

# Current Literature on Substance Misuse Interventions to Mitigate HIV Seroconversion Among High-Risk Youth MSM

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## Problem

- HIV prevalence is highest among the MSM community with youth MSM at increased risk of seroconversion due to increased rates of risky behaviors that have gone inappropriately addressed. This population has been left vulnerable through healthcare discrepancies and unique mental health challenges, alongside high-risk behaviors including polysubstance misuse, inconsistent condom use, and multiple sexual partners. Risk modification is critical to HIV prevention however, limited research exists surrounding targeted interventions to address substance misuse within MSM communities.

## Background

- In 2020, 71% of new HIV infections were among MSM (54% Black identified and 27% Latino identified).
- Alcohol and illicit drug misuse are known risk factors for HIV acquisition given their cognitive impairment capabilities which can lead to impaired judgement and risk perception.
- Impaired judgement results in increased sexual drive, number of casual partners, condomless anal intercourse, group sex, sex exchange, and sexual violence.
- A large proportion of youth MSM studied have self-reported recent alcohol or illicit drug use prior to sexual intercourse.
- Most common substances include alcohol, cannabis, amyl nitrite (poppers), ecstasy, amphetamines, and ketamine.
- Reasons for substance misuse stem from peer influence, social normalization, societal discrimination, and maladaptive coping strategies secondary to unique mental health challenges.
- Current research aims to reduce HIV seroconversion through targeted interventions that focus on substance misuse as a method of risk mitigation. This is being done through tailored face-to-face counseling, electronic screenings and intervention access, and developing adaptive coping strategies to foster a self-help system.

## Research

### Drug and Alcohol Link to High Risk Sex

- Zhang et al. gathered data through questionnaires in China to investigate sexual behaviors, substance use, and STI transmission within the MSM population.
- Around 21% of participants used club drugs and 32% drank alcohol before engaging in sexual intercourse within the past 6 months.
- Substance use was significantly associated with higher odds of HIV prevalence (16% in substance use group compared to 11% in non-substance use group,  $p < 0.05$ ).
- Syphilis prevalence was also recorded and was not significant (felt to be due to increased healthcare access and treatment within urban landscapes).
- Amount of alcohol consumed or rate of polysubstance use was proportional to the rate of condomless anal intercourse and number of partners.

### Polysubstance Use – Black and Latino MSM

- Cross-sectional study examined participations of the PUSH study – aimed to promote HIV prevention and PrEP use among Black and Latino youth in urban areas.
- 76% of participants reported alcohol use, 76% reported cannabis use, and 23% reported other illicit drug use with 19-47% reported polysubstance use (depending on drug types).
- Black and Latino MSM were found to be at greater risk of behaviors associated with increased HIV transmission:
  - Inconsistent condom use – 1.99x
  - Pressured to engage in condomless sex – 2.67x
  - Older partner – 2.10x
  - Drug use associated with decreased PrEP adherence

### Help-Seeking Interventions

- Two studies examined the efficacy of targeted treatments to reduce substance misuse including electronic screenings, motivations interviewing, and SBIRT.
- Both studies found no significant reduction in substance use however, one study reported reduction in reported condomless anal intercourse.

## Solution

- The current proposed solution to reduce new HIV transmission is to focus on risk mitigation through substance use screening and early intervention. Risky behavior screenings (e.g. AUDIT questionnaire) should take place at STI screening and PrEP care sites for improved identification of at-risk youth MSM. Interventions should be tailored and utilize motivation interviewing strategies, SBIRT, and longitudinal face-to-face approaches.

## Conclusions

- Youth MSM, especially Black and Latino men, remain vulnerable to HIV acquisition through high-risk sexual behaviors despite identifiable risk factors including substance misuse. Youth MSM were found refractory to proposed targeted interventions, theorized due in part to lack of support interest, downplaying mental health, internalized shame, and financial strain. These complex social and structural factors continue to limit healthcare access within this demographic and acknowledgement of this difficult topic should be recognized by healthcare providers. Screening for high-risk behaviors should continue despite these results, and an intersectional approach is imperative when managing the individualized healthcare of youth MSM.

## References

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