**Response to the Hammoud at al paper on ‘the new MTV generation’**

Authors: Mitzy Gafos1, Julie Chas2, Gilles Pialoux2,3

1 Faculty of Public Health and Policy, Department of Global Health and Development, London School of Hygiene and Tropical Medicine, London, UK.

2 Infectious Diseases Unit, Hopital tenon, Paris, France.

3 Paris Sorbonne University, Paris, France.

The Hammoud paper published in this series is the first to explore PrEP use in the context of the sexualised use of drugs among MSM outside of a clinical trial setting. PrEP is extremely effective at preventing HIV during anal sex when using daily or event-based dosing regimens (1-5). Event-based dosing involves taking two tablets between 2 to 24 hours before potential exposure, a third tablet 24 hours later and a fourth 24 hours after that, with daily dosing until at least two days after the last potential exposure. The offer of immediate ARV treatment for positive individuals and the offer of PrEP for negative at-risk individuals has resulted in a substantial decline in new HIV infections in a number of cities, including Sydney, as noted in the paper, as well as London, New York and San Francisco (6-10).

The sexualised use of drugs, referred to in this paper as ‘chemsex’, is a growing public health concern and public health agencies are increasingly aiming to monitor and address this growing phenomenon. However, it is important to note that as seen in this paper and the Melendez-Torres paper also in this series, there are still only a minority of MSM reporting the use of drugs most commonly associated with chemsex. Nonetheless, there is compelling evidence suggesting an association with chemsex and high risk sexual behaviour, HIV and HCV infection, which requires further attention (11-13). There is also a growing evidence base on the intravenous use of crystal methamphetamine and other drugs (colloquially referred to as slamming), an issue that is not reported in this paper, and continued HIV acquisition among intravenous drug users in the USA (14).

To date there is very limited literature on the use of PrEP and chemsex. In the PROUD PrEP study in the UK, 44% (231/525) of participants reported using any of the three drugs most commonly associated to chemsex in the 3-months prior to enrolment (36% used mephedrone, 31% GHB/GBL, 18% crystal methamphetamine). In addition, 41% reported the use of Viagra in the same period (15). The use of Viagra as an adulterant to chemsex has been reported elsewhere (16). In the IPERGAY PrEP study in France, 29% (95/331) of participants reported chemsex and interestingly chemsex users were twice as likely to use PrEP the last time they had sex than those who had never used chemsex (17). Not surprisingly, data from PROUD, IPERGAY and the MTV study all demonstrate chemsex use in the context of higher risk sexual behaviours such as numbers of sexual partners, condomless anal sex, and group sex. As such, it has been posited that PrEP, particularly event-based dosing, could play an important role in reducing the risk of HIV during periods in peoples’ lives when they are engaging in chemsex and related higher risk behaviours. The Hammoud paper illustrates that MSM engaging in chemsex are incorporating PrEP into their sexual practice and this is an important area of research in the future.

However, there are a number of methodological limitations to this evaluation which should be addressed in future research. Firstly, the study focuses on the use of methamphetamine in the form of crystal meth or speed. The most commonly used drugs for chemsex are crystal methamphetamine, mephedrone, Gamma-hydroxybutyrate (GHB) and Gamma-butyrolactone (GBL), and to a lesser extent Ketamine. As the authors rightly point out, the choice of drugs during sex differs by cities let alone countries. However, it will be useful to collect data on the same set of drugs consistently across studies in the future for comparative purposes. Secondly, this study collected data on the use of M (methamphetamine), T (Truvada) and V (Viagra) in the last six-months. While ‘MTV’ is an interesting play of a well-recognized acronym, it is not particularly helpful for future discussions. That a side, although the authors report on ‘concurrent use’ within the last six-months, the study was unable to report on simultaneous use of M, T and V. It will be useful to assess PrEP use and adherence during periods of chemsex risk taking in future studies as there are specific concerns about adherence among people engaged in chemsex. In future studies, it will also be useful to understand whether MSM engaging in chemsex are opting for daily or event-based dosing of PrEP. Thirdly, this paper is not able to comment on the temporal relationship between PrEP and chemsex, and as such cannot determine whether MSM engaged in chemsex started using PrEP or if PrEP use preceded entry into chemsex. Certainly, the PROUD data suggested that MSM engaged in chemsex were adding PrEP to their risk mitigation practices, and the trends in drug use and PrEP use in the MTV paper suggest the same. However, with increased access to PrEP there is also a chance that PrEP use may precipitate engagement in chemsex for some people and therefore we may need to not only incorporate PrEP information into services for chemsex users, but also incorporate advice on mitigating the risks around chemsex use into PrEP services.

Evidence is limited on both chemsex and PrEP use and until now there has been no evidence at all on the combined use of chemsex and PrEP outside of clinical trials. As such, this paper is an important contribution to the field. PrEP is now approved in over 20 countries and has the potential to substantially reduce new HIV diagnosis. However, PrEP is not a panacea to HIV and in order to maximise the potential benefits of PrEP it is important to also address the social and structural factors that increase vulnerability to HIV and serve as a barrier to uptake and adherence to both prevention and treatment (18). An integrated sexual health model provides the best opportunity to offer a sex positive service supporting individuals to achieve healthy sex lives including in the context of chemsex, integrate PrEP into broader sexual health services, support MSM to mitigate risks of chemsex, and use the quarterly sexual health visits required for PrEP to screen and promptly treat STIs. As this paper illustrates, PrEP opens up exciting new opportunities for sex positive narratives around safer sex practices including in the context of chemsex.

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