

# ARV street markets and informal PrEP use by MSM in South Florida: the context of limited access

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# Background

- Widespread diversion (unlawful sale or trade) of ARVs has been documented in the US among vulnerable, indigent patients, often targeted by pill brokers to trade their ARVs for money or drugs.

Surratt et al. 2013

- Large scale diversion of ARVs has also been documented by law enforcement in at least seven US states.

Kuehn 2014; Surratt and Kurtz 2013; Dorschner 2005; Flaherty and Gaul 2003; Glasgow 1999; Associated Press 1995

# Background

- FDA approval of Truvada for PrEP has the potential to broaden these illicit markets, as the non-prescribed use of ARVs for prevention has been documented among high risk MSM since at least 2004.

Kellerman SE, et al. 2006; Kurtz et al. 2014

- Non-adherence among diverters and unsupervised ARV use for treatment or PrEP increases risks of treatment/ PrEP failure, drug resistance, and disease transmission.

# Background

No national public health campaign has addressed MSM with accurate information about the purpose, efficacy, accessibility, and adherence requirements of PrEP.

As well, the manufacturer has thus far decided not to promote the use of Truvada<sup>®</sup> for PrEP.

**Misunderstanding  
of Pre-exposure Prophylaxis  
Use among Young MSM  
in Miami, Florida:  
“the morning after pill”**

# Methods

- Focus groups conducted in 2014 to solicit information about the HIV testing and prevention practices of MSM at high risk for HIV.
- The interview schedule covered knowledge of HIV disease, treatment, and transmission risk behaviors, and HIV testing and prevention practices.
- Recruitment was through GPS-based social networking applications (GSNAs, e.g., Grindr, Scruff).

# Methods

- When not spontaneously occurring, facilitators asked specifically about men's knowledge of and experience with PrEP.
- This analysis focused on coding the frequencies and the texts of men's responses to questions about PrEP.



# Eligibility Requirements

- 18 to 35 years of age
- self-reported HIV-negative/unknown
- anal sex with 2+ more male partners in the past 90 days
- drug use /binge drinking in the past month
- current users of one or more GSNA's designed for MSM

# Study sample

- 31 men ages 18-35 participated in six focus groups of three to eight participants each
- 17 were Hispanic, 7 African American/Black, 6 White, and one other race/ethnicity
- Median age was 28 (range = 18 to 35).

# Results

- 14 of 31 participants had heard of PrEP or of the use of ARVs for prevention.
- Of those who had heard of it, 4 men indicated a thorough understanding of PrEP as a daily regimen that was prescribed and monitored by a physician.

# Results

One of these 4 men indicated that he had requested and been denied PrEP by his doctor:

“I thought about taking [PrEP] as prevention, and I spoke to my doctor. He said he would only suggest it in extreme cases. They don’t know what the long term effects are of somebody negative taking the pill.”

The remaining 10 participants who had heard of PrEP understood PrEP as variations of a “morning after” pill:

“You can have bareback sex all you want as long as you take these drugs. Right after you do it, though. Like girls, they got a Plan B. Gay guys, we got the Plan C.”

“You could fuck him without a condom and you can take the pill tomorrow.”

“Who doesn’t know somebody that’s HIV-positive, you know? ‘Girl, sell me one of your pills! Or give me a couple of weeks’ worth.’ It’s just gonna create chaos. But they are taking them.”

One of these men, who worked in the pornographic film industry, had taken PrEP informally:

“This guy I filmed with, he was positive. He’s undetectable on meds. He gave me two Truvada<sup>®</sup>, one for that moment, and one for the next day as a kind of preventative. “

“I got tested two days afterward. I don’t feel sick. I have a good idea I’m still negative, and I don’t know if it’s because of the Truvada<sup>®</sup>, or because his viral load was low, or because I was topping him.”

“That was the first time I was ever offered meds by a positive sex partner. I think that supporting each other like that is important. He’s trying to help.”

# Limitations

- Our study sample was small and met high risk eligibility criteria.
- Focus group data collection relied on self-report.
- The study was conducted in Miami, Florida. Some U.S cities and states have implemented PrEP information campaigns targeted to MSM and also expanded health insurance coverage.



# Discussion

- The men we enrolled were at high risk for HIV infection and the highest priority for PrEP uptake. Only 4 of 31 men understood PrEP to be a medication prescribed and monitored by a physician.
- Of greater concern is the extent of misinformation we found. Almost 1/3 of the total sample believed PrEP to be a drug taken before and/or after sex, and is acquired on the street or through HIV-positive friends.

# Discussion

- Although efficacy studies of intermittent PrEP are underway, current science indicates effective use requires frequent testing, regular health monitoring, and high levels adherence.
- At present, important structural barriers exist for high risk MSM to access these services, including the lack of accurate and accessible information and limited access to health care.

# Discussion

- In addition to the lack of medical support, informal use increases risk for inconsistent drug access, unmonitored restarts, use when unknowingly infected, and compromised or counterfeit pills in the supply chain.
- MSM are urgently in need of culturally relevant knowledge about the efficacious use of PrEP as well as clear avenues of access for the medication.

# Supplying ARV Street Markets

# The RISE Study

Data were drawn from a mixed methods study designed to examine the patterns and predictors of ARV diversion (unlawful sale or trade) among indigent drug using men and women living with HIV. This presentation focuses on MSM participants.



# Study Eligibility

- age 18 or older
- current ARV prescription
- endorsed cocaine, crack or heroin use 12 or more times in the past 90 days
- quota sample of 50% ARV diverters / 50% non-diverters; diverters endorsed diversion in the past 90 days.



# Purpose of the Presentation

- We examined demographic, substance use, and sexual behavior differences among MSM who diverted their ARV medications and those who did not divert in the 90 days prior to interview.
- We also investigated street market characteristics.

# Demographics (N=147)

Age (median; SD) 45 (8.1) years

Education (median; SD) 12 (2.4) years

N      %

Race/Ethnicity

White 31 21.1

Hispanic or Latino 36 24.5

African American 75 51.0

Other 5 3.4

Income < \$1000 / month 105 72.1



# ARV Diversion

ARV diverters, compared to non-diverters, did not differ on measures of age, race/ethnicity, or education, but were more likely to report:

- incomes of less than \$1000 per month

82.9% vs. 58.5%,  $p < .001$

- trading sex for money/drugs

60.8% vs. 36.9%,  $p = .004$

# ARV Diversion

As well as:

- DSM-IVR substance dependence

65.9% vs. 44.6%,  $p=.010$

- lower 90% ARV adherence rate

43.9% vs. 73.9%,  $p<.0001$

# Motivations

Of 147 MSM with ARV prescriptions, 82 (55.8%; quota sample) reported recent diversion.

Reasons included:	<u>N</u>	<u>%</u>
■ need money for drugs/alcohol	61	74.4
■ need money for living expenses	19	23.2
■ to help someone	6	7.3
■ leftover / extra medications	5	6.1
■ hopelessness	3	3.7
■ feels in good health	2	2.4

# Products

Medications sold by diverters and prices received:

	<u>N</u>	<u>%</u>	<u>\$ per bottle (median)</u>
Truvada	36	43.9	100
Norvir	32	39.0	80
Atripla	31	37.8	100
Reyataz	17	20.7	75
Prezista	14	17.1	100
Epzicom	13	15.9	80
Kaletra	12	14.6	80
Isentress	9	11.0	100
Sustiva	8	9.8	70

# Diversion modality

	<u>N</u>	<u>%</u>
Cash sale		
Pill broker	69	84.1
Street drug dealer	34	41.5
Personal use	27	32.9
Pharmacy worker	7	8.5
Pharmacist	5	6.1
Non-cash trade	20	24.4

# 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 MSM.
- Because many sales were to market middlemen, information on the ultimate users of the diverted medications is limited.

# Discussion

- Economic vulnerability, characterized by limited incomes, survival sex work, and drug dependence are the primary motivations for HIV-positive MSM to sell or trade their ARVs.
- The pricing structure for ARVs in the US – where the medications carry high retail prices but are free for indigent patients – drives illicit supply and demand.

# Conclusions

- The potential intersection of widespread ARV street markets + misinformed at-risk populations about the effective use of PrEP is a major public health concern.
- The diversion and misuse of medications to treat and prevent an infectious disease – increasing risk for transmission and drug resistance – appears unprecedented.



# Conclusions

- The implications of diversion for treatment failure and disease transmission must inform policy and behavioral supports to TasP / PrEP.
- Enhanced Risk Evaluation and Mitigation Strategies (REMS; US FDA), including bottle labeling, should be considered.
- Post-marketing surveillance strategies to track misuse and diversion appear warranted.

# Thank you

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