**Serious Mental Illness and Medication Adherence among Vulnerable HIV+ Women**

**BACKGROUND**

- Miami is a high-incidence community for HIV, and African American women have been especially impacted. In 2010, Miami had the highest rate of new HIV infections in the U.S.
- Serious mental illness (SMI) is a significant risk factor for HIV infection. SMI is thought to increase HIV-related vulnerability through behavioral repertoires characterized by substance use and high risk sexual behaviors. Environmental risk factors, such as poverty and homelessness, are also more prevalent among persons with SMI, and these factors indirectly increase vulnerability to HIV.
- Among HIV-positive individuals, depression, anxiety, and substance use disorders are key factors influencing antiretroviral (ARV) medication adherence. The severity of symptoms related to these disorders is inversely related to ARV adherence.

**PURPOSE AND METHODS**

**Aim:** The overall goal of this study is to examine multi-level (individual, provider and environmental) risk and protective factors for ARV adherence and diversion among indigent HIV positive substance abusers; data will be used to identify salient targets for intervention to reduce patient vulnerability to diversion.

**Purpose:** This analysis examines the contribution of serious mental illness (SMI) to ARV medication adherence among a highly marginalized sample of substance abusing HIV-positive women.

**Methods:** Guided by targeted sampling in geographic areas with high HIV prevalence and poverty indices, direct outreach was utilized to recruit 503 indigent HIV+ substance abusers in South Florida between 2010 and 2012. Following informed consent, participants completed a simple face-to-face standardized interview based on the GAIN instrument, assessing demographics, substance use, DSM-IV dependence and mental health status. Standardized instruments also assessed HIV diagnosis/treatment history, HIV-related stigma, and ARV attitudes. ARV adherence in the past week was measured by self-report of doses missed, using the ACTG instrument.

**Eligibility criteria:** age 18+; cocaine or heroin use 12+ times in the prior 3 months; documented HIV+ status; and, current ARV prescription.

**Analysis:** Descriptive and bivariate statistics were computed to examine ARV adherence and its predictors. Linear regression analyses were utilized to examine multivariate relationships. This analysis presents data only for the female study participants, N=191.

**RESULTS**

- 70.2% of the sample met criteria for SMI (past year severe depression, anxiety, and/or traumatic stress).
- 52.6% were bothered by a serious mental health problem in the past week.
- The sample reported a mean HIV-related stigma score of 24.0, range 10-40. Sample item: “People think I am a bad person because I have HIV.”
- The sample reported a mean ARV medication attitudes score of 8.2, range 2-16. Sample item: “Taking HIV medication strengthens my immune system.”

**Table:** Linear Regression Analyses Predicting Past Week % ARV Adherence

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<thead>
<tr>
<th></th>
<th>Bivariate</th>
<th>Multivariate</th>
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<tbody>
<tr>
<td></td>
<td>Unstandardized</td>
<td>B (SE)</td>
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<tr>
<td>Homeless (past week)</td>
<td>-1.68 (.05)</td>
<td>-155 (.05)</td>
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<tr>
<td>Substance problem (past week)</td>
<td>-0.94 (.03)</td>
<td>-043 (.04)</td>
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<tr>
<td>HIV-related stigma</td>
<td>-0.05 (.03)</td>
<td>-1.87</td>
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<tr>
<td>ARV medication attitudes</td>
<td>.032 (.31)</td>
<td>.024 (.31)</td>
</tr>
<tr>
<td>Mental health problem (past week)</td>
<td>-1.08 (.04)</td>
<td>-065 (.04)</td>
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**DISCUSSION AND CONCLUSIONS**

- In the bivariate analyses, past week ARV adherence was negatively associated with current mental health problems, substance problems, and homelessness; adherence was positively associated with favorable attitudes toward ARV medications.
- Multivariate analyses pointed to the impact of two key factors on adherence: ARV medication attitudes and current homelessness. These findings support the notion that both intrapersonal and environmental factors are important contributors to medication adherence among HIV+ patients with high levels of competing needs.
- Economic vulnerability, unstable environments, and low levels of knowledge and attitudes about ARV treatment regimens must be addressed in community and practitioner-based intervention initiatives with this highly marginalized population.
- From a public health perspective, the provision of mental health services and housing support would appear to be important co-level (individual, provider and environmental) risk and protective factors for ARV adherence and diversion among indigent HIV positive substance abusers; data will be used to identify salient targets for intervention to reduce patient vulnerability to diversion.

**REFERENCES**

- AIDS and mental health services and housing support would appear to be important components of effective ARV treatment among this vulnerable group of women, and should form part of a comprehensive approach to marginalized HIV+ women. A primary recommendation would involve the integration of mental health and care into locations where drug involved women routinely visit, such as shelters and community HIV clinics. Co-location of services may be especially important for this group, given their economic need and difficulties in navigating the healthcare system.
- ARV diversion (sale or trading of medications) was reported by 38.7% of the women in this sample at least once in the past 90 days. Women reported being routinely targeted by “pill brokers” offering small financial incentives to purchase their ARV medications. HIV care providers should be made aware of this phenomenon in order to better educate their patients about the importance of consistent adherence to ARV medications.

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**CONTACT**

Hilary L. Surratt, Ph.D.
Surratt@nova.edu
Catherine E. O’Grady
2 NE 40th Street, Suite 404
Miami, FL, USA 33137