



# The National AIDS Housing Coalition

727 15<sup>th</sup> Street, 6<sup>th</sup> Floor  
Washington, DC 20005

p 202.347.0333    www.nationalaidshousing.org  
f 202.347.3411    nahc@nationalaidshousing.org

2008

## ***Examining the Evidence: The Impact of Housing on HIV Prevention and Care*** Policy Paper from the Third Housing and HIV/AIDS Research Summit

*“[R]esearch without action is dusty books on a shelf...and  
action without research is simply a tantrum.” – Shirlene Cooper<sup>1</sup>*

### **Overview**

Increasing evidence directs attention to the role of housing – or lack of housing – for the continuing HIV epidemic and associated health disparities. Housing status has been identified as a key structural factor affecting access to treatment and health behaviors among people living with HIV/AIDS (PLWHA), and research shows that receipt of housing assistance is associated over time with reduced HIV risk behaviors and improved health care outcomes, controlling for a wide range of individual characteristics (poverty, race/ethnicity, substance use, mental illness) and service use (primary care, case management, substance abuse and/or mental health treatment) variables. These are exciting findings, signifying the potential of housing interventions to improve the health of people living with HIV and reduce the number of new infections.

Indeed, data from two large-scale intervention studies, the Chicago Housing for Health Partnership (CHHP) and HUD/CDC Housing and Health (H&H) study, indicate that supportive housing for homeless persons with HIV/AIDS and other chronic illnesses not only improves health outcomes, but also sharply reduces use of costly emergency and inpatient health care services. Initial CHHP data show that medical cost savings for formerly homeless participants with HIV and other chronic illnesses far exceeded the costs of the housing intervention. Preliminary results from the two-year H&H study show that homeless participants living with HIV who secured stable housing reported significant reductions in emergency room visits, hospitalizations, opportunistic infections and sex trade. These two studies are the first of their kind designed specifically to examine the significance of housing as an independent determinant of health. They provide strong new evidence for housing as an effective and cost-saving health care intervention for homeless and unstably housed persons with HIV.

Housing is increasingly identified as strategic point of intervention to address HIV/AIDS and overlapping vulnerabilities associated with race and gender, extreme poverty, mental illness, chronic drug use, incarceration, and histories of exposure to trauma and violence, as well as homelessness. Housing assistance has been shown to decrease health disparities while reducing overall public expense and/or making better use of limited public resources. This evolving body of research also has profound implications for the broader affordable housing and healthcare agendas, paving the way for new housing policies and practices consciously structured and

---

<sup>1</sup> Opening Keynote Speech, Housing & HIV/AIDS Research Summit III, Baltimore Maryland, March 2008. Shirlene Cooper is the Co-Director of the New York City AIDS Housing Network (NYCAHN), a non-profit membership organization formed and led by homeless and formerly homeless people living with HIV and AIDS.

studied as public health interventions. Findings are relevant to policy in a number of areas, including HIV prevention and care planning, housing, homelessness prevention and services, health care equity and finance, and reentry from prison and jail.

The National AIDS Housing Coalition (NAHC)<sup>2</sup> has taken the lead in synthesizing and disseminating research in this area through the Housing and HIV/AIDS Research Summit Series, convened by NAHC in collaboration with Dr. David Holtgrave and the Department of Health, Behavior and Society of the Johns Hopkins Bloomberg School of Public Health.<sup>3</sup> Since 2005, the Summit has provided an innovative forum for the presentation of research findings and discussion of their public policy implications by leading researchers, public policy experts, and providers and consumers of HIV housing and services. Results include a special “Housing and HIV” issue of the journal *AIDS and Behavior* released in November 2007 (Volume 11(6), Supplement 2), and the first *International Summit on Poverty, Homelessness and HIV/AIDS*, convened in Mexico City in conjunction with the XVII International AIDS Conference by an international committee headed by NAHC, the Ontario HIV Treatment Network (OHTN)<sup>4</sup>, and NAHC member organizations Housing Works and the San Francisco AIDS Foundation.

Summit III, held in March 2008, brought together 225 participants for presentations by over 40 experts on the relationship of housing status and HIV prevention and care, including the first release of the preliminary CHHP and H&H findings. Participants examined and discussed this evidence within the context of “framing policy issues” that include stalled HIV prevention efforts, worsening health disparities, escalating health costs, and the national affordable housing crisis, and concluded that the findings presented provide strong support for renewed attention to housing as a core value, as a critical component of health care, and as a structural determinant of health disparities. Participants worked together on advocacy and research strategies to support the provision of housing assistance for low-income persons living with HIV/AIDS:

- As a basic human right;
- As a necessary component of systems to enable individuals to manage their HIV/AIDS care and treatment; and
- As an exciting new tool to end the AIDS crisis in America by reducing the number of new HIV infections.

This paper summarizes new research findings presented at Summit III, reported in the special “Housing & HIV” issue of *AIDS & Behavior*<sup>5</sup>, and set out in articles included in the Summit III Briefing Book<sup>6</sup> – framed in terms of these three mandates, and describes evidence-based advocacy strategies discussed by Summit III participants.

---

<sup>2</sup> The National AIDS Housing Coalition, Inc ([www.nationalaidshousing.org](http://www.nationalaidshousing.org)) is a 501(c)(3) organization formed in 1994 to assert the fundamental right of all persons living with HIV/AIDS to decent, safe, affordable housing and supportive services that are responsive and appropriate to their self-determined needs. NAHC engaged Virginia Shubert of Shubert Botein Policy Associates ([www.shubertbotein.com](http://www.shubertbotein.com)) to help plan the Summit III program and to prepare this policy paper.

<sup>3</sup> Dr. David Holtgrave chairs the Department of Health, Behavior and Society of the Johns Hopkins Bloomberg School of Public Health, which was established in the summer of 2005 with a mission dedicated to research and training that advances scientific understanding of the impact on health of behavior and the societal context.

<sup>4</sup> The OHTN is an independently incorporated, not-for-profit organization funded by the AIDS Bureau, Ontario Ministry of Health and Long-Term Care. The OHTN acts as a collaborative network of people living with HIV/AIDS, health care providers, consumers, researchers, community-based organizations and government, with a mandate to provide leadership and to advance policy relating to the optimal treatment and care of people living with HIV in Ontario.

<sup>5</sup> *AIDS & Behavior*, Volume 11(6), Supplement 2 / November 2007. Guest Editors: Angela A. Aidala, David R. Holtgrave, and Martha R. Burt.

<sup>6</sup> The Summit III Briefing Book, which includes research articles and other materials used at the meeting and cited in this paper, is available at a nominal charge from the National AIDS Housing Coalition, [www.nationalaidshousing.org](http://www.nationalaidshousing.org).

## **THE HOUSING AND HIV/AIDS RESEARCH SUMMIT SERIES**

The Housing and HIV/AIDS Research Summit Series is now established as the premiere venue for informing HIV/AIDS housing policy, and is acknowledged as an innovative and influential opportunity for the broader discussion of housing and health. Summit III brought together participants representing 25 states, the District of Columbia, and three Canadian Provinces.<sup>7</sup> Researchers, policy makers, providers and consumers work together to develop evidence-based public policy goals and strategies. NAHC will convene the fourth Housing and HIV/AIDS Research Summit June 3<sup>rd</sup> through 5<sup>th</sup>, 2009, in Washington, DC. NAHC will continue its collaboration with the Johns Hopkins Bloomberg School of Public Health, and will be joined for the first time by the OHTN as a co-convening organization, to formally expand the scope of the Summit Series to bring together researchers, policy experts, consumers and providers of HIV/AIDS housing from across North America.

Summit proceedings have been widely disseminated through NAHC summit policy papers, its Housing and HIV/AIDS Policy Tool Kit and digital Summit briefing books. Summit proceedings have been featured in the Wall Street Journal and other national publications, have been used by advocates to educate federal, state and local policy-makers, and have been cited in the Senate Appropriation Committee report and on the floor of Congress during debate on federal housing appropriations. Summit materials have been presented at HIV/AIDS and homelessness/housing conferences, and to state and local planning bodies, and have influenced at least one community to fund housing as an HIV prevention measure. For information on the Summit Series and to read Summit materials, visit [www.nationalaidshousing.org](http://www.nationalaidshousing.org).

### **EXAMINING THE EVIDENCE:**

#### ***HIV HOUSING ASSISTANCE AS A BASIC HUMAN RIGHT***

##### **Worsening Housing Need**

The CDC estimates that there are currently 1.2 million people living with HIV/AIDS in the United States, and that over 56,000 persons become newly infected each year. AIDS housing experts estimate that about half of these people – over 500,000 households – will need some form of housing assistance during the course of their illness (NAHC, 2008). At current funding levels, the federal Housing Opportunities for Persons with AIDS (HOPWA) program serves only about 70,000 households per year. Yet, there is not a single county in the United States where a person who relies on the maximum federal Supplemental Security Income (SSI) payment (\$637 in 2008) can afford even a studio apartment (National Low Income Housing Coalition, 2008).

Research consistently shows that housing remains one of the greatest unmet needs of Americans living with HIV. A recent survey of PLWHA receiving care in the four-county Tampa, Florida area revealed that 84% could be considered unstably housed, as indicated by rent burden, need for housing assistance and other factors (Bennett, 2008). An ongoing study of US veterans living with HIV shows that 32% have experienced homelessness, 7% are currently homeless, and that HIV-infected veterans who have experienced homelessness are more likely than those who have not to be hospitalized, adjusting for age, severity of HIV disease, and use of illicit drugs (Valdiserri, 2008; Gordon, et al., 2007). More than half of a group of jail inmates released and

---

<sup>7</sup> Leading researchers and policy experts in the fields of housing and health worked with NAHC and Johns Hopkins to convene Summit III, and others committed their time and resources to the project. In addition to Dr. Holtgrave, co-convening researchers included: Dr. Angela Aidala, Columbia University Mailman School of Public Health; Dr. Dennis Culhane, School of Social Policy and Practice, University of Pennsylvania; Dr. Daniel Kidder, US Centers for Disease Control and Prevention; and Dr. Romina Kee, Collaborative Research Unit, John H. Stroger Hospital Chicago.

re-incarcerated within a 12-month period were homeless in the month preceding re-incarceration, and housing was their most pressing post-release need (Clements-Nolle, et al., 2008). Almost two in five (38.6%) of HIV positive adolescents seen at a NYC clinic over a four and a half year period had a history of unstable housing, with homelessness and unstable housing associated with household member abuse and neglect (Eastwood & Birnbaum, 2008; Eastwood & Birnbaum, 2007).

### **Housing Status as a Structural Determinant of Health Disparities**

As observed by researchers from the CDC in a “call to action” published in the November 2007 special issue of *AIDS and Behavior*, “the available research makes it readily apparent that access to adequate housing profoundly affects the health of Americans who are at-risk for or living with HIV. Sadly, much of the public health community has been slow to recognize this fact and take action to address it.” (Wolitski, et al 2007).

Homelessness and unstable housing are strongly associated with greater HIV risk, inadequate health care, poor health outcomes and early death. Rates of new HIV diagnoses among populations of homeless persons are as much as 16 times the rate in the general population, and death rates due to HIV/AIDS are five to seven times higher among homeless persons (Aidala, 2008). Persons living with HIV who lack stable housing are: more likely to delay HIV care; have poorer access to regular care; are less likely to receive optimal antiretroviral therapy; and are less likely to adhere to therapy (Wolitski, et al., 2007; Aidala, et al., 2007; Kidder, et al., 2007; Leaver, et al., 2007). A large-scale study compared the health of homeless and stably housed PLWHA. Compared to stably housed PLWHA, homeless PLWHA rate their mental, physical and overall health worse, and are more likely to be uninsured, use an emergency room, and be admitted to a hospital (Kidder, et al., 2007). Homeless PLWHA have lower CD4 counts and are less likely to report an undetectable viral load; a lower percentage of homeless PLWHA have ever taken HIV antiretroviral medications, and they are less likely to be on antiretroviral therapy (ART) currently; and among those on ART, self-reported adherence is significantly lower among homeless PLWHA (Kidder, et al., 2007). Significantly, housing status was found to be more significant than individual characteristics as a predictor of health care access and outcomes (Kidder, et al., 2007).

The HIV epidemic in the United States is concentrated among persons marginalized by race, gender, abandonment in youth, criminal justice involvement, mental illness, substance use, violence and abuse, and among these persons at highest risk, housing status is increasingly identified as a determinant of health outcomes. Initial findings from an ongoing study of the health and health services use of homeless and marginally housed women found strong connections between housing instability, HIV risk, and victimization among indigent women (Riley, 2008). In a large cohort (3300) of young injection drug users (IDUs), half reported housing instability in the last year, including 41% who reported literal homelessness; homelessness was associated with childhood abuse and out-of-home placement; and HIV risk was found to vary by housing status, with homeless IDUs at highest risk (Coady, et al., 2007). Lack of stable housing was identified as a significant barrier to highly active antiretroviral therapy (HAART) use among persons recently released from incarceration, with homelessness strongly associated with lack of HAART use among HIV+ persons with a history of HAART use (Clements-Nolle, et al., 2008).

Baseline data from the Housing and Health (H&H) study underscores the overlap of violence, homelessness, and HIV health disparities. The 630 homeless and unstably housed PHWHA included in the study reported rates of physical and sexual victimization (77% of men and 86%

of women) that are three to seven times the rates among the general US population, HIV positive persons generally, and homeless persons (Henny, et al., 2007). Sixty-eight percent of the homeless and unstably housed participants in the H&H Study had a detectible viral load at baseline (24% with a viral load over 50,000), yet 44% either were not receiving any HIV antiretroviral medications (33%), or were on a suboptimal regimen (11%) (Kidder, 2008). Among these homeless/unstably housed HIV+ persons, the experience of HIV-related stigma is common, especially among women; and HIV stigma was found to be independently associated with poorer self-reported physical and mental health (Wolitski, 2008).

## **EXAMINING THE EVIDENCE:**

### ***HIV HOUSING ASSISTANCE AS A NECESSARY COMPONENT OF HIV HEALTH CARE***

#### **Housing Status Predicts Health Care Access and Outcomes**

Recent findings contribute significantly to the body of research showing strong and consistent correlations between housing status and health care access and outcomes among PLWHA. A long-term ongoing study of PLWHA in NYC shows that over a 12-year period, receipt of housing assistance was among the strongest predictors of accessing HIV primary care, maintaining continuous care, receiving care that meets clinical practice standards, and entry into HIV care among those outside or marginal to the health care system. (Aidala, et al., 2007). Receipt of housing assistance had an independent, direct impact on improved medical care, regardless of demographics, drug use, health and mental health status, or receipt of other services (Aidala, et al., 2007). IDU's with stable housing were found to be 1.5 times as likely to access HAART than those who lacked stable housing, and among those on treatment, those with stable housing were almost 3.7 times as likely to achieve viral suppression (Knowlton, 2008). Indeed, results of a systematic review of the literature reveal a significant positive association between increased housing stability and better health-related outcomes in all studies examining housing status with outcomes of medication adherence, utilization of health and social services, and studies examining health status and HIV risk behaviors (Leaver, et al., 2007; Aidala, 2008).

#### **New Evidence for Housing as an Effective and Cost-Saving Health Care Intervention**

Investigators from two major multi-year studies released preliminary findings at Summit III that link housing assistance to improved health outcomes for homeless and unstably housed persons living with HIV and other chronic health conditions, and show that public investment in housing not only improves health outcomes but actually saves taxpayer money. These two studies are the first of their kind, designed specifically to examine the significance of housing as an independent determinant of health.

The Housing and Health (H&H) Study is a large-scale study conducted by the Centers for Disease Control and Prevention (CDC) and the HUD Housing Opportunities for People with AIDS (HOPWA) program, to assess the impact, in terms of disease progression and risks of transmission, of providing housing assistance to persons with HIV who are homeless or at imminent risk of homelessness. The Chicago Housing for Health Partnership (CHHP), a multi-disciplinary collaboration of health care, respite care and housing providers, is a large-scale, comprehensive examination of the impact of supportive housing on the stability and health of homeless persons living with HIV/AIDS and other chronic illnesses, as well as their health services utilization rates.

#### ***“Housing First” CHHP Program Improves Health and Saves Taxpayer Dollars***

The CHHP study followed 407 chronically ill homeless persons over an 18-month period

following discharge from Chicago hospitals. Participants had high rates of long-term substance abuse (86%), mental illness (46%), and medical issues such as HIV/AIDS (34%) and hypertension (33%), as well as a number of other chronic medical illnesses such as diabetes and cancer. During the 18-month research phase, researchers used a randomized control trial design to study the number of hospital, emergency room, and nursing home visits incurred by two groups: individuals who received CHHP supportive housing versus those who received “usual care” – a piecemeal system of emergency shelters, family and recovery programs. The information was used to track health outcomes and assess how much in medical expenses could be saved through stable housing and increasing access to primary care rather than relying on costly hospital visits and nursing home stays (Sadowski, 2008). Final study results and costs analyses have been submitted for publication this fall. Set out below is a summary of preliminary data presented at Summit III.

Despite high rates of mental illness, substance use and other factors thought to an individual’s ability to remain stably housed, preliminary data indicate that 60% of CHHP study participants who were provided housing were stably housed at the end of the 18-month study period, compared to only 15% of the “usual care” participants. The housed group used only half as many nursing home days as their usual care counterparts and were nearly two times less likely to be hospitalized or use an emergency room. These improved health outcomes translated into substantial savings in annual medical expenses for the group of housed clients as compared to the usual care group – savings that far exceeded the annual average of \$12,000 spent per housed client to provide a permanent supportive housing unit in a highly coordinated system of care (Sadowski, 2008; Bendixen, 2008).

The CHHP model differs from traditional emergency shelter or transitional housing approaches in that the primary focus is on helping individuals quickly access and sustain housing, where needed services are provided best. The CHHP demonstration project and the H&H study described below contribute to a growing body of research showing that such “housing first” and “low demand” housing programs: improve quality of life; achieve stability and health outcomes comparable to more traditional abstinence-based housing models; and are far less expensive than the cost of habitual shelter stays and emergency medical services often required by chronically ill homeless people (Wilkins, 2008; Caton, et al., 2007; Culhane, et al., 2007; Martinez & Burt, 2006; Rosenheck, et al., 2003; Culhane, et al., 2002).

### ***CHHP Improves HIV Health Outcomes Among Positive Participants***

Significantly, more than a third of the CHHP participants studied were HIV positive. Like other study subjects, HIV+ participants were randomly assigned to “usual care” or to a permanent housing placement with intensive case management. A sub-study examined the impact of housing on HIV disease progression. After twelve months, 55% of HIV+ participants who received a housing placement were alive and had “intact immunity,” compared to only 34% of HIV+ participants who received only “usual care.” Those who received a housing placement were twice as likely at 12 months to have an undetectable viral load (39%) as those who did not receive housing (19%) (Buchanan, 2008).

### ***H&H Results Demonstrate Connection Between Housing and Health for PLWHA***

The groundbreaking HUD/CDC Housing and Health (H&H) Study is the first effort to investigate the effect of housing on HIV risk behaviors, medical care and treatment adherence. The study was conducted as a randomized controlled trial among 630 HIV positive participants in three cities – Baltimore, Chicago and Los Angeles. Participants were homeless (27%), doubled up (62%), or otherwise at risk of homelessness (11%) at baseline, and all participants

were provided case management, help finding housing, referral to medical care, and two behavioral HIV prevention interventions. Participants were then randomly assigned to two study groups: half received immediate HOPWA rental assistance (the intervention group); while the other half continued to receive the services provided by the participating service providers, including housing from other sources (the customary care group) (Kidder, et al., 2007; Kidder & Wolitski, 2008)

H&H participants were followed for an eighteen-month period (2004 – 2006), to compare data on a range of HIV risk and health care indicators, at baseline and at three follow up assessments, collected through in-depth questionnaires and blood tests. The CDC's analyses of the H&H data are ongoing: some important variables, including substance use, have not yet been examined; anticipated trend analyses will enable the researchers to examine participants' housing experiences over time; and cost-utility analyses will evaluate the cost-effectiveness of housing as an HIV prevention and treatment intervention. Final results will be submitted for publication later this year.

Preliminary H&H results released for the first time at Summit III show significant improvements in housing status among all study participants, leading to significant improvements in health outcomes. Researchers found significant improvements in housing status among participants in both arms of the study. The intervention group showed much stronger gains in securing housing, with 82% reporting a stable housing situation at 18 months, up from just 4% at baseline. However, participants receiving only customary care also substantially improved housing, with 52% reporting stable housing at 18 months, up from 4% at baseline. This "crossover" between the intervention and customary care groups limits the statistical power to detect differences in outcome measures between the "intent to treat" study arms. Significantly, however, as housing status improved for the group as a whole, so did health outcomes. Analyses show substantial improvements in health outcomes over time in both groups, including: a 34% reduction in emergency room visits; a 21% reduction in hospitalizations; a 44% reduction in self-reported opportunistic infections; a 40% reduction in sex trade; and significantly improved mental health status (Kidder & Wolitski, 2008).

Additional "as treated" analyses are currently being conducted to better understand the association between obtaining housing and health outcomes among H&H participants. For example, preliminary analyses presented at Summit III examine differences between study participants who reported an experience of homelessness at a follow up interview and those who did not, controlling for socio-demographic variables, substance use, and physical and mental health status. Results show significant differences in outcomes between participants experiencing homelessness and housed persons in: emergency room visits (homeless significantly more likely to use an ER); HAART use (housed persons more likely to be receiving HAART than homeless); HAART adherence (homeless more likely to report one or more missed doses); viral load (homeless significantly more likely to have a detectable viral load at 18 months); and mental health (homeless reporting significantly higher levels of perceived stress; housed reporting significantly better overall mental health) (Kidder & Wolitski, 2008).

## EXAMINING THE EVIDENCE:

### *HOUSING ASSISTANCE AS A TOOL TO END THE AIDS CRISIS BY PREVENTING NEW INFECTIONS*

#### **Housing Status Predicts HIV Risk**

A rapidly evolving body of research leaves no doubt that homelessness and housing instability are one cause of the continuing AIDS crisis in America. HIV prevention efforts in the United States are stalled, with the number of new infections in recent years remaining steady or even increasing (Holtgrave & Curran, 2006). Recent estimates by the CDC put the number of new infections at over 56,000 each year (Hall, et al., 2008). Findings reported at the Housing Research Summits and in the November 2007 special issue of *AIDS & Behavior* show that homelessness and unstable housing are associated with increased rates of HIV sex and drug risk behaviors; that unstable housing increases HIV risk behaviors even among those at highest HIV risk; and that the association between lack of stable housing and greater HIV risk behaviors remains even among persons who have received risk reduction services (Aidala, et al., 2005; Wenzel et al., 2007; German, et al., 2007; Kipke et al., 2007; Salazar et al., 2007; Des Jarlais, et al., 2007; Elifson, et al., 2007).

Controlling for age and income, homeless men as compared to stably housed men in the urban South of the United States were 2.6 times more likely to report sharing needles, 2.4 times more likely to have 4 or more sex partners and 2.4 times more likely to have had sex with other men (Salazar, et al., 2007). In a recent study of 833 low income women in Los Angeles, homeless African American and Hispanic women were two to five times more likely than their housed counterparts to report multiple sex partners in the last six months, in part due to recent victimization by physical violence (Wenzel, et al., 2007). Young men who have sex with men in (YMSM) who experience residential instability, who have been forced to leave their home because of their sexuality, and/or who are precariously housed, are at significantly greater risk for drug use and involvement in HIV risk-related behaviors (Kipke, et al., 2007). Homeless youth are four to five times more likely to engage in high-risk drug use than youth in housing with some adult supervision and over twice as likely to engage in high-risk sex (Lee, 2008).

Another set of important findings is that HIV risk reduction interventions shown to be effective in general populations are less effective among persons homeless/ unstably housed than among housed counterparts – including counseling based, needle exchange, and other behavioral interventions. Unstably housed needle exchange participants are twice as likely to report high-risk receptive needle sharing than are stably housed participants (Des Jarlais, et al., 2007). Female drug users with unstable housing conditions report higher levels of HIV drug and sex-related HIV risk behavior than their housed counterparts, and their levels of behavioral change over time are lower (Elifson, et al., 2007).

HIV health care disparities are also a factor. As observed by researchers from the CDC, “[t]he higher levels of HIV observed in the blood of unstably housed persons living with HIV compared to those who are stably housed has ominous implications for the health of unstably housed people living with HIV and increases their biological potential to transmit HIV to others” (Wolitski, et al., 2007).

#### **Housing is HIV Prevention**

Significantly, persons with stable housing are less likely to engage in risky behaviors, and more likely to reduce risk behaviors, than their counterparts who are homeless/unstably housed. (Aidala & Sumartojo, 2007; Des Jarlais, et al., 2007; German, et al., 2007; Elifson, et al., 2007; Kipke, et al., 2007; Salazar, et al., 2007; and Wenzel, et al., 2007). A large, multi-state study

conducted by Columbia University found that that homeless/unstably housed persons whose housing status improved over time reduced risk behaviors by half. (Aidala, et al., 2005). Women who received federal housing assistance were found to be half as likely to engage in sexual risk behaviors as similar low-income women who were homeless. (Wenzel, et al., 2007).

These findings indicate that progress in halting the continued transmission of HIV will require greater efforts to provide stable housing. As Aidala and Sumarjoto observe, addressing awareness of risk, motivation and intention goes only so far when persons are faced with the myriad challenges associated with the lack of stable, secure housing. Housing status is thus a significant structural or “environmental” risk factor that itself affects the ability of individuals to avoid risky situations or effectively use risk reduction resources (Aidala & Sumarjoto, 2007).

#### **EXAMINING THE EVIDENCE:**

##### ***INTERNATIONAL RESEARCH ON HOUSING AND HIV***

Summit III included for the first time international research on the relationship of housing and HIV/AIDS. Positive Spaces Healthy Places (PSHP) is the first longitudinal community-based study of the impact of housing on the health of people living with HIV in Canada. Six-month results presented at Summit III showed that HIV positive participants with unmet housing needs or whose housing was at risk had significantly lower ratings of overall health, and were twice as likely to report a worsening in their health during the initial six months of the study (Tucker, R. & Koornstra, J., 2008). Ongoing research in Johannesburg, South Africa, indicates that housing policy (or lack of policy) has a potentially significant impact on HIV disease progression and the prevention and treatment of opportunistic infections (Tomlinson, 2008). A study from India showed that sex workers "housed" in brothels were able to form support networks that led to widespread condom use versus so-called "flying" or un-housed sex workers (Ghose, 2008).

Summit IV will for the first time include a specific track on international research to inform development of culturally appropriate housing resources as a key element of global, national and local HIV prevention and care strategies.

#### **EVIDENCE-BASED ADVOCACY**

The explosive growth in the literature on HIV and housing and health outcomes has created an exciting opportunity for data driven policy change. (See Shubert & Bernstine, 2007). The Summit meetings provide a critical opportunity to work collectively, and with new allies, to increase understanding in government of the role of housing in the prevention and treatment of illness, and to tie housing to other national priorities, including: health care access; addressing health disparities; successful re-entry from prison and jail; and the critical need for affordable housing for disabled persons and others on fixed incomes.

Evolving research findings on the relationship of housing status and HIV prevention and health care have been used to “credential” the experiences of homeless and unstably housed PLWHA. Published research findings and briefings by academic researchers have enabled advocates to elevate HIV housing need as an issue among public officials and in the media. Community briefings on research and cost analyses have provided effective education and organizing opportunities (Oyola-Santiago, T. & Goodwin, K., 2008). The rapidly expanding literature on the costs of homelessness and cost offsets realized through housing interventions have been used effectively to leverage political will and public resources; and the likely cost savings associated

with prevented infections provides a particularly persuasive public policy argument for expanding the availability and affordability of HIV housing supports. Evidence-based methodologies are being used locally to develop models and projections to demonstrate the potential cost-effectiveness of housing as an HIV prevention and health care intervention. In NYC, a threshold analysis developed for HIV housing campaigns based on local epidemiological data and housing and service costs shows that expanded housing supports would likely be both cost-saving and cost-effective (Shubert, 2008). Research on the potential cost savings of housing support for people living with HIV was used to make a successful case for 100 new units of subsidized AIDS housing in Chicago (Munar, 2008).

This area of research is increasingly focused on articulating and testing solutions – what works, for whom, and at what cost. Equally important is the effort to link housing to health in the public discourse, working across disciplines and policy areas, to find the common ground necessary to advance these solutions.

To move policy forward we must provide key decision makers across systems of care the data they need to understand that housing assistance supports HIV prevention interventions and systems of care, that homelessness is both a cause and an effect of the continued spread of the HIV epidemic, and that HIV treatments will not be effective if housing is not included in their delivery. We have to learn to make the case that an appropriate and workable health care solution might not be a medical approach but rather a housing intervention.

## CONCLUSION

"The results of the CHHP and CDC studies as well as the numerous other studies presented at the Summit are inspiring," observed Summit III co-convenor David Holtgrave, PhD, chair of the Department of Health, Behavior and Society at the Johns Hopkins Bloomberg School. "Not only do these studies show that there is a really good scientific basis to the argument that housing is health care, they show that we can save lives and save money at the same time by providing people with housing."

In the words of researchers from the CDC, "[p]ublic health agencies have an important role to play in ensuring that vulnerable populations have access to the basic essentials of healthy living including access to good nutrition, clean air and water, and adequate housing. Ensuring equitable access to these essential building blocks of good health will require leadership and sustained effort from public health agencies, housing providers, homeless and unstably housed persons, and their advocates.... Clearly, the time to act is now." (Wolitski, et al., 2007).

NAHC and its member organizations call on international, national, state and local policy makers to join with us to promote an evidence-based, public health approach to the housing needs of PLWHA and those at heightened risk of HIV infection.<sup>8</sup>

---

<sup>8</sup> Go to <http://nationalaidshousing.org/2008/07/endorseconference/> to endorse the *International Declaration on Poverty, Homelessness and HIV/AIDS* developed by a global coalition at the July 2008 International AIDS Conference in Mexico City.

## References

(Key articles and reports are included in the *National Housing and HIV/AIDS Research Summit III Briefing Book CD*, available at nominal cost from the National AIDS Housing Coalition)

- Aidala, A.A. (2008). *Housing and HIV prevention and care: Recently published findings on the relationship of housing status and HIV risk and health outcomes*. Angela Aidala, Mailman School of Public Health, Columbia University. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Aidala, A.A., Lee, G., Abramson, D.M., Messeri, P., & Siegler, A. (2007). Housing need, housing assistance, and connection to medical care, *AIDS & Behavior*, 11(6)/Supp 2: S101-S115.
- Aidala, A.A., Cross, J.E., Stall, R., Harre, D., & Sumartojo, E. (2005). Housing status and HIV risk behaviors: Implications for prevention and policy. *AIDS and Behavior*, 9(3): 251-265.
- Bendixen, A. (2008). *Chicago Housing for Health Partnership: Preliminary Cost Estimates*. Arturo Bendixen, AIDS Foundation of Chicago. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Bennett, R. (2008). *Are they really stable? Findings from a four-county community housing survey of low-income persons living with HIV/AIDS*. Russell Bennett, Collaborative Solutions, Inc. Presentation at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Buchanan, D. (2008). Chicago Housing for Health Partnership: HIV sub-study. David Buchanan, John Stroger Hospital/Rush Medical College. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Caton, C.M.P., Wilkins, C., Anderson, J. (2007). *People who experience long-term homelessness: Characteristics and interventions*. 2007 National Symposium on Homelessness Research. <http://aspe.hhs.gov/hsp/homelessness/symposium07/caton/index.htm>
- Clements-Nolle, K., Marx, R., Pendo, M., Loughran, E., Estes, M., & Katz, M. (2008). Highly active antiretroviral therapy use and HIV transmission risk behaviors among individuals who are HIV infected and were recently released from jail. *American Journal of Public Health*, 98(4): 661-666.
- Coady, M.H., Latka, M.H., Thiede, H., Golub, E.T., Ouellet, L., Hudson, S.M., Kapadia, F., & Garfein, R.S. (2007). Housing status and associated differences in HIV risk behaviors among young injection drug users (IDUs). *AIDS and Behavior*, 11(6): 854-863.
- Culhane, D.P. (2008). *Emerging research on the costs of homelessness*. Dennis P. Culhane, University of Pennsylvania. Paper presented at the Third National Housing and HIV/AIDS Research Summit, March 2008, Baltimore, Maryland.
- Culhane, D.P., Walker, W.D., Poppe, B., Gross, K.S., & Sykes, E. (2007). *Accountability, cost-effectiveness, and program performance: Progress since 1998*. 2007 National Symposium on Homelessness Research. <http://aspe.hhs.gov/hsp/homelessness/symposium07/culhane/index.htm>

- Culhane, D.P., Metraux, S., & Hadley, T.R. (2002). Public service reductions associated with the placement of homeless people with severe mental illness in supportive housing. *Housing Policy Debate*, 13(1): 107-163.
- Des Jarlais, D.C., Braine, N., & Friedmann, P. (2007). Unstable housing as a factor for increased injection risk behavior at US syringe exchange programs. *AIDS and Behavior*, 11(6)/Supp 2: S78-S84.
- Eastwood, E.A., & Birnbaum, J. (2008). *Factors associated with unstable housing among adolescents with HIV: Addressing the need for safe space*. Poster presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Eastwood, E.A., & Birnbaum, J.M. (2007). Physical and sexual abuse and unstable housing among adolescents with HIV. *AIDS and Behavior*, 11(6)/Supp 2: S116-S127.
- Elifson, K.W., Sterk, C.E., & Theall, K.P. (2007). Safe living: The impact of unstable housing conditions on HIV risk reduction among female drug users. *AIDS and Behavior*, 11(6)/ Supp 2: S45-S55.
- German, D., Davey, M.A., & Latkin, C.A. (2007). Residential Transience and HIV Risk Behaviors Among Injection Drug Users. *AIDS and Behavior*, 11(6)/ Supp 2: SXX-SXX.
- Ghose, T. (2008). *"I kick them out if they don't use a condom": How housing influences HIV risk among sex workers in Sonagachi, India*. Toorjo Ghose, University of Pennsylvania School of Social Policy & Practice. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Gordon, A.J., McGinnis, K.A., Conigliaro, J., Rodriguez-Barradas, M.C., Rabenack, L., & Justice, A.C., VACS-3 Project Team. (2007). Associations between alcohol use and homelessness with healthcare utilization among human immunodeficiency virus-infected veterans. *Medical Care*, 44(8)/ Supp 2: S37-43.
- Hall, H.I., Song, R., Rhodes, P., Prejean, J., An, Q., Lee, L.M., Karon, J., Brookmeyer, R., Kaplan, E.H., McKenna, M.T., & Janssen, R.S., for the HIV Incidence Surveillance Group (2008). Estimation of HIV Incidence in the United States. *Journal of the American Medical Association*, 300(5): 520-536.
- Henny, K.D., Kidder, D.P., Stall, R., & Wolitski, R.J. (2007). Physical and sexual abuse among homeless and unstably housed adults living with HIV: Prevalence and associated risks. *AIDS and Behavior*, 11(6): 842-853.
- Holtgrave, D.R. (2008). *Housing and Health Study Cost Analyses*. David Holtgrave, Johns Hopkins Bloomberg School of Public Health. Presentation at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Holtgrave, D.R., Briddell, K., Little, E., Bendixen, A., Hooper, M., Kidder, D.P., Wolitski, R.J., Harre, D., Royal, S., & Aidala, A. (2007). Cost and threshold analysis of housing as an HIV prevention intervention. *AIDS and Behavior*, 11(6)/Supp 2: S162-S166.

- Holtgrave, D.R., & Curran, J.W. (2006). What works, and what remains to be done, in HIV prevention in the United States. *Annual Review of Public Health*, 27: 261-275.
- Kerker, B., Bainbridge, J., Li, W., Kennedy, J., Bennani, Y., Agerton, T., Marder, D., Torian, L., Tsoi, B., Appel, K., & Gutkovich, A. (2005). *The health of homeless adults in New York City: A report from the New York City Departments of Health and Mental Hygiene and Homeless Services*. (<http://www.nyc.gov/html/doh/downloads/pdf/epi/epi-homeless-200512.pdf>)
- Kidder, D.P. (2008). *Factors associated with clinically unacceptable HIV health status in homeless or unstably housed adults living with HIV*. Daniel P. Kidder, United States Centers for Disease Control and Prevention, Divisions of HIV/AIDS Prevention. Paper presented at the Third National Housing & HIV/AIDS Research Summit, Baltimore, Maryland.
- Kidder, D.P., & Wolitski, R.J. (2008). *The Housing and Health Study: Background, methods & preliminary findings*. Presentation at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Kidder, D.P., Wolitski, R.J., Royal, S., Aidala, A.A., Courtenay-Quirk, C., Holtgrave, D.R., Harre, D., Sumartojo, E., & Stall, R., for the Housing and Health Study Team (2007). Access to housing as a structural intervention for homeless and unstably housed people living with HIV: Rationale, methods, and implementation of the Housing and Health Study. *AIDS & Behavior*, 11(6)/Supp 2: S149-S161.
- Kidder, D.P., Wolitski, R.J., Campsmith, M.L., & Nakamura, G.V. (2007). Health status, health care use, medication use, and medication adherence in homeless and housed people living with HIV/AIDS. *American Journal of Public Health*, 97(12): 2238-2245.
- Kipke, M.D., Weiss, G., & Wong, C.F. (2007). Residential status as a risk factor for drug use and HIV risk among young men who have sex with men. *AIDS and Behavior*, 11(6)/Supp 2: S56-S69.
- Knowlton, A. (2008). *Stable housing as a persistent barrier to HIV seropositive injection drug users' uptake and effective use of antiretroviral therapy*. Amy Knowlton, Department of Health, Behavior & Society, Johns Hopkins Bloomberg School of Public Health. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.
- Knowlton, A., Arnsten, J., Eldred, L., Wilkinson, J., Gourevitch, M., Shade, S., Dowling, K., Purcell, D., & the INSPIRE Team (2006). Individual, interpersonal, and structural correlates of effective HAART use among urban active injection drug users. *Journal of Acquired Immunodeficiency Diseases*, 41(4): 486-492.
- Leaver, C.A., Bargh, G., Dunn, J.R., & Hwang, S.W. (2007). The effects of housing status on health-related outcomes in people living with HIV: A systematic review of the literature. *AIDS & Behavior*, 11(6)/Supp 2: S85-S100.
- Lee, J. (2008). *Housing status and HIV risk behaviors: Implications for prevention services for homeless youth*. JoAnn Lee, Larkin Street Youth Services, San Francisco. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

Martinez, T.E., & Burt, M.R. (2006). Impact of permanent supportive housing on the use of acute care health services by homeless adults. *Psychiatric Services*, 57(7): 992-999.

Munar, D. (2008). *The Chicago Rental Assistance Program Advocacy Campaign*. David Munar, AIDS Foundation of Chicago. Presentation at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

National AIDS Housing Coalition (NAHC) (2008). *Housing Opportunities for People with AIDS: 2009 Need*. Washington, DC: National AIDS Housing Coalition ([www.nationalaidshousing.org](http://www.nationalaidshousing.org)).

National Low Income Housing Coalition (NLIHC) (2008). *Out of Reach 2007-2008*. Washington, DC: National Low Income Housing Coalition ([www.nlihc.org](http://www.nlihc.org)).

Oyola-Santiago, T. & Goodwin, K. (2008). *The New York HASA for All and 30% Rent Cap campaigns*. Tamara Oyola-Santiago, Housing Works, and Kristin Goodwin, Gay Men's Health Crisis. Presentation at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

Riley, E.D. (2008). *Understanding housing instability, gender and HIV among indigent adults: A mixed methods approach*. Elise D. Riley, Department of Medicine, Epidemiology and Prevention Center, School of Medicine, University of California, San Francisco. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

Riley, E.D., Gandhi, M., Hare, C., Cohen, J., & Hwang, S.W. (2007). Poverty, unstable housing, and HIV infection among women living in the United States. *Current HIV/AIDS Reports*, 4(4): 181-186.

Rosenheck, R., Kaspro, W., Frisman, L., & Liu-Mares, W. (2003). Cost effectiveness of supported housing for homeless persons with mental illness. *Archives of General Psychiatry*, 60: 940-951.

Sadowski, L. (2008). *Chicago Housing for Health Partnership: Background, methods & preliminary findings*. Laura Sadowski, John Stroger Hospital/Rush Medical College. Presentation at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

Salazar, L.F., Crosby, R.A., Holtgrave, D.R., Head, S., Haddock, B., Todd, J., & Shouse, R.L. (2007). Homelessness and HIV-associated risk behavior among African American men who inject drugs and reside in the urban south of the United States. *AIDS and Behavior*, 11(6)/Supp 2: S70-S77.

Shubert, V. (2008). *Developing local cost-saving & cost-effectiveness thresholds to support housing policy*. Virginia Shubert, Shubert Botein Policy Associates. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

Shubert, V. & Bernstine, N. (2007). Moving from fact to policy: Housing is HIV prevention and health care. *AIDS & Behavior*, 11(6)/Supp 2: S172-S181.

Tomlinson, R. (2008). *Housing and the prevention of HIV/AIDS-associated opportunistic infections: a Johannesburg case study*. Richard Tomlinson, Columbia University. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

Tucker, R. & Koornstra, J. (2008). *Positive Spaces, Healthy Places: Methods; baseline findings; health outcomes at 6 months*. Ruthann Tucker, Ontario HIV Treatment Network, and Jay Koornstra, Bruce House, Ottawa. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland

Tsemberis, S., Gulcur, L., & Nakae, M. (2004). Housing First, consumer choice, and harm reduction for homeless individuals with a dual diagnosis. *American Journal of Public Health*, 94:651-656.

Valdiserri, R.O. (2008). *Providing care to America's veterans living with HIV*. Ronald O. Valdiserri, United States Department of Veterans Affairs, Veterans Health Administration. Presentation at the Third National Housing and HIV/AIDS Research Summit Baltimore, Maryland.

Wall Street Journal (2008). *Homeless study looks at 'Housing First': Shifting policies to get chronically ill in homes may save lives, money*. Wall Street Journal, March 6, 2008, p. A10.

Wenzel, S.L., Tucker, J.S., Elliot, M.N., & Hambarsoomians, K. (2007). Sexual risk among impoverished women: Understanding the role of housing status. *AIDS & Behavior*, 11(6)/Supp 2: S9-S20.

Wilkins, C. (2008). *Emerging evidence about chronic homelessness: Characteristics and promising interventions*. Carol Wilkins, Corporation for Supportive Housing. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

Wolitski, R.J. (2008). *Stigma is associated with poor mental and physical health among homeless/unstably housed persons living with HIV*. Richard J. Wolitski, United States Centers for Disease Control and Prevention, Division of HIV/AIDS Prevention, National Center for HIV, STD, and TB Prevention. Paper presented at the Third National Housing and HIV/AIDS Research Summit, Baltimore, Maryland.

Wolitski, R.J., Kidder, D.P., & Fenton, K.A. (2007). HIV, homelessness, and public health: Critical issues and a call for increased action. *AIDS & Behavior*, 11(6)/Supp 2: S167-S171.