

# Sex Partner Meeting Venues and HIV Transmission Risk Factors among Newly Diagnosed HIV-Infected Urban MSM: Implications for Targeted Control Strategies

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## Introduction

Men who have sex with men (MSM) account for more than half of all new HIV infections in the US annually. National trends are mirrored in Baltimore which ranks among US cities with the highest HIV incidence.

Targeted control strategies, including identifying sex partner meeting venues/ types with ongoing HIV transmission and patron characteristics associated with HIV risk are needed. These characteristics include high viral load (>1,500 copies/ml), substance use, multiple sex partners, and co-morbid STIs.

The internet and, most recently, mobile technologies as sex partner meeting venues have been associated with some of these HIV risk factors among MSM. Surveillance efforts, however, traditionally focus on physical venues which may miss key places for targeted control.

## Objective

The objective of this study was to identify associations between individual demographic characteristics, and risk factors by sex partner meeting venue type utilization patterns among newly diagnosed HIV-infected MSM.

## Methods

Using retrospective surveillance data reported to the Baltimore City Health Department (BCHD) from 2011-2014, we compared characteristics and, in a sub-analysis, available viral load data (Oct 2012 to July 2014) of individuals based on their report of using internet only, place only, or internet and place sex partner meeting venues.

BCHD HIV surveillance practices include client interviews during which data on sex partner meeting venues and number of sex partners for the last 12 months are collected. Viral load and biologic samples for STI testing are also collected at diagnosis.

509 MSM were diagnosed during the study period, 424 (83%) of these had interview records, and 280 (55%) had sex partner meeting venue data.

Sex partner meeting venue types from available interview data were coded as internet only, place only (including bar/club, market/store, street, neighborhood, house/apartment, school, or park) or internet and place.

We ran Chi-square statistics to determine differences in individual demographic characteristics, number of sex partners, substance use, co-morbid STI and viral load at diagnoses by reported sex partner meeting venue type.

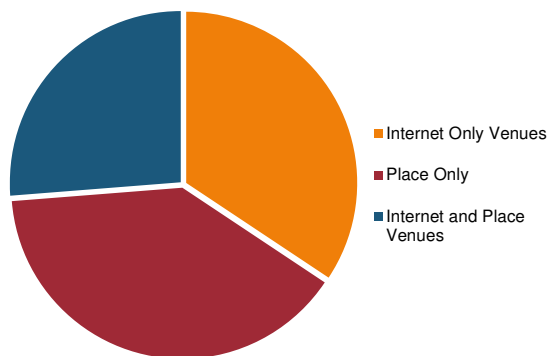
## Results

**Table 1. Demographic Characteristics of newly diagnosed HIV-infected MSM in Baltimore City by Sex Partner Meeting Venue Type, 2011-2014 (N=280)**

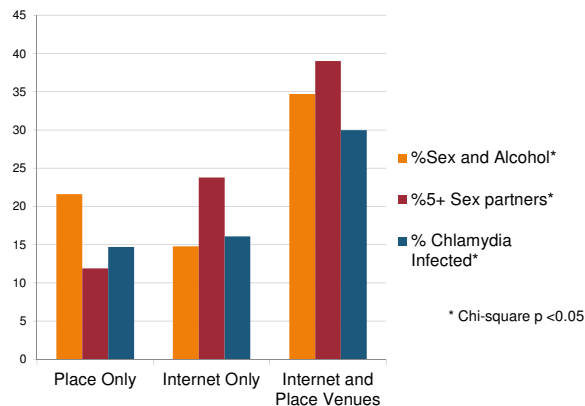
Characteristic	Total	Place Only	Internet only	Internet and Place
<b>Total n (%)</b>	<b>280 (100)</b>	<b>110(39)</b>	<b>96(34)</b>	<b>74 (26)</b>
<b>Age</b>				
16-24 Years	135 (48)	51 (46)	45 (47)	39 (53)
25-34 Years	98 (35)	37 (34)	37 (39)	24 (32)
35-44 Years	28 (10)	11 (10)	10 (10)	7 (10)
45-54 Years	16 (6)	9 (8)	3 (3)	5 (5)
55+ Years	3 (1)	2 (2)	1 (1)	0 (0.0)
<b>Race/ethnicity</b>				
Black Non-Hispanic	171(84)	80 (87)	65 (81)	26 (84)
White Non-Hispanic	25 (12)	11 (12)	11 (14)	3 (10)
Other	7 (4)	1 (1)	4 (5)	2 (6)

## Results

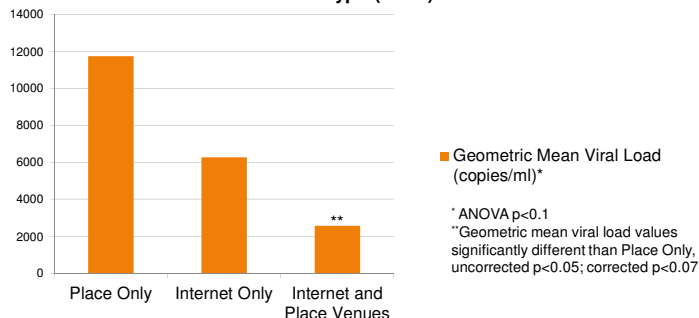
**Figure 1: Reported Sex Partner Meeting Venue Types Last 12 months (N=280)**



**Figure 2: Sex Risk Characteristics Based on Reported Sex Partner Meeting Venue Type (N=280)**



**Figure 3: Viral Load at Diagnosis by Sex Partner Meeting Venue Type (N=45)**



## Conclusions

MSM meeting sex partners at both venue types may be at greater risk for HIV transmission based on greater sex partners, sex under the influence of alcohol and chlamydia co-infection.

Viral load data suggest equally high viral (>1,500 copies/ml) load across types; but significantly lower viral load among users of both venue types which may suggest later diagnosis which increases transmission risk..

Exploring this population may improve understanding of Baltimore's MSM epidemic and provide novel targets for HIV control efforts.