Sociodemographic, clinical, and housing factors associated with a lack of viral suppression among HIV-positive clients of a federally funded housing program, New York City, 2014

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The following personal financial relationships with commercial interests relevant to this presentation existed during the past 12 months:

• No relationships to disclose
BACKGROUND
HIV and Unstable Housing

• Compared to those who are stably housed, people who are unstably housed are more likely to:
  – Be diagnosed with HIV
  – Delay entry into HIV care
  – Die of an HIV-related illness

Treatment (and Housing) as Prevention

Published in final edited for

Moving from Fact to Policy: Housing is HIV Prevention and Health Care

HIV treatment as

Myron S. Cohen, Marybeth McCauley, and Theresa R. Gamble
HIV and Homelessness in NYC

- Approximately 87,000 individuals living with HIV in New York City in 2014

- In FY 2015, over 109,000 individuals accessed the city shelter system

Housing Opportunities for Persons with HIV/AIDS (HOPWA)

- **Rental Assistance**
  - Rent subsidies to help establish and/or maintain affordable permanent housing

- **Housing Placement Assistance (HPA)**
  - Assistance to locate, acquire, finance, and maintain affordable permanent housing

- **Supportive Housing**
  - Affordable permanent housing and comprehensive support services

Support services promote health & housing stability, emphasizing engagement in HIV primary care

- Case management
- Escorts to clinical/social services visits
- Mental health counseling
- Substance abuse counseling
Effect of HIV Housing Services on Engagement in Care and Treatment, New York City, 2011

Arpi S. Terzian · Mary K. Irvine · Laura M. Hollod · Sungwoo Lim · John Rojas · Colin W. Shepard

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Abstract The federal Housing Opportunities for Persons with AIDS (HOPWA) program addresses housing needs of low-income persons living with HIV/AIDS (PLWHA). The New York City (NYC) Department of Health and Mental Hygiene oversees 22 HOPWA contracts for over 2,400 beds, including 704 beds for HIV/AIDS. The NYC Department of Health and Mental Hygiene oversees 22 HOPWA contracts for over 2,400 beds, including 704 beds for HIV/AIDS. In fiscal year 2012, $332 million dollars was awarded for HOPWA.

Introduction Public funds are spent each year to address the needs of homeless and unstably housed persons living with HIV/AIDS (PLWHA). In fiscal year 2012, $332 million dollars was awarded for HOPWA.
Research Question

• What are the sociodemographic and clinical factors associated with a lack of viral load suppression among in-care NYC HOPWA consumers?
Data Sources

• eCOMPAS is a web-based platform that houses NYC HOPWA data, entered by housing providers
• Psychosocial assessments carried out every 90 days
Data Sources

• New York City DOHMH HIV Surveillance Registry
  – Legally mandated
  – Electronically reported

• HOPWA NYC consumers are routinely matched from eCOMPAS to the surveillance registry
Eligibility Criteria

- Engaged in HIV primary care in 2014
- Enrolled and received $\geq$1 service from a NYC HOPWA housing services provider in 2014
- Matched to HIV surveillance registry
Statistical Analysis

• Outcome variable
  – Lack of viral load suppression (VL >200 copies/mL at last HIV viral load test in 2014)
Statistical Analysis

• Predictor variables
  • Age
  • Gender
  • Race/ethnicity
  • HIV risk factor
  • Housing status
  • Employment
  • Neighborhood poverty
  • Mental health history
  • Substance use
  • Treatment for substance use issues
Statistical Analysis

- $\chi^2$ test used for bivariate association between individual predictor variables and lack of viral load suppression
- Multivariable logistic regression to examine the association between predictor variables and lack of viral load suppression while controlling for other factors
RESULTS
Study Population

• N = 1,665
• The study population is primarily:
  – Older than 45 (57%)
  – Male (60%)
  – Black and Hispanic (92%)
  – Unemployed (57%)
  – High/very high neighborhood poverty (79%)
  – History of mental health diagnosis or hospitalization (52%)
  – No current substance use (57%)
Overall Viral Suppression in 2014

- Suppressed: 79%
- Unsuppressed: 21%
Younger age was associated with a lack of viral load suppression.
100% There was no association between gender and viral load suppression

Gender

There was no association between gender and viral load suppression

<table>
<thead>
<tr>
<th>Gender</th>
<th>Suppressed</th>
<th>Unsuppressed</th>
<th>Overall suppression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male (N=991)</td>
<td>90%</td>
<td>10%</td>
<td>80%</td>
</tr>
<tr>
<td>Female (N=638)</td>
<td>90%</td>
<td>10%</td>
<td>80%</td>
</tr>
<tr>
<td>Transgender (N=36)</td>
<td>80%</td>
<td>20%</td>
<td>80%</td>
</tr>
</tbody>
</table>
Black PLWH were the racial/ethnic group most likely to be unsuppressed.
Injection drug use history was associated with a lack of viral load suppression.
PLWH receiving HPA services who were not yet placed in stable housing (living in SROs or shelters) were the most likely group to be unsuppressed.
Lack of employment was associated with a lack of viral suppression.
Neighborhood Poverty

There was no statistically significant association between neighborhood poverty and lack of viral suppression.
Mental Health History

Psychiatric hospitalization was associated with a lack of viral suppression

- None (N=794)
- Diagnosed/ no hospitalization (N=631)
- Psychiatric hospitalization (N=240)

Suppressed

Unsuppressed

Overall suppression
Current substance use was associated with a lack of viral suppression.
Current Substance Use Treatment

Current substance use treatment was not significantly associated with a lack of viral suppression.
Multivariable Results

Lack of viral suppression in 2014: adjusted odds ratios and 95% confidence intervals

*Variables adjusted for all other predictor variables
Lack of viral suppression in 2014: adjusted odds ratios and 95% confidence intervals

- HIV risk factor:
  - MSM (ref)
  - Heterosexual
  - IDU
  - Other

- Housing status:
  - Rental assistance (ref)
  - Supportive housing
  - HPA, stably housed
  - HPA, SRO/shelter
  - No (ref)
  - Yes

*Variables adjusted for all other predictor variables
DISCUSSION
Conclusions

• Factors independently associated with a lack of viral load suppression among NYC HOPWA consumers were:
  – Younger age
  – Black race
  – Intravenous drug use history
  – Active substance use
  – Living in a SRO or shelter

• HIV housing programmatic data can be combined with surveillance data to identify factors related to a lack of viral suppression, improving treatment as prevention efforts
Limitations

- Reliance on self-report for key predictor variables (e.g. current substance use)
- Cross-sectional
Strengths

• Mandated reporting of HIV-related lab tests
  – No reliance on self-report for primary outcome

• Routine program assessments used as a rich source of data
Next Steps

- *Getting to 90 initiative*
- Qualitative research to explore factors influencing suppression not asked in routine psychosocial assessments
- Multilevel analysis to explore effect of neighborhood and other contextual factors on suppression
Citations


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