Harmful alcohol use and sexual risk behaviours among men who have sex with men
Impact of harmful alcohol use on health outcomes among MSM

- A National U.S. HIV Behavioral Surveillance System from 21 cities showed that 50% of all MSM reported binge drinking in the past 30 days (Finlayson 2008)

- Alcohol use is associated with greater odds of engaging in condomless anal intercourse (Woolf 2009, Lim 2012, Woolf-King 2013)

- Studies conducted with people living with HIV also highlight that unhealthy drinking is associated with:
  - Elevated viral load (Hendershot 2009, Conen 2013, Carrico 2011)
  - Potentially faster HIV disease progression (Baum 2010)
Alcohol and HIV: Causal considerations

• There is a strong association between HIV and alcohol consumption, however there is not enough evidence for a causal connection.

• It is not clear whether personality traits (e.g. sensation seeking or sexual compulsivity) and psychiatric disorders (e.g. antisocial personality disorder) impact alcohol consumption and risky sex.

• In terms of worsening the disease course of HIV – there is enough evidence to support a causal impact of alcohol. Specifically, alcohol affects the immune system, thus contributing to a worsened course of HIV.

• Alcohol negatively impacts on behaviours that include support seeking and medication adherence.

Shuper 2010
• An abundance of studies have identified a correlation between alcohol use and HIV infection (Carrico 2016)

• Behavioural interventions are needed to explicitly address the role of alcohol use as driver of condomless anal intercourse (Carrico 2016)

• A minority of men who have sex with men develop alcohol use disorders that require intensive treatment (Carrico 2016)

• Many men who have sex with men experience overlapping psychosocial health comorbidities such as childhood sexual abuse, depression, and sexual compulsivity that serve as triggers for unhealthy drinking (Marshall 2015)
Alcohol and HIV risk behaviours

- A 2016 systematic review of 12 randomized control trials (RCTs) for reducing condomless anal intercourse among substance-using men who have sex with men
- 5 of 12 studies on alcohol
- Most effective interventions in reducing condomless anal intercourse and substance use occurred among men who have sex with men who had lower severity of substance use disorder symptoms

Critical Review: Epidemiology and Prevention

When the Party is Over: A Systematic Review of Behavioral Interventions for Substance-Using Men Who Have Sex with Men

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Abstract: Alcohol problem-related patterns of alcohol and other substance use are prevalent drivers of the HIV/AIDS epidemic. Although interventions are needed for substance-using men who have sex with men (MSM), recent reviews of 12 randomized control trials (RCTs) for reducing anal intercourse among substance-use disorders (AUD) and HIV-related interventions achieved a 20% to 40% decrease in HIV incidence among young MSM ages 13-19 years, which was substantially higher than in the general population. The aim of this systematic review was to identify effective interventions for reducing condomless anal intercourse and substance use among those who have lower severity of substance use disorder symptoms. Although behavioral interventions for MSM are an important component of HIV/AIDS prevention, further research is needed to refine the efficacy of these interventions for preventing HIV transmission. Multimodal interventions have been shown to be more effective than single-component interventions and may be more effective in reducing substance use and HIV transmission. The authors discuss the need for comprehensive, integrated approaches to targeting substance use disorders among men who have sex with men (MSM)."
Interventions addressing alcohol use among MSM – Personalized Cognitive Counseling (Coffin 2014, Santos 2014)

- **N=326, San Francisco, 6 month follow-up**
- **Intervention**: Personalized Cognitive Counselling (PCC) - individualized 30-50 min session adapted for episodic substance using MSM
- **Results**: Those randomized to PCC more likely to report abstaining from alcohol (RR=0.93, 95% CI=0.89-0.97; p<0.001), as well as marijuana, and erectile dysfunction drug use
- Also significantly associated with reduction in frequency of alcohol intoxication (OR=0.58; 95% CI=0.36–0.90)
Interventions addressing alcohol use among MSM – Cognitive–Behavioral Therapy (Shoptaw 2008)

- N=128 Los Angeles; 17, 26, and 52 week follow-ups but **low number** of alcohol using participants (n=10)
- **Intervention**: Cognitive–behavioral therapy (GCBT, 48 group sessions) vs. gay-specific social support therapy (GSST, three weekly group sessions)
- **Results**: Both GCBT and GSST conditions produced similar two-fold reductions in substance use sustained one year after baseline
- No overall statistically significant differences were observed between groups along retention, substance use, or HIV-related sexual risk behaviours
- **Conclusion**: GCBT produces reliable, significant, and sustained reductions in stimulant use and sexual risk behaviours
Interventions addressing alcohol use among MSM – Integrated Motivational Interviewing and Peer Group Sessions (Velasquez 2009)

- N=253 HIV+ MSM Texas: Exclusively MSM with alcohol use disorders: 3, 6, 9, 12 month follow-ups

- Intervention: Mixed-format intervention to integrate (a) individual motivational interviewing-based sessions designed to promote alcohol abstinence and (b) Four peer group sessions to promote consistent use of condoms

- Results: Participants in the intervention group drank 1.38-fewer drinks per 30-day period than participants in control group (OR=1.38; 95% CI 1.02–1.86)
  - Participants in the control group had a higher number of heavy drinking days per 30-day period by a factor of 1.5 (OR=1.5; 95% CI 1.08–2.10)
  - Control group had twice the number of at-risk behaviour days than those in intervention group (OR=2.19; 95% CI 1.17–4.11).

- Conclusion: Integrated interventions may achieve enhanced patient outcomes in reduction of both alcohol use and risky sexual behaviour
Interventions addressing alcohol use among MSM – Small group discussion vs. Brief individual counselling (Kurtz 2013)

- N=515 South Florida (Miami/Ft. Lauderdale); 3, 6, 12 month follow-ups
- **Intervention:** Weekly four-session small group sexual and substance use risk reduction intervention vs. brief single session (40 minute) individual counselling
- **Results:** Effect sizes for sexual risk and substance use outcomes were moderate to large in both groups:
  - HIV transmission risk frequency, $d=0.71$ control vs. 0.66 intervention group
  - Number of anal sex partners, $d=1.04$ vs. 0.98
  - Substance dependence symptoms, $d=0.49$ vs. 0.53
- **Conclusion:** Similarity of effects between study arms suggests that brief interventions delivered in the context of an office staffed by peers enable even very high risk MSM to access mechanisms to reduce risk.
Interventions addressing alcohol use among MSM – Group counselling (Mansergh 2010)

- N=1,686 Chicago, Los Angeles, New York City and San Francisco: 3, 6, 12 month follow-ups
- **Intervention:** Six 2-hour group sessions focused on reducing substance use and sexual risk behaviour

**Results:** Outcomes for the two-arm comparisons were not significantly different at any time points:
- Alcohol use soon before or during unprotected anal sex OR= 1.06, CI =0.75–1.49
- Unprotected anal sex, OR=1.14, 95% CI=0.86–1.51

**Conclusion:** Critical challenges for the field of HIV behavioural interventions
• High rates of alcohol use are observed among men who have sex with men
• Addressing alcohol use among this population is key as there is a strong correlation between alcohol use and poorer health outcomes, particularly among people living with HIV.
• Several interventions have been shown to be effective in addressing alcohol use and risky sexual behaviours among men who have sex with men. These include:
  • Personalized Cognitive Counselling
  • Gay-specific social support therapy
  • Integrated interventions/mixed-format (alcohol + risky sexual behaviours) – Motivational interviewing sessions combined with peer group sessions
Thank you!

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