



Housing Outcomes for Homeless Individuals in Street Outreach Compared to Shelter

Christopher Weare

To cite this article: Christopher Weare (2021): Housing Outcomes for Homeless Individuals in Street Outreach Compared to Shelter, Journal of Poverty, DOI: [10.1080/10875549.2020.1869664](https://doi.org/10.1080/10875549.2020.1869664)

To link to this article: <https://doi.org/10.1080/10875549.2020.1869664>



Published online: 25 Jan 2021.



Submit your article to this journal [↗](#)



Article views: 214



View related articles [↗](#)



View Crossmark data [↗](#)



Housing Outcomes for Homeless Individuals in Street Outreach Compared to Shelter

Christopher Weare

Goldman School of Public Policy, University of California, Berkeley, California, California USA

ABSTRACT

Outreach is a core component of homelessness policy, but its effectiveness at housing individuals has been understudied. Employing administrative data, this paper compares the outcomes of outreach clients to those who initially enter shelters. It finds that outreach clients compared to the shelter population, are less likely to be in households with children, had been homeless for longer periods of time, and suffer from greater vulnerabilities. Outreach clients, nevertheless, are less likely to return to homelessness after receiving homeless services. The comparative cost analysis finds that outreach leads to 59% more days housed for each dollar in program expenditures.

KEYWORDS

Homeless; street outreach; shelter; program effectiveness

This paper analyzes administrative data to examine the housing outcomes of homeless individuals who are initially engaged through street outreach during an episode of homeless services compared to a set of clients who initially enter into emergency shelters. Since the passage of the original McKinney-Vento Act in 1987, street outreach and shelters have comprised the two principal points of contact for individuals experiencing unsheltered homelessness and seeking assistance. The two programs share the common goals of moving unsheltered individuals off of the streets and helping them navigate to stable housing situations. Nevertheless, the literature examining housing outcomes for street outreach programs is limited. Much of the work focuses on specific populations such as the mentally ill, substance abusers, veterans, and youth. Also, this work often lacks a clear comparison group (Connolly & Joly, 2012; Mackie et al., 2017; Olivet et al., 2010). As a consequence of these research decisions, this literature fails to provide policy makers and program managers essential information concerning the effectiveness of street outreach for the general homeless population and how the program may substitute and/or complement emergency shelters. Improved understanding of the comparative effects of street outreach would inform important system planning and resource allocation decisions.

Greater attention to street outreach programs is important because such programs offer a distinct mode of treatment with a number of attractive features. While shelter services have the advantage of ending unsheltered homelessness immediately, shelter is expensive and is subject to neighborhood opposition when CoCs seek to site new shelters. In contrast, street outreach is relatively inexpensive, offers greater flexibility with respect to geographic targeting of resources, avoids political battles over locally unwanted land uses, and engages populations who tend to be resistant to homelessness services and especially shelter stays (Cohen et al., 2019; Wusinich et al., 2019). The recent outbreak of COVID-19 and the rise of large homeless encampments have underscored the importance of homeless service providers being able to engage with individuals in the field (Cohen et al., 2019; Homelessness Research Institute, 2020; Junejo et al., 2016).

One of the reasons our understanding of the housing outcomes of street outreach programs is limited is that data is sparse. Although HUD has recommended the application of street outreach to address chronic homelessness, it does not include outreach program enrollments in the American Homeless Assessment Report (Henry et al., 2018). System performance measure reports from HUD, however, do include data on street outreach outcomes, though not on the number of outreach workers (Department of Housing and Urban Development, 2015). Based on 2018 data, the diffusion of street outreach programs is uneven. Twenty percent of Continuums of Care (CoCs) nationally, 77 in total, do not support any form of outreach (e.g., reported no exits from street outreach programs) even though most of them do have unsheltered homeless according to their PIT count. Another 65% support limited efforts, where outreach workers exited fewer clients than the number of shelter beds in the CoC. Only 15% support robust programs that exit more street outreach clients than emergency shelter beds. The Sacramento CoC, from which the data for this analysis are taken, supports a robust street outreach effort and providers report into the HMIS, providing the data necessary for this comparative analysis.

The analysis examines three core questions. First, it compares the characteristics of the people served by street outreach to those entering shelter to determine whether there are systematic differences between the two groups that should affect housing outcomes. Second, it evaluates the relative effectiveness of street outreach in preventing returns to homelessness after program exit. Finally, it compares the cost-effectiveness of street outreach to shelter in terms of the cost of reducing the incidence of unsheltered homelessness over a two-year period following program entry.

The paper begins with a review of the existing research on the characteristics of outreach programs and their effectiveness. It describes the data from the Sacramento Continuum of Care that is analyzed here. It then examines

three research questions and ends with a discussion of the implications of the findings for policy and future research.

Literature review

The basic model for street outreach to individuals experiencing homelessness is straightforward. It seeks to identify and engage individuals who are unsheltered, build a relationship with those individuals, connect them to services, and move them toward regaining permanent shelter (USICH, 2019). Within this rubric, however, program models vary considerably (Olivet et al., 2010). Models target different populations. Much of early attention was focused on populations suffering from mental health challenges, but other models focus on individuals with unmet medical needs, youth, and veterans. The mode of contact can take on different forms. The literature distinguishes between standard outreach and assertive outreach that targets the least engaged homeless and seeks to end their homelessness through multidisciplinary supports. Also, specific street outreach programs offer different services some provide medical services, others provide blankets and food, others provide social support, some focus on housing services, while still others stress preventing antisocial behaviors (Olivet et al., 2010; Phillips & Parsell, 2012). There are also multiple modes of delivery. Some programs promote individuals with lived experience to facilitated relationship building, some rely more on law enforcement, while still others employ multidisciplinary teams (Mackie et al., 2017; USC Homeless Policy Research Institute, 2019).

These differences complicate the assessment of program outcomes and determination of cost-effectiveness. The literature identifies trust-building, the development of clients' sense of agency, and other soft skills as critical components of successful outreach, indicating that these variations in program design are likely to influence the quality of services and resulting outcomes (Kryda & Compton, 2009; Lee & Donaldson, 2018; Parsell et al., 2014). Unfortunately, while controlled trials could in theory manipulate the specific form of outreach employed, administrative data typically fail to provide information on such program details, confounding the exact nature of the intervention.

The literature has established that compared to emergency shelters, street outreach targets a distinct population. Rossi (1991) found that people living on the economic margins often transitioned between temporary sleeping arrangements, shelters, and unsheltered homelessness. Nevertheless, there is a particular subpopulation that tends to avoid shelters. Members of this subpopulation tend to be more mistrustful of authority, are resistant to services, and have negative perceptions of shelters (Wusinich et al., 2019). They often wish to avoid the regulations often imposed by shelters including the gender segregation that forces couples to live apart, restrictions on pets,

and attendance at religious services (Rossi, 1991; Wusinich et al., 2019). People who are engaged through street outreach have also been found to suffer from more severe psychological symptoms, to have been homeless for a longer period of time, and to present greater housing challenges than those who seek agency-based services (Lam & Rosenheck, 1999; Tommasello et al., 1999).

Research on the impacts of street outreach on a range of program outcomes remains underdeveloped. Three large literature reviews of this work cover over 100 quantitative and qualitative studies (Connolly & Joly, 2012; Mackie et al., 2017; Olivet et al., 2010). This and subsequent work provides initial support for the effectiveness of street outreach in improving housing, health, service uptake, and psychiatric conditions (Dennis et al., 2011; Lettner et al., 2016; Morris & Warnock, 2001). Nevertheless, this work suffers from an array of methodological limitations that limit causal inference, including small sample sizes, nonrandom assignment, and a lack of a control group.

More recent work has improved research designs and generally support these preliminary conclusions. In a meta-analysis of six random controlled trials and four observational studies, Coldwell and Bender (Coldwell & Bender, 2007) find that compared to standard case management assertive community treatment (ACT) is more effective at housing individuals with severe mental illness and addressing their psychiatric issues. Similarly, RCTs comparing outreach to treatment in a health clinic finds that veterans are more likely to enroll in health services through outreach (O'Toole et al., 2015).

While most of this work has not directly compared street outreach services to shelter, there are exceptions. A random control trial examining outreach to non-service-connected homeless youth found that outreach through drop-in centers increased service use compared to outreach conducted through shelter, though housing outcomes did not differ significantly between the two treatment groups (Slesnick et al., 2016). Two studies of HomeBase a New York City program that offered case management and small amounts of financial assistance to people at risk of homelessness found that enrollment in the program reduced homelessness and was cost-effective in terms when accounting for averted stays in shelter (Goodman et al., 2016; Rolston et al., 2013). Not all studies, however, found positive results for outreach. A retrospective study of outcomes on the Community Care and Effective Services and Supports Program (ACCESS) found that clients contacted on the streets were worse off initially compared to clients in shelters, but outcomes were similar for the two groups (Lam & Rosenheck, 1999). Also, a study of Veteran's Administration permanent supportive housing randomized subjects between three treatments: 1) a housing voucher with case management services, 2) a case management by itself, and 3) usual care (Rosenheck et al., 2003). The results found that case management by itself did not lead to better housing outcomes compared to usual care.

In sum, the literature as a whole supports the presumption that engaging with unsheltered homeless people on the street can be an effective method for helping them resolve their issues with homelessness. This work, however, has focused on specific populations, frequently those with high needs, and it has not explicitly compared the intervention to shelters. The following analysis addresses those gaps.

Data and metrics

The data for this study comprise a comprehensive, de-identified data set from the Sacramento CoC Homeless Management Information System (HMIS) provided to the researcher by the County of Sacramento. The data include enrollments from the beginning of 2000 to September 4, 2019. Sacramento maintains a robust street outreach program and these programs enter data into the HMIS, making it a useful dataset for comparing street outreach and shelter.

The analysis focuses on single adults who are the head of the household and who were literally homeless at the time of their first enrollment.¹ The basic unit of analysis is a client's episode with the homeless crisis system (Metraux et al., 1999). An episode begins when a client enrolls in either an emergency shelter or street outreach and has not been enrolled in any program during the previous 2 years. Subsequent enrollments in other programs are included in the episode as long as there is no more than a 30-day gap between the previous program exit and the subsequent enrollment. To be included in the analysis episodes have to meet two criteria. First, they have to begin after January 1, 2015 because data prior to 2015 were found to be unreliable. Second, either the episode had to end by Sept 5, 2018 or the client had to be enrolled in permanent housing programs (either permanent housing or rapid re-housing) on that date. This cutoff ensures that episodes have a minimum of 1 year to observe a return to homelessness. When an individual had more than one episode that satisfied these criteria, the first episode was included in the data. These criteria yield 9,514 episodes for the analysis. In total, 4,445 (46.7%) episodes begin with a shelter stay, and 5,069 (53.3%) begin with enrolling in street outreach.²

The metrics employed in the analysis are taken directly from the HMIS or are calculated using HMIS data fields. Demographic data and information on experiences with homelessness are taken from the client's initial enrollment. These variables include the gender, age, race, ethnicity, and veteran status of the client. In terms of experience with homelessness, the variables include whether the client met HUD's criteria to be considered chronically homeless,³ their residence prior to enrolling in homelessness services, and whether they had previously received homelessness services. Assessments of the client's vulnerabilities were merged in from assessment data. This included whether

they were assessed. Only slightly more than half of clients, 51%, were administered the VI-SPDAT assessment employed in Sacramento. For those who were assessed, the score for the assessment closest to the initial enrollment date was included.

The exit destination and date of exit are taken from the client's program enrollment with the last exit. The exit destinations are classified using the typology from HUD's system performance metrics for exits from street outreach. All exits to permanent, temporary, or other locations are deemed exits out of homelessness, while exits to places not fit for human habitation or jail are considered exits into homelessness. The main outcome measures are whether a client returned to homelessness after an episode and the length of time until the return occurred. Clients whose final enrollment in their episode are in either permanent housing or rapid re-housing are considered housed at the start of that enrollment. Thus, the time until a return to homelessness begins at program entry. For clients whose final enrollment is in either a shelter or street outreach program, the final exit date begins the period during which a return to homelessness can occur. When clients exit into homelessness, the return to homelessness coincides with the exit date. Clients with no observed return to homelessness were censored on Sept 4, 2019, the final day included in these data.

Figure 1 illustrates six scenarios of episodes and returns to homelessness. The blue lines represent shelter stays, the red represent street outreach engagements, and the black and green lines represent permanent housing and rapid re-housing stays, respectively. The dashed lines illustrate the length of time from being housed to either a return to homelessness or censoring. The first three episodes are in the shelter group and the last three are in the outreach group. Scenario A is a client who entered shelter twice separated by less than a 30-day gap and then returned to homelessness. Scenario B is a single shelter stay with no return to homelessness during the study period. Scenario C is a client who entered sheltered and then enrolled in rapid re-housing and who did not return to homelessness after exiting rapid re-housing. Scenario D is

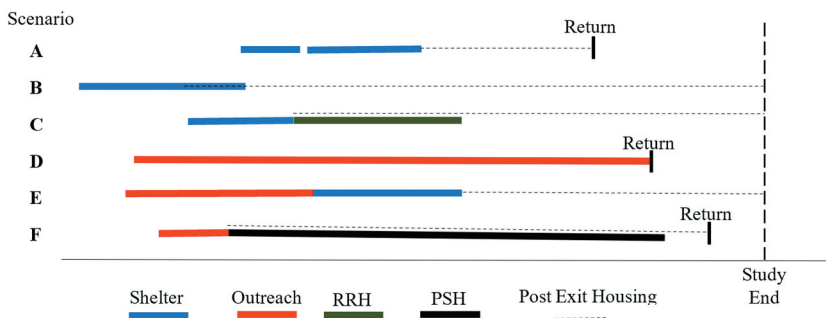


Figure 1. Sample scenario of service.

a client who enrolled in street outreach and then exited back into a place not fit for human habitation, meaning that the return to homelessness was immediate. Example E is a client who first engaged with street outreach then found a shelter bed and who did not return to homelessness after exiting from the shelter. Finally, F is a client who initially engaged with street outreach and then found a placement in permanent housing. This client exited permanent housing into a permanent or temporary placement and then returned to homelessness.

Group and program characteristics

Table 1 displays descriptive statistics for the street outreach and shelter groups for demographic characteristics, experience with homelessness prior to this episode of homeless services, and the characteristics of the services received. The street outreach group is slightly older than the shelter group (46.6 old vs. 44.6), more likely to be male (56.2% vs. 53%), white (43.5% vs 34.5%), and chronically homeless (19.9% vs. 16.5%). There is no statistically significant difference between the proportion of veterans in each group (9.9% vs. 9%).

Table 1. Demographic characteristics.

	Emergency Shelters	Street Outreach	
Age	44.6	46.6	***
N	4440	5069	
Children	27.5%	0.2%	***
N	6132	5079	
Veteran	9.0%	9.9%	
N	4216	5054	
Male	53.0%	56.2%	***
White	34.5%	43.5%	***
Chronic	16.5%	19.9%	***
Assessed	30.9%	68.6%	***
VI Score	8.6	10.6	***
N	1374	3477	
Previous Residence – Homeless	59.8%	86.2%	***
N	4151	4937	
Previous Residence – Institution	14.6%	6.9%	***
N	4151	4937	
Previous Residence – Housing	25.6%	6.9%	***
N	4151	4937	
Homeless for over 6 months	50.3%	69.6%	***
N	614	516	
Previously Homeless	21.6%	17.6%	***
Average Length in Program Enrollment	47.4	217.5	***
Enrolled in Transitional Housing	3.7%	2.6%	***
Enrolled in Rapid Re-Housing	11.5%	10.0%	**
Enrolled in Permanent Housing	2.1%	4.6%	***
Enrolled in Any Subsidize Housing	16.0%	16.0%	
Returned to Homelessness	41.1%	27.8%	***
Average Days to Return or Censor	700.5	721.7	**

N is 4445 for the Emergency Shelter Group and 5069 for the Outreach group unless otherwise indicate

^aBased on episodes that start in 2018 and 2019 due to missing data in earlier years

*** $p < .01$

** $p < .05$

The main difference between the groups is that when one includes individuals less than 18 years of age, the street outreach group includes less than a dozen children while for those in shelter 27.5% are children. This gap reflects broader data from PIT counts that few children are identified in unsheltered counts (Henry et al., 2018), though it is difficult to determine whether few children experience unsheltered homelessness or that they tend to stay in cars or other locations that are more difficult to capture in PIT counts.

Clients enrolled in street outreach are more than twice as likely (68.6% vs. 30.9%) to be assessed for the degree of vulnerabilities they face. Of those who are assessed, the street outreach had higher average scores: 10.6 out of 20 compared to 8.6 for the shelter group. This difference is large constituting 0.56 of a standard deviation in the scores. The frequency of missing data, however, complicates the interpretation of these differences because differing practice standards between street outreach and shelter workers may lead to selection biases. Street outreach clients, nevertheless, appear to have been homeless for a longer period. Far fewer people in the street outreach reported being housed in their prior residence (6.9% vs. 25.6%), and more street outreach clients report being homeless for more than 6 months (69.6% vs. 50.3%).⁴ Overall, these comparisons comport with previous findings on the differences between the populations being served by street outreach and shelter.

Once individuals enroll in either street outreach or shelter their experiences within the homelessness crisis system differ. Street outreach clients have a much longer average length of enrollment, 217.5 days compared to shelter stays that average 47.4 days in length. It is not uncommon for clients to engage in both street outreach and shelter. Of those clients starting in street outreach 16% will also have a shelter stay during their episode of services. For shelter clients, 11.9% will also enroll in street outreach. While an equal percent of outreach and shelter clients access some form of subsidized housing programs (e.g., transitional housing (TH), rapid re-housing (RRH), or permanent housing (PH)) during their episode (16% in each group), the type of housing accessed differs. Street outreach clients are more likely to access permanent housing (4.6% vs. 2.1%). In contrast, fewer street outreach clients enter into TH (2.6% vs. 3.7%) or RRH (10% vs. 11.5%).

Analysis of returns

Once individuals exit their service episode, 41.1% of the group that began their episode in shelter returned to homelessness, while 27.8% of the street outreach clients did so. The street outreach group also remained housed for a longer period on average 721.7 days vs. 700.5 days for the shelter group. To assess the difference between these groups while controlling for covariates, we employ event history analysis (Allison, 1984). These models are used to estimate the

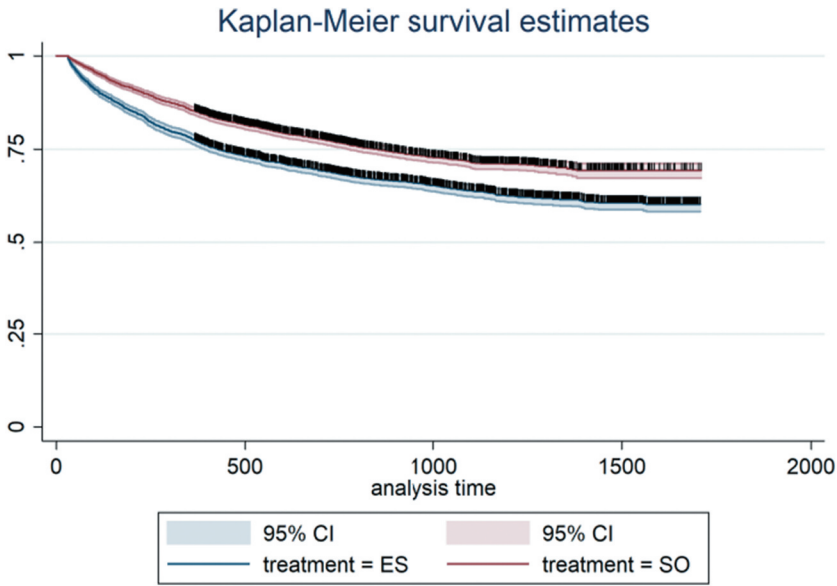


Figure 2. Kaplan-Meier Survival Estimates for Returns to Homelessness.

time prior to the occurrence of an event and have been widely employed to examine returns to homelessness (Brown et al., 2017; Byrne et al., 2016). The estimates were conducted within Stata version 14.2 employing the `stcox` procedure.

To visualize the pattern of returns to homelessness over the entire study period [Figure 2](#) displays the Kaplan-Meier survival curves for each group which represent the cumulative probability of avoiding a return to homelessness over time. The vertical ticks on the curve represent censored observations where no return to homelessness is observed before the end of the study period, and the gray areas represent the 95% confidence intervals of each of these estimates. For those who exit from the shelter, the risk of returns to homelessness are significantly higher in the first year after exit, though marginal risks of returns are more similar after that point.

A more detailed analysis of returns is conducted by estimating a Cox proportional hazards model, which estimates the probability of a return to homelessness at each point of time. The covariates included in the model are the treatment (outreach with shelter as the base value) and dummy variables for clients who are White, Latino, veterans, and who have had received previous homeless services. Continuous covariates include the clients' age and their score on the VI-SPDAT assessment. Missing data for the VI-SPDAT assessments reduce the number of observations included in the model, so, a second version of the model is estimated that excludes the VI-SPDAT covariate.

An important assumption of the Cox Hazard models is that the hazard rates are proportional, or that the ratio of the hazard of falling into homelessness for two separate individuals remains constant over time. To test whether this assumption holds, one can interact covariates with time and check whether these interaction coefficients are statistically significant. These tests indicate that the interaction between the street outreach indicator variable and time was statistically significant, indicating a violation of the proportionality assumption. Thus, the interaction term is retained in the model, which is considered an appropriate method for satisfying the proportionality assumption (Allison, 1984).

The results of the two models are shown in Table 2. The demographic characteristics of individuals, including gender, race, ethnicity, and veteran status are not significant factors in determining the risk of returns in either model, which is not surprising given that these factors have not been found to be significant in the previous work examining returns (Brown et al., 2017; Byrne et al., 2016; Rodriguez & Eidelman, 2017). Age is significant in Model II but not in Model I that includes the VI score, due to the fact that scores on the vulnerability assessment increase slightly with age. Otherwise, the model results are qualitatively similar, and the analysis will focus on Model I. Having a previous homeless episode does significantly increase the hazard of a return to homelessness by over 45% (OR = 1.455, 95% CI 1.298, 1.629), which comports with previous work on returns after program enrollments (Byrne et al., 2016; Rodriguez & Eidelman, 2017). More surprisingly, clients

Table 2. Proportional cox model results.

	(1)	(2)
	Model 1	Model 2
Main		
Street Outreach	0.117*** (-6.86)	0.201*** (-6.72)
Male	0.991 (-0.17)	1.027 (0.65)
White	0.988 (-0.22)	0.973 (-0.63)
Latino	1.132 (1.57)	1.044 (0.73)
Veteran	0.917 (-1.06)	1.001 (0.01)
Previously homeless	1.456*** (6.50)	1.572*** (9.89)
Chronic	0.944 (-0.90)	0.981 (-0.36)
Age	1.000 (0.11)	1.003* (2.12)
VI	1.025*** (3.36)	
Time Varying Effects		
Street Outreach x ln(days)	1.257*** (4.00)	1.254*** (5.26)
AIC	25,137.5	44,034.0
N	4548	8586

who are chronically homeless at the time of their initial program entry are not more likely to return to homelessness, which may indicate that administrative records are better suited than self-reported data for evaluating a person's experience with homelessness. Also, having a higher score on the vulnerability index assessment increases the odds of returning to homelessness by 2.4% for each point increase in score (OR = 1.024, 95% CI 1.009, 1.038).

Most importantly, the results indicate that after controlling for covariates, the hazards of returning to homelessness are statistically significantly lower for individuals in the street outreach group compared to the clients initially served in homeless shelters. The hazard ratio varies over time. Right after exiting from a service episode, street outreach clients are 88.2% less likely to return to homelessness compared to shelter clients (OR = .118, 95% CI .064, .218). Over time, this ratio declines but continues to favor the outreach group. After 1 year, street outreach clients are 54.7% less likely to return and after 2 years the model estimates that they are 47.1% less likely.

Comparative cost-effectiveness analysis

The finding that street outreach clients are less likely to return to homelessness raises the question of the relative cost-effectiveness of the outreach for reducing the incidence of unsheltered homelessness. A precise answer to this question requires a comparable metric that accounts for the differences in the programs and program interactions. We employ the number of days housed or sheltered over the 2 years after the initial program enrollment per 1000 USD dollars in program expenses. This productivity ratio (e.g., unit of outcome per dollar expended) is similar to the more familiar efficiency ratio (e.g., dollars expended per unit of outcome), but it is preferred here because many individuals in the street outreach group are never housed or sheltered, causing the efficiency ratio to be undefined. To ensure that all individuals have a full 2 years of data after their initial entry, this comparison is limited to people who begin their episode 2 years before the end of the data or earlier. The numerator sums the costs for all days enrolled in the shelter and/or street outreach during a client's service episode. The costs of down-stream subsidized housing programs such as TH, RRH, and PH are ignored because this metric focuses on the cost-effectiveness of the initial program engagement and because the street outreach and shelter group are equally likely to make use of these subsidized programs. The denominator sums all days a client is housed including days in shelter, days in subsidized housing (e.g., TH, RRH, or PH), and days housed after an exit from an episode. The count of days housed after an episode ends when either the client returns to homelessness or the end of the time frame is reached.

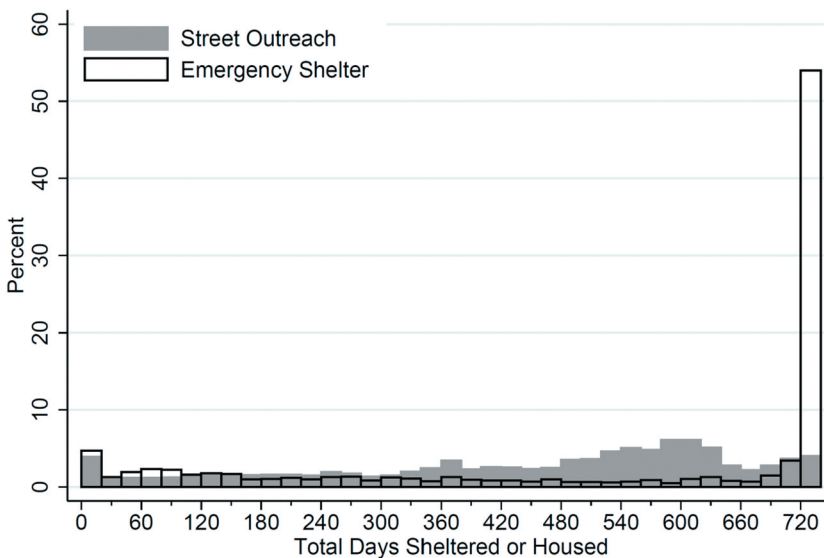
The components of the estimates are summarized in [Table 3](#). On average, the group that starts in an emergency shelter stays in a shelter almost 5 times

Table 3. Per day cost of reducing unsheltered homelessness.

	Emergency Shelter	Street Outreach
Clients	3,418	4,240
Average Days in ES	50.5	10.8
Average Days in SO	30.3	244.4
Average Days in TH, RRH, & PH	34.1	45.2
Average Days Housed Post Exit	450.2	389.1
Average Days Housed	534.8	445.1
Cost per day	\$68.49	\$4.70
Cost per client	\$3,601	\$1,885
Days Housed per \$1000	148.5	236.1

longer than the outreach group (50.5 days vs. 10.8 days). This difference is due to the fact that only 21.2% of the outreach group access shelter prior to exiting. Outreach enrollments last for an average of over 8 months, much longer than the average shelter stay of shelter clients, which indicates the difficulties of engaging people who remain unsheltered. Although the same proportion of shelter and outreach clients access subsidized housing program, outreach clients have longer average stays (45.2 vs. 34.1 days).

The distribution of housing outcomes differs markedly between the groups. As seen in [Figure 3](#), the distribution of outcomes is negatively skewed for both groups, but it is more pronounced for the shelter group where more than half are housed for almost the entire 2-year period. In contrast, far fewer outreach clients are housed for more than 700 days during the 2 years because this group spends less time in the shelter and long periods unsheltered while engaging with an outreach worker. Outreach clients, however, are more likely to be housed between 1 year to close to 2 years. Overall, the average stay in

**Figure 3.** Distribution of housing outcomes.

shelter or housing is 534.8 days for the shelter group and 445.1 days for the outreach group.

Emergency shelters have been found to be a relatively expensive method for addressing homelessness (Gubits et al., 2018). Culhane et al.(2020) estimate that the average cost of providing a shelter bed for an entire year is 25,000 USD per bed per year or 68.50 USD per night. In contrast, in Sacramento, the full yearly cost for an outreach worker is about 60,000 USD. It was found that a caseload of 35 clients allowed outreach workers to maximize the number of clients that they housed, which results in a cost of 4.70 USD per client per day.⁵

These outcomes indicate that the services provided to the average person in the shelter group cost 3,601 USD to provide and the average cost for services provided to the outreach group was 1,885, USD about half as much. Dividing these costs into the average number of days housed yield a productivity ratio of 148.5 days housed per 1000 USD in program expenses for the shelter group and 236.1 days for the outreach group. While the shelter group spends less time in their initial engagement with the system (e.g., shelter and outreach programs) and is housed for a longer period, the high cost of shelter stays reduces the productivity of this treatment option. Per dollar expended, outreach is able to help unsheltered individuals move off of the streets for 59% more time.

Sensitivity analysis is employed to test the robustness of these results. The productivity factor employed in this comparison is the ratio of the means for cost and days housed, which provides an estimate of the overall impact for each program. It is also possible to calculate the days housed per dollar spent on each individual and examine the mean of this productivity ratio (e.g., the means of the ratios). Those means are 128.3 days per 1000 USD for the shelter group and 410.0 days per 1000 USD for the outreach, indicating that on average a dollar spent on outreach leads to almost a tripling of the time a person is housed compared to the average person in the shelter group. These differences are statistically significant at the .01 level. To test whether these results were sensitive to the time span of the analysis, these ratios were also calculated for one- and three-year periods following program entry. The productivity ratios for both groups increase as the time span of the analysis expands because more days of housing are included in the out years for individuals who do not return to homelessness. Nevertheless, the productivity advantage of outreach remains constant over time.

Discussion

This analysis augments the body of accumulating evidence that supports the effectiveness of street outreach for housing individuals experiencing unsheltered homeless (Dennis et al., 2011; Lettner et al., 2016; Mackie et al., 2017; Morris & Warnock, 2001; Olivet et al., 2010). It demonstrates that street

outreach can improve housing outcomes for the general homeless population and not just specialized populations, such as individuals with severe mental illness, who have been the focus of previous research. In addition, by directly comparing outreach outcomes to a population of individuals entering the shelter, it reveals that both housing outcomes of outreach programs and the cost-effectiveness dominate shelter programs.

The comparative effectiveness and cost-effectiveness of street outreach, when compared to shelter, is surprising. Shelters provide their clients with a higher level of service and are able to remain in more regular contact with their clients compared to street outreach. Nevertheless, their clients are more likely to return to homelessness. These comparative results suggest that the relationship development and trust-building that are central to street outreach are key components to helping individuals experiencing homelessness reenter housing (Kryda & Compton, 2009; Ng & McQuiston, 2004; Wusinich et al., 2019). Also, it is possible that street outreach focuses more on addressing barriers to housing such as gathering basic papers like social security cards and driver's licenses and conducting assessments employed in the coordinated entry (Shinn & Khadduri, 2020). It is notable, for example, that in Sacramento, 68.6% of outreach clients were assessed compared to just 30.9% of the shelter clients.

Interestingly, these case management-related services that may explain the relative effectiveness of street outreach could be applied in a shelter setting. In fact, some jurisdictions have been experimenting with navigation centers which represent a hybrid between shelter and outreach-type case management services.⁶ Unfortunately, HMIS data continue to lack more detailed data on the services provided to individuals, which constrains the ability to unpack the relationship between case-management and other services and outcomes. Also, a more consistent recording of the housing destinations upon exit would permit a more detailed analysis of how these programs resolve homelessness. Unfortunately, in these data over 50% of the fields for housing destination are missing usable data.

Street outreach is certainly no panacea in the absence of credible offers of housing. Researchers have found that the effectiveness of outreach is hampered when clients are mistrustful about the services offered (Kryda & Compton, 2009; Parsell, 2011; Phillips & Parsell, 2012). Phillips and Parsell (2012) argue that housing outcomes from outreach programs are likely to be better when the client is offered a more stable form of housing. Nonetheless, subsidized housing is not essential in all cases. In the Sacramento data where exit destinations are recorded, over half of the clients resolve their homelessness either by joining family or friends or renting a non-subsidized apartment.

The policy implications of this analysis are straightforward. Communities should consider expanding their ranks of street outreach workers. Given that

only 16% of CoCs currently maintain robust programs, there is certainly room for expansion. Yet, even in communities, such as Sacramento, that already have robust programs the comparative cost-effectiveness of street outreach programs argues that reallocating a portion of funds for the provision of shelters to street outreach could reduce the overall incidence of street homelessness. The size of advisable reallocations is uncertain because shelter and outreach are not strictly substitutes and serve distinct populations, but marginal adjustments are warranted. Street outreach also offers some important advantages to shelter provision. Shelters generate substantial community opposition when efforts are made to site new shelters. Street outreach avoids this political opposition while also providing flexibility in how resources are targeted geographically and providing tools for addressing the increasing prevalence of large street encampments (Cohen et al., 2019). Street outreach programs may not be suitable for all communities, for example, those with severe winter weather that makes unsheltered homelessness untenable and those that maintain right-to-shelter policies, but pilot programs could be an inexpensive avenue for evaluating the benefits in a specific community.

There are certainly caveats to these policy recommendations. This is an observational study that may be biased due to unobserved covariates. The fact that members in the street outreach group experience more significant risk factors compared to the shelter group suggests that the comparative performance of street outreach could be even stronger. Nevertheless, there are other possible unobserved factors that increase the probability of shelter users reengaging with homeless services.

It is also possible that neither treatment has positive effects. Work that has classified the homelessness episodes of individuals finds that the largest group, around 80%, is comprised of people who experience transitory homelessness, a short spell of homelessness with no subsequent return (Benjaminsen and Andrade 2015; Kuhn & Culhane, 1998). In these data, 58.9% and 72.2% of shelter and outreach clients, respectively, do not return to the homeless. Because these proportions are similar to the size of the transitory homeless groups in these studies, the outcomes of these interventions may simply reflect the natural ability of individuals to resolve their issues independently. Nevertheless, if the treatment effects of both of these programs are, in fact, small, outreach would still be preferable due to its lower cost.

Finally, this study is vulnerable to possible selection bias, given that a minority of communities engage in street outreach, weakening the generalizability of the results. A random control trial could resolve these uncertainties. Randomization, though, could be challenging given reports that many unsheltered homeless resist entering into shelters and given that randomization may interfere with the trust-building that is a core program component of outreach.

Beyond conducting random trials, this work could be extended in a number of directions. First, it would be useful to distinguish families with children from individual adults. Other work suggests that families fare better in homelessness programs, and it would be useful to understand whether this also applies to outreach (Byrne et al., 2016; Rodriguez & Eidelman, 2017). Data from PIT counts and this study indicate that families with children comprise a small percentage of the unsheltered homeless population that could be engaged through outreach programs. Nevertheless, school-based evidence indicates that children are much more likely to experience homelessness than indicated by PIT data, which raises the question whether changes to PIT count procedures and street outreach practices are warranted to capture these families (National Law Center on Homelessness and Poverty, 2017).

Finally, data on the specific services provided within programs – including small financial grants, case management, transportation, and collection of documents – should be improved. With these data, communities would be able to assess program effectiveness and improve program policies more accurately. For example, communities employ a range of outreach program modalities – multidisciplinary teams, drop-in centers, peer outreach, and police-involved outreach, to name a few (Gronda, 2009; USC Homeless Policy Research Institute, 2019). More refined data on the specific services provided to clients would enable researchers to evaluate and define best practices. Standard HMIS software offers the possibility to collect these data, but these capabilities are not applied as consistently and broadly as would be optimal. Such more detailed analyses work could also be fruitfully complemented with qualitative analyses of the service provider–client relationship which would help open up the black-box of the case management process (Brown, 2019; Parsell et al., 2014).

Notes

1. Unfortunately, these data do not include usable household identifiers. Thus, it is not feasible to distinguish between families and single adults.
2. In a small number of cases (83), an individual enrolls in street outreach and in a shelter on the same day. These cases are included in the shelter group.
3. This chronic field is based on self-reported information provided at the time of program enrollment.
4. The percentage of clients reporting being homeless for more than 6 months is based only on clients who entered homelessness in 2018 or 2019. In previous years there was too much missing data to calculate reliable estimates.
5. Personal communication with Ryan Loofbourrow, former CEO of Sacramento Steps Forward, the lead agency of the Sacramento CoC.
6. Specific examples have been worked on in San Francisco and Seattle. See hsh.sfgov.org/services/emergencyshelter/navigation-centers/ and depts.washington.edu/harrtlab/projects/.

Disclosure statement

No potential conflict of interest was reported by the author.

References

- Allison, P. D. (1984). *Event history analysis: Regression for longitudinal event data*. Sage.
- Benjaminsen, L., & Andrade, S. B. (2015). Testing a typology of homelessness across welfare regimes: Shelter use in Denmark and the USA. *Housing Studies*, 30(6), 858–876. <https://doi.org/10.1080/02673037.2014.982517>
- Brown, M. (2019). Constructing accountability: The development and delegation of outcome evaluation in American social work. *Social Service Review*, 93(4), 712–763. <https://doi.org/10.1086/706468>
- Brown, M., Vaclavik, D., Watson, D. P., & Wilka, E. (2017). Predictors of homeless services re-entry within a sample of adults receiving homelessness prevention and rapid re-housing program (HPRP) assistance. *Psychological Services*, 14(2), 129. <https://doi.org/10.1037/ser0000112>
- Byrne, T., Treglia, D., Culhane, D. P., Kuhn, J., & Kane, V. (2016). Predictors of homelessness among families and single adults after exit from homelessness prevention and rapid re-housing programs: Evidence from the department of veterans affairs supportive services for veteran families program. *Housing Policy Debate*, 26(1), 252–275. <https://doi.org/10.1080/10511482.2015.1060249>
- Cohen, R., Yetvin, W., & Khadduri, J. (2019). *Understanding encampments of people experiencing homelessness and community responses*. Washington, D.C. <https://www.huduser.gov/portal/publications/Understanding-Encampments.html>
- Coldwell, C. M., & Bender, W. S. (2007). The effectiveness of assertive community treatment for homeless populations with severe mental illness: A meta-analysis. *American Journal of Psychiatry*, 164(3), 393–399. <https://doi.org/10.1176/ajp.2007.164.3.393>
- Connolly, J. A., & Joly, L. (2012). Outreach with street-involved youth: A quantitative and qualitative review of the literature. *Clinical Psychology Review*, 32(6), 524–534. <https://doi.org/10.1016/j.cpr.2012.05.006>
- Culhane, D., Treglia, D., Steif, K., Kuhn, R., & Byrne, T. (2020). Estimated Emergency and Observational/Quarantine Capacity Need for the US Homeless Population Related to COVID-19 Exposure by County. Retrieved from <https://escholarship.org/uc/item/qt9g0992bm/qt9g0992bm>
- Dennis, D., Lassiter, M., Connelly, W. H., & Lupfer, K. S. (2011). Helping adults who are homeless gain disability benefits: The SSI/SSDI outreach, access, and recovery (SOAR) program. *Psychiatric Services*, 62(11), 1373–1376. https://doi.org/10.1176/ps.62.11.pss6211_1373
- Department of Housing and Urban Development. (2015). *System performance measures: An introductory guide to understanding system-level performance measurement*. Washington, D. C. <https://files.hudexchange.info/resources/documents/System-Performance-Measures-Introductory-Guide.pdf>
- Goodman, S., Messeri, P., & O’Flaherty, B. (2016). Homelessness prevention in New York City: On average, it works. *Journal of Housing Economics*, 31(March), 14–34. <https://doi.org/10.1016/j.jhe.2015.12.001>
- Gronda, H. (2009). *What makes case management work for people experiencing homelessness?: Evidence for practice*. Australian Housing and Urban Research Institute.

- Gubits, D., Shinn, M., Wood, M., Brown, S. R., Dastrup, S. R., & Bell, S. H. (2018). What interventions work best for families who experience homelessness? Impact estimates from the family options study. *Journal of Policy Analysis and Management*, 37(4), 835–866. <https://doi.org/10.1002/pam.22071>
- Henry, M., Bishop, K., Sousa, T. D., Shivji, A., & Watt, R. (2018). *The 2017 annual homeless assessment report (AHAR) to congress: PART 2: Estimates of homelessness in the United States*. United States Department of Housing and Urban Development.
- Homelessness Research Institute. (2020). *A research agenda for ending homelessness*. National Alliance to End Homelessness.
- Junejo, S., Skinner, S., & Rankin, S. (2016). *No rest for the weary: Why cities should embrace homeless encampments*. Seattle University School of Law, Homeless Rights Advocacy Project.
- Kryda, A. D., & Compton, M. T. (2009). Mistrust of outreach workers and lack of confidence in available services among individuals who are chronically street homeless. *Community Mental Health Journal*, 45(2), 144. <https://doi.org/10.1007/s10597-008-9163-6>
- Kuhn, R., & Culhane, D. P. (1998). Applying cluster analysis to test a typology of homelessness by pattern of shelter utilization: Results from the analysis of administrative data. *American Journal of Community Psychology*, 26(2), 207–232. <https://doi.org/10.1023/A:1022176402357>
- Lam, J. A., & Rosenheck, R. (1999). Street outreach for homeless persons with serious mental illness is it effective? *Medical Care*, 37(9), 894–907. <https://doi.org/10.1097/00005650-199909000-00006>
- Lee, W., & Donaldson, L. P. (2018). Street outreach workers' understanding and experience of working with chronically homeless populations. *Journal of Poverty*, 22(5), 421–436. <https://doi.org/10.1080/10875549.2018.1460737>
- Lettner, B. H., Doan, R. J., & Miettinen, A. W. (2016). Housing outcomes and predictors of success: The role of hospitalization in street outreach. *Journal of Psychiatric and Mental Health Nursing*, 23(2), 98–107. <https://doi.org/10.1111/jpm.12287>
- Mackie, P., Johnsen, S., & Wood, J. (2017). Ending rough sleeping: What works. In *An international evidence review*. London, England: Crisis. <https://www.crisis.org.uk/ending-homelessness/homelessness-knowledge-hub/services-and-interventions/ending-rough-sleeping-what-works-an-international-evidence-review/>
- Metraux, S., Culhane, D., & Metraux, S. (1999). *Analyzing shelter stays and shelter stay patterns using administrative data: An overview of practical methods* [Paper presented]. The Homeless Services Data Users Meeting, Washington, D.C..
- Morris, D., & Warnock, J. (2001). Effectiveness of a mobile outreach and crisis services unit in reducing psychiatric symptoms in a population of homeless persons with severe mental illness. *The Journal of the Oklahoma State Medical Association*, 94(8), 343–346. <https://pubmed.ncbi.nlm.nih.gov/11515382/>
- National Law Center on Homelessness and Poverty. (2017). *DON'T COUNT ON IT: How the HUD point-in-time count underestimates the homelessness crisis in America*.
- Ng, A. T., & McQuiston, H. L. (2004). Outreach to the homeless: Craft, science, and future implications. *Journal of Psychiatric Practice*, 10(2), 95–105. <https://doi.org/10.1097/00131746-200403000-00004>
- O'Toole, T. P., Johnson, E. E., Borgia, M. L., & Rose, J. (2015). Tailoring outreach efforts to increase primary care use among homeless veterans: Results of a randomized controlled trial. *Journal of General Internal Medicine*, 30(7), 886–898. <https://doi.org/10.1007/s11606-015-3193-x>

- Olivet, J., Bassuk, E., Elstad, E., Kenney, R., & Jassil, L. (2010). Outreach and engagement in homeless services: A review of the literature. *The Open Health Services and Policy Journal*, 3(1), 53–70. <https://doi.org/10.2174/1874924001003020053>
- Parsell, C. (2011). Responding to people sleeping rough: Dilemmas and opportunities for social work. *Australian Social Work*, 64(3), 330–345. <https://doi.org/10.1080/0312407X.2010.538705>
- Parsell, C., Tomaszewski, W., & Phillips, R. (2014). Exiting unsheltered homelessness and sustaining housing: A human agency perspective. *Social Service Review*, 88(2), 295–321. <https://doi.org/10.1086/676318>
- Phillips, R., & Parsell, C. (2012). *The role of assertive outreach in ending' rough sleeping'*. <https://ir.lib.uwo.ca/aprci/321>
- Rodriguez, J. M., & Eidelman, T. A. (2017). Homelessness interventions in Georgia: Rapid re-housing, transitional housing, and the likelihood of returning to shelter. *Housing Policy Debate*, 27(6), 825–842. <https://doi.org/10.1080/10511482.2017.1313292>
- Rolston, H., Geyer, J., Locke, G., Metraux, S., & Treglia, D. (2013, June 6). *Evaluation of the homebase community prevention program*. Final Report. Abt Associates Inc.
- Rosenheck, R., Kasprow, W., Frisman, L., & Liu-Mares, W. (2003). Cost-effectiveness of supported housing for homeless persons with mental illness. *Archives of General Psychiatry*, 60(9), 940–951. <https://doi.org/10.1001/archpsyc.60.9.940>
- Rossi, P. H. (1991). *Down and out in America: The origins of homelessness*. University of Chicago Press.
- Shinn, M., & Khadduri, J. (2020). *In the midst of plenty: Homelessness and what to do about it*. John Wiley & Sons.
- Slesnick, N., Feng, X., Guo, X., Brakenhoff, B., Carmona, J., Murnan, A., Cash, S., & McRee, A.-L. (2016). A test of outreach and drop-in linkage versus shelter linkage for connecting homeless youth to services. *Prevention Science*, 17(4), 450–460. <https://doi.org/10.1007/s11121-015-0630-3>
- Tommasello, A. C., Myers, C. P., Gillis, L., Treherne, L. L., & Plumhoff, M. (1999). Effectiveness of outreach to homeless substance abusers. *Evaluation and Program Planning*, 22(3), 295–303. doi:10.1016/S0149-7189(99)00019-1
- USC Homeless Policy Research Institute. (2019). *Homeless outreach: The Los Angeles County context*. University of Southern California.
- USICH. (2019). *Core elements of effective street outreach to people experiencing homelessness*. United States Interagency Council on Homelessness.
- Wusinich, C., Bond, L., Nathanson, A., & Padgett, D. K. (2019). “If you’re gonna help me, help me”: Barriers to housing among unsheltered homeless adults. *Evaluation and Program Planning*, 76(June), 101673. <https://doi.org/10.1016/j.evalprogplan.2019.101673>