



Housing is HIV Prevention and Health Care

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# Cost Effectiveness of Housing As HIV Prevention and Care

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# Housing is HIV Prevention and Health Care

## Housing Interventions Work

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### Investments in housing improve outcomes & reduce public costs

- Investments in supportive housing found to reduce emergency and inpatient health services, criminal justice involvement, and use of other crisis services
- Seattle DESC 1811 Eastlake project for homeless people with chronic alcohol addiction
  - 41% reduction medical expenses
  - 87% reduction sobering center use
  - 45% reduction county jail bookings
  - Median **monthly** per person costs reduced from \$4066 to \$1492 (6 months in housing) and \$958 (12 months in housing)
- NYC FUSE Initiative for frequent users jail & shelter
  - Reduced jail days 52% for housed participants
  - Jail days increased for comparison group





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## Housing Interventions Work

### Evaluating the cost-effectiveness of HIV housing

- Savings in other publicly funded services have been found to offset or exceed the cost of housing interventions
- These cost-offset analyses support the provision of housing even before taking into account the costs of heightened HIV risk and treatment failure among homeless PLWHA
- Each prevented HIV infection saves over \$300,000 in life-time medical costs
- Housing instability limits the ability of individual PLWHA to access and benefit from life-saving antiretroviral therapies



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## Housing Interventions Work

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### New evidence that housing assistance works to improve HIV outcomes and save health care dollars

- Two large-scale, random controlled intervention studies examine the impact of housing on health care utilization & outcomes among homeless/unstably housed persons with HIV & other chronic medical conditions
  - The ***Chicago Housing for Health Partnership (CHHP)*** followed 407 chronically ill homeless persons over 18 months following discharge from hospitals, including an HIV sub-study among 34% of participants who are HIV+
  - The ***Housing and Health (H&H) Study*** examined the impact of housing on HIV risk behaviors, medical care and treatment adherence among 630 HIV+ persons who were homeless or unstably housed at baseline





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### CHHP background & methods

- “Housing first” program providing supportive housing for homeless persons with medical issues such as HIV/AIDS (34%), hypertension (33%), diabetes, cancer and other chronic illnesses
- 18 month random controlled trial (RCT) studied the number of hospital, emergency room & nursing home visits of participants in 2 groups:
  - Half who received CHHP supportive housing
  - Half who continued to rely on “usual care” - a piecemeal system of emergency shelters, family & recovery programs
- Information used to track health outcomes & assess health care costs
- Final results published in JAMA (Sadowski) and APHA (Buchanan)





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### CHHP shows housing saves lives and money

- Housed participants:
  - Were 3 times more likely to be stably housed at 18 months (66% vs. 21%), with significantly fewer housing changes (2 vs. 3)
  - Had 29% fewer hospitalizations, 29% fewer hospital days, and 24% fewer emergency department visits than their “usual care” counterparts
  - Reduced nursing home days by 50%
- For every 100 persons housed, this translates annually into 49 fewer hospitalizations, 270 fewer hospital days, and 116 fewer emergency department visits
- CHHP cost analyses to be published this fall expected to show that reductions in avoidable health care utilization translated into annual savings of at least \$900,000 for the 200 housed participants, after taking into account the cost of the supportive housing





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### Housing improved health among HIV+ CHHP participants

- A CHHP sub-study examined the impact of housing on disease progression among the 25% (105) of CHHP participants who were HIV+
- Like other study subjects, HIV+ participants were randomly assigned to permanent supportive housing or “usual care”
- At 12 months, housed HIV+ CHHP had significantly better health status:
  - 55% of housed were alive with “intact immunity”, compared to only 34% of HIV+ participants left to “usual care”
  - Housed HIV+ participants were twice as likely to have undetectable viral load (40%) as compared to who did not receive housing (21%)





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### Housing & Health Study: background & methods

- Conducted by the CDC and the HUD HOPWA program - in Baltimore, Chicago & Los Angeles
- 630 HIV+ participants were homeless (27%), doubled up (62%) other otherwise at risk of homelessness (11%) at baseline
- All received case management, help finding housing, referral to medical care and behavioral prevention interventions
- Half were randomly selected to receive an immediate HOPWA voucher
- Data on HIV risk and health indicators collected at baseline & at 3 follow up assessments over an 18-month period
- Final results presented at Summit IV & in press







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### **H&H vouchers = stability & improved health**

- At 18 months, only 15% of voucher recipients remained unstably housed, compared to 44% of control group members
- Compared to housed participants, and controlling for demographics & health status, those who experienced homelessness during follow up:
  - Were 2.5 times as likely to use an ER
  - Were 2.8 as likely to have a detectable viral load at 18 months
  - Reported significantly higher levels (1.4 times higher) of perceived stress
  - Were significantly more likely (1.5 times) to report unprotected sex with a negative/unknown status partner





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## Housing Interventions Work

### Comparative cost effectiveness of housing

- Using these differences in outcomes related to housing status – reductions in detectable viral load and unprotected sex; reduced ER visits; and improved mental health - H&H researchers were able to calculate the “cost-utility” or “cost per quality adjusted life year (QALY) saved” of housing as an HIV risk reduction & treatment intervention
- “Cost per quality-adjusted life year (QALY) saved” is the measure used by health economists to compare the “value for money” of health care interventions
- Such “comparative cost effectiveness” analyses are central to health reform - to ensure that health care dollars are being spent wisely, on treatments that work
- Preliminary findings released at the 2009 National HIV Prevention Conference show that *housing is a cost effective health care intervention* for PLWHA, with a cost per QALY (\$16,000) *lower* than such widely accepted health care interventions as renal dialysis (\$50,000 per QALY) and screening mammography (\$30,000 per QALY).



# Cost Effectiveness of Selected Medical Interventions

Strategy	Cost per Life-year Saved (U.S.\$)	
Enalapril for congestive heart failure	9,700	I ← Targeted HIV Prevention
Lovastatin to prevent coronary disease	21,000	
Screening mammography <sup>b</sup>	30,000	← New HIV Treatments
Faecal occult blood with sigmoidoscopy <sup>c</sup>	43,000	
Renal haemodialysis	50,000	
Warfarin for nonvascular atrial fibrillation <sup>d</sup>	110,000	
Prostate specific antigen screening <sup>e</sup>	113,000	

a Converted to 1994 values using the US Consumer Price Index.

b In women aged 40 to 79 years.

c In patients aged  $\geq 65$  years.

d In patients aged  $\geq 75$  years.

e In 50-year-old men.

Adapted from: Moore et al, *Pharmaco Economics*, 1996

# Housing is HIV Prevention and Health Care

## Transforming Research into Policy Initiatives

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### Summary of key findings on Housing & HIV

- Homelessness and unstable housing are linked to greater HIV risk, inadequate care, poor health outcomes & early death
- Studies also show strong & consistent correlations between improved housing status and...
  - Reduction in HIV/AIDS risk behaviors
  - Access to medical care
  - Improved health outcomes
  - Savings in taxpayer dollars
- The Housing & Health (H&H) study and Chicago Housing for Health Partnership (CHHP) demonstrate that housing is an effective and cost saving health care intervention for homeless/unstably housed persons with HIV & other chronic conditions



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## Transforming Research into Policy Initiatives

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### **Yet housing remains the greatest unmet service need of PLWHA**

- 1.2 million PLWHA in the United States—half (600,000) will need housing assistance at some point
- The Federal Housing Opportunities for Persons with AIDS (HOPWA) program serves only 70,500 households/year nationwide
- There is not a single county in the US where a person on SSI (\$637 in 2008) can afford even a studio apartment
- An ongoing study of US veterans living with HIV shows that 48% have experienced homelessness, and 11% are currently homeless



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## Select references - recent articles

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