Expanding STI Control & Pre-Exposure Prophylaxis (PrEP) to Prevent HIV among Persons Who Inject Drugs

Presentation to the ARCH Program of the

New Jersey HIV Planning Group

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Agenda

- Two mini talks summarizing work in Camden, NJ:
  - Pairing STI Control and Syringe Exchange Services Increases Case Finding among Persons Who Inject Drugs
  - Towards understanding factors impacting pre-exposure prophylaxis (PrEP) uptake among persons who inject drugs
- Questions

Acknowledgements

- **Participants**
- **Co-Authors**
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- **Collaborators**
  - Sam Meyers, MA; Ruth Williams, RN; Sondra Mojica; Kevin Henao; Jerome Pipes; & Brandy Williams
  - Marisa Felsher, MPH, DrPH(c)
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Pairing STI Control and Syringe Exchange Services Increases Case Finding among Persons Who Inject Drugs

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Background

- Persons who inject drugs (PWID) are not considered a priority population for STI control under current national STI testing and treatment guidelines.
- Therefore, we have no national STI prevalence data for this population.
- Despite this, there are reasons to suspect high rates of STI in this group
  - Data indicate high rates of concurrent sexual partnerships, limited condom use, and engagement in transactional sex by both women and men.
- Offering STI control services at non-traditional community-based locations has been proposed as a novel way to increase the reach of STI control efforts, but in the case of syringe exchange programs, this strategy has yet to be routinely implemented.

Objectives

1) To assess the acceptability of co-locating STI screening with syringe exchange program (SEP) services

2) To estimate prevalence of chlamydia and gonorrhea among SEP users

Study Setting

- Camden, New Jersey
  - Accounts for less than 1% of the state population; accounted for the 2nd highest rates of chlamydia (CT) and gonorrhea (GC) in New Jersey (2013) and 9th highest rates of persons living with HIV/AIDS in NJ (2015)

- Camden Area Health Education Center (AHEC)
  - Twice weekly SEP serves 1,180/year

Methods

Eligibility criteria

- ✓ English-speaking SEP clients
- ✓ ≥18 years old
- ✓ Injected drugs within previous 30 days
- ✓ Engaged in anal or vaginal sex within previous 30 days

Data collection

- ✓ Completed self-administered electronic survey
- ✓ Self-collected specimen for chlamydia & gonorrhea diagnosis via NAAT @ 3 sites
- ✓ Received $20 gift card for survey & $10 for returning for results
- ✓ Descriptive statistics to assess factors associated with STI positivity (defined as CT or GC infection at any site).

Sample Description

	Women (n=65)*	Men (n=73)*	P value
Age (median, IQR)	31 (25, 37)	33 (28, 41)	0.15
Race/Ethnicity			**0.03**
White	80.0%	67.1%	
Black	<1%	20.0%	
Hispanic/Latino	4.6%	5.5%	
Other	10.6%	8.2%	
Sexual orientation			**<0.01**
Straight	66.2%	90.3%	
Gay self-identified	4.6%	0.03%	
Bisexual self-identified	29.2%	0.07%	
Homeless	68.7%	80.6%	0.08
High school education	78.5%	61.6%	0.16
≤ $9,999 annual income	68.4%	75.0%	0.24

* 60 women and 60 men indicated partnered sexual activity

Results

Table 1. Sexual Orientation, Sexual Behavior and Sexual Risk Factors Among Sexually Active Male and Female Injection Drug Users (N=120)

	Women (N=60)	Men (N=60)	p-value
Sexual Orientation			
Bisexual	18/59 (30.5%)	5/60 (8.3%)	.01
Heterosexual	39/59 (66.1%)	52/60 (86.7%)	
Homosexual	3/59 (5.1%)	2/60 (3.3%)	
Sexual behaviors, 6 months			
Oral sex	52/60 (86.7%)	48/60 (80.0%)	.33
Vaginal sex	53/60 (88.3%)	41/60 (68.3%)	.01
Anal sex	14/60 (23.3%)	9/60 (15.0%)**	.25
Sexual risk factors, 6 months			
Number of sex partners (median, IQR*)	5 (2,10)	2 (1,5)	.003
Inconsistent condom use	49/57 (86.0%)	46/54 (85.2%)	.91
STI within 6 months	5/52 (9.6%)	4/57 (7.0%)	.62
Transactional sex	36/57 (63.2%)	10/55 (18.2%)	.01
Sex with PWID	31/58 (53.4%)	40/57 (70.2%)	.16
Sex with HIV-positive partner (vs. no)			
Yes	0/59 (0.0%)	2/57 (3.5%)	.04
Unsure	14/59 (23.7%)	5/57 (8.8%)	

Results

Distribution of CT/GC infections by microorganism and gender, among sexually active male and female injection drug users

	Women (N = 60)	Men (N = 60)	Total (N = 120)
Gonorrhea alone	5 (8.3%)	3 (5.0%)	8 (6.7%)
Chlamydia alone	8 (13.3%)	2 (3.3%)	10 (8.3%)
Gonorrhea and *Chlamydia*	3 (5.0%)	-	3 (2.5%)

Results

Distribution of CT/GC infections by site and gender, among sexually active male and female injection drug users

	Women (N = 60)	Men (N = 60)
Genital only	4/59	2/60
Pharyngeal only	5/55	3/21
Rectal only	0/6	0/5
Genital and Pharyngeal	5/55	0/21
Rectal and Pharyngeal	1/6	0/5
Genital and Rectal	2/6	0/5
Infections at all sites	1/6	0/5
Total	16/60	5/60

Results

Return Rates & Preferences for STI Screening

- 60% of those without CT/GC and 75% persons screening positive returned for results and when applicable, received timely treatment of their infection.
- 86% preferred to receive future STI screening at SEP vs. traditional clinic

Discussion

- Among this convenience sample of PWID, we found high rates of STI.
- Rates were similar to those in STI clinics and other outreach projects and substantially higher than the general population nationally.
- Findings suggest that extra-genital screening is essential to disease finding efforts in this population.
- This may be influenced by sexual behaviors, particularly among women reporting transactional sex, where oral sex may present a substantial risk.

Limitations

- Participants were not required to collect all sample types and thus, we may have missed some infections.
- Given that PWID who exchange syringes are more focused on preventing parenteral infection to preserve health, our findings most probably represent conservative estimates of infection in this high-risk population.
- High levels of oral GC infection could be attributable to environmental contaminates at study/lab sites.

Conclusion

- The prevalence of STIs among PWID who utilize this SEP was quite high
- Multi-site STI screening protocol and subsequent treatment is essential to controlling STIs among this population; single-site (UG) screening is not sufficient
- PWID prefer to access STI care at the SEP
- Pairing STI & SEP services can increase access to care & case finding

Questions?

Towards understanding factors impacting pre-exposure prophylaxis (PrEP) uptake among persons who inject drugs

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Background

- Globally, syringe exchange programs have dramatically reduced HIV among persons who inject drugs (PWID)

- Within the United States, federal and state/local laws limit the effectiveness of this intervention

- PWID continue to be disproportionately burdened with HIV
  - PWID account for 3% of the adult population but nearly 10% of new HIV infections annually and >25% of those who have died from AIDS
  - Important racial/ethnic disparities among PWID living with and dying from HIV/AIDS

Background

- Pre-exposure prophylaxis (PrEP) has promise for preventing HIV among PWID
- The Bangkok Tenofovir Trial demonstrated 74% efficacy among PWID w/ high adherence
- However, little research has focused on the willingness of, and potential barriers to PrEP among this population in the US

Objectives

1) Estimate the proportion of PWID accessing a syringe exchange program (SEP) who would qualify for PrEP based on current CDC clinical guidelines

2) Assess SEP users' attitudes and barriers to PrEP uptake

Study Setting

- Camden, New Jersey
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Methods

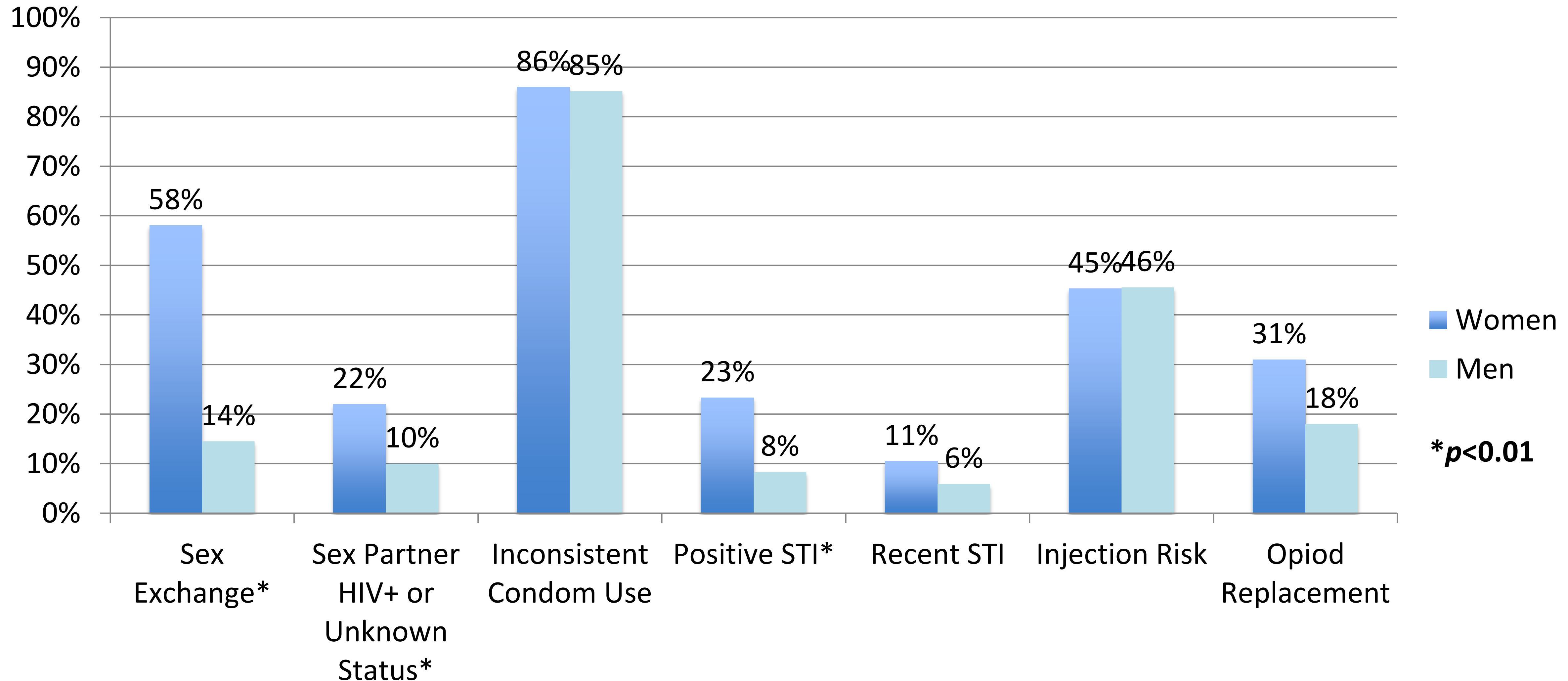
Table 1: Summary of Guidance for PrEP Use

	Men Who Have Sex with Men	Heterosexual Women and Men	Injection Drug Users
Detecting substantial risk of acquiring HIV infection	HIV-positive sexual partner Recent bacterial STI High number of sex partners History of inconsistent or no condom use Commercial sex work	HIV-positive sexual partner Recent bacterial STI High number of sex partners History of inconsistent or no condom use Commercial sex work In high-prevalence area or network	HIV-positive injecting partner Sharing injection equipment Recent drug treatment (but currently injecting)

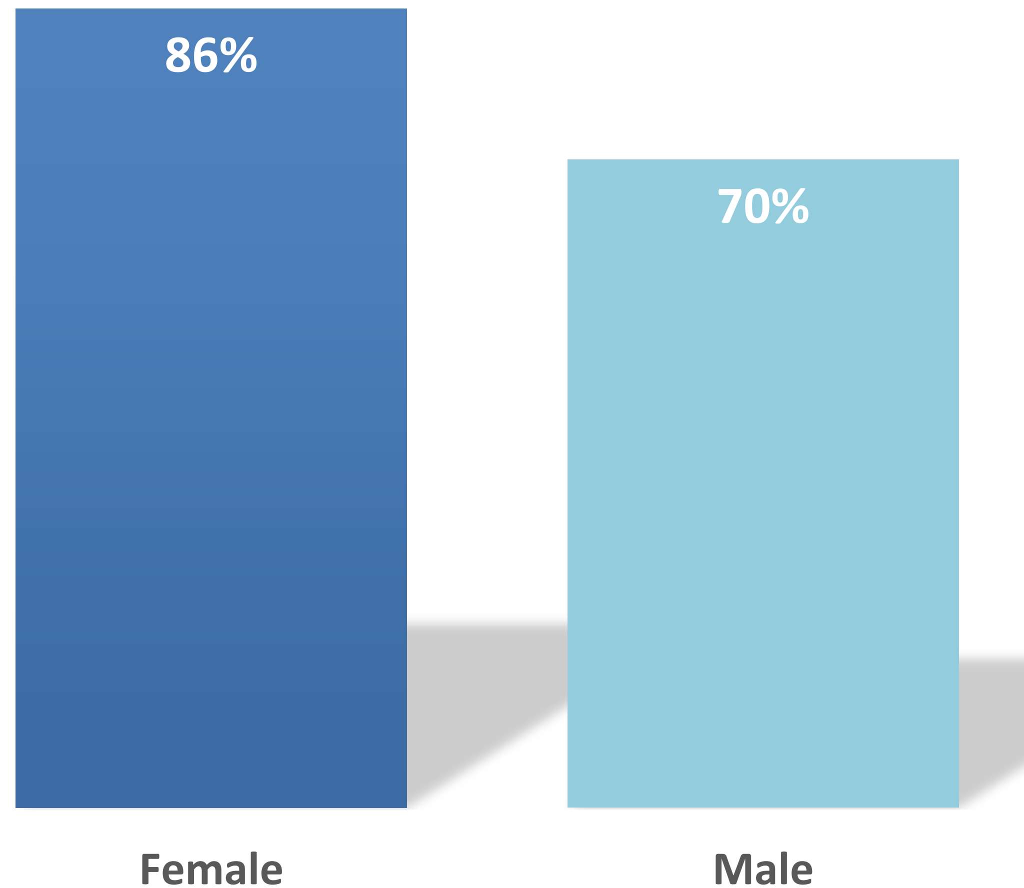
Analyses

- ✓ PrEP eligibility was determined based on the current CDC clinical guidelines for PrEP. Any affirmative response to: current or recent STI, sex with a person living with HIV or unknown HIV status, sex exchange, inconsistent condom use with more than the median number of sex partners (by gender), syringe sharing, and receiving drug treatment indicated eligibility

Behavioral Factors Contributing to PrEP Eligibility among 138 PWID Accessing SEP in Camden



PrEP Eligibility Among SEP Clients



*p<0.01

Facilitators of PrEP Uptake & Willingness

- High willingness to take PrEP (89% of women and 71% of men; $p<0.01$)
- Willing to pay $20/month (58.3%)
- Willing to take despite mild side effects (68.8%)
- Willing to get quarterly HIV screening (88.7%)

Barriers to PrEP Uptake & Adherence

- Anxiety about PrEP (51.6%)
- Embarrassed about PrEP (45%)
- Would not want sexual partner to know (51.4%)
- Have not seen primary care physician (56.2%)
- Uninsured (32.9%)
- Severe drug dependence (88.4%)
- Would share PrEP with others who need it more (45.7%)
- Would sell PrEP to others who need it more (13.8%)

Summary

- Despite being recruited from a SEP, the majority of participants were eligible for PrEP and also found the concept acceptable.
- However, PWID face multiple barriers to uptake including limited engagement with providers where PrEP care may be offered.
- Co-locating PrEP with SEPs decreases barriers to uptake, retention and adherence.
- Targeted efforts for women PWID may be warranted
  - 4-fold more likely to screen for STI, a biomarker for increased HIV risk

Limitations

- Sexual behavior as inclusion criteria
- Did not assess PrEP knowledge before we provided participants with information about PrEP
- Data represent an urban population and as such may be very different from more rural settings

Conclusion

- Injection risk persists despite engagement with SEP
- Sexual risk: high rates of STI, inconsistent condom use and sex exchange could lead to bridging
- “The PWID in this study were remarkably open to utilizing PrEP even in the face of mild side effects, especially the female participants; the acceptability rate was far higher than I would have imagined in the absence of this data.” (S. Sauders)

Next Steps

- Expansion of multi-site STI screening for women and men at all ARCH sites
  - Evaluate prevalence & provision of treatment over time
- Implement STI/PrEP Care within a brick-&-mortar SEP for PWID in Kensington, Philadelphia
  - Assess uptake
  - Adherence/Retention
  - Barriers/Facilitators to above

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