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EXPLORING MULTIPLE LEVELS of ACCESS to RENTAL SUBSIDIES and SUPPORTIVE HOUSING

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Abstract

Despite the well-documented benefits of stable housing, there are myriad barriers that preclude low-income and homeless individuals from accessing housing support. This paper examines which individual characteristics predict greater or more limited access to supportive housing and rental subsidy programs in Hartford, Connecticut. Although individuals with HIV/AIDS are most likely to access housing, limited options remain for other vulnerable populations, including those with substance use disorders and mental illness.

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Notes on Contributors

Katherine Quinn

Katherine Quinn, MA, is a doctoral candidate in Public and Community Health at the Medical College of Wisconsin. Ms. Quinn's research interests include a focus on structural and social HIV risk factors, including the role of housing in HIV prevention. She has a bachelor's degree in Social Welfare and Justice from Marquette University and a Master's Degree in Social Service Administration from the University of Chicago. Her dissertation work is focusing on the effects of religiosity on the lives of young black men who have sex with men.

Julia Dickson-Gomez

Dr. Dickson-Gomez studies HIV prevention among drug users in the United States and El Salvador and is also interested in the influence of structural factors on HIV risk. Her research explores the effects of housing policy on drug users' access to housing, variations in housing status and housing options of drug users, and levels of HIV risk related to these factors. Dr. Dickson-Gomez's work also explores macro- and micro-social contexts of crack use and HIV risk in communities in El Salvador. She has used qualitative methods to evaluate network-based HIV prevention interventions for drug users and at-risk women.

Timothy McAuliffe

Dr. McAuliffe is a biostatistician with particular experience in the evaluation of HIV prevention intervention outcomes. His research at CAIR focuses on the reliability and validity of self-reported risk behavior, and on developing and evaluating novel HIV risk assessment strategies and methods to evaluate the effectiveness of HIV prevention interventions including electronic diary reports for reporting sexual activity. His expertise has led to the development of analytical strategies in HIV prevention trials involving community and social network randomization.

Jill Owczarzak

Dr. Owczarzak, a medical anthropologist, is concerned with how models of health intervention address questions of health disparity. Her research focuses on HIV vulnerability among MSM, sex workers, and injection drug users in Eastern Europe, particularly in Poland. She has used qualitative methods to explore how international organizations perceive HIV risk and how they incorporate ideas of risk into their HIV prevention programs. Dr. Owczarzak's interests include how providers adopt and modify prevention interventions and the effectiveness of these modified interventions in reducing health disparities.

Keywords

Housing access; rental subsidies; supportive housing; policy

Growing evidence indicates that provision of rental assistance is an effective strategy to improve overall health and standards of living, as well as increase housing stability, for homeless and low-income individuals (Kessell, Bhatia, Bamberger, & Kushel, 2006; Kidder, Wolitski, Campsmith, & Nakamura, 2007; Shinn et al., 1998; Wolitski, Kidder, & Fenton, 2007). Financial rental assistance programs, made available via rental subsidies and supportive housing, are often hailed as solutions to housing instability and homelessness, acting as a safety net to thousands of low-income families. Despite recognition of the importance of such housing support, a combination of structural- and individual-level barriers significantly reduce access to housing assistance programs (A. Aidala & Sumartojo, 2007; Center on Budget and Policy Priorities, September 2011). This study aims to understand the characteristics of individuals who manage to access these limited housing resources compared with those who do not in Hartford and East Hartford, Connecticut. These individual-level factors may act as barriers to accessing housing support programs given the restrictive legislative barriers in place. Understanding which individual-level characteristics predict greater or more limited access to housing programs can initiate conversations about how to increase housing access for those who are most in need and address housing policies that may impede housing access. Further, this paper adds to the understanding of the multiple levels of housing access and the numerous ways in which individuals are excluded from rental support programs.

Rental subsidies and supportive housing make housing affordable for low-income individuals, acting as effective and logical policy solutions for reducing homelessness and housing instability. Rental subsidies are federal, state, or local programs that provide vouchers to low-income individuals and families to secure apartments in the private market and reduce the recipient's rent contribution to a more affordable level (Dasinger & Speiglmann, 2007). Residential instability, attributable to unaffordable rent, is often a precursor to homelessness (Rog & Buckner, 2007) and rental subsidies are intended to mitigate homelessness and continued instability. In Connecticut, rental assistance is primarily funded through the HUD Section 8-Housing Choice Voucher Program and the State Rental Assistance Program. The waitlists for these programs are often extensive and individuals face numerous barriers that preclude them from accessing this housing should they make it to the top of the waitlist including poor credit histories, previous incarceration, or active substance use. Furthermore, there is a shortage of affordable housing and there simply are not enough rental subsidies to address the needs of all residents (Partnership for Strong Communities, 2011).

While rental subsidies exclusively provide financial support for low-income renters, supportive housing offers additional services in conjunction with subsidies. Given that homeless populations often have extensive health and social service needs, supportive housing programs provide a multitude of services in conjunction with housing provision, including case management and mental health and substance use treatment. These programs

are designed to assist participants in maintaining housing by mitigating other life circumstances that may contribute to future homelessness or housing instability (Holtgrave et al., 2007; Kessell et al., 2006). Connecticut has funded several supportive housing projects made available through a number of social service agencies, although it has provided only half of the intended goal of 10,000 supportive housing unit goal by 2010 (Partnership for Strong Communities, 2011). Similar to rental subsidies, supportive housing is provided via several federal programs including Housing Opportunities for Persons with AIDS (HOPWA), HUD McKinney-Vento, and the HUD Shelter Plus Care program (Partnership for Strong Communities, 2011). For example, the City HOPWA Program provides funding to multiple area social service agencies to provide supportive housing and social services to people living with HIV/AIDS. Similarly, the Shelter Plus Care program provides housing to homeless individuals with a disability, including mental illness or substance use (The Commission to End Chronic Homelessness, 2005). Both rental subsidies and supportive housing programs subsidize the difference between 30 percent of an individual's monthly income and the amount needed to rent in the private market, creating an effective way to overcome financial barriers to renting (Khadduri, 2008).

In addition to making housing affordable, rental assistance programs have demonstrated significant effectiveness at increasing housing stability and helping individuals avoid homelessness (Khadduri, 2008; Shinn et al., 1998; US Conference of Mayors, 2011). These programs allow individuals to move directly from homelessness into subsidized permanent housing, and research has shown that subsidized housing is a strong predictor of residential stability. For instance, those who leave homelessness with a rental subsidy are much less likely to become homeless again compared to those who have not received subsidies (Khadduri, 2008; Shinn et al., 1998), and subsidized housing has been shown to help homeless people living with HIV/AIDS (PLWHA) establish and maintain housing stability (Scott, Ellen, Clum, & Leonard, 2007; Shubert & Bernstine, 2007). Rental assistance programs have proven similarly effective in improving individual health outcomes. Receipt of rental assistance is a consistent and strong predictor of entry into medical care, and has an independent, direct effect on improved medical outcomes (A. Aidala, Lee, Abramson, Messeri, & Siegler, 2007). These improvements are even more pronounced among individuals with chronic health conditions, including HIV/AIDS. Homeless PLWHA are more likely to delay entry into HIV care, less likely to receive optimal antiretroviral therapy and less likely to adhere to therapy when compared with individuals who are stably housed (A. Aidala et al., 2007; A. Aidala et al., 2007; Kidder et al., 2007; Leaver, Bargh, Dunn, & Hwang, 2007; Smith et al., 2000).

Despite this demonstrated effectiveness, there are a number of structural- and individual-level barriers that preclude people from accessing housing programs, the combination of which, perpetuates homelessness and housing instability. One such structural barrier is the lack of funding for federal housing programs. Current federal funding levels for both rental subsidies and supportive housing programs are vastly insufficient to significantly reduce, much less end, housing instability and homelessness. While federal rental subsidies assist more than 4.9 million low-income renters every year, 9.3 million additional renters pay more than half their monthly cash income toward housing costs, making them highly vulnerable to homelessness (Center on Budget and Policy Priorities, September 2011). Further, although

the number of supportive housing units available has grown significantly from almost zero in the late 1980s to the current 237,000 units available,(U.S. Department of Housing and Urban Development, 2010) there are still nearly 650,000 homeless individuals on any given night according to the most recent point-in-time counts (Cortes, Henry, de la Cruz, & Brown, November 2012).

Restrictive legislative policies and prohibitive eligibility standards can further shape the availability of housing and serve to influence who has access to rental assistance programs. Such policies produce or limit affordable housing options, often by way of excluding persons with histories of behavior problems, drug use, or criminal convictions (A. Aidala & Sumartojo, 2007). For example, federal law allows local public housing authorities administering rental assistance programs to establish policies that deny program admission to households that include tenants currently engaged in illegal use of drugs (Quality Housing and Work Responsibility Act of 1998, 1999). However, state and local administrators do have some discretion in applying these restrictions, and while several housing authorities have proposed expanding drug testing policies for housing applicants, others have been less restrictive with policies regarding drug use and criminal convictions (McCarty, Aussenberg, Falk, & Carpenter, September 17, 2013).

Similarly, although local program administrators can implement additional eligibility criteria, given supportive housing's intent to assist individuals with mental illness and substance use (as well as other disabling conditions), depending in the funding source, such programs are not always subject to the same substance use and criminal history regulations as many rental subsidy programs. Yet, unofficial policy is equally as important as formal policies in understanding housing access (J. Dickson-Gomez, Convey, Hilario, Corbett, & Weeks, 2007). For example, many subsidy programs, including the tenant-based Housing Choice Voucher program and some scattered site supportive housing programs, require applicants to search for rental units via the private-market, and rental decisions are left to the discretion of the landlord. Thus, even when housing programs do not consider drug use grounds for denying housing, as in McKinney-Vento or HOPWA funded scattered site supportive housing, a drug-related criminal conviction can still impede an applicant's ability to access housing when working with private-market landlords. Landlords often run criminal background checks and may be hesitant to rent to individuals with criminal histories, as well as those with visible or identified mental illness or substance abuse, further restricting housing access (J. Dickson-Gomez et al., 2007). Individuals who seek housing through other rental support programs including project-based supportive housing, however, are not subject to these same informal housing barriers.

Despite the well-documented benefits of stable housing, limited research has explored the facilitating factors and barriers for low-income and homeless individuals to access housing support. Although previous research has begun to identify individual characteristics associated with housing access, access has been categorized as a dichotomous variable, consisting of whether an individual received rental support or did not. While this provides a useful starting point, it fails to recognize the multiple dimensions of housing access, including whether or not individuals ever received information about such housing programs, and whether or not they applied for but did not receive rental support. While it is

important to understand who is actually receiving (and thus, accessing) housing services, it is similarly important to determine who receives information about these programs and who is more likely to apply for such programs. Receiving information about, applying for, and receiving rental assistance are key aspects of accessing housing and examining these levels of access in more depth allows for a deeper understanding of housing access than has been previously explored. This paper aims to explore how structural-level barriers to housing may affect individuals with various characteristics, including mental illness, HIV/AIDS, and criminal conviction, and how such characteristics are associated with multiple dimensions of housing access. Understanding the multileveled barriers to housing allows for an effective combination of interventions for homelessness and housing instability and provides the foundation for policies and programs to facilitate increased access for those most vulnerable.

Study Population

Study participants were 392 low-income residents of Hartford and East Hartford, Connecticut, recruited through a targeted sampling plan between October 2008 and August 2010. Formative research was conducted that reviewed: 1) 2000 census data to identify low-income block groups, 2) data from town property assessors, and town planning departments, 3) windshield surveys in high poverty block groups to identify recruitment locations, and 4) key informant interviews with residents and service providers. These data were necessary to update the 2000 census data to identify areas that have experienced significant demographic changes and changes in housing stock characteristics since the 2000 census and may no longer be relevant for the study. For example, one census block was dropped from the targeted sampling plan because low-income housing units had been demolished since the 2000 census and the remaining area was industrial rather than residential. Further, these data informed the development of a targeted sampling plan, which indicated the expected number of low-income residents by gender and ethnicity in each census block group that should be represented in our study. Field staff recruited participants in venues within the census blocks to reach a sample indicative of the geographic and ethnic diversity of low-income residents in the area. Recruitment venues included supermarkets, bus stops, the street, homeless shelters, and soup kitchens. We purposefully sampled current drug users and non-users in order to more clearly look at the effect of drug use on housing status and housing access. For the purposes of recruitment, we defined drug users as those who had used crack, heroin, or cocaine in the last 30 days, while non-drug users were defined as those who had not used any of these substances ever, or within the past year. Given that a small number of individuals reside in supportive housing, residents of these programs were recruited regardless of drug use in order to maximize the number of participants currently residing in supportive housing.

Eligibility criteria for the study included being 21 years or older, residing in Hartford or East Hartford, and being low-income, defined by the Department of Housing and Urban Development as living on 50% or less of the median income for a family of four in the Hartford metropolitan area, adjusted according to household size. Survey responses were entered into handheld computers. Participants gave written informed consent and were compensated \$25 for completing the survey. All study procedures were approved by

Institutional Review Boards at the Medical College of Wisconsin and the Institute for Community Research.

Methods

Covariates analyzed included age, race/ethnicity, gender, ever having a criminal conviction, mental health diagnosis, HIV diagnosis, education level, total monthly income, drug use in the past 30 days, and current housing status. Self-reported race/ethnicity was divided into four categories: African American, White non-Hispanic, Puerto Rican, and Other Latino. HIV and mental health diagnoses were self-reported dichotomous measures. Education level was broken into three categories: less than a high school degree or GED, a high school degree or GED, or greater than a high school degree or GED. Total monthly income was measured as a continuous variable and included employment, welfare benefits, financial support from friends or family, and financial support from informal work including sex work and drug sales. Drug use in the past 30 days was defined as consuming any heavy drug, including crack, heroin, or cocaine, within the previous 30 days. Housing status was classified into four categorical variables: 1) homeless, defined as living on the street, shelter, hotel, car, or other place not meant for sleeping; 2) unstably housed, defined as temporarily living with a friend or sex partner, or in an SRO; 3) stably housed, defined as living in your own apartment or in a family members' home or apartment; and 4) living in supportive housing. In the regression analyses, housing status is a dichotomized variable defined as whether or not someone was currently homeless (as defined above) or housed in some capacity.

The two outcomes of interest, access to rental subsidies and access to supportive housing, were both split into three mutually exclusive outcomes: 1) whether or not individuals had ever received information about rental subsidies or supportive housing, 2) whether those individuals who had received information applied for rental subsidies or supportive housing, and 3) whether those individuals who applied for a rental subsidy or supportive housing received housing. As such, there were six discrete outcome variables examined. Rental subsidies were defined as vouchers available to provide financial assistance including programs like Housing Choice Vouchers or Shelter Plus Care. Supportive housing was defined as programs that provide financial rental assistance and include supportive services like case management, substance abuse treatment, or employment training. Participants were read a list of rental assistance programs, supportive housing programs, or housing organizations and asked to identify which programs they had received information on, applied for, or received housing through to ensure accuracy of program categorization.

All individuals in the study were eligible to receive rental subsidies, based on their incomes. Eligibility for individual supportive housing programs varies, but for our analyses, individuals were considered eligible if they had a mental illness, were a current drug user, or had HIV/AIDS. Regression analyses were limited to only those eligible to receive supportive housing and rental subsidies, respectively. Individuals who applied for, yet were ineligible for those programs were excluded. Descriptive statistics were calculated to examine frequencies and means of individual characteristics, reasons individuals did not apply for housing, and where individuals received housing information. To determine where

individuals received information on housing programs, participants were read a list of different options (shelter caseworker, caseworker at a housing subsidy or social service agency, drug treatment center, Department of Social Services, mental health provider, friend or family member, utilities company, supportive housing staff, 211 Info line, church or pastor, or parole or probation officer) and selected all that applied. Six separate logistic regressions explored the relationship between varied level of access to rental subsidies and supportive housing (information on, application for, and receipt of housing) and individual characteristics. All analyses were conducted using SAS 9.3 (SAS Institute, Cary, NC).

Given the prevalence of restrictive formal and informal policies, as well as the fact that residents receiving rental subsidies must still apply for housing in the private market and face potential landlord discrimination, we hypothesized that current drug use and criminal convictions would be negatively associated with receiving rental subsidies. We further hypothesized that drug use and criminal convictions would be positively associated with applying for rental subsidies, as there is a high demand for subsidized housing among ex-offenders (Golembeski & Fullilove, 2005) and a high degree of substance use among homeless and unstably individuals (J. Dickson-Gomez et al., 2007). Supportive housing, on the other hand, is designed to overcome many of the barriers to housing faced by individuals with HIV diagnoses, mental illness, drug use, and criminal convictions. Thus, we hypothesized that criminal convictions would not be significantly related to accessing supportive housing. HIV diagnosis, mental illness, and drug use, however, all are hypothesized to predict receiving information on, applying for, and receiving supportive housing.

Results

Sample Characteristics

As seen in Table 1, of the 392 individuals in the study, 65% were male with an average age of 45 years old. Puerto Ricans comprised the largest ethnic category, encompassing 41% of the sample, with African Americans making up 35%. Over 90% of participants had used heroin, crack, or cocaine in their lifetime, and over 60% had used in the previous 30 days. The sample was well below the poverty line, with a mean monthly income of just \$560. Despite their low-incomes, less than one-third had ever received a rental subsidy and less than one-quarter had ever received supportive housing, with even fewer currently receiving housing through those programs (20% and 14% respectively). Additionally, 21% of the individuals in the study were currently homeless. Just 9% indicated they have children under the age of 18 living with them, the majority of whom are women (74%).

Access to rental subsidies

Of the 392 individuals in the study, the vast majority (72%) reported receiving information on rental subsidies at some point in time. Nearly 40% of individuals received rental subsidy information from the Department of Social Services or a housing, mental health, drug treatment, or social service agency. A quarter of participants received information from shelter caseworkers and one-third received information from friends or family members. Among those who received information, three-quarters applied for that housing, only half of

whom ended up actually receiving a rental subsidy. As indicated in Table 2, the most commonly cited reasons for not applying for rental subsidies include not knowing programs were available and not thinking one would receive the subsidy. Although all participants were financially eligible to receive rental subsidies, only one-quarter of the sample ever received a subsidy, and just 13% (n=49) indicated being on a waitlist. Among those who applied for subsidies, 75% applied for Section 8 Housing Choice Vouchers and nearly one-third applied for Shelter Plus Care. Table 3 shows the results of three separate logistic regression models demonstrating which individual characteristics predict each of these levels of access to rental subsidies. As evidenced in the table, among all respondents, individuals who were female or had a mental health diagnosis were more likely to receive information on rental subsidies. Further, among those who did receive information, applying for subsidies was predicted by being female, having a mental health diagnosis, housing status and race. However, among those who applied for rental subsidies, receipt of a subsidy was only predicted by being female and having an HIV diagnosis.

As indicated by the adjusted odds ratios present for the significant covariates in the logistic regression models, being female was the only predictor of all levels of housing access for rental subsidies. Being female was positively associated with receiving information on rental subsidies (OR:4.66, 95%CI: 2.51–8.67), as well as subsequently applying for (OR: 5.82, 95%CI: 3.43–9.87), and receiving rental subsidies (OR: 2.97, 95%CI: 1.84–4.79). Participants who were currently homeless were significantly less likely than those in transitional housing, doubled up with friends or family, or those housed in other capacities to receive information on or apply for rental subsidies. Those who were HIV-positive were also significantly more likely than those without an HIV diagnosis to receive a rental subsidy among those who applied (OR: 2.39, 95%CI: 1.44–3.98). Although individuals who had a mental health diagnosis had nearly twice the adjusted odds of both receiving information on (OR: 1.90, 95%CI: 1.17–3.09) and applying for rental subsidies (OR: 2.17, 95%CI:1.34–3.50), mental illness was not significantly associated with receiving a rental subsidy after applying. Contrary to our hypotheses, neither drug use in the past 30 days nor having a criminal conviction was associated with less access to rental subsidies at any of the three levels.

Access to Supportive Housing

Unlike rental subsidies, where 72% of study participants reported receiving information on such subsidies, only 43% reported ever receiving information on supportive housing, which could be attributable to their more limited supply. Individuals who received information on supportive housing primarily received that information from the Department of Social Services or a housing, mental health, drug treatment, or social service agency (39%). Individuals also reported receiving information from family or friends (24%) and shelter caseworkers (31%). Of those who did receive information, approximately half applied for supportive housing, of which over three-quarters of them actually received supportive housing, significantly higher than the 49% of those who received rental subsidies. As indicated in Table 2, almost half of those who were eligible for supportive housing did not apply, citing not knowing the programs were available or not knowing how to apply. The supportive housing programs individuals applied for varied. Several were specific programs

for people living with HIV/AIDS, mental illness, and substance use, while other housing providers required sobriety. Only 3% (n=13) participants indicated currently being on a supportive housing waitlist. Eligibility criteria for supportive housing programs varies by housing provider, but many, like Shelter Plus Care, are limited to individuals who are chronically homeless (and by definition, must have a disabling condition including substance use, HIV, or mental illness). Table 4 presents the results of the three logistic regression models demonstrating which individual characteristics predict each of these three levels of access to supportive housing among those with a qualifying disability.

As opposed to rental subsidy access, which had a number of predictors at each level of access, having an HIV diagnosis, mental health diagnosis, and homelessness were the only predictors of any level of access to supportive housing. Similar to rental subsidies, individuals who were currently homeless were less likely to have ever received information on supportive housing (0.62, 95%CI: 0.40–0.98). Individuals who were HIV-positive had over three times the adjusted odds of receiving information on (OR: 3.27, 95%CI: 1.99–5.38) and applying for, (OR: 5.46, 95%CI: 3.24–9.21) supportive housing, compared to those without an HIV diagnosis. Further, among those who applied for supportive housing, individuals with an HIV diagnosis had over seven times the adjusted odds ratio of receiving that housing, compared to those who were HIV-negative (OR: 7.65 95%CI: 4.25–13.77).

Although having a mental health diagnosis was not as significant as having an HIV diagnosis for accessing supportive housing, it was a predictor of every level of supportive housing access. Individuals with a reported mental health diagnosis had nearly twice the adjusted odds of receiving information on (OR: 1.76, 95%CI: 1.15–2.70) supportive housing, compared to those without a mental health diagnosis. Having a mental illness was also predictive of applying for, (OR: 2.49, 95%CI: 1.48–4.21) and receiving (OR: 2.51, 95%CI: 1.36–4.61) supportive housing. It is surprising that, similar to accessing rental subsidies and contrary to our hypotheses regarding drug use and supportive housing, current drug use did not predict access to supportive housing at any level of access.

Discussion

Studies have shown clear relationships between homelessness, housing instability, and certain characteristics including HIV status, substance abuse, and mental illness, yet have failed to look further into how these same populations, highly vulnerable to homelessness, can access housing support to end or prevent homeless episodes. This study begins to examine the influence of these factors on the varied levels of housing access, revealing some of the more complex barriers and facilitating factors. While structural-level factors such as restrictive laws and policies are believed to be one important barrier to housing (A. Aidala & Sumartojo, 2007), it is also useful to look at various individual characteristics that may impede or facilitate housing access among low income individuals.

Findings from this study reveal differences in rental subsidy and supportive housing access among low-income urban residents. In examining access to information about rental subsidies, there were some significant differences in access indicating that certain subsets of the population have significantly more access to information about such programs, namely,

women, those with HIV, and those with mental health diagnoses. Previous research indicates that individuals who reside in shelters are more likely to receive information about housing programs, particularly supportive housing (J. Dickson-Gomez et al., 2007). Our findings indicate, however, that individuals who reported current homelessness were less likely than those in other housing situations to report receiving information on both supportive housing and rental subsidies. Among those individuals who did receive information on either rental subsidies and supportive housing, a quarter reported receiving information from shelter caseworkers and nearly 40% reported receiving information from the Department of Social Services or a housing, mental health, drug treatment, or social service agency. It is important to note that the Connecticut Department of Social Services is unique in that it is one of only a few state social service agencies that administer Section 8 housing choice voucher programs in addition to the Food Stamps program, medical programs, and cash assistance programs. Thus, individuals who are accessing housing information may have been subsequently receiving services for other needs (including mental illness or HIV). Individuals also reported receiving information on rental subsidies and supportive housing from family and friends (30% and 25%, respectively), which may be why those who are homeless are less likely to receive information than those who are housed, including being doubled up with family and friends. In this study, an HIV or mental health diagnosis predicted access to information on supportive housing, but receipt of information was otherwise fairly equitable. That being said, less than half of all study participants had ever received information on supportive housing programs, whereas nearly three-quarters of individuals had received information on rental subsidies.

Among those who were eligible for supportive housing, only a third reported having ever applied (n=93). This low application rate is concerning and can be partially explained by examining reasons eligible individuals never applied for supportive housing. The most commonly cited reason for not applying was being unaware of the programs; nearly 50% of participants eligible for supportive housing indicated they didn't know such programs were available to them. This may be attributable to the fact that many supportive housing programs use individual site-based waiting lists and application processes, rather than having a central point of application at a housing authority. The lack of program awareness suggests the need for increased community outreach around supportive housing programs, yet the need for supportive housing currently far outweighs the availability. Recent Connecticut statistics in the Hartford region reveal a significant proportion of the homeless population would qualify for supportive housing; one-third of all homeless adults are mentally ill, two-thirds experience chronic substance use, and 3% have HIV/AIDS (Connecticut Coalition to End Homelessness, September 4, 2013). Furthermore, as of February 2011, there were 4,500 supportive housing units in Connecticut, but estimates indicate that between 2012 and 2016, over 5,700 households will need permanent supportive housing (Partnership for Strong Communities, 2011). Thus, making individuals aware of programs must be accompanied by an increase in available units.

There were significant differences present in housing access when we considered whether those who received information actually applied for rental subsidies, and further, whether those who applied for rental subsidies received them. Two-thirds of individuals who received information on rental subsidies applied for them. Being female, African American, or

mentally ill were all significant predictors of applying for rental subsidies, while being female and HIV positive were the only significant predictors of receiving subsidies among those who applied. Although all individuals in the study were financially eligible for rental subsidy programs, only half of all those who applied for rental subsidies received them, which, like supportive housing, may be indicative of the scarcity of affordable rental units and the significant shortfall of available subsidies (Steffen, Bucholtz, Martin, Vanderbroucke, & Yao, August 2013). For every 100 households in Connecticut with extremely low incomes, there are only 38 affordable and available rental units (National Low Income Housing Coalition, March 2011), leaving the majority of low-income households in need of rental subsidies. It is also possible, however, that although individuals met financial guidelines to participate, current drug use or criminal background disqualified them from mainstream programs. Over two-thirds of participants reported drug use in the previous 30 days or had a criminal history, which may also help explain why individuals who applied did not receive subsidies (Partnership for Strong Communities, 2011). It should be noted, however, that individuals who apply for but do not receive rental subsidies are not necessarily denied that subsidy. Rather, not receiving the rental subsidy may also indicate that the applicant is on a waitlist or that there simply were not subsidies currently available. Thus, individuals who applied for rental subsidies may eventually receive one, as more become available, although just 13% and 3% of participants indicated being on a waitlist for rental subsidies and supportive housing, respectively. While the data can provide some information about individuals who did not receive housing, we do not know whether they were rejected by the housing authority or a private landlord, and furthermore, we do not know the reason individuals were rejected. Contrary to our hypotheses, current drug use and having a criminal conviction were not negatively correlated with receiving rental subsidies and current drug users were no less likely to apply for rental subsidies than non-drug users. This may be due in part to the fact that the majority of research participants (62%) had reported some drug use in the past 30 days, although those individuals were no more or less likely to access housing than non-drug users. That being said, 71% of all those who applied for supportive housing received it, likely indicative of the “low-barrier” nature of supportive housing, wherein drug use rarely precludes receipt of housing. For example, many supportive housing programs operate with a housing first philosophy, providing nonabstinence-based immediate and permanent supportive housing (Tsemberis, Gulcur, & Nakae, 2004). Not only does this model of housing provide permanent housing options for active drug users without conditions of sobriety, it has been shown to be essential in attaining and maintaining housing for those with severe mental illness or substance use disorders (Collins et al., 2012; Tsemberis et al., 2004). Eligibility criteria can vary depending on funding source, and federal guidelines for some supportive housing programs can differ from that of public housing or Housing Choice Vouchers. For these rental subsidy programs, federal law requires Public Housing Authorities to establish policies that mandate denial of admission to any households where tenants are determined to be engaging in illegal use of drugs at the time of application. Similarly, the law requires the adoption of policies that allow for termination of tenancy because of drug use, although the law does go so far as to require termination itself (McCarty et al., September 17, 2013). It is also possible that individuals with co-occurring mental health and substance use disorders had increased access to housing programs that operate within a therapeutic framework (e.g. Assertive

Community Treatment programs) more so than active drug users without co-morbidities. Over half of those with recent substance use had co-occurring mental health diagnoses, and this may account for some of the reason drug use overall, was not negatively correlated with receiving housing.

Although restrictive policies can make it more difficult to address homelessness among drug users, current drug use was not correlated with housing access in our study. This may be due, in part, to the discretion housing authorities have in enforcing federal drug policies, which may suggest that drug users can apply for and access housing subsidies when eligibility restrictions for those with current or past substance use problems or convictions are not in place. Although federal law requires housing programs to establish policies that deny housing to active drug users, there are no federal policies that explicitly mandate that administrators of federal housing drug test applicants and recipients (McCarty et al., September 17, 2013), which can provide some flexibility for states and housing authorities to house drug users. It is also possible that at the time of admission into the housing program individuals were not using drugs, only to start using drugs once they were stably housed. However, there is evidence to the contrary that suggests recipients of housing subsidies and supportive housing, especially those who spent years on housing waiting lists, engage in strategies to reduce or limit their drug use once housed, to avoid losing their subsidies (S1_Reference14J. Dickson-Gomez et al., 2009).

It is unclear why women, most of whom did not have children living with them, were more likely to apply for and receive rental subsidies. Women may be perceived to be more vulnerable and subsequently prioritized. Further, they may be more familiar with navigating the social service system than men and have more experience and connections with agencies and individuals who can make them aware of available housing programs. Previous research has demonstrated that women may encounter increased barriers to housing when compared to men, often stemming from sex and drug related risk behaviors (Riley, Gandhi, Hare, Cohen, & Hwang, 2007). Exchange of sex for money, drugs, housing, or food has been shown to put women at increased risk for drug and sex-related criminal convictions (Mallory & Stern, 2000; Tyler, Hoyt, Whitbeck, & Cauce, 2001) and those with drug-related offenses on their record face additional barriers to housing, as housing officials and landlords tend to avoid tenants they suspect will engage in future drug use and sex work (Blankenship & Koester, 2002). On the contrary, the current study found that being female predicted access to rental subsidies, and drug use and criminal convictions had no effect on rental subsidy or supportive housing access.

The most salient predictor of receiving rental subsidies and supportive housing in this study was having an HIV/AIDS diagnosis. This could be, in part, attributable to the separate funding streams available for people living with or disabled by HIV/AIDS. For these specified populations, there are both mainstream housing programs and housing programs specifically for persons with HIV/AIDS or mental illness, increasing opportunities for PLWHA to access housing. For example, the HOPWA program provides resources to state and local governments to provide supportive housing to low income persons with HIV/AIDS (US Department of Housing and Urban Development, Feb 2011). The recent increased focus on housing for the chronically homeless further provides housing opportunities for

individuals with mental illness and HIV/AIDS, as HUD's definition of chronically homeless includes having a disabling condition, which encompasses AIDS diagnoses and mental illness (US Department of Housing and Urban Development, 2008). Although housing programs have been successful at increasing housing availability for people living with HIV/AIDS, there continues to be insufficient housing for other vulnerable populations, including those with mental illness and substance abuse histories, who may be particularly vulnerable to HIV. As HIV has become more of a chronic condition, housing has become a critical aspect of HIV care, and has resulted in significant improvements in the health of PLWHA (Buchanan, Kee, Sadowski, & Garcia, 2009; Kidder et al., 2007), suggesting it should continue to be well-funded and prioritized. Despite the documented effects of housing on health, housing remains limited as an integral aspect of HIV prevention. For example, there is a strong association between housing status and risk for HIV transmission (A. Aidala, Cross, Stall, Harre, & Sumartojo, 2005; Elifson, Sterk, & Theall, 2007), as housing status is significantly associated with sexual (A. Aidala et al., 2005) and drug risk factors (Salazar et al., 2007; Weir, Bard, O'Brien, Casciato, & Stark, 2007). This suggests that housing instability and homelessness may act as structural barriers to traditional HIV prevention interventions. Research has also clearly demonstrated that the factors that put people at risk for homelessness and housing instability, including mental illness and substance use, which at least half of this sample reported experiencing, further put individuals at greater risk for contracting HIV (Culhane, Gollub, Kuhn, & Shpaner, 2001). Housing resources, then, must extend beyond those who already have HIV and consider those vulnerable to HIV infection as well.

It is important to note, however, that while having HIV/AIDS may be a significant predictor of accessing rental subsidies and supportive housing, there is still a significant unmet need in housing for PLWHA. HOPWA grantees have reported nearly 125,000 additional households with PLWHA in need of housing (US Department of Housing and Urban Development, Feb 2011). Further, compared to PLWHA in stable housing, homeless and unstably housed PLWHA experience decreased mental and physical health, lower CD4 counts, and higher viral loads (Kidder et al., 2007). As such, special provision of housing for homeless PLWHA is certainly warranted and integral to the care and treatment of individuals with HIV/AIDS. Precisely because of this vulnerability, funding priorities have rightly focused specifically on individuals with HIV/AIDS providing increased access to receiving subsidies.

Beginning in 2011, Hartford, along with dozens of other cities, began implementing The Vulnerability Index, a survey tool based on research into the causes of death for homeless populations, to identify and prioritize homeless individuals for housing according to their health status (Community Solutions, 2013). For example, individuals who have been homeless for at least six months are considered to be at heightened risk of mortality if they have HIV/AIDS, are aged 60 or older, have had more than three hospitalizations or emergency room visits in the past year, or have co-occurring psychiatric, substance abuse, and chronic medical conditions (Community Solutions, 2013). The Vulnerability Index tool is useful in identifying homeless persons facing the greatest risk of mortality if they remain homeless, providing the basis for prioritizing the limited supply of supportive housing available (Journey Home, July 2010). Although implementation of the tool occurred

following this research and cannot explain differential access to housing in this study, it may be an important explanatory variable in future research.

This study should be considered in light of potential limitations. One notable limitation of this study is that our data do not allow us to correlate housing access with specific funding streams. For example, we do not know whether PLWHA received housing funded by HOPWA, the HUD McKinney-Vento program, or another funding source. The funding source can also influence whether current drug use is allowable within the housing program or is grounds for denial or termination of subsidies, as some funding sources do not have sobriety restrictions. Future research exploring housing access should work to correlate access with funding streams. Additionally, we do not know reasons individuals did not receive housing subsidies or supportive housing and whether they were rejected due to eligibility issues, incomplete or inadequate applications, or based on landlord discrimination. Understanding reasons for not accessing housing could provide additional context to the issue of housing access. It should also be noted that participants were recruited through a targeted sampling plan and thus, this is not a probability sample. Further, findings from this study are limited to Hartford and East Hartford Connecticut and cannot be generalized to other cities.

Conclusion

There is a significant shortfall of affordable housing available for low-income renters, and a similar shortfall of federal, state, and local housing resources available to address these housing needs (Steffen et al., August 2013). Results from this study demonstrate that access to rental subsidies and supportive housing programs generally remains limited, with the exception of certain high-risk and prioritized populations namely women and those with HIV/AIDS or mental health diagnoses. Although our approach to addressing homelessness and housing instability should be multi-faceted, addressing the shortfall of rental subsidies and supportive housing is one opportunity to increase access to housing. Additionally, it is important for states and local housing authorities to simultaneously consider opportunities to minimize structural barriers and increase housing access for active drug users and those with criminal backgrounds. Restrictive policies have attempted to limit access to those deemed most 'worthy' of assistance, which may make accessing housing support increasingly difficult for certain individuals. Future research comparing states or local housing authorities that differentially implement drug-testing and criminal background check policies may be useful in understanding how such policies affect homelessness. Our future research will analyze longitudinal data using housing status at baseline to predict access to housing subsidies at 6 and 12-month follow up. This will provide increased information about barriers to housing and offers additional opportunities to explore the complex nature of housing access.

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Table 1:

Sample Characteristics

Characteristic	% (N) unless otherwise specified
N=392	
Gender	
<i>Male</i>	65% (255)
<i>Female</i>	35% (136)
<i>Transgendered</i>	0.26% (1)
Living with children under the age of 18	9% (34)
Race/Ethnicity	
<i>African American</i>	35% (137)
<i>White-not Hispanic</i>	18% (69)
<i>Puerto Rican</i>	41% (161)
<i>Other Latino</i>	6% (25)
Less than high school education	45% (176)
Mental illness diagnoses	50% (196)
HIV Diagnosis	26% (101)
Criminal conviction	65% (253)
Drug Use in the past 30 days	62% (244)
Ever used heroin, crack, or cocaine	92% (365)
Ever Received a rental subsidy	27% (104)
Ever Received supportive housing	19% (73)
Current Housing Status	
<i>Homeless</i>	21% (82)
<i>Unstably housed</i>	19% (74)
<i>Stably housed</i>	46% (182)
<i>Supportive housing</i>	14% (54)
Longest length of time homeless	
<i>Never</i>	15% (58)
<i>Less than 1 Month</i>	4% (17)
<i>1 month to 1 year</i>	38% (147)
<i>1 year or longer</i>	43% (170)
Monthly income	\$560 (mean) (\$424.60 median)
Age	45 (mean)

Table 2:

Reasons for never applying for a rental subsidy or supportive housing

	Reason given	%(N)
Reasons for never applying for rental subsidies among those eligible (n=172)	Didn't know program was available	25% (43)
	Didn't feel I needed it	22% (37)
	Didn't think I would get it	36% (61)
	Couldn't keep appointments or provide paperwork	5% (8)
	Other	14% (23)
Reasons for never applying for supportive housing among those eligible for supportive housing (n=232)	Didn't know program was available	49% (113)
	Didn't feel I needed it	32% (73)
	Didn't think I would get it	18% (13)
	Couldn't keep appointments or provide paperwork	2% (5)
	Other	5% (12)

Table 3:

Results of logistic regression analyses of multiple levels of access to rental subsidies

Level of Access	Parameter *	Unadjusted Odds Ratio (95%CI)	Adjusted Odds Ratio (95% CI)
Received information about rental subsidies (n=282)	Female	5.50 (2.58–11.71)	4.66 (2.51–8.67)
	HIV diagnosis	1.40 (0.52–2.74)	
	Mental Health Diagnosis	2.15 (1.24–3.71)	1.90 (1.17–3.09)
	Race		
	<i>African American</i>	1.92 (0.88–4.19)	
	<i>Puerto Rican</i>	1.15 (0.52–2.56)	
	<i>Other Latino</i>	1.04 (0.25–4.31)	
	Criminal Conviction	0.91 (0.53–1.59)	
	Drug use in the past 30 days	0.91 (0.53–1.60)	
	Education Level		
	<i>High School Diploma or GED</i>	0.61 (0.33–1.10)	
	<i>More than high school</i>	1.87 (0.69–5.08)	
	Total Monthly Income	1.00 (0.99–1.00)	
	Currently Homeless	0.44 (0.25–0.80)	0.43 (0.27–0.70)
Applied for a rental subsidy (n=215)	Female	8.38 (4.38–16.06)	5.82 (3.43–9.87)
	HIV diagnosis	1.73 (0.94–3.20)	
	Mental Health Diagnosis	2.07 (1.22–3.51)	2.17 (1.34–3.50)
	Race		
	<i>African American</i>	3.66 (1.63–8.21)	4.08 (1.97–8.47)
	<i>Puerto Rican</i>	1.35 (0.59–3.07)	1.69 (0.85–3.35)
	<i>Other Latino</i>	0.77 (0.20–2.96)	1.16 (0.35–3.89)
	Criminal Conviction	1.09 (0.60–1.97)	
	Drug use in the past 30 days	1.43 (0.83–2.45)	
	Education Level		
	<i>High School Diploma or GED</i>	0.74 (0.41–1.33)	
	<i>More than high school</i>	0.83 (0.36–1.94)	
	Total Monthly Income	1.00 (0.99–1.01)	
	Currently Homeless	0.32 (0.18–0.60)	0.35 (0.21–0.56)
Received a rental subsidy (n=105)	Female	3.05 (1.73–5.37)	2.97 (1.84–4.79)
	HIV diagnosis	2.10 (1.18–3.74)	2.39 (1.44–3.98)
	Mental Health Diagnosis	1.31 (0.78–2.20)	
	Race		

Level of Access	Parameter *	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
	<i>African American</i>	2.23 (0.93–5.38)	
	<i>Puerto Rican</i>	1.68 (0.69–4.10)	
	<i>Other Latino</i>	1.51 (0.39–5.89)	
	Criminal Conviction	1.31 (0.71–2.41)	
	Drug use in the past 30 days	1.10 (0.63–1.91)	
	Education Level		
	<i>High School Diploma or GED</i>	0.82 (0.45–1.51)	
	<i>More than high school</i>	0.87 (0.39–1.91)	
	Total Monthly Income	1.001 (1.00–1.001)	

* Reference categories: Male, no HIV diagnosis, no mental health diagnosis, Caucasian, no criminal conviction, no drug use in the past 30 days, lower than high school education, not currently homeless

Table 4:

Results of logistic regression analyses of access to multiple levels of supportive housing access among individuals eligible for supportive housing

Level of Access	Parameter **	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
Received information about supportive housing (n=169)	Female	<i>1.45 (0.85–2.46)</i>	
	HIV diagnosis	<i>3.10 (1.77–5.43)</i>	3.27 (1.99–5.38)
	Mental Health Diagnosis	<i>1.92 (1.19–3.11)</i>	1.76 (1.15–2.70)
	Race		
	<i>African American</i>	<i>1.79 (0.86–3.72)</i>	
	<i>Puerto Rican</i>	<i>1.33 (0.62–2.82)</i>	
	<i>Other Latino</i>	<i>1.21 (0.37–4.00)</i>	
	Criminal Conviction	<i>1.36 (0.79–2.33)</i>	
	Drug use in the past 30 days	<i>0.88 (0.54–1.42)</i>	
	Education Level		
	<i>High School Diploma or GED</i>	<i>1.44 (0.83–2.47)</i>	
	<i>More than high school</i>	<i>1.75 (0.84–3.67)</i>	
	Total Monthly Income	<i>1.00 (0.99–1.00)</i>	
	Currently Homeless	0.60 (0.35–1.01)	0.62 (0.40–0.98)
Applied for supportive housing (n=93)	Female	1.22 (0.66–2.25)	
	HIV diagnosis	<i>4.86 (2.62–6.02)</i>	5.46 (3.24–9.21)
	Mental Health Diagnosis	<i>2.52 (1.42–4.45)</i>	2.49 (1.48–4.21)
	Race		
	<i>African American</i>	1.62 (0.63–4.19)	
	<i>Puerto Rican</i>	1.36 (0.52–3.57)	
	<i>Other Latino</i>	0.77 (0.16–3.68)	
	Criminal Conviction	<i>0.85 (0.45–1.62)</i>	
	Drug use in the past 30 days	<i>1.10 (0.61–1.96)</i>	
	Education Level		
	<i>High School Diploma or GED</i>	<i>0.90 (0.48–1.71)</i>	
	<i>More than high school</i>	<i>0.70 (0.29–1.70)</i>	
	Total Monthly Income	<i>1.00 (0.99–1.01)</i>	
	Currently Homeless	0.50 (0.26–0.96)	
Received supportive housing (n=73)	Female	<i>0.84 (0.41–.69)</i>	
	HIV diagnosis	7.83 (3.90–15.70)	7.65 (4.25–13.77)
	Mental Health Diagnosis	<i>2.47 (1.28–4.77)</i>	2.51 (1.36–4.61)
	Race		

Level of Access	Parameter **	Unadjusted Odds Ratio (95% CI)	Adjusted Odds Ratio (95% CI)
	<i>African American</i>	<i>1.37 (0.47–4.02)</i>	
	<i>Puerto Rican</i>	<i>1.28 (0.42–3.86)</i>	
	<i>Other Latino</i>	<i>0.88 (0.16–4.97)</i>	
	Criminal Conviction	<i>0.56 (0.27–1.16)</i>	
	Drug use in the past 30 days	<i>0.63 (0.33–1.21)</i>	
	Education Level		
	<i>High School Diploma or GED</i>	<i>1.10 (0.53–2.27)</i>	
	<i>More than high school</i>	<i>0.89 (0.34–2.35)</i>	
	Total Monthly Income	<i>1.00 (0.99–1.01)</i>	

** Reference categories: Male, no HIV diagnosis, no mental health diagnosis, Caucasian, no criminal conviction, no drug use in the past 30 days, lower than high school education, not currently homeless