Medicaid expansion in January 2014 may result in greater use of primary and preventive care in the interim, which has the potential to improve health status and reduce long-run state medical costs in this population.<sup>10</sup>

## DISCUSSION

The HEN program has shown promising early results. Although sufficient time has not elapsed to know whether receipt of HEN services impacts health outcomes, the findings do suggest that HEN recipients have greater housing stability, stay better connected to food and medical assistance, and are less likely to be incarcerated compared to similar peers who do not receive HEN services. Together, the findings to date suggest that providing housing and other essential items may protect clients from some of the impact they might otherwise have experienced due to the loss of cash assistance.

<sup>8</sup> WSP arrest data do not include misdemeanors and, therefore, reflect arrests for only more serious types of offenses.

<sup>9</sup> Recent policy changes may explain part of the difference observed in the proportion of HEN recipients under DOC jurisdiction compared to the retrospective comparison group. See "Major Sentencing Changes Impacting Supervision Caseloads and Prison Population," Department of Corrections, [http://www.doc.wa.gov/aboutdoc/docs/MajorSentencingChangesImpactingCommunitySupervisionCaseloadsandPrisonPopulation\\_001.pdf](http://www.doc.wa.gov/aboutdoc/docs/MajorSentencingChangesImpactingCommunitySupervisionCaseloadsandPrisonPopulation_001.pdf).

<sup>10</sup> A major recent study has shown the beneficial impact of access to medical coverage on use of primary/preventive care and self-reported health status in a similar population. See Finkelstein, A., et al. "The Oregon Health Insurance Experiment: Evidence from the First Year," Cambridge, MA: The National Bureau of Economic Research, July 2011.

This report summarizes an evaluation of the Housing and Essential Needs (HEN) program. We used two comparison groups—one from the same period of time during which the HEN program was implemented and another from a pre-HEN period—to examine outcomes over a six-month follow-up period for HEN recipients compared to statistically matched peers.

### STUDY TIME PERIOD

We identified individuals who received HEN benefits at some point between November 2011 and January 2012 and looked at their outcomes over a six-month follow-up period that included the “index month.” For the treatment group, the index month was typically the first month in the November 2011 to January 2012 period in which the client received HEN. However, if a HEN recipient had received housing assistance recorded in HMIS in the month prior to their first receipt of HEN in the November to January period, that prior month (in some cases, October 2011) became their index month. For the comparison groups, index months were randomly assigned prior to the matching process to mirror the distribution of index months over the October to January period that we observe for the HEN treatment group.

### SELECTION CRITERIA FOR INDIVIDUALS INCLUDED IN ANALYSIS

We began with a population of 2,107 individuals who had MCS/DL-U medical coverage and received HEN services at some point between November 2011 and January 2012. After imposing the restrictions below, we were left with 661 HEN recipients included in the evaluation.

#### *Overall selection criteria for study population*

- Had MCS/DL-U medical coverage at some point between November 2011 and January 2012 (November 2010 and January 2011 for retrospective group)
- Had an identified need for housing, using an indicator that combines data from multiple systems, between November 2011 and January 2012 (November 2010 and January 2011 for retrospective group)
- Had identified homelessness in ACES in at least one of the 3 months prior to their index month

#### *HEN “treatment” group*

- Received HEN services between November 2011 and January 2012
- Excluded anyone who had emergency shelter, transitional housing, or Homelessness Prevention and Rapid Re-housing services recorded in HMIS in the second or third month prior to the index month.

#### *Concurrent and retrospective comparison group sampling frames*

- Did not receive any housing assistance recorded in HMIS between November 2011 and June 2012 (November 2010 and June 2011 for retrospective group)
- Excluded anyone who had emergency shelter, transitional housing, or Homelessness Prevention and Rapid Re-housing services recorded in HMIS in the second or third month prior to the index month.

### PROPENSITY SCORE MATCHING

Logistic regression models estimated the probability of receiving HEN. Propensity scores obtained from these models were then used to create two one-to-one matched comparison groups. There are a few things to note:

- The propensity score models included most of the measures presented in the Appendix table on page 8. In addition, we included employment status and measures of housing need in the second and third months prior to the index month.
- The matching process required an exact match on gender and age group.
- Using U.S. Census data, a measure of geography was constructed based on the percent of each county’s population residing in an urbanized area. Clients were assigned to a category based on their county of residence in the index month.
- With the exception of demographic measures, all other baseline measures reflect an individual’s experience over the 12 months prior to the index month.



**APPENDIX | Baseline Measures for HEN Recipients and Matched Comparison Groups**

|   | <b>HEN Recipients</b><br>n=661 | <b>Concurrent Comparison</b><br>n=661 | <b>Retrospective Comparison</b><br>n=661 |
|---|--------------------------------|---------------------------------------|--|
| <b>Age</b>  |                                |                                       |  |
| 18-24   | 8.3%                           | 8.3%                                  | 8.3%                                     |
| 25-34   | 18.6%                          | 18.6%                                 | 18.6%                                    |
| 35-44   | 28.7%                          | 28.7%                                 | 28.7%                                    |
| 45-54   | 36.5%                          | 36.5%                                 | 36.5%                                    |
| 55-64   | 7.9%                           | 7.9%                                  | 7.9%                                     |
| <b>GENDER</b>   |                                |                                       |  |
| Female  | 38.4%                          | 38.4%                                 | 38.4%                                    |
| Male  | 61.6%                          | 61.6%                                 | 61.6%                                    |
| <b>RACE/ETHNICITY</b>   |                                |                                       |  |
| White only  | 74.3%                          | 72.9%                                 | 70.4%                                    |
| African American  | 16.9%                          | 17.1%                                 | 19.1%                                    |
| Asian/Pacific Islander  | 1.7%                           | 1.4%                                  | 2.6%                                     |
| Native American   | 3.2%                           | 3.2%                                  | 3.2%                                     |
| Hispanic  | 7.9%                           | 7.7%                                  | 7.7%                                     |
| <b>GEOGRAPHIC LOCATION</b>  |                                |                                       |  |
| Rural   | 9.5%                           | 10.7%                                 | 10.1%                                    |
| Urban – Low density   | 22.4%                          | 21.0%                                 | 25.0%                                    |
| Urban – Medium density  | 32.7%                          | 32.7%                                 | 30.1%                                    |
| Urban - High density  | 35.4%                          | 35.6%                                 | 34.8%                                    |
| <b>HOUSING INSTABILITY</b>  |                                |                                       |  |
| Housing instability in the Automated Client Eligibility System (ACES) in month prior to index month | 90.2%                          | 92.4%                                 | 90.8%                                    |
| Housing instability in ACES in second month prior to index month                                    | 89.9%                          | 91.5%                                 | 89.6%                                    |
| Housing instability in ACES in third month prior to index month                                     | 88.8%                          | 89.3%                                 | 89.0%                                    |
| Housing instability in mental health treatment records  | 0.30%                          | 0.45%                                 | 0.45%                                    |
| Housing instability in chemical dependency assessment records                                       | 3.8%                           | 3.5%                                  | 4.2%                                     |
| <b>MEDICAL AND BEHAVIORAL HEALTH</b>  |                                |                                       |  |
| Need for Alcohol or Other Drug (AOD) Treatment  | 41.0%                          | 40.5%                                 | 42.8%                                    |
| Received AOD Treatment  | 23.8%                          | 23.5%                                 | 25.1%                                    |
| Diagnosis of Psychosis or Bipolar/Mania Disorder  | 18.6%                          | 19.4%                                 | 18.5%                                    |
| Diagnosis of Depression or Anxiety  | 52.2%                          | 51.0%                                 | 49.3%                                    |
| Inpatient Hospital, Psychiatric, or State Mental Hospital Stay                                      | 12.7%                          | 11.8%                                 | 11.7%                                    |
| Mean chronic disease risk score in index month  | 0.91                           | 0.77                                  | 0.73                                     |
| Outpatient Emergency Department Visits<br><i>per 1,000 member months</i>                            | 204                            | 175                                   | 267*                                     |
| Disability-related medical coverage (mean months)   | 0.36                           | 0.37                                  | 0.32                                     |
| MCS/DL-U related medical coverage (mean months)   | 6.9                            | 6.9                                   | 5.7*                                     |
| MCS/ADATSA medical coverage (mean months)   | 0.21                           | 0.25                                  | 0.30                                     |
| Family medical coverage (mean months)   | 0.34                           | 0.23                                  | 0.52                                     |
| <b>CRIMINAL JUSTICE</b>   |                                |                                       |  |
| Incarcerated  | 4.4%                           | 4.1%                                  | 4.2%                                     |
| Arrests (average number per client in baseline period)  | 0.53                           | 0.50                                  | 0.51                                     |

\*Indicates that the difference between the HEN group and the retrospective comparison group is statistically significant at p<.05. No other statistically significant differences were found between HEN and either comparison group on any of the baseline measures we examined.

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