

# Antiretroviral Medication Diversion in South Florida: Prescription Types and Motivations

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## Abstract

News reports and qualitative data have pointed toward the emerging phenomenon of ARV diversion by HIV positive individuals. However, studies documenting commonly diverted medications, diversion motivations and medication recipients are lacking. We examined these factors in an exploratory South Florida study. Respondents were at least 18 yrs of age, confirmed HIV positive, prescribed ARV medications, and reported 12 or more occasions of cocaine or heroin use in the last 3 months. Trained interviewers administered standardized assessments that included detailed lifetime and current drug use, as well as history of HIV infection and treatment. Participants were first diagnosed with HIV an average of 12.7 years ago and were first prescribed HIV medications an average of 9.8 years prior to interview. The participants first began selling their prescription HIV medications an average of 2.8 years prior to interview, and had sold or traded them a median of 7 times. Our findings indicate a variety of diverted HIV medications. The most frequently diverted medications (past 3 months) included Atripla<sup>®</sup> (diverted by 31.9% of the participants), Norvir<sup>®</sup> (29.5%), and Truvada<sup>®</sup> (39.8%). A majority recently sold/ traded their HIV medications for money for drugs or alcohol (72.5%). Medications were sold to pill brokers 79.7% of the time, and to another HIV-positive person for their use 11.6% of the time. The diverters knew, on average, 4 other people who were involved in selling ARV medications. Findings demonstrate that many substance users have histories of HIV medication diversion related to their alcohol and drug use. The sale or trading of ARVs reduces adherence, reducing treatment effectiveness and increasing viral load. Given this, further study is warranted to explore risk factors for diversion, and develop interventions to reduce the diversion by this vulnerable population of these needed medications. This work was supported by NIH Grant R01DA023157.

## Introduction

- The Miami area had the highest rate of new HIV infections in the nation in 2011 at 46 cases per 100,000 population (CDC, 2013).
- ARV medication diversion in South Florida includes HIV positive individuals who sell or trade their prescribed ARV medications.
- Little is known specifically about motivations for ARV medication diversion and commonly diverted ARV medications.
- ARV diversion has potentially significant public health consequences including compromised adherence to needed ARV medication regimens.

## Methods

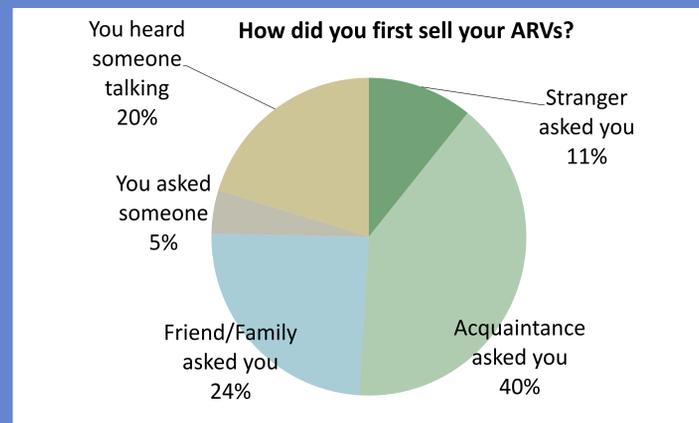
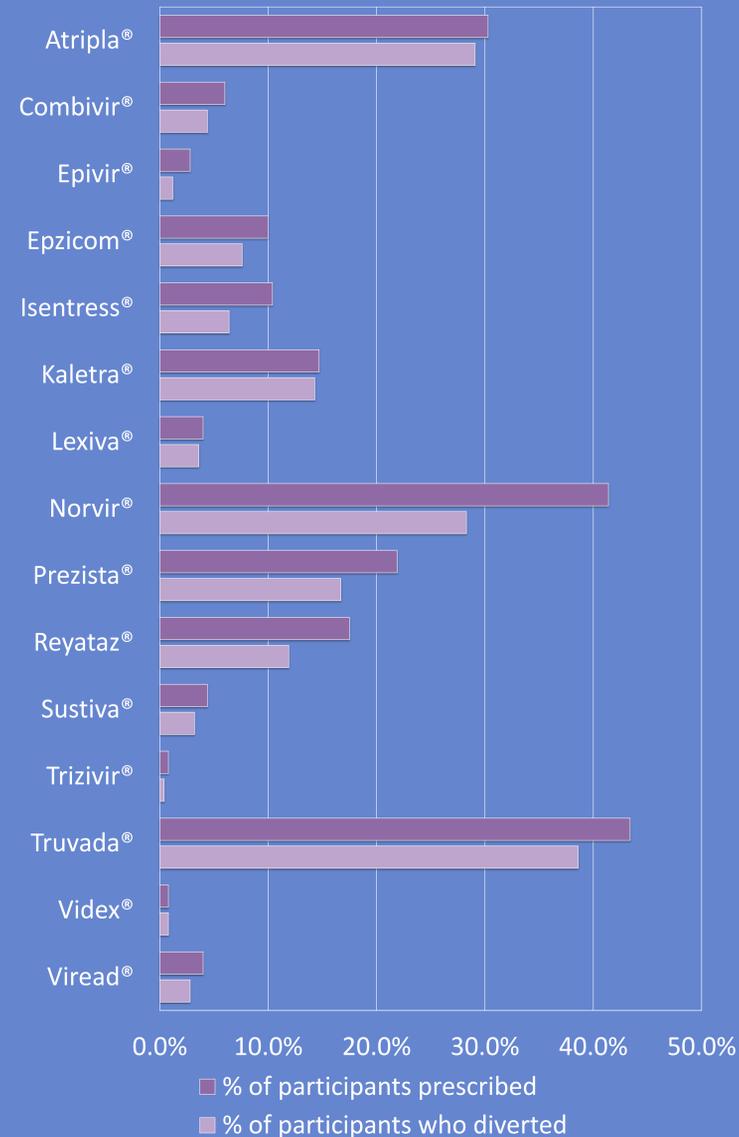
- Participants were recruited using targeted sampling strategies in South Florida.
- A single face to face interview was conducted by trained interviewers following informed consent.
- Assessment instrumentation consisted of a modified version of the Global Appraisal of Individual Needs (GAIN), an evidence based assessment tool.
- Participants who had recently diverted ARV medications (at least once in the past 90 days) were included in this analysis (n=251).

Table 1: Characteristics of ARV Diverters (n=251)

Demographics	
Age, mean (sd)	45.9 (7.9)
Female gender, n(%)	74 (29.5%)
Race/Ethnicity	
Hispanic/Latino, n(%)	35 (13.9%)
African American/ Black, n(%)	179 (71.3%)
Caucasian/ White, n(%)	33 (13.1%)
Other, n(%)	4 (1.6%)
Economic Factors	
Income is \$500 or less a month, n(%)	101 (42.4%)
Homeless within the last three months, n(%)	120 (47.8%)
Currently unemployed, n(%)	116 (46.2%)
Went without food/housing last 3 mnths, n(%)	130 (51.8%)
Substance use	
Substance dependent, n(%)	155 (61.8%)
\$ spent on substances per month, mean (sd)	485.2(583.5)
Drug treatment history, n(%)	187 (74.1%)
Adherence	
95% adherence to ARV regimen, past week, n(%)	95 (37.8%)
Missed ARVs last weekend, n(%)	130 (51.8%)

## Results

### Medications Prescribed and Diverted 90 Days



## Discussion

- The market for selling ARV medications appears to be established, with 80% recently selling to pill brokers, and the study participants selling an average of seven times.
- Diverters do not consistently adhere to their own ARV regimens (only 37.8% report 95% adherence).
- Diverters of ARV medication have substance related economic challenges which could be motivations for selling the medication:
  - 70.1% reported they first diverted for money for drugs or alcohol.
  - 42.4% earned less than \$500 a month, however the mean monthly spending on alcohol and drugs is \$485 a month.
- In addition, many have high levels of unmet basic needs:
  - 51.8% reported recent food or housing insecurity.
  - 46.2% are unemployed.

## Conclusion

- ARV medication diversion is visible in South Florida drug markets, and is likely occurring in other major urban centers as well.
- Diversion is tied to lower adherence to ARV medications.
- Public health implications of lower adherence to ARV medications include increased viral load and risk of HIV transmission to others (CDC, 2013).
- These results form a portion of the larger RISE study, which is examining ARV diversion using a mixed-method approach.
- Further exploration of the link between substance use and ARV diversion is warranted.

## References Cited

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