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No Wrong Door: Can Clinical Care Facilitate Veteran Engagement in Housing Services?

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It is well established that providing stable housing to homeless persons improves health outcomes. It is less clear whether engagement in clinical care facilitates housing outcomes. We present a post hoc analysis of a prospective, community-based randomized controlled trial of homeless veterans not actively receiving or assigned to a primary care. Study subjects were interviewed at baseline, 1 month and 6 months and survey results were supplemented/verified by review of all notes in their VA electronic medical record for 6 months postenrollment. A total of 142 subjects with complete data were included in this analysis: 82 (57.7%) were in a stable sheltering/housing arrangement (transitional housing, stably doubled-up, independent housing) at baseline and stayed stable; 36 (25.4%) started in an unstable sheltering arrangement (unsheltered, emergency sheltered, unstable doubled-up arrangement) and moved into stable sheltering/housing while 24 (17.0%) individuals either started in and stayed unstably sheltered or went from a stable to an unstable arrangement. Of 36 individuals who transitioned from unstable to stable sheltering/housing, 25 (69.4%) accessed primary care within 1 month compared with 37.5% of the persistently unstable sheltering group and 57.3% of the stably sheltered/housed group ($p = .05$). Of those with care within 1 month, their average time from unstable to stable housing was 84.8 days compared with 165.9 days for those who do not access care ($p = .02$). Of those receiving primary care within 1 month of enrollment, 88.9% were in stable sheltering at 6 months. These findings suggest an important role for clinical engagement in helping achieve housing stability for homeless veterans.

Keywords: housing, homeless persons, patient participation, veterans

It is well established that stable housing improves health outcomes among the homeless (Larimer et al., 2009; Sadowski, Kee, VanderWeele, & Buchanan, 2009; Tsemberis, Kent, & Respress, 2012). Beyond removing many of the physical environmental drivers of poor health, such as exposure to the elements or high risk of trauma (Kushel, Evans, Perry, Robertson, & Moss, 2003; Kushel, Perry, Bangsberg, Clark, & Moss, 2002), housing also enhances engagement in mental health care, addiction treatment, and chronic disease management (O'Toole et al., 2010; Srebnik, Connor, & Sylla, 2013). Housing interventions using a Housing First approach, for example, where placement in permanent housing is not contingent on sobriety, substance abuse treatment, or income, further demonstrate this dynamic of enhanced treatment engagement (Fitzpatrick-Lewis et al., 2011; Larimer et al., 2009; Tsemberis et al., 2012).

Even when employing Housing First or Rapid Rehousing intervention based on harm-reduction principles, however, a degree of patient activation and engagement is needed to successfully interact with case managers and comply with various program requirements. This can be particularly daunting for those experiencing chronic homelessness or who may be precontemplative in their willingness to effect behavioral changes. Earlier research demonstrates the motivating effect of homelessness on health seeking behavior and, specifically, engagement in substance abuse treatment (O'Toole, Pollini, Ford, & Bigelow, 2008; Pollini, O'Toole, Ford, & Bigelow, 2006). Several studies explore "treatable moments," where acute events (e.g., trauma, incarceration) can cause a shift in readiness for behavioral change and facilitate enrollment in a substance abuse treatment program or other action step (Gentilello, Donovan, Dunn, & Rivara, 1995). Further, health care settings are often the "first stops" people access when they become homeless, especially if they have any underlying chronic health conditions or identified medical needs (O'Toole et al., 2008).

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Patients accessing ambulatory care while experiencing homelessness demonstrate a level of activation and help-seeking behavior reflected in the prioritization of addressing health care needs. In this framework, it is less clear if seeking ambulatory health care can serve as a "priming event" to further enhance patient engagement and more quickly activate both intrinsic and extrinsic processes that lead to obtaining stable housing.

We explore the relationship between receiving health care and changes in housing status, and whether there is any relationship between receiving primary care and moving to stable housing. This analysis was part of a larger study testing different field-based interventions aimed at increasing primary care treatment engagement among homeless veterans within the Veterans Health Administration health system.

Method

This is a post hoc analysis of a prospective, community-based randomized controlled trial of homeless veterans not receiving any ongoing primary or continuity care. Our aim was to look specifically at the relationship between engaging in health care and moving into stable housing. Recruitment occurred in two northeastern urban communities (Providence, RI; New Bedford, MA) at 7 different community-based settings frequented by homeless veterans. Participants enrolled in the study were interviewed at baseline and randomized to receive a brief intervention/personalized health assessment, a clinic/health system orientation or a combination of the two versus usual care. The primary outcome was enrollment and receipt of primary care within 1 month of the intervention. Participants were actively tracked at 1 month and 6 months to assess any changes in attitude, clinical status, changes in living arrangements, and other demographic characteristics. Participants were also tracked passively using the VA electronic medical record to identify receipt of care, as well as status updates documented in the social work and housing coordinator notes. Results from the clinical trial are reported and data describing the relationship between receipt of primary care and change in housing status are reported here (O'Toole, Johnson, Borgia, & Rose, 2015). The study protocol was approved by the Providence VA Medical Center Institutional Review Board and all participants signed an informed consent prior to participating in the trial.

Study Population

The study population was limited to those homeless veterans eligible for VA care (as confirmed by study protocol) who had not received any primary or longitudinal specialty care in the previous 6 months (by self-report and confirmed by review of VA records). Participants not planning to stay in the area for the 6 months study period, those whose housing status could not be ascertained, and those with significant cognitive impairment as measured by the Short Blessed Test (Callahan, Unverzagt, Hui, Perkins, & Hendrie, 2002) were also excluded. The Short Blessed Test was administered by the study team prior administering study-related questionnaires.

Housing Status

We examined two types of housing status: Unstable and stable. *Unstable sheltering* included unsheltered arrangements (sleeping outdoors, in a car, in an abandoned building), emergency sheltering (in a dusk-to-dawn community shelter), or unstable doubled-up arrangements (staying with a friend or relative, aka "couch surfing") where the participant was unclear how long he or she would be allowed to remain. *Stable sheltering* included transitional housing, voucher-based permanent supportive housing (e.g., Housing and Urban Development–Veterans Affairs Supportive Housing) or living in a stable doubled-up arrangement with a family or friend that was considered permanent or semipermanent. Housing status and subsequent changes were determined by self-report at the time of assessments (baseline, 1 month, 6 months) and confirmed where possible by review of the social worker or housing coordinator notes within the electronic medical record. Change in housing status was organized into three groups (a) those who either stayed in or moved to unstable housing; (b) those who moved from unstable to stable housing; and (c) those who remained in stable housing throughout the study period. If multiple changes occurred, only first and last housing arrangements were considered.

Health Services Utilization

Health services use was identified by reviewing of the VA electronic medical record during the 6-month study period. Treatment engagement was defined by the date of the enrollment history and physical as entered in the electronic medical record. Additional care events were also recorded, including follow-up primary care encounters, specialty clinic-based care, mental health and addiction services as well as any acute care use (emergency department and inpatient care). Because mental health and addiction services include individual, group therapy, and medical management components where an aggregate sum of encounters could skew utilization patterns, we considered receipt of this care group as a dichotomous variable of receipt or no receipt of any care within those identified treatment areas.

Attitudinal Survey Data

Survey data collected included at baseline, 1 month, and at 6 months assessed attitudes about health care (motivators for seeking care as well as reasons for not accessing it), cause and duration of homelessness, current sheltering arrangements, self-reported needs, and overall self-reported state of health. The Basic Shelter Inventory survey was originally used by Robertson et al. in sentinel research describing homelessness in Los Angeles County in the early 1980s (Robertson, Ropers, & Boyer, 1985) and has been adapted and used in subsequent studies of homeless persons since then (O'Toole, Hanusa, Gibbon, & Boyles, 1999); the Motivation for Health Care survey was adapted from the NIDA-funded Clinical Research to Engage in Substance Abuse treatment study (Pollini et al., 2006). Additionally, social support was formally assessed at baseline and at 6 months using the RAND Medical Outcomes Study (MOS) Social Support Survey also used in previous homeless studies which includes a scoring tool to measure degree of social support and change over time (Sherbourne & Stewart, 1991). The MOS Social Support Survey originally was used among patients with chronic conditions. Higher values indicate greater social support with scores ranging from 0–100. Readiness to change was assessed using the University of Rhode Island Change Assessment scale (URICA)—a 32-item screener scored

across four domains—with those participants endorsing active substance use (Pantalon & Swanson, 2003).

Data Analyses

Demographic data was examined for the entire sample and by housing group with analysis of variance (ANOVA) and chi-squared tests. We also examined personal motivations and attitudes about health care/health seeking behaviors by housing group using chi-squared tests. The total change from baseline to 6 months of the MOS Social Support score and its emotional subscale were compared between groups with an ANOVA and collapsed groups were used to further investigate through *t* tests and difference-in-differences. We examined the relationship between primary care within 1 month and the housing groups with a chi squared analysis and calculated the mean of days until primary care for the group that moved from unstable to stable housing. For that group, we also compared the days until stable housing for those with primary care within 1 month and for those without primary care. We examined the relationship between receiving primary care within 1 month and housing status using another chi-squared analysis. We graphed the inverted survival curve of weeks until stable housing. Finally, we compared care utilization between those with and without stable housing at 6 months using *t* tests for number of visits and chi-squared tests for whether participants received mental health care or substance abuse treatment during the study.

Results

A total of 142 participants with complete data were included in this post hoc analysis. Of that group, 82 (57.7%) were in a stable sheltering arrangement when they were enrolled and remained housed during the 6-month study period. Thirty-six participants (25.4%) started in an unsheltered setting and moved into stable sheltering by the end of the 6-month study period. Finally, 24 (17.0%) participants started in and remained in an unstable sheltering arrangement ($n = 18$) or went from a stable sheltering arrangement to an unstable arrangement ($n = 6$) during the study period.

As shown in Table 1, there was no difference in any of the demographic variables between these three groups. The average age was 48.4 ($SD = 11.1$), they were predominantly male (95.0%), White (62.4%), and single (91.5%). Most respondents in all three housing categories reported economic reasons for becoming homeless while postincarceration was reported the least among individuals for who moved into stable sheltering during the study period. The majority in all three groups also earned less than $500 per month in income. Overall, 68.1% had at least one medical problem with no difference across groups ($p = .75$). 68.8% had at least one mental health condition, again with no difference across groups ($p = .47$). Only baseline rates of anxiety were significantly lower in the group moving from unstable to stable sheltering ($p = .04$). There was also no difference in social support scores at baseline across all three groups ($p = .27$). Of note, although it did not reach significance, those individuals who were unstably housed at 6

Table 1
Demographics by Housing Status Change Over the Study Period (Six Months)

Demographic	Remain in or move to unstable housing ($n = 24$) *N* (%)	Begin in unstable housing & move to stable housing ($n = 36$) *N* (%)	Remain in stable housing ($n = 82$) *N* (%)	χ^2 *p*
Gender, male	23 (95.8)	35 (97.2)	76 (93.8)	.72
Race, White/Caucasian	15 (62.5)	26 (72.2)	47 (58.0)	.49
Single/divorced/widowed	23 (95.8)	33 (91.7)	73 (90.1)	.70
Major reasons for homelessness				.39
Economic	15 (75.0)	22 (75.9)	41 (65.1)	
Alcohol or drug problem	0 (0.0)	3 (10.3)	9 (14.3)	
Incarceration	5 (25.0)	4 (13.8)	13 (20.6)	
Cash available each month				.58
None	10 (41.7)	15 (41.7)	26 (32.5)	
$1–$500	11 (45.8)	13 (36.1)	33 (41.3)	
Physical conditions (any)	15 (62.5)	24 (66.7)	57 (70.4)	.75
Hypertension	4 (16.7)	9 (25.7)	27 (34.6)	.21
Arthritis	4 (16.7)	12 (33.3)	19 (23.5)	.31
Other problems	8 (34.8)	14 (38.9)	25 (31.3)	.72
Mental health conditions (any)	18 (75.0)	22 (61.1)	57 (70.4)	.47
Depression	15 (62.5)	16 (44.4)	48 (60.8)	.22
Anxiety	11 (45.8)	11 (30.6)	44 (55.7)	.04
PTSD	4 (17.4)	10 (28.6)	30 (37.0)	.18
Active substance abuse (any)	21 (87.5)	25 (69.4)	61 (75.3)	.27
Alcohol	17 (70.8)	24 (66.7)	55 (67.9)	.94
Marijuana	11 (45.8)	12 (33.3)	24 (29.6)	.34
Cocaine	5 (20.8)	4 (11.1)	10 (12.4)	.50
Trauma in the last 6 months	4 (16.7)	7 (19.4)	9 (11.1)	.46
Overall health rating				
Poor/fair	10 (41.7)	17 (47.2)	38 (46.9)	.58

Note. PTSD = posttraumatic stress disorder.

months had an overall decline in social support scores during this time of −4.7 points while those who move from unstable to stable housing had a + 2.8-point increase and those who had stayed in stable sheltering had a + 4.8-point increase. There was also no difference in readiness for change scores among respondents.

Table 2 presents data on attitudes about health care including motivations for wanting care, reasons for not seeking care when needed and past experiences with care received. The majority of respondents endorsed the statement that "health care will help me leave homelessness" (range = 63.9% to 70.8%) with no difference between groups ($p = .85$). Similarly, majorities also endorsed reasons for wanting health care: "to do more with my life;" "to take better care of myself;" and "to get or keep a job" with no difference between groups. Participants who moved from unstable to stable sheltering arrangements were also more likely to endorse statements "they don't help me" ($p = .01$) and "care was not very convenient" ($p = .02$) as reasons for not seeking health care when needed.

As shown in Table 3, among the 36 individuals who transitioned from unstable to stable housing, 25 (69.4%) accessed primary care within 1 month of study enrollment (averaging 6.0 days) which was significantly greater than the proportion accessing primary care in the group that stayed in unstable housing (37.5%) and the group that stayed in stable housing (57.3%; $p = .05$). Of those unstably housed homeless who received care within 1 month, their average time to stable sheltering was 84.8 days. In contrast, those individuals who did not access care within the first month but who did move to stable housing averaged 165.9 days to achieve stable housing ($p = .02$). Among all study subjects who received primary care within 1 month of enrollment, (81 individuals; 57.0% of entire sample), 72 of them (88.9%) were in stable sheltering at 6 months compared which was significantly higher than the proportion that did not access primary care within 1 month of enrollment ($p = .03$). Conversely, those individuals who stayed in or moved to unstable sheltering arrangements were significantly less likely to have received primary care (23.4% with no primary care compared with 10.7% with primary care; $p = .04$). This trend is further demonstrated in the survival curve shown in Figure 1.

Table 4 describes the overall care use by those homeless persons receiving care during the study period who were in stable housing at 6 months compared with those in unstable sheltering. Individuals in stable housing were more likely to receive a consult for and utilize specialty medical services but there were no difference in hospitalizations, emergency department or primary care use, or the proportion receiving mental health and addiction services between these groups.

Discussion

The majority of respondents in this analysis reported that receiving health care would help them leave homelessness but only those veterans accessing primary care were significantly more likely to move into stable housing arrangements and to move in faster. These findings can be interpreted in several different ways and raise several questions that merit further investigation.

One explanation for these findings is that the process of actively seeking care (as opposed to expressing a need for it) "primes" the patient to engage in other action-based behaviors. The process of

Table 2
Attitudes About Health Care and Housing Status

Attitude	Remain in or move to unstable housing ($n = 24$) *N* (%)	Begin in unstable housing & move to stable housing ($n = 36$) *N* (%)	Remain in stable housing ($n = 82$) *N* (%)	ANOVA *p*
Personal motivations for health care				
To keep/get a job	18 (75.0)	27 (75.0)	64 (78.0)	.85
Take better care of self	20 (83.3)	28 (77.8)	70 (85.4)	.51
To leave homelessness	17 (70.8)	23 (63.9)	52 (63.4)	.85
To do more with one's life	21 (87.5)	31 (86.1)	68 (82.9)	.90
Chronic pain	8 (33.3)	17 (47.2)	39 (47.6)	.43
Reasons for delaying care				
Can't keep an appointment	13 (54.2)	14 (38.9)	33 (40.2)	.44
Treated poorly when I go there	7 (29.2)	9 (25.0)	13 (15.9)	.28
Can't afford it	9 (37.5)	18 (50.0)	44 (53.7)	.35
Too much of a run-around	8 (33.3)	11 (30.6)	28 (34.1)	.91
They don't help me	3 (13.6)	15 (41.7)	15 (18.3)	.01
Embarrassed by being homeless	9 (37.5)	21 (58.3)	32 (39.0)	.17
Don't care what happens	8 (33.3)	13 (36.1)	25 (30.5)	.85
Hours don't work for me	7 (29.2)	7 (19.4)	18 (22.0)	.67
Don't trust the doctors	3 (12.5)	9 (25.0)	21 (25.6)	.37
Don't trust VA	1 (4.2)	6 (16.7)	10 (12.2)	.32
Reasons for not having a primary care provider				
Didn't know where to go	6 (25.0)	9 (25.0)	17 (20.7)	.85
Didn't think I needed one	5 (20.8)	11 (30.6)	17 (20.7)	.47
Wasn't very convenient	1 (4.2)	13 (36.1)	23 (28.0)	.02
Didn't care what happened	6 (25.0)	6 (16.7)	12 (14.6)	.54

Table 3
Housing Status at Six Months and Receipt of Primary Care

Receipt of primary care	Remain in or move to unstable housing (n = 24) N (%)	Begin in unstable housing & move to stable housing (n = 36) N (%)	Remain in stable housing (n = 82) N (%)	χ^2 p
Primary care within 1 month	9 (37.5)	25 (69.4)	47 (57.3)	.05

engaging in primary care and accessing ambulatory health services typically requires several organizational aspects, including prioritizing a need and rationalizing benefit from addressing that need, structuring one's time, engaging in a process that may have delayed gratification (e.g., signing in for an appointment, needing to wait until they can be seen), and developing the capacity to trust a health provider in order to share with them health concerns and being willing to take advice. All of these elements of treatment engagement in health care have parallel applications in other help seeking behaviors such as pursuing stable housing. Additionally, the process of achieving sobriety, stabilizing mental health needs, and navigating the health system to receive care for chronic medical conditions reflect a process of patient activation (Greene & Hibbard, 2012), including increased self-management (Dixon, Hibbard, & Tusler, 2009).

Another possible consideration of these findings is that the receipt of care addresses underlying needs that allows the homeless veteran to prioritize seeking housing support, both as a way to sustain health/prevent infirmity, as well as potentially becoming a more suitable housing candidate. A usual source of health care helps remove barriers to exiting homelessness by addressing underlying mental health needs, treating addictions, managing pain and chronic medical conditions. Regular health care also facilitates receipt of services needed in order to remain housed—a core element to the Permanent Supportive Housing framework in a Housing First model (Kertesz, Crouch, Milby, Cusimano, & Schumacher, 2009). Although there was no difference in underlying health or mental health conditions in the groups studied, it is notable that those who moved to stable housing were more likely to have previous negative experiences trying to access care and were more likely to be seen in a specialty medical clinic in this study. This suggests a higher level of need (perceived or actual) in this cohort that may have enhanced their motivation to pursue this care. It is also consistent with earlier research demonstrating the high rates of unmet and deferred care needs present when a homeless person first enrolls in care (O'Toole et al., 2013).

Another possible explanation is that care engagement potentiates a socialization process, enhancing social networks and support systems, both informally and through system-based structures, and furthering the ability to pursue services and seek additional help and support. Previous research has associated higher levels of social support with both accessing health care (Robertson et al., 1985) and exiting homelessness (Zlotnick, Tam, & Robertson, 2003). The importance of trust in this construct is extremely important and was previously identified as a major reason for why health care was not pursued by homeless veterans when needed (O'Toole, Johnson, Redihan, Borgia, & Rose, 2015). This is supported by the noted trend data where social support network scores increased among those who moved to or stayed in stable housing while declining among those staying in unstable arrangements. Although these data were not statistically significant, the observed trends suggest an association may exist and warrants further research in this area.

Finally, these findings warrant considering how both outreach and the availability of clinical services are structured to maximize the potential "treatable moment" opportunity. Among the homeless cohort, assessing the perceived need for health care is an opportunity to leverage this time as a motivator for engagement in needed services and processes ultimately linked to permanent housing. Similarly, it is critical to have available and accessible clinical services to harness this motivation in a way that promotes trust and treatment engagement while simultaneously addressing the multitude of concurrent and competing

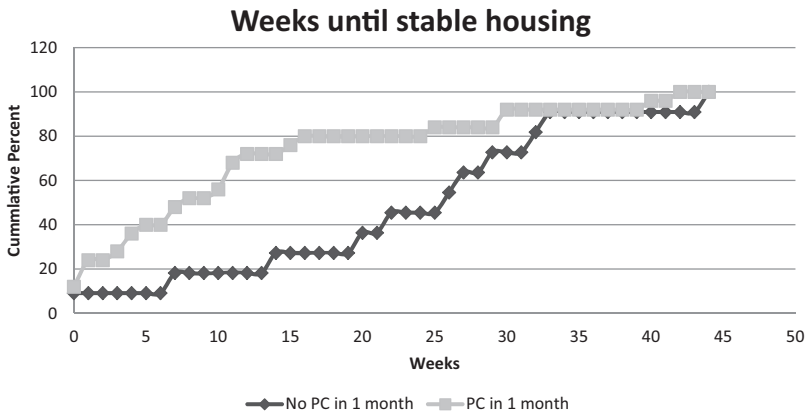

Figure 1. Time to stable housing vs. time to primary care.

Table 4
Health Services Use by Housing Status at Six Months

Health service	Unstable housing (n = 24) M (SD)	Stable housing (n = 122) M (SD)	t test p
Primary care	1.9 (2.2)	3.2 (2.7)	.09
Specialty care	0.5 (0.9)	2.5 (3.6)	.04
Specialty consult	1.9 (1.8)	4.4 (3.8)	.02
Emergency department	0.5 (1.8)	0.4 (0.7)	.68
Medical hospitalization	0 (0)	0.1 (0.6)	.43
Surgery hospitalization	0 (0)	0.0 (0.2)	.62
Mental health hospitalization	0.3 (0.7)	0.1 (0.5)	.41
	N (%)	N (%)	p
Proportion accessing outpatient mental health care	6 (25.0)	52 (42.6)	.56
Proportion accessing outpatient substance abuse treatment	3 (12.5)	33 (27.0)	.41

needs (Gelberg, Gallagher, Andersen, & Koegel, 1997). Recent research on homeless patient preferences and needs (Kertesz et al., 2013), as well as health care models integrating social determinants of health within homeless-tailored medical home approaches (O'Toole, Johnson, Aiello, Kane, & Pape, 2016) help inform this consideration.

There are several limitations to consider with these data. First, this is a post hoc analysis of a community-based randomized controlled trial. Although the uniqueness of the sample and trial do provide an opportunity to observe these dynamics, additional research is needed to make more definitive associations and to determine causality with greater confidence. Our definitions of stable sheltering/housing included transitional housing which—although not permanent—is substantially more stable (up to two years in a structured, supportive setting) than being unsheltered or in an emergency shelter. Transitional housing also has very high permanent housing placement rates (greater than 70% according to personal communications with the VHA Office of Homeless Programs). Transitional housing also represented a more readily accessible sheltering arrangement when supply of permanent housing vouchers. Finally, the trial took place in two New England urban communities and with a veteran population and may not necessarily be representative of other homeless groups or other geographic settings. We also relied only upon Veterans Health Administration data for health care use. It is possible that we did not captured health events occurring outside of this system.

These findings suggest an important role for clinical engagement in helping facilitate housing for homeless veterans. Among nonveterans receiving care in the community, these findings help inform a social-determinates-of-health-based approach of care delivery, suggesting clinical venues can be pathways to both care and housing. Although our historic understanding of the relationship between housing and health care has been oriented to how housing improves health care, these findings suggest receipt of health care may also improve housing outcomes for some homeless veterans as well.

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