Drivers of the HIV care continuum among a population-based sample of younger Black MSM

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Introduction

- Disparities in HIV infection rates between Black and White MSM continues to receive much attention.
- There is high and increasing HIV incidence among younger Black MSM (16-29 years of age) in major urban areas across the United States.
- Optimization of distinct HIV care continuum metrics is crucial to decreasing incidence in this generalized YBMSM epidemic.
- Little YBMSM HIV care continuum research exists, and usually includes clinical cohorts.
- In addition, existing analytic approaches that compare YBMSM to other MSM is inadequate to understand the diversity and complexity of the HIV care continuum among this population.

Objective

To describe HIV care continuum metrics among a representative sample of YBMSM and explore the drivers of HIV care continuum optimization.

Methods

Setting and Study Population: Data were collected from a longitudinal cohort of 623 young Black MSM, 16-29 years of age in Chicago from 2013-2014.

Recruitment: Participants were recruited via respondent-driven sampling with seeds originating in community social spaces, online venues, schools, CBOs, treatment programs, and/or LGBT centers.

Survey: CAPI was used to collect information on demographics, potential drivers of HIV care success including multiple socio-structural factors as well as other commonly used behavior and risk variables.

Continuum of Care Measures: HIV care continuum measures included: HIV infected unaware, HIV infected aware, linkage to care, retention in care, adherence to antiretrovirals and viral suppression. Linkage to care, retention in care and adherence to antiretrovirals were based upon self report.

HIV Infected Unaware: HIV infection (including acute infection) was determined by three assays applied to samples eluted from dry blood spot samples. HIV infected unaware was determined by the number of clients who reported HIV negative status (or never tested), and who were found to be HIV infected by testing. All clients found to be HIV infected unaware were reviewed and confirmed by a trained social worker following the study visit. *Linkage:* Linkage was defined as having at least one HIV medical care visit within 3 months of diagnosis. *Retention:* Retention in care was defined as two or more appointments within 90 days in the previous 12 months. *Adherence:* Adherence to antiretrovirals was defined as missing HIV medications on fewer than 4 days in the previous month. *Viral Suppression*: Viral suppression was defined as having an HIV RNA <2000 nucleic acid (NA) copies/mL.

Model generation and Analysis: A core model was developed that included factors associated with HIV care continuum metrics from previous research. Exploratory variables significant from univariate analysis were added to multivariate logisitic and ordinal regression models.

RDS Analysis: Gile's sample weights were used for all descriptives and regression models.

Results

A total of 62 seeds were recruited to generate the final analytic sample (n=623). 38 seeds (61.2%) recruited at least one sprout with recruitment chain length between 1 and 137 (mean = 9.0, median = 1). The mean age of the sample was 22.7 years. 84.3% had not completed a college degree, and 79.3% reported an income of less than $ 20,000 per year. Approximately 46% reported having been arrested, detained, or spent time in a jail.

Table 1. Characteristics of Younger Black MSM in Chicago (n=623), 2013-2014.

Variables	N (%)	Mean	SD
Demographics			
Age		24.2	0.20
Sexual Orientation (Gay)	492 (79.0)		
Education			
Less than HS	59 (9.50)		
HS diploma	130 (20.9)		
Greater than HS	434 (69.7)		
Employment			
Unemployed	325 (52.2)		
Part Time	147 (23.6)		
Full Time	155 (24.8)		
Health Care			
Health Coverage	442 (70.9)		
Adverse Health Factors			
Years since HIV diagnosis		3.10	0.30
Drug Use	194 (31.2)		
Depression (BSI Index, Range 0-72)		27.8	1.00
Adverse Living Situations			
Homeless in past 12 months	171 (27.5)		
Social Factors			
Have Mother/Mother-Figure	568 (91.1)		
Involvement (No Gay Family or House/Ball membership)	421 (67.5)		
Involvement (Member of Gay Family or House/Ball)	142 (22.8)		
Involvement (Member of Both)	60 (9.70)		
Connectedness: Feel Close to Black Community	526 (84.4)		
Social Affiliation Factors			
Socializes at Clubs/Bars	401 (64.4)		
Socializes at Gym	20 (3.20)		
Socializes in Public Spaces	239 (38.4)		
Socializes at House/Ball	104 (16.7)		
Psychobehavioral Factors			
Combo HIV Meds Make me Less Worried	95 (15.3)		
Condomless Sex no Longer Risky due to HIV Meds	25 (4.00)		
Enjoy New Sexual Experiences	330 (52.9)		
Structural Factors			
Had Close Relative Injured Through Violence	416 (66.8)		
Have Witnessed Attacks	417 (67.0)		
Ever Incarcerated	366 (58.8)		

*Data are weighted.

Figure 1. HIV Care Continuum for HIV infected YBMSM (n=206), uConnect.

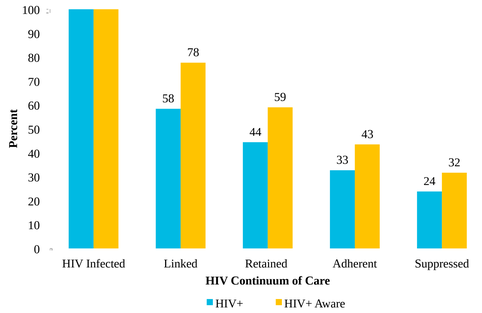


Table 2. Factors Associated with HIV Care Continuum Outcomes among HIV-Infected YBMSM in Chicago (n=154), 2013-2014, uConnect.

	Logistic/Ordinal Regression Coefficients				
Independent Variables	**Linked (3 months)**	**Retained**	**Adherence**	**Viral Suppression**	**Care Continuum**
Social Factors					
Have Mother/Mother-Figure	0.14*	0.50	0.34	1.23	0.58
Involvement (Ref=Member of Neither)	R	R	R	R	R
Involvement (Member of either Gay Family or House/Ball)	3.85	1.69	1.83	1.20	1.56
Involvement (Member of Both)	1.27	4.01	2.08	1.22	1.77
Connectedness: Feel Close to Black Community	3.09	0.43	0.42	0.44	0.52
Social Affiliation Factors					
Clubs/Bars	0.91	1.93	1.61	1.21	1.52
Gyms	0.43	0.61	0.25	0.64	0.65
Public Spaces	1.36	0.54	0.51	0.48	0.58
House/Ball	2.02	8.17**	3.30*	1.26	2.22*
Psychobehavioral Factors					
Combo HIV Meds Make me Less Worried	2.08	1.17	1.06	2.63	1.45
Condomless Sex no Longer Risky due to HIV Meds	1.00	0.28	0.52	0.17	0.43
Enjoy New Sexual Experiences	0.46	0.43	0.42	0.72	0.52
Structural Factors					
Had Close Relative Injured Through Violence	0.62	0.52	0.26*	0.84	0.56
Have Witnessed Attacks	1.04	0.92	0.35	1.42	0.93
Ever Incarcerated	3.41*	3.54**	2.25	2.32	2.28*

#All models controlled for the effects of age*, sexual orientation, education, employment, health coverage, years since HIV diagnosis, drug use, depression*, and homelessness.**
##R = reference group
*P<.05; **P<.01

Conclusions

- Newly described factors associated with increased HIV care continuum engagement include history of incarceration and affiliation with the House/Ball community.
- Few variables were associated with viral suppression, and included age (positive association), education (negative), and depression (negative).
- More attention is needed to unique factors associated with HIV care continuum engagement among YBMSM and informed interventions to impact all stages of the continuum.

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