THE CURRENT STATE OF DRUG USE AMONG AUSTRALIAN GAY AND BISEXUAL MEN: FACTORS ASSOCIATED WITH DRUG USE, INITIATION, AND DEPENDENCE

Mohamed A. Hammoud¹, Garrett P. Prestage¹, Adam Bourne, Lisa Maher¹, Fengyi Jin¹, Bridget Haire¹, Toby Lea², Louisa Degenhardt³, Peter Saxton⁴, Nicky Bath⁵, Brent Mackie⁵, Colin Batroyney²

¹The Kirby Institute, UNSW, Sydney, Australia, ²Centre for Social Research in Health, UNSW Sydney, Australia, ³National Drug and Alcohol Research Centre, UNSW Sydney, Australia, ⁴University of Auckland, New Zealand, ⁵ACON NSW, Australia, ⁶Victorian AIDS Council, Australia.

Presenter’s email: Mohamed A. Hammoud – mhammoud@kirby.unsw.edu.au

Nominated Chair: Mohamed A. Hammoud & Brent Mackie

Chair’s email address: mhammoud@kirby.unsw.edu.au bmackie@acon.org.au

Aim of Abstract:

The prevalence of licit and illicit drug use among gay and bisexual men (GBM), in Australia and internationally, is higher than in other population groups. GBM often use illicit drugs to enhance sexual pleasure, commonly referred to as ‘chemsex’ or ‘party n play.’ The links between chemsex and HIV risks, and dependent use, have led to considerable attention and concerns about its role in gay communities, and calls for new harm reduction approaches.

Intensive sex partying among GBM involves the use of drugs for sex and adventurous sex play and has been associated with HIV risk in GBM. Knowing the circumstances in which GBM commence, and stop, using drugs, and the role of dependence, is a key concern in understanding risk among GBM, both in relation to sex and in relation to drug use.

Since 2014, the Flux Study has been collecting and analysing data from 4000 GBM about their drug use. Flux (‘Following Lives Undergoing Change’) is being conducted nationally and is among the first in the world to report on the incidence of drug initiation among GBM. Flux explores, in detail, the contexts and consequences of, and motivations for, drug use, over time.

Given the current media and community attention to chemsex, this symposium will dedicated session to address the context in which party drugs are used, how social engagement influenced drug use and drug using norms, harm reduction strategies, and predictive factors for initiating use and dependence. This session will showcase the internationally unique Flux Study data.

Presentation 1: Gamma-hydroxybutyrate (GHB) used for chemsex and its association to HIV risk behaviours and overdose

Hammoud MA¹, Bourne A², Maher L¹, Jin F¹-Haire B¹, Lea T³, Degenhardt L⁴, Grierson J⁵, Prestage G¹

¹The Kirby Institute, UNSW Sydney, Australia, ²Australian Research Centre in Sex, Health & Society, La Trobe University, Melbourne, Australia, ³Centre for Social Research in Health,
**Introduction and Aims:** Gamma-hydroxybutyrate (GHB) is becoming an increasingly popular drug used for chemsex, which has been implicated in HIV infection risk among GBM. We investigate factors associated with GHB use, and its negative consequences.

**Design and Methods:** Flux is an online prospective observational study of Australian GBM. To determine factors associated with GHB use and its association to overdose, we use binary logistic multiple regression to estimate adjusted odds ratios (aOR) and associated 95% confidence intervals (95%CI).

**Results:** Among a sample of 3190 GBM, one in five men (19.5%) had a history of GHB use and 5.4% reported use within the past 6 months, with 2.7% having used it monthly or more frequently. Sex as their motivation for using GHB (65.1%).

GHB use in the previous 6 months was independently associated with: Being HIV-positive (aOR=1.63; 95%CI=1.03-2.56); having more gay friends; greater social engagement with gay men who use drugs (aOR=2.16; 95%CI=1.96-2.38); a greater number of sexual partners (aOR=1.00; 95%CI=1.00-1.01); group sex (aOR=1.88; 95%CI=1.36-2.60); and condomless anal intercourse with casual partners (aOR=3.43; 95%CI=2.07-5.70).

Overdose was experienced by 34.2% of all GHB users in their lifetime. This was more common among men who used GHB at least monthly (aOR=1.82; 95%CI=1.08-3.01).

**Conclusions:** Men who used GHB frequently, were at greater risk of overdose. GHB use should be considered alongside other drugs that have been implicated in sexual risk behaviour and HIV transmission. Harm-reduction interventions, including PrEP eligibility guidelines, need to consider the particular impact of frequent GHB use.

**Presentation 2: The new MTV generation: Using Methamphetamine, Truvada, and Viagra to enhance sex and stay safe.**

Hammoud MA¹, Vaccher SJ¹, Bourne A², Haire BG¹, Lea T³, Maher L¹, & Prestage G¹

¹The Kirby Institute, UNSW Sydney, Australia, ²Australian Research Centre in Sex, Health & Society, La Trobe University, Melbourne, Australia, ³Centre for Social Research in Health, UNSW Sydney, Australia

**Introduction and Aims:** The use of methamphetamine and Viagra™ are strongly predictive of incident HIV infection among gay and bisexual men (GBM). Truvada™, as pre-exposure prophylaxis, virtually eliminates HIV risk during condomless anal intercourse (CLAI). We describe the prevalence and context of concurrent use of methamphetamine (M), Truvada™ (T), and Viagra™ (V); collectively MTV.

**Design and Methods:** Flux is an online prospective observational study drug use among GBM. 1831 HIV-negative GBM provided details about their use of MTV. Binary logistic multiple regression were used to estimate adjusted odds ratios (aOR) and associated 95% confidence intervals (95%CI).

**Results:** MTV use was reported by 6.0% of participants; 3.1% used methamphetamine and Viagra™ (‘MV only’) and 11.2% used Truvada™ (‘T only’). Compared to use of ‘MV only’,
MTV was independently associated with CLAI with casual partners (aOR=6.78;95%CI=1.42–32.34) and ‘fuckbuddies’ (aOR=3.47;95%CI=1.41–8.56) in the previous six months. Compared to use of ‘T only’, MTV was independently associated with being older (aOR=3.95;95%CI=1.55–10.03) and engaging in group sex (aOR=3.31;95%CI=1.82–6.00). Greater social engagement with other gay men (aOR=1.44;95%CI=1.18–1.76) and having more sexual partners (aOR=2.30;95%CI=1.10–4.82) were independently associated with use of MTV compared to use of ‘MV only’ or ‘T only’.

**Conclusions:** The addition of PrEP mitigates the increased HIV risk associated with party drug regimens, and these data demonstrate that this harm reduction strategy is being utilised by GBM. Interventions that promote harm reduction strategies, including the use of PrEP during chemsex could help reduce HIV transmissions within this at-risk population.

**Presentation 3: Incidence and predictors of the initiation of methamphetamine use among gay and bisexual men**

Hammoud MA¹, Bourne A², Maher L¹, Jin F¹, Haire B¹, Lea T³, Prestage G¹

¹The Kirby Institute, UNSW Sydney, Australia, ²Australian Research Centre in Sex, Health & Society, La Trobe University, Melbourne, Australia, ³Centre for Social Research in Health, UNSW Sydney, Australia

Presenter’s email: Mohamed A. Hammoud – mhammoud@kirby.unsw.edu.au

**Introduction:** Crystal methamphetamine (MA) use among gay and bisexual men (GBM) is higher than in other populations. MA has also been implicated in HIV transmission and drug dependency among GBM. We use data from a cohort study to investigate prior behaviours and conditions that subsequently predict GBM initiating MA.

**Methods:** 1710 men enrolled in the Flux cohort study of drug use among GBM. 1328 men completed at least one follow-up interview. We identified factors predicting MA initiation at follow-up.

**Results:** Between baseline and 2-year follow-up: 81.8% had never used MA, 9.6% reported continuous use, 4.0% had ceased use at follow-up, and 4.6% had initiated use at follow-up.

Compared to GBM who never initiated MA, those who initiated MA after baseline were more likely to be younger (HR:0.97;95%CI:0.94-0.99) and more socially engaged with GBM who used MA (HR:1.52;95%CI:1.17-1.98). They were also more likely to use drugs (other than MA) for sex (HR:2.61;95%CI:1.20-5.66) and more likely to have sex with men who used MA during sex (HR:2.38;95%CI:1.00-5.65).

**Conclusions:** Men who were younger, had gay friends or had sex with men who used MA, and used other drugs to engage in sex, were more likely to commence MA use themselves. Exposure to, and feeling comfortable around MA use within friendship networks increases the likelihood of MA use. The normalisation of MA use among social networks appear to play an influencing factor on MA initiation. Interventions need to consider using social networks to inform safe use and mitigate against the potential risk of dependence.

**Presentation 4: What behaviours predict crystal methamphetamine dependence among gay and bisexual men in Australia?**

Hammoud MA¹, Bourne A², Maher L¹, Jin F¹, Haire B¹, Lea T³, Degenhardt L⁴, Prestage G¹
Presenter's email: Garrett Prestage – gprestage@kirby.unsw.edu.au

Introduction: Gay and bisexual men (GBM) use most illicit drugs at higher rates compared to their male heterosexual counterparts. The use of crystal has been associated with growing concerns about dependence within this population.

We use data from a cohort study to investigate prior behaviours that subsequently predict dependent crystal use.

Methods: A total of 295 GBM provided follow-up data on crystal use. We used the Severity of Dependence Scale (SDS) to measure crystal dependence.

Results: Crystal use, between 2014 to 2017 remained steady; 13.1% to 10.5%. Among those who recently used crystal, 6.8% (n=95) were categorized as dependent uses.

Compared to men who showed no evidence of dependence at follow-up, those who showed some evidence of dependence were more likely to have previously been socially engaged with other gay men who use crystal (HR=1.37;95%CI=1.11-1.57) and were more likely to report having previously used crystal to enhance their sexual experiences (HR=5.09;95%CI=1.20–21.54). Most (60.8%) categorised as dependant users reported having used crystal at least monthly compared with 27.9% of non-dependent users (p<0.001).

Conclusions: Among GBM, social networks and chemsex appear to play a key role in crystal use developing into dependence: those who become dependent tend to be socially engaged with other crystal users and use crystal for sex. This suggests that the normalization of crystal use, especially in a sexual setting, may be key to understanding how dependence develops. Interventions need to consider how social networks influence these behaviours to mitigate against the risk of dependence.

Discussion Section
The results presented in this symposium will provide evidence to underpin practical recommendations for health promotion programs and policy to improve the targeting within local gay communities, and to promote sustainable behaviour change.

Attendees will have a greater understanding of the context of, and motivations for, chemsex among Australian GBM. Specifically, they will be among the first to see international and unique findings that look at:

- Prevalence and incidence of use of specific party drugs
- Chemsex, PrEP, and harm reduction
- Sexual, psychological, and social factors that predict the initiation and dependence of methamphetamine.

Disclosure of Interest Statement:
The Flux Study is funded by an Australian Research Council Discovery Project. In 2018, this study was partly funded by the Gilead Australia Fellowship: Research Grants Program. Gilead Australia Fellowship had no input in the data collection, analysis, interpretation, or presentation of any findings.