

**Title:**

Polysubstance Use, Decision Making, and Geosocial Networking App Use Among MSM

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**Session Title:**

Evidence-Based Practice Poster Session 2

**Slot (superslotted):**

EBP PST 2: Saturday, 29 July 2017: 12:00 PM-1:30 PM

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**Keywords:**

MSM, Sexual behavior and Substance use

**References:**

Benotsch, E. G., Snipes, D. J., Martin, A. M., & Bull, S. S. (2013). Sexting, substance use, and sexual risk behavior in young adults. *Journal of Adolescent Health, 52*(3), 307-313.

Beymer, M. (2012). Grindr and other geosocial networking applications: Advent of a novel, high-risk sexual market place. *2012 National STD Prevention Conference*,

Centers for Disease Control and Prevention. (2014). *Diagnoses of HIV Infection in the United States and Dependent Areas, 2011, HIV Surveillance Report, 2013, Vol.23*,

Centers for Disease Control and Prevention. (2016). Lifetime risk of HIV infection.

Fisher, J. D. (1988). *Possible effects of reference group-based social influence on AIDS-risk behavior and AIDS-prevention*. American Psychological Association.

Goedel, W. C., Halkitis, P. N., & Duncan, D. T. (2016). Behavior-and partner-based HIV risk perception and sexual risk behaviors in men who have sex with men (MSM) who use geosocial-networking smartphone applications in new york city. *Journal of Urban Health, 93*(2), 400-406.

Holloway, I. W. (2015). Substance use homophily among geosocial networking application using gay, bisexual, and other men who have sex with men. *Archives of Sexual Behavior, 44*(7), 1799-1811.

Latkin, C., Mandell, W., Oziemkowska, M., Celentano, D., Vlahov, D., Ensminger, M., & Knowlton, A. (1995). Using social network analysis to study patterns of drug use among urban drug users at high risk for HIV/AIDS. *Drug and Alcohol Dependence, 38*(1), 1-9.

Lehmiller, J. J., & Iorger, M. (2014). Social networking smartphone applications and sexual health outcomes among men who have sex with men. *PLoS One*, 9(1), e86603.

Lyons, A., & Hosking, W. (2014). Health disparities among common subcultural identities of young gay men: Physical, mental, and sexual health. *Archives of Sexual Behavior*, 43(8), 1621-1635. doi:10.1007/s10508-014-0315-1

Phillips II, G., Magnus, M., Kuo, I., Rawls, A., Peterson, J., Jia, Y., . . . Greenberg, A. E. (2014). Use of geosocial networking (GSN) mobile phone applications to find men for sex by men who have sex with men (MSM) in Washington, DC. *AIDS and Behavior*, 18(9), 1630-1637.

Rice, E., Holloway, I., Winetrobe, H., Rhoades, H., Barman-Adhikari, A., Gibbs, J., . . . Dunlap, S. (2012). Sex risk among young men who have sex with men who use Grindr, a smartphone geosocial networking application. *Journal of AIDS & Clinical Research*, 2012

Scott-Sheldon, L. A., Carey, K. B., Cunningham, K., Johnson, B. T., Carey, M. P., & MASH Research Team. (2016). Alcohol use predicts sexual decision-making: A systematic review and meta-analysis of the experimental literature. *AIDS and Behavior*, 20(1), 19-39.

Stall, R., & Purcell, D. W. (2000). Intertwining epidemics: A review of research on substance use among men who have sex with men and its connection to the AIDS epidemic. *AIDS and Behavior*, 4(2), 181-192.

#### **Abstract Summary:**

Little is known about the associations of polysubstance use and decision-making process among men who have sex with men in the realm of geosocial networking applications use. This poster presentation will provide background to this unique venue for risky sexual behavior.

#### **Learning Activity:**

LEARNING OBJECTIVES	EXPANDED CONTENT OUTLINE
Understand the use of geosocial networking applications among men who have sex with men.	Explain what geosocial networking applications are Describe how are they used
Identify associations and motivations among polysubstance use and risk-taking among men who have sex with men and whether these differ among people who utilize geosocial networking applications versus those who do not	Identify motivators for polysubstance use Explain does substance use contribute to risky sexual behavior
Compare polysubstance use patterns among those who utilize geosocial networks applications versus those who do not.	Describe differences in polysubstance use patterns

#### **Abstract Text:**

Men who have sex with men (MSM) exhibit the greatest risk for HIV and are disproportionately affected by HIV infection. At current rates, 1 in 6 MSM will be diagnosed with HIV in their lifetime, including 1 in 2 black MSM, 1 in 4 Latino MSM, and 1 in 11 white MSM. MSM account for 55% of people living with HIV in the United States in 2013. While it is estimated that MSM represents 2% of the male population in the US, this group accounts for 66.7% of HIV infections diagnosed in 2014 <sup>2</sup>. From 2005 to 2014, HIV diagnoses steadily decreased in the United States by 19%, however, the incidence continues to rise among MSM

aged 13 and older. Among males, MSM accounted for 83% (29,418) of the estimated new HIV diagnoses. Within this sexual minority group, diagnoses rates continue to rise among certain racial/ethnic minority populations (e.g., African American and Hispanic/Latino MSM) in contrast to the noted drop among other racial/ethnic groups .

Geosocial networking (GSN) applications (e.g., Grindr, Scruff, and Jack'd) have become a new environment through which young MSM can meet potential sex partners. Smartphones and GSN applications have changed the traditional paradigm for identifying sexual partners and provides new means for MSM to locate partners outside of traditional venues. GSN applications facilitate the identification of sex partners nearby. Sexual encounters between MSM are often expedited by the use of these GSN. These meetings may occur quickly, with little discussion of each partner's HIV status or sexual history. Users of these applications may rely on incorrect perceptions of what types of people are HIV-positive to make decisions regarding their sexual practices with their potential partners. The role that GSN applications play in potential exposure to HIV among young MSM is of particular interest given that MSM in the 13 to 24 year age group accounted for 92% of new HIV diagnoses among this age group overall, and 27% of new diagnoses among all gay and bisexual men.

Little is known about the associations of polysubstance use and decision-making process among MSM in the realm of GSN applications use. Social networks may influence members' sexual behavior via social comparison, social sanctions and rewards, socialization, and information exchange. These processes may be exacerbated/confounded by polysubstance use, but has not been extensively studied. It is known that alcohol and substance use among MSM is a significant predictor of risky sexual behavior. Moreover, alcohol consumption directly affects sexual-decision making and is associated with increased risk behaviors linked to HIV infection. One study found that the effects of alcohol on intentions to engage in unprotected sex were stronger when sexual arousal was heightened. Additionally, alcohol consumption, particularly binge drinking, has been significantly associated with more unplanned sexual encounters and can also affect sexual communication and negotiation.

Many of the studies evaluating polysubstance use and decision making among MSM were conducted before 2009, before new technologies, particularly GSN applications were developed and broadly adopted. Thus, these studies did not consider or evaluate the implications of substance use in association with sex-seeking behaviors among MSM specifically within the context of GSN application utilization. Additionally, some of these GSN applications target varying subcultural identities of MSM, highlighting the heterogeneity of this population that is often overlooked <sup>10</sup>. Given that GSN applications are increasing in popularity as a means of meeting sexual partners, further research in this area is warranted to aid the development of novel and effective HIV/STI prevention programs.