

Co-occurring Psychosocial Health Disparities and ARV Medication Adherence among Indigent HIV-positive Patients who Use Drugs

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Background

- Antiretroviral (ARV) non-adherence increases risks of HIV treatment failure, drug resistance, and disease transmission.
- Our research among indigent substance-using HIV patients in South Florida documented modest levels of ARV adherence, as well as extensive diversion of their medications into illicit markets, directly impacting their ability to achieve effective levels of adherence.

Purpose of the Presentation

- Based on a syndemics analytic approach, we examined psychosocial factors that affect vulnerability to ARV diversion and low ARV adherence among this marginalized group.
- For this analysis, syndemic risk factors included:
 - DSM-IVR substance dependence
 - severe depression
 - recent homelessness
 - high HIV-related stigma

The RISE Study

Data were drawn from a mixed methods study designed to examine the patterns and predictors of ARV diversion (the unlawful sale and trading of ARV medications) among indigent drug using men and women living with HIV.



Study Eligibility

- age 18 or older
- HIV-positive
- current ARV prescription
- endorsed cocaine, crack or heroin use 12 or more times in the past 90 days



Sampling

- targeted sampling in high poverty and HIV prevalence areas
- direct outreach
- quota sample of 50% ARV diverters / 50% non-diverters; diverters endorsed diversion in the past 90 days.

Measures

- The main instrument was a comprehensive health and social risk assessment using a modified version of the Global Appraisal of Individual Needs.

Dennis et al. 2002

- Additional items queried ARV prescription, adherence and diversion history, as well as HIV-related stigma.

Demographics (N=503)

Age (mean; SD)	46.1 (7.8) years	
Education (median; SD)	12.0 (2.4) years	
	<u>N</u>	<u>%</u>
Male	299	59.4
Race/Ethnicity		
White	68	13.5
Hispanic or Latino	91	18.1
African American	340	67.6
Income < \$500 / month	159	31.6%

Analyses

- Bivariate logistic regression models predicting the presence of each of the four syndemic factors
- A count measure of syndemic factors predicting ARV medication adherence and diversion

Results

Logistic regression predicting **substance dependence**

Overall prevalence 83.5%

Controlled for age, gender, race/ethnicity and education	<i>P</i>	<i>OR</i>
Severe depression	.001	2.526
High HIV-related stigma	.050	2.055
Recent homelessness	.027	1.970
ARV diverter	.058	1.687

Results

Logistic regression predicting **severe depression**

Overall prevalence 54.7%

Controlled for age, gender,
race/ethnicity and education

P

OR

Substance dependence

.001

2.586

High HIV-related stigma

.000

2.945

Recent homelessness

.050

1.501

ARV diverter

.018

1.627

Results

Logistic regression predicting **recent homelessness**

Overall prevalence 39.2%

Controlled for age, gender, race/ethnicity and education	<i>P</i>	<i>OR</i>
Substance dependence	.023	2.007
High HIV-related stigma	.001	2.035
Severe depression	.050	1.505
ARV diverter	.019	1.609

Results

Logistic regression predicting **high HIV-related stigma**

Overall prevalence 28.8%

Controlled for age, gender,
race/ethnicity and education

P

OR

Substance dependence

.035

2.143

Recent homelessness

.001

2.051

Severe depression

.000

2.948

ARV diverter

.134

1.609

Results

Logistic regression predicting **>80% ARV adherence**

Overall prevalence 68.4%

Controlled for age, gender,
education and race/ethnicity

P

OR

Syndemic symptom count

1

.523

1.306

2

.959

1.021

3

.041

0.447

4

.005

0.287

Results

Logistic regression predicting **ARV diversion**

Overall prevalence 49.9%

Age n.s. Female OR=.413. Black/White vs Hisp
OR= 2.468/1.987. HS+ education OR=.669.

P

OR

Syndemic symptom count

1

.261

1.564

2

.028

2.346

3

.000

4.719

4

.001

4.703

Limitations

- The study recruited a quota sample of ARV diverters and non-diverters, such that the overall magnitude of ARV diversion cannot be estimated.
- Eligibility requirements included frequent cocaine and/or heroin use, limiting generalizability to other HIV-positive men and women.

Discussion

- A syndemics-based analysis reveals the co-occurrence of multiple levels – economic, social, psychological and physical - of health and social disparities among indigent HIV-positive patients.
- This approach also highlights the exponential effect of multiple disparities on ARV medication adherence and on ARV diversion.

Discussion

- The pricing structure for ARVs in the US – where the medications carry high retail prices but are free for indigent patients – drives street markets in ARVs.
- ARV diversion negatively impacts adherence, increasing the likelihood of onward disease transmission.

Conclusions

- Indigent HIV-positive patients with substance abuse problems are a highly vulnerable population requiring multi-level intervention approaches to improve their access and retention in care and treatment.
- The implications of diversion for treatment failure and disease transmission must inform policy and behavioral supports to TasP / PrEP.

Thank you

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