

# Understanding Psychosocial and Behavioral Correlates of STI and HIV Risk among MSM and MSMW

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# ***What Are the Complex Reasons for These Trends?***

- Long before AIDS, complex and longstanding structural barriers along the contours of racial and gendered oppression that were inadequately acknowledged and addressed

## **REASONS:**

- **Poverty: Competing Priorities**
- **Gender Imbalance**
- **Incarceration Rates**
- **Dynamics of Black Sexuality**
- **Historical & Persistent Trauma**

# Prevention Challenges

- **Stigma**, a “negative social label that identifies people as deviant”, also puts too many African American communities at a high risk of infection. Any behavior deemed deviant (i.e. MSM) has been highly stigmatized.
- **The socioeconomic issues associated with poverty, including limited access to high quality healthcare, housing and HIV prevention education may directly or indirectly increase the risk factors for poor HIV infection care.**

# Additional Challenges

- Understanding mechanisms through which psychosocial, cultural and structural factors impact high risk behavior
  - Psychological, Social, Substance Use and Sexual Risk for HIV
  - Intersecting social and behavioral factors (Syndemics)

# Overview

- S1: Differences in substance use, psychosocial characteristics and HIV-related sexual risk behavior between Black Men Who Have Sex with Men Only (BMSMO) and Black Men Who Have Sex with Men and Women (BMSMW) in 6 US Cities
- S2: Syndemic Production among Black Men who have Sex with Men in the Multicenter AIDS Cohort Study (MACS)



# Minority Stress Theory

- Being a man who has sex with men (MSM) in the United States confers “minority” status based upon one’s sexual identity
- Being a Black MSM in the US confers dual minority status based on both one’s racial and sexual identities.
- Developing an understanding of the mechanisms through which men who occupy this position of being a double minority impacts their mental and physical health and subsequent behavior, has implications for developing interventions and treatment not only for these men but the members of their networks with whom they engage sexually.





# STUDY 1

Differences in substance use,  
psychosocial characteristics and HIV-  
related sexual risk behavior between Black  
Men Who Have Sex with Men Only  
(BMSMO) and Black Men Who Have Sex  
with Men and Women (BMSMW) in 6 US  
Cities

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MS, Steve Shoptaw, PhD. Journal of Urban Health, July 2013





# Study Aim and Hypotheses

Identify psychosocial, substance use and sexual risk behaviors that characterize Black MSMW from Black MSM

- H1: Internalized homophobia higher for MSMW than MSM
- H2: Stimulant Drug Use differs for MSMW
  - Crack/cocaine higher among MSMW than MSM
  - Methamphetamine use higher among MSM than MSMW
- H3: MSMW will engage in more IAI compared to MSM

# Methods: Study Design

- HPTN061 BROTHERS Study
  - Atlanta, Boston, Los Angeles, New York City, San Francisco, and Washington, DC
- Multisite data (N=1533)
  - A total of 1553 men were enrolled in HPTN 061 and data from 1429 participants were utilized in the current analysis.
- Behavioral questionnaire (ACASI)
- Social and sexual network questionnaire
- HIV Antibody Testing
- Cross-sectional analysis using baseline data only

# Methods:

## Psychosocial Measures

- Internalized Homophobia (Herek, 1995)
  - 6 items + 1 item culturally tailored to Black men;  $\alpha = 0.91$
- Social Support Scale (Sherbourne and Stewart, 1990)
  - 6 Items; Emotional/Affectionate Support;  $\alpha = 0.94$
- CES-D Depression Scale (Radloff, 1977)
  - 20 items;  $\alpha = 0.88$

# Methods:

## Substance Use Measures

- Marijuana
- Crack cocaine
- Powder cocaine
- Methamphetamine
  
- Individual items then asked participants to report the frequency of use (e.g. daily use) of specific drugs used.
- Collapsed to create a trichotomous variable
  
- Alcohol Use
  - Dichotomized at  $\geq 5$  drinks

# Methods:

## Outcome Measures

### Sex Risk Measures

- Unprotected insertive anal intercourse
- Sex while under the influence of drugs
- Sex while under the influence of alcohol
- Involvement in exchange sex

# Results: Sample Differences

Variables	BMSMO (N=839) N (%)	BMSMW (N=590) N (%)	P
Age	35.0 (24.0, 45.0)	44.0 (34.0, 49.0)	<0.0000
Education			
High School or less	360 (42.9%)	372 (63.2%)	<0.0001
Income			
Less than 20,000	443 (53.5%)	393 (66.7%)	<0.0001
Employment Status			
Not Working Currently	524 (62.5%)	450 (76.3%)	<0.0001
Housing Stability			
Unstable	81 (9.7%)	121 (20.5%)	<0.0001
Past Incarceration			
Yes	400 (48.3%)	422 (73.0%)	<0.0001

# Results: Hypothesis 1

	MSM (N=839)	MSMW (N=590)	P
<b>Internalized Homophobia</b>			<0.001
Mean (SD)	1.8 (1.0, 2.7)	2.7 (2.0, 3.2)	
<b>Social Support</b>			<0.001
Low	135 (16.6%)	168 (30.4%)	
Moderate	259 (31.9%)	192 (34.8%)	
High	419 (51.5%)	192 (34.8%)	
<b>Depression</b>			0.0022
<= 15	479 (60.0%)	273 (51.5%)	
Scale>=16	319 (40.0%)	257 (48.5%)	

Compared to BMSMO, BMSMW more likely to report:

- Higher homophobia
- Lower social support
- Higher depression symptoms



# Results: Hypothesis 2

Substance Use	BMSMO (N=839)	BMSMW (N=590)	p
Marijuana	444 (50.1%)	380 (60.8%)	<0.001
Powder Cocaine (Coke)	126 (14.2%)	135 (21.6%)	<0.001
Crack Cocaine	148 (16.7%)	226 (36.2%)	<0.001
Methamphetamine	84 ( 9.5%)	53 ( 8.5%)	0.65
>=5 drinks on one occasion			<0.001
Never	495 (55.8%)	284 (45.4%)	
Less than monthly	186 (21.0%)	125 (20.0%)	
Monthly	99 (11.2%)	74 (11.8%)	
Daily or weekly	94 ( 10.6%)	130 (20.8%)	

# Results: Hypothesis 3

HIV-related sexual risk	BMSMO (839)	BMSMW (590)	p
Having IAI in past 6 months	682 ( 81.7%)	544 ( 92.7%)	<0.001
Having UIAI in past 6 months	603 (72.4%)	478 (81.6%)	<0.001
Having RAI in past 6 months	491 (55.4%)	157 (25.1%)	<0.001
Having URAI in past 6 months	333 (67.8%)	96 (61.1%)	0.11
Receiving money last UAI	108 (12.2%)	221 (35.4%)	<0.001
Giving money to UAI	72 ( 8.1%)	83 (13.3%)	0.001
Buzzed/drunk last UAI	324 (36.5%)	378 (60.5%)	<0.001
Used drugs last UAI	320 ( 39.3%)	318 ( 56.2%)	<0.001

# Multivariable Results

HIV Risk-Related Outcome	N (%)	UOR (95% CI)	AOR (95% CI)
<b>Drug Use within 2 Hours of Last UAI</b>			
BMSMO	168 (20%)	Ref.	Ref.
BMSMW	204 (35%)	2.15 (1.69-2.74)	1.31 (0.98-1.75)
<b>Alcohol Use within 2 hours of last UAI</b>			
BMSMO	212 (26%)	Ref.	Ref.
BMSMW	245 (43%)	2.15 (1.71-2.69)	1.45 (1.11-1.90)
<b>Giving Money or Drugs At Last UAI</b>			
BMSMO	51 (6%)	Ref.	Ref.
BMSMW	57 (10%)	1.68 (1.14-2.50)	1.10 (0.70-1.73)
<b>Receiving Money or Drugs At Last UAI</b>			
BMSMO	67 (8%)	Ref.	Ref.
BMSMW	143 (25%)	3.72 (2.72-5.09)	2.11 (1.48-3.03)

# Conclusions

- BMSMW report more homophobia, less social support and more depression symptoms compared to BSMO, implicating a heavy psychosocial burden
- BMSMW report significantly and comparatively higher rates of substance use (excepting meth) than BSMO, which suggests substantial distress, particularly when engaging sex with other men
- BMSMW used alcohol during insertive anal sex, often receiving goods for sex

# Implications

- Among BMSMW alcohol use is an important factor to be considered when developing risk reduction interventions
- Interventions additionally should address sex while under the influence of alcohol



# Study 2

## Application of Syndemic Theory to Black Men who have Sex with Men in the Multicenter AIDS Cohort Study (MACS)

**Penniman Dyer T**, Shoptaw S, Guadamuz TE, Plankey MW, Kao, U, Ostrow, D, Chmiel, J, Herrick, A, Stall RD. Application of Syndemic Theory to Black Men who Have Sex with Men in the Multicenter AIDS Cohort Study. *Journal of Urban Health*. 2012



# Study Aim

- To evaluate potential associations among sociodemographic, psychosocial and behavioral health conditions (i.e., syndemic conditions) that may correspond with HIV-status and unprotected anal intercourse.



# Syndemics

- The aggregation of two or more diseases in a population in which there is some level of positive biological interaction that exacerbates the negative health effects of any or all of the diseases
- Merrill Singer 1990's
- Syndemics tend to develop under conditions of health disparity, are caused by
  - Poverty
  - Stress
  - Structural violence
- **Contribute to significant burden of disease in affected populations**

# The Multicenter AIDS Cohort Study (MACS)

- Prospective cohort study
- Baltimore, Chicago, Los Angeles and Pittsburgh
  - The original study includes a sample of 6,972 men
    - Followed since April 1984
  - Data are collected every six months
    - Interview
      - Medical treatments, and sexual and substance use behaviors
    - Physical examination
    - Collection of blood for laboratory testing and storage

<http://www.statepi.jhsph.edu/macs/macs.html>



# The MACS Substudy

- April 1, 2008 to March 31, 2009
  - Visits 49 and 50
- Additional data collection
  - Life course
  - Syndemics
- 30 to 45 minutes to complete and participants received
  - \$10 compensation for their time



# Methods: Sample Selection

- 87% opted to participate in the substudy
- N=1,551 surveys from unique individuals
- N=301 were Black men

# Methods: Outcome Measures

- Depression
  - CES-D (dichotomized)
- Sexual Compulsiveness (Past 5 years)
  - 10-item scale
- Substance Use (Including binge drinking)
  - At least weekly use of drugs
  - Six or more drinks on one occasion
- Intimate Partner Violence (Past 5 years)
- Stress (Past 12 months)
  - 14-item scale
- SYNDEMIC: Two or more of the above in an individual

# Results

[illegible]



# Conclusions and Implications

- Explain the existence of co-occurring conditions among Black MSM and
- This study has important implications for future research agendas and public health practice.

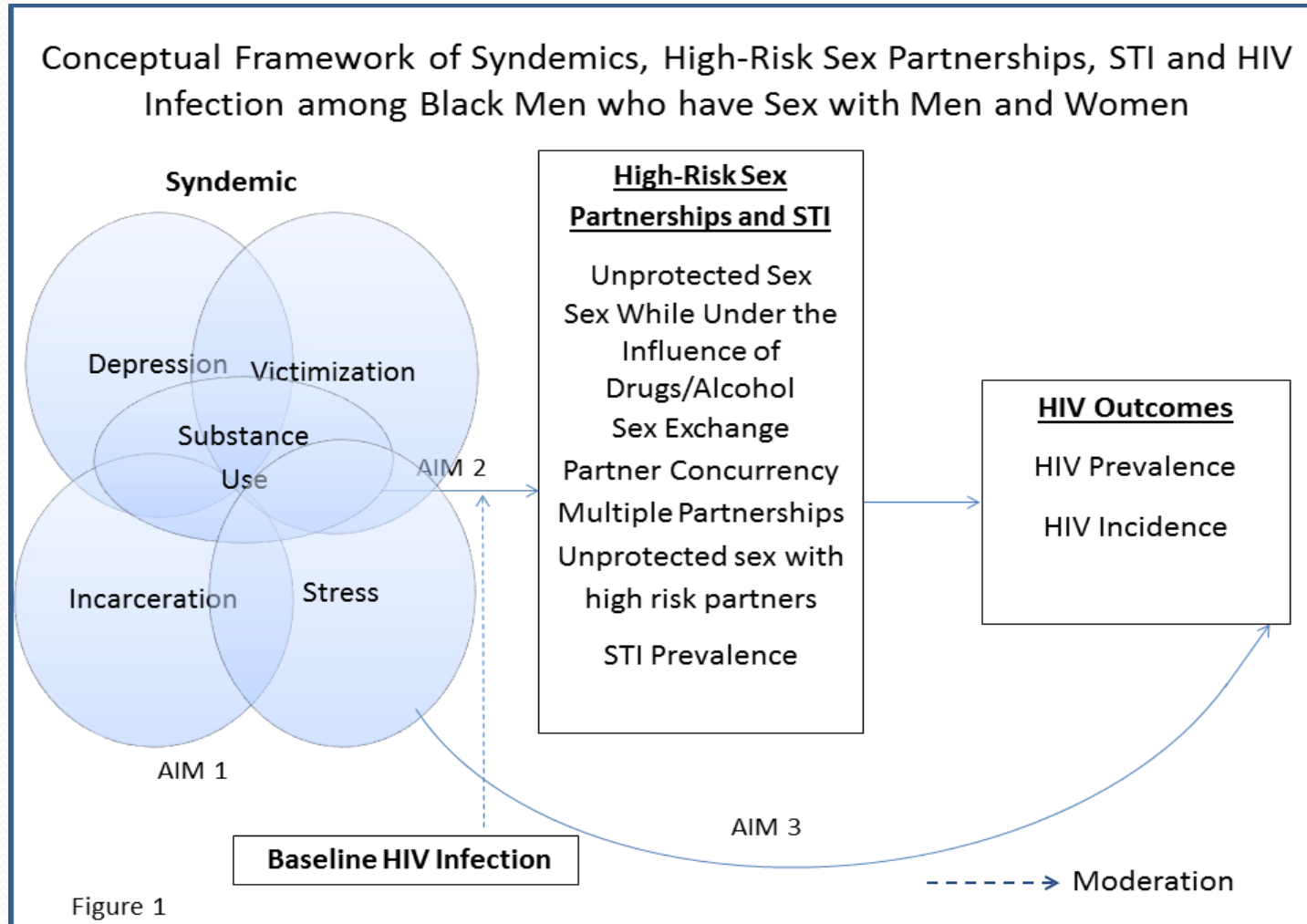




# Future Directions

- R03 to NIDA to explore syndemics, STI and HIV risk among BMSMW in HPTN061
  - Includes incarceration as an additional syndemic factor that is prevalent among BMSMW
  - Syndemics has never been explored among BMSMW
- R21 exploring relationship stability of incarcerated BMSM as a resilience factor that may assist in developing policy around stable partnerships when there is an epidemic of community disruption

# Syndemics among BMSMW in HPTN061





# Future Directions

- Explore intersectionality of racial identity, sexual identity and gender identity and expression, addiction and mood disorders and HIV risk among BMSMW
  - Mixed methods approach
  - Applying intersectionality theory, critical race theory, theory of minority stress and social identity
  - Issues of alcohol and drug addiction
  - Ethical considerations with recruiting BMSMW into studies

# Thank you!



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