

Sex, Methamphetamine, and a Surge in Syphilis Among Women and Men Who Have Sex With Women: A Call to Diversify Research Addressing Sexualized Drug Use

Contemporary Drug Problems

1–17

© The Author(s) 2026



Article reuse guidelines:

sagepub.com/journals-permissions

DOI: 10.1177/00914509261433267

journals.sagepub.com/home/cdx

Jack Freestone^{1,2} , Krista J. Siefried^{1,2,3,4}, Kerryn Drysdale^{5,6}, Joel Murray^{7,8}, James Ward⁹, Nadine Ezard^{1,2,3}, Brendan Clifford^{1,2,3}, and Adam Bourne^{10,11}

Abstract

Globally rates of syphilis have been increasing since 1990 and, historically transmission has predominated among gay, bisexual, and men who have sex with men (GBMSM). In the past decade, transmission has increased among women and men who have sex with women (MSW). This led Australia to declare syphilis a communicable disease of national significance in August 2025. In this commentary, we consider the implications of these developments on conceptions of sexualized drug use (SDU) and research in this field. To date, discourses surrounding SDU have often focused on GBMSM and the culturally specific practice of chemsex. Yet emerging data outlining an association between methamphetamine use and syphilis transmission across populations may warrant a more inclusive SDU research agenda. In reflecting on this topic, we acknowledge that while the association between methamphetamine use and syphilis transmission may stimulate additional research on SDU, there are

¹National Centre for Clinical Research on Emerging Drugs, University of New South Wales Sydney, Sydney, Australia

²The National Drug and Alcohol Research Centre, the University of New South Wales Sydney, Sydney, Australia

³Alcohol and Drug Service, St Vincent's Hospital Sydney, Australia

⁴Drug and Alcohol Clinical Research and Improvement Network (DACRIN) c/o the Ministry of Health New South Wales, St Leonards, Australia

⁵Centre for Social Research in Health, University of New South Wales, Sydney, Australia

⁶Australian Human Rights Institute, UNSW, Sydney, Australia

⁷Neophile, Albury, Australia

⁸Australian Injecting and Illicit Drug Users League, Sydney, Australia

⁹Poche Centre for Indigenous Health, University of Queensland, Queensland, Australia

¹⁰Australian Research Centre in Sex Health and Society, La Trobe University, Melbourne, Australia

¹¹The Kirby Institute, University of New South Wales, Sydney, Australia

Corresponding Author:

Jack Freestone, National Centre for Clinical Research on Emerging Drugs, University of New South Wales Sydney, Sydney, Australia.

Email: j.freestone@unsw.edu.au

drawbacks associated with this research focusing on sexually transmitted infections (STIs) alone. We look to the literature on GBMSM and chemsex as a blueprint for a potential research agenda on SDU as practiced by women and MSW. Chemsex research was initially spurred by concerns regarding HIV transmission, however, this body of work has expanded over time to traverse domains of health and wellbeing, service delivery, evaluation and critical theory. We suggest that a similarly diverse body of empirical, applied and critical research on SDU is required to shape culturally appropriate, interdisciplinary services that meet the varied information and support needs of women and MSW who use drugs in sexual contexts.

Keywords

syphilis, sexualized drug use, methamphetamine, chemsex, women, men who have sex with women

Overview

This commentary was prompted by the Australian Chief Medical Officer's declaration of syphilis as a communicable disease of national significance (Kidd, 2025). It was also spurred by emerging data indicating an association between syphilis acquisition and recent methamphetamine use among women and men who have sex with women (MSW) (Kidd et al., 2019; Sisnowski et al., 2025). In light of this evidence, we consider the need to diversify and broaden research into sexualized drug use (SDU).

Our commentary is comprised of four key subsections. The first section provides an overview of evidence denoting an association between syphilis acquisition and recent methamphetamine use. Within this section we also briefly comment on theories that attempt to account for associations between drug use and sexually transmitted infections (STIs). The following section describes how research and services addressing SDU have predominantly focused on gay, bisexual, and men who have sex with men (GBMSM) and the culturally specific practice of chemsex. In this section, we note that much research on chemsex (as practiced by GBMSM) has been driven by concerns regarding HIV transmission. The third section of our commentary shows that increasing syphilis notifications among women and MSW reporting methamphetamine use has incited some preliminary attention in research, clinical guidelines, community-based responses, and policy. In this section, we outline an imperative for research that explores syphilis transmission among people who use methamphetamine while highlighting the potential for an exclusive focus on STIs to reinforce stigma. We conclude our commentary with an outline of the multiple realms of contemporary chemsex scholarship. In doing so, we suggest that chemsex research offers a useful blueprint for a diverse body of research addressing SDU as practiced by women and MSW.

To compile this commentary, we drew on the collective expertise of the authorship team comprising researchers with backgrounds spanning clinical services, lived/living experience representation, peer-led programs, harm reduction, sexual health, Aboriginal and Torres Strait Islander populations, drug use, qualitative methods, and critical chemsex studies. This expertise was supplemented by a desk-top review of peer-reviewed and grey literature addressing syphilis notifications, SDU, and chemsex. Our commentary has also been informed by engagement with public health practitioners across Australia and consultation with the Australian Injecting and Illicit Drug Users League (AIVL). AIVL is Australia's national peer-led peak organization representing a network of peer-based harm reduction programs and organizations.

The specific drugs used in the context of sex and terminology used to describe this practice are variable and often geographically determined (Murphy et al., 2024; Stuart, 2019). As will be discussed throughout our commentary, research on this subject has prioritized the sexualized use of methamphetamine and gamma-hydroxybutyrate specifically among GBMSM and has often used the term chemsex to denote this phenomenon (Strong et al., 2022; Stuart, 2019). Several scholars, however, question the

centrality of chemsex and GBMSM to discourses on sex and drugs (Azbel, 2023; Giacalone et al., 2023). Researchers highlight that people of all sexualities and genders use a range of drugs to enhance sex and often use terminology of SDU when describing this practice (Anderson & Norman, 2025; Freestone et al., 2022; Hibbert et al., 2019; Íncera-Fernández et al., 2022; Poullos et al., 2024). With acknowledgement that the terms chemsex and SDU are contested, dynamic, and sometimes interchangeably applied (Poullos et al., 2024), we broadly align the term chemsex with crystal methamphetamine and gamma hydroxybutyrate use among GBMSM. We use the term SDU when referring to a wider range of drugs, used in sexual contexts among people of all sexualities and genders, including women and MSW.

Methamphetamine, Syphilis, and New Populations

Syphilis is an STI that can also be transmitted vertically during pregnancy (Daniels et al., 2024). Syphilis can be asymptomatic and if undetected and untreated, it can develop into secondary or tertiary infection (Peeling et al., 2023). In severe cases, late-stage syphilis may cause blindness, organ failure, brain infections, or death (Australian Department of Health and Aged Care, 2024; World Health Organisation, 2024). When transmitted congenitally, syphilis may result in stillbirth or infant death (Peeling et al., 2023).

The potential severity of syphilis underscores concerns surrounding the persistent rise in syphilis notifications across high income nations over the past 30 years (Tao et al., 2023). Although syphilis continues to disproportionately impact GBMSM (King et al., 2024), rapid increases in syphilis notifications across several nations globally have been observed among women and MSW (Carter et al., 2023; Kidd et al., 2019; King et al., 2024; Public Health Agency of Canada, 2020).

In light of increasing rates of syphilis transmission, cases of congenital syphilis, and cases of infant death, the Australian Chief Medical Officer declared syphilis a communicable disease of national significance in August 2025 (Kidd, 2025). This declaration followed evidence of an overall 200% increase in infectious syphilis notifications between 2014 and 2023, with a seven-fold increase in syphilis notifications among women specifically who now represent 20% of new case notifications (King et al., 2024). This outbreak has particularly affected remote Aboriginal communities (Pérez Chacón et al., 2024). The syphilis notification rate among Aboriginal and Torres Strait Islander people in 2023 was almost five times as high as among non-Indigenous people, and congenital syphilis notification rates among Aboriginal and Torres Strait Islander infants were more than 20 times higher than among non-Indigenous infants (King et al., 2024).

Syphilis Notifications and Recent Methamphetamine Use

Syphilis notification data from several countries increasingly demonstrates that a significant portion of those newly diagnosed with syphilis report recent methamphetamine use (Harney et al., 2025; Kidd et al., 2019; Raval et al., 2022; Shaw et al., 2019). In the Australian state South Australia, 26% ($n = 108$) of people diagnosed with syphilis between July 2022 and September 2023 reported either injecting or non-injecting drug use in the past 12 months (Sisnowski et al., 2025). Among this group, methamphetamine was the drug most commonly reported and overall, women and heterosexuals diagnosed with syphilis had higher odds of reporting drug use than GBMSM (Sisnowski et al., 2025). In 2018 and 2019, among a sample of 2759 people diagnosed with syphilis in Alberta Canada, nearly half (41.8%, $n = 1153$) reported non-prescription stimulant use at any point in their lifetime (Raval et al., 2022). In the United States' National Notifiable Diseases Surveillance System, 16.6% ($n = 456$) of women and 13.3% ($n = 482$) of MSW with syphilis in 2017 reported methamphetamine use within the past year, an increase from 6.2% and 5.0% respectively in 2013 (Kidd et al., 2019). Monitoring of congenital syphilis notifications in the United States similarly demonstrates that those reporting

recent methamphetamine or other drug use are more likely to give birth to an infant with syphilis and are also more likely to have received inadequate pre-natal care (Daniels et al., 2024; Plotzker et al., 2022). Although a seemingly high proportion of people diagnosed with syphilis report recent methamphetamine use, the reliance on self-report to collect these data, stigmas surrounding drug use, the perception that reporting drug use may negatively impact care or bare other negative consequences may mean that methamphetamine use is under-reported in these datasets (Kidd et al., 2019; Pearce et al., 2020).

Evidence on syphilis notifications arising from routine public health monitoring concurs with findings from several discrete studies conducted among people who use methamphetamine. For example, multiple studies conducted among GBMSM (Guerra et al., 2020; Jennings et al., 2021) and people of all sexualities and genders (Liao et al., 2013; Ye et al., 2022) have recorded higher odds of infectious syphilis among people who use methamphetamine.

Theorizing Associations Between Methamphetamine Use and Syphilis Transmission

Syphilis is a bacterial infection usually passed on via contact with an infectious lesion during anal, vaginal, or oral sex (World Health Organisation, 2024). Unlike hepatitis C and HIV, syphilis is not a blood-borne STI and is rarely passed on via shared injection equipment or drug use paraphernalia (Arora et al., 2016; Price et al., 2025; World Health Organisation, 2024). This raises a question as to why methamphetamine use and syphilis cluster together? Because no studies have provided clear evidence of a causal pathway between methamphetamine use and syphilis transmission, it is important to emphasize that evidence of any association is observational (Bryant et al., 2018; Digiusto & Rawstorne, 2013). It has long been well known that STIs disproportionately impact people who use drugs (Murali & Jayaraman, 2018; Price et al., 2025; Reno et al., 2020) and several theories have been mounted in an effort to explain this association.

A social determinants lens on STI transmission among people who use drugs, and in turn, syphilis transmission among people who use methamphetamine, frames the phenomenon as a byproduct of poor environmental conditions, social and economic disenfranchisement, and inequitable systems (Rubin, 2024). When describing surges in syphilis among people who use methamphetamine, researchers may also refer to the interplay between social determinants and syndemic theories (Liao et al., 2014; Liao et al., 2013; Rubin, 2024; Singer et al., 2006). These theories suggest that environmental, structural, and social inequalities give rise to the simultaneous experiences of multiple adverse health outcomes which then compound each other (Ferlatte et al., 2018). For example, in an Australian context, elevated rates of methamphetamine use and STI transmission among remote Aboriginal communities may be mutually associated with compounding factors such as intergenerational trauma, insufficient access to health care, lack of health care capacity, lack of employment, and experiences of ongoing stigma and discrimination (Sivak et al., 2023; Ward et al., 2020).

Moreover, the pharmacological effects of methamphetamine, especially its libido enhancing properties, have been considered in relation to syphilis transmission (Rubin, 2024). People who use methamphetamine often do so for the express purpose of enhancing sex (Cheng et al., 2010; Hammoud et al., 2020). There is a large and growing body of research that documents associations between methamphetamine use and a range of social practices which may carry risks for STI transmission, such as condomless intercourse (Schmidt et al., 2019; Zule et al., 2007), engagement with a greater number of sexual partners (McKetin et al., 2018), and sexual episodes that last for longer than a day (Cheng et al., 2010). Equally, the few studies that have been conducted among women and MSW engaged in SDU suggest that women and MSW who use methamphetamine have more casual sex partners,

report reduced condom use, and engage in prolonged sexual episodes (Cheng et al., 2010; Íncera-Fernández et al., 2022; McKetin et al., 2018; Zule et al., 2007).

Finally, the mechanism underlying this association may be hypothesized with reference to biomedical risk factors. For example, long-term methamphetamine use is known to heighten certain physiological vulnerabilities to syphilis, methamphetamine use reduces immune function (Salamanca et al., 2015) and may also lead to dry mucosal membranes or microtears that enable syphilis to be easily transmitted during sex (Shoptaw & Reback, 2007).

Theories (such as those outlined above) that attempt to explain associations between drug use, sexual practices, and disparate health outcomes have faced substantial critique among critical chemsex scholars. In brief, such theories are critiqued for pathologizing practices, positioning people as vulnerable rather than agentive and eschewing pleasure in favor of risk (Bryant et al., 2018; Pienaar et al., 2018; Race et al., 2017). Moreover, theories that rest solely on biomedical reasoning or that suggest the pharmacological effects of substances *cause* STI transmission have been described as overly deterministic (Race, 2009). Notably Bryant and colleagues remind us that while methamphetamine may facilitate sexual exploration and pleasure, it is important to avoid perpetuating the suggestion that the pharmacological effects of methamphetamine *cause* STI transmission. This slippage fails to account for the social, material, and contextual variations of methamphetamine use (Bryant et al., 2018). Relatedly, research that situates “risky” drug use or sexual practices in the realm of individual choice, or individual susceptibility has been critiqued for neglecting examination of macro-level structural conditions (Hakim, 2019). Overall critiques of behavioral risk frameworks, bio-medical and pharmacological causality suggest that associations between drug use and STIs are not stable and linear but instead relational, emergent, and situated within complex assemblages (Race, 2009; Race et al., 2017).

A Prevailing Focus on GBMSM and Chemsex

SDU as practiced by women and MSW remains relatively unexplored in comparison to chemsex as practiced by GBMSM, with notable exceptions (Azbel, 2023; Cheng et al., 2010; Íncera-Fernández et al., 2022). To date, most research, media, and policy discourses surrounding methamphetamine use and sex have focused on the social practices and experiences of GBMSM (Flynn, 2015; Home Office, 2017; Møller & Hakim, 2021; Tomkins et al., 2018).

In part, the principal focus on chemsex among GBMSM to discourses surrounding sex and drugs may be explained by the seemingly high proportion of GBMSM who use drugs such as methamphetamine to enhance sex (Tomkins et al., 2018). In Australia, cross-sectional surveys conducted among a sample of the general adult population found that approximately 1% reported methamphetamine or amphetamine use within the previous 12 months (Australian Institute of Health and Welfare, 2024). By comparison, surveys conducted among convenience samples of GBMSM consistently report rates of approximately 8% of GBMSM using methamphetamine in the past 6 months (Broady et al., 2025). A cohort study exploring drug use among Australian GBMSM reported that over 80% of GBMSM who had used methamphetamine did so for the explicit purpose of enhancing sex (Hammoud et al., 2020).

The role of HIV must also be considered. GBMSM are at heightened risk of HIV transmission (World Health Organisation, 2025) and concern about the link between chemsex and HIV has incited significant attention on the phenomenon, been leveraged to fund chemsex research and services and overall reified a focus on GBMSM specifically (Drysdale et al., 2020; Grov et al., 2020; Murphy et al., 2024; Pakianathan et al., 2018; Pienaar et al., 2018). Although a direct causal pathway between HIV transmission and chemsex is far from clear (Bourne et al., 2015a; Bryant et al., 2018), studies, policies, and discourses surrounding chemsex often explicitly focus on associations between chemsex, HIV risk behaviors, and HIV transmission (Heritage & Baker, 2022; HM Government, 2017; Maxwell et al., 2019). This said, over the last 10 years the uptake of PrEP among GBMSM, alongside high coverage of HIV treatment and retention in HIV care, appears to ameliorate HIV risk for some GBMSM

who practice chemsex (Hammoud et al., 2020; Hammoud et al., 2018b). Alongside these advances in biomedical prevention, chemsex research has diversified its focus. We outline and consider the implications of this development in a later section of this commentary.

Syphilis-Driven Imperatives for Expanding SDU Research

Just as concerns associated with HIV prompted attention on chemsex among GBMSM, associations between methamphetamine use and syphilis transmission has prompted preliminary attention to the ways in which drugs are being used during sex by women and MSW (Gorman, 2019; Kidd et al., 2019; Liao et al., 2013). In this section, we consider both the rationale for, and drawbacks associated with researching associations between syphilis acquisition and methamphetamine use.

There is a clear rationale for researching associations between methamphetamine use and syphilis transmission. For one, it is particularly important to understand the epidemiology of syphilis and prioritize the groups most impacted for primary prevention and screening. This imperative is heightened by the fact that syphilis can be fatal, but when detected early it is easily treatable. Studies report 90–100% treatment success rates when early-stage syphilis is treated with a single intramuscular injection of penicillin (Clement et al., 2014).

Australian commentators have advocated for clinical guidelines to list drug use (particularly methamphetamine and gamma-hydroxybutyrate) as a standalone indicator for syphilis screening in asymptomatic, sexually active people (Sisnowski et al., 2025). While certain public health strategies now prioritize syphilis prevention, testing and treatment for people who use drugs specifically (Government of Western Australia Department of Health, 2021; U.S. Preventive Services Task Force, 2022), ongoing research is required to inform future policy development and guide the adaptation of clinical guidelines.

This research is particularly key in a context where screening and biomedical prevention technologies are evolving. These advances may offer benefits for groups at elevated syphilis risk; however, research is required to inform how these programs are implemented. For example, there is growing evidence regarding the use of doxycycline as both a post-exposure prophylactic (Doxy-PEP) and pre-exposure prophylactic (Doxy-PrEP) for syphilis and other bacterial STIs (Grant et al., 2020). In the IPERGAY trial Doxy-PEP resulted in an approximately 73% relative reduction in syphilis diagnoses among GBMSM and transgender women (Molina et al., 2018). As a result, guidelines from the Centres for Disease Control in the US now recommend intermittent Doxy-PEP use for GBMSM and transgender women who report a heightened syphilis risk (Bachmann et al., 2024). Doxy-PEP may also be appropriate for people who use methamphetamine, but suitability must be weighed against risks associated with anti-microbial resistance (Kong et al., 2023). Moreover, acceptability among women and MSW who use methamphetamine warrants further investigation.

Drawbacks of a Narrow Focus on STI Risk

Although evidencing associations between methamphetamine use and syphilis transmission may incur benefits, a body of critical chemsex research highlights the negative impacts of discourses which place too much emphasis on associations between drug use and STI risk (Drysdale et al., 2020; Pienaar et al., 2020). Notably, accounts that overwhelmingly problematize practices of chemsex or SDU may disenfranchise people who engage in it by perpetuating stigma (Drysdale et al., 2020; Weatherburn et al., 2017). Furthermore, studies that focus on STI risk alone position participants as vulnerable rather than agentive (Bryant et al., 2018) and eschew the vigilance and care of those who routinely employ harm reduction strategies to extend experiences of pleasure while mitigating risk (Drysdale et al., 2021). When such studies underline relationships between social practices and STIs, they risk reinforcing notions of individual deviance and responsibility and give rise to reductive media coverage and

public health strategies that attempt to induce compliance with social norms via stigmatizing rhetoric (Brown, 2018; Digiusto & Rawstone, 2013).

In the case of syphilis, sensitivities around stigma are particularly significant (Kidd et al., 2019) and may be strongly felt by people who use drugs when having sex. People who combine sex and drugs are often subject to multiple intersecting stigmas associated with drug use, sexual identity, STI, HIV, or hepatitis C status, injecting behaviors and sexual practices which others may deem adventurous, risky, or unusual (Freestone et al., 2025a; Freestone et al., 2025b; Treloar et al., 2021). The detrimental impact of these stigmas may reinforce the anticipation of discrimination within healthcare services (Freestone et al., 2025a) and the onwards disenfranchisement from supportive social networks (Treloar et al., 2021). Given these sensitivities, work must be undertaken to undo rather than perpetuate stigmas, which has implications for research which is conducted at the intersection of drug use and sexual health. The evolution of research focused on chemsex and GBMSM may provide useful lessons on research that is both productive and is conscious of unintended effects.

Drawing Inspiration From the Breadth of Contemporary Chemsex Research

So far, we have outlined evidence of an association between syphilis acquisition and recent methamphetamine use. We have described the literature's prevailing focus on GBMSM and chemsex and we have considered the imperative for further research on the association between methamphetamine use and syphilis. In this final section, we draw attention to a diverse and growing body of chemsex research focused on GBMSM with the intention of indicating the potential for a similarly diverse research agenda focused on SDU as practiced by women and MSW.

We conceptualize contemporary chemsex research along three axes: (1) empirical research on chemsex and health and wellbeing, (2) applied research on tailored and inclusive chemsex services, and finally (3) critical and cultural chemsex studies. In turn, we suggest that research on SDU among diverse populations must similarly encompass three axes and meaningfully engage people with lived-living experience at all stages (Australian Injecting and Illicit Drug Users League, 2025).

Chemsex Health and Wellbeing

Empirical research exploring chemsex, health and wellbeing now traverse multiple domains that extend beyond associations with STI or HIV transmission risk. Empirical chemsex research has investigated acute harms, such as overdose, accidents, and emergencies (Bourne et al., 2015b; Freestone et al., 2023; Hammoud et al., 2018a). Other studies have examined impacts on mental health (Bohn et al., 2020; Tomkins et al., 2018), and outcomes associated with employment and other components of psychosocial wellbeing (Hegazi et al., 2017; Kurtz, 2005). Several studies have also examined chemsex and sexual wellbeing and have explored a bi-directional relationship between drugs and sex, an inability to have sex without drugs and experiences of sexual distress or sexual violence (Drückler et al., 2021; Evers et al., 2020; Freestone et al., 2025b). With acknowledgement of these potentially adverse experiences, empirical research on chemsex and wellbeing emphasizes that not all who engage in chemsex experience harm and in fact many people experience benefits (Lunchenkov et al., 2024). For example, studies conducted among GBMSM living with HIV engaged in chemsex have demonstrated that the practice may be associated with positive mental health outcomes, which may be attributed to experiences of community and peer connection afforded by chemsex participation (Field et al., 2023; Power et al., 2018). Further, with regards to sexual wellbeing, studies have demonstrated that the sexualized use of drugs can facilitate, gratifying, exploratory, and ultimately beneficial sexual experiences (Freestone et al., 2022; Pienaar et al., 2020).

In sum, empirical chemsex research has enabled a nuanced understanding of the numerous ways in which chemsex shapes wellbeing. This body of literature has informed our understanding of the concerns facing those engaging in chemsex as well as the experiences that are most associated with morbidity and the sub-groups who may be at highest risk of experiencing drug-related harm, such that we can target them for supportive programs and services.

Research on Chemsex Services and Interventions

The realm of applied research on tailored and inclusive chemsex service delivery is slim by comparison to empirical work, with only a handful of studies on services and interventions having been conducted (Íncera-Fernández et al., 2025). Peer interventions for GBMSM who use crystal methamphetamine have been favorably evaluated against outcomes associated with crystal methamphetamine use and mental health (Burgess et al., 2018; Reback et al., 2019; Reback et al., 2012). Peer-reviewed and grey literature make reference to peer-led chemsex outreach education, peer-led chemsex counselling, group programs, and peer-led training programs for health services, with a range of these interventions delivered across Europe, Asia, and Australia (APCOM, 2021; Controlling Chemsex, 2024; Freestone et al., 2025a; Mainline, 2022; Pires et al., 2022; Stardust et al., 2018; Strong et al., 2022). In the context of services delivered by those with clinical qualifications, the literature highlights that chemsex talk therapies are delivered across both mainstream general population health settings and within tailored and community-led health services (Freestone et al., 2025b). Commentators have also outlined that chemsex services should be interdisciplinary and address matters relating to drug use and sex, be LGBTQ+ inclusive, affirm autonomy, and adopt a posture of openness and non-judgement (Gaudette et al., 2022; Graf et al., 2018; McGaughey et al., 2023). A handful of clinician-led, talk-based therapies tailored for GBMSM using methamphetamine have been favorably evaluated against outcomes spanning sexual health and methamphetamine use outcomes (Knight et al., 2019).

This body of applied research has significantly advanced our ability to meet GBMSM engaging in chemsex where they are at and hold lessons for designing and delivering services for other populations engaged in SDU. To be acceptable and accessible, such programs and services need to be delivered by trusted parties, in the spaces and places where chemsex is occurring and where the potential for harm can be actively addressed.

Critical Chemsex Studies

Counter to perspectives that frame chemsex as a phenomenon which needs to be examined for its detrimental impacts on health and wellbeing, or as a practice which must be addressed by tailored services, critical and cultural chemsex studies invite a pluralistic understanding of the phenomenon. Chemsex scholarship has emerged at the interstices of sociology, cultural studies and media studies, and this body of work is often drawn together by feminist and queer theoretical orientations towards power, identity, and affect (Møller & Hakim, 2021; Pienaar et al., 2020). A recent review of critical chemsex studies authored by Møller and Hakim (2021) suggested that research in this area operates along three domains. The first focuses on public health, with a range of critical studies aiming to move the field beyond risk-based perspectives on chemsex. The second are studies that examine the cultural dimensions of chemsex and explore the discursive, sociopolitical, and economic contexts in which the practice has emerged. Finally, the third element of critical chemsex studies highlights how chemsex interplays with pleasure and the role it plays in shaping gay identity, intimacy, social connections, and chemsex “scenes” (Drysdale, 2021; Møller & Hakim, 2021).

This domain of research has made explicit the social and cultural forces that shape engagement in chemsex and the structural conditions that both help and hinder in terms of addressing harm. Critical and cultural chemsex studies have problematized what at times has been a highly pathologizing


discourse about chemsex, which as we have outlined is a key issue of concern in the context of methamphetamine use, syphilis, and other populations.

In sum, we propose that research spanning health and wellbeing, service delivery, and critical theory, offers potential to explore salient questions regarding the benefits and harms associated with SDU as practiced by women and MSW. Such research must be informed by lived/living experience at all stages (Australian Injecting and Illicit Drug Users League, 2025) and may guide the commissioning, design and delivery of programs and services that extend beneficial experiences and mitigate harms while also illuminating the cultural forces and structural conditions that shape SDU practices.

Conclusions

Syphilis disproportionately impacts people of all sexualities and genders who use drugs (Price et al., 2025). In this commentary, we have noted emerging associations between methamphetamine use and syphilis notifications among women and MSW. We argue that increasing rates of syphilis among women and MSW who use methamphetamine highlight a need to diversify perspectives, research, and services surrounding SDU, which to date have largely focused on chemsex and GBMSM. Research on associations between methamphetamine use and syphilis may usefully guide public health priorities, programs, and services; however, there are drawbacks associated with exclusively examining SDU from the vantage of STI risk. Looking to a body of evolving chemsex research, we suggest that an exclusive focus on STI risk behaviors and STI transmission may invite slippages towards erroneous narratives that suggest methamphetamine use causes the transmission of syphilis or other STIs. Such narratives suggest that those who practice SDU are responsible for the spread of disease while positioning people and communities as reckless and vulnerable, rather than responsible and agentive. The trajectory of research and practice in the chemsex field, which initially focused on HIV but expanded over time, offers useful guidance to researchers and service providers working in the field of SDU as practiced by people of all sexualities and genders. While HIV retains centrality to many chemsex discourses, the field now extends to scholarship traversing domains of health and wellbeing, service delivery, evaluation and critical theory, each of which have usefully shaped thinking and informed practice.

ORCID iD

Jack Freestone  <https://orcid.org/0000-0002-7503-7540>

Ethical Considerations

This research comprises a commentary and did not enroll participants, ethical approval was not sought.

Author Contributions

JF led conceptualization, research, drafting, and revision. KJS and AB supported conceptualization, drafting, and revisions. JM, KD, JW, NE, and BC each contributed to manuscript drafting and revisions.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was funded by the National Centre for Clinical Research on Emerging Drugs (NCCRED). NCCRED receives funding from the Australian Department of Health, Disability and Aged Care.

Declaration of Conflicting Interest

The authors declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: In addition to his employment with the National Centre for Clinical Research on

Emerging Drugs, the first author, works as a consultant for ACON, a community health organization for LGBTQ+ communities in NSW.

References

- Anderson, J. R., & Norman, T. (2025). The relationship between internalized sexual prejudice and sexualized substance use: A systematic review and meta-analysis. *Journal of Sex Research*. Advance online publication. <https://doi.org/10.1080/00224499.2025.2549374>
- APCOM. (2021). *Encouraging the Global Fund to programme on chemsex*. APCOM. Retrieved 28.02.2024 from <https://www.apcom.org/platforms-apcom-has-been-on-to-talk-about-chemsex/>
- Arora, N., Schuenemann, V. J., Jäger, G., Peltzer, A., Seitz, A., Herbig, A., Strouhal, M., Grillová, L., Sánchez-Busó, L., Kühnert, D., Bos, K. I., Davis, L. R., Mikalová, L., Bruisten, S., Komericki, P., French, P., Grant, P. R., Pando, M. A., Valet, L. G., ... & Bagheri, H. C. (2016). Origin of modern syphilis and emergence of a pandemic *Treponema pallidum* cluster. *Nature Microbiology*, 2(1), 16245. <https://doi.org/10.1038/nmicrobiol.2016.245>
- Australian Department of Health and Aged Care. (2024). Don't fool around with syphilis. Retrieved 15.01 from <https://www.health.gov.au/dont-fool-around-with-syphilis>
- Australian Injecting and Illicit Drug Users League. (2025). Supplementary Submission to the House of Representatives Standing Committee on Health, Disability and Ageing Inquiry into the health impacts of alcohol and other drugs use in Australia.
- Australian Institute of Health and Welfare. (2024). National drug strategy household survey 2022–2023. <https://www.aihw.gov.au/reports/illicit-use-of-drugs/national-drug-strategy-household-survey>
- Azbel, L. (2023). Narcofeminist 'chemsex': Rethinking sexualised drug use in a shifting queer landscape marked by public health emergency. *The Sociological Review*, 71(4), 881–901. <https://doi.org/10.1177/00380261231175728>
- Bachmann, L., Barbee, L., Chan, P., Reno, H., Workowski, K., Hoover, K., Mermin, J., & Mena, L. (2024). CDC Clinical Guidelines on the Use of Doxycycline Postexposure Prophylaxis for Bacterial Sexually Transmitted Infection Prevention, United States. 2024, MMWR Recomm Rep 2024; 73.
- Bohn, A., Sander, D., Köhler, T., Hees, N., Oswald, F., Scherbaum, N., Deimel, D., & Schecke, H. (2020). Chemsex and mental health of men who have sex with men in Germany. *Frontiers in Psychiatry*, 11, 542301. <https://doi.org/10.3389/fpsy.2020.542301>
- Bourne, A., Reid, D., Hickson, F., Torres-Rueda, S., & Weatherburn, P. (2015a). Illicit drug use in sexual settings ('chemsex') and HIV/STI transmission risk behaviour among gay men in South London: Findings from a qualitative study. *Sexually Transmitted Infections*, 91(8), 564–568. <https://doi.org/10.1136/sextrans-2015-052052>
- Bourne, A., Reid, D., Hickson, F., Torres-Rueda, S., Steinberg, P., & Weatherburn, P. (2015b). "Chemsex" and harm reduction need among gay men in South London. *The International Journal of Drug Policy*, 26(12), 1171–1176. <https://doi.org/10.1016/j.drugpo.2015.07.013>
- Broady, T., Chan, C., MacGibbon, J., Smith, A. K. J., Mao, L., Tremain, D., Watson, L., Molyneux, A., Sullivan, E., Costello, J., Bavinton, B., & Holt, M. (2025). *GBQ+ Community Periodic Survey: Sydney 2025*. Centre for Social Research in Health, UNSW Sydney. <https://doi.org/10.26190/unsworks/31367>
- Brown, M. M. (2018). Public health and the rhetoric of personal responsibility. Thesis, The University of British Columbia, Vancouver. <https://open.library.ubc.ca/collections/24/items/1.0366155>
- Bryant, J., Hopwood, M., Dowsett, G. W., Aggleton, P., Holt, M., Lea, T., Prestage, G., & Treloar, C. (2018). The rush to risk when interrogating the relationship between methamphetamine use and sexual practice among gay and bisexual men. *International Journal of Drug Policy*, 55, 242–248. <https://doi.org/10.1016/j.drugpo.2017.12.010>
- Burgess, K., Parkhill, G., Wiggins, J., Ruth, S., & Stoové, M. (2018). Re-Wired: Treatment and peer support for men who have sex with men who use methamphetamine. *Sexual Health*, 15(2), 157–159. <https://doi.org/10.1071/SH17148>

- Carter, A., McManus, H., Ward, J. S., Vickers, T., Asselin, J., Baillie, G., Chow, E. P., Chen, M. Y., Fairley, C. K., Bourne, C., McNulty, A., Read, P., Heath, K., Ryder, N., McCloskey, J., Carmody, C., McCormack, H., Alexander, K., Casey, D., ... & Guy, R. J. (2023). Infectious syphilis in women and heterosexual men in major Australian cities: Sentinel surveillance data, 2011-2019. *Medical Journal of Australia*, *218*(5), 223–228. <https://doi.org/10.5694/mja2.51864>
- Cheng, W. S., Garfein, R. S., Semple, S. J., Strathdee, S. A., Zians, J. K., & Patterson, T. L. (2010). Binge use and sex and drug use behaviors among HIV(-), heterosexual methamphetamine users in San Diego. *Subst Use & Misuse*, *45*(1-2), 116–133. <https://doi.org/10.3109/10826080902869620>
- Clement, M. E., Okeke, N. L., & Hicks, C. B. (2014). Treatment of syphilis: A systematic review. *Jama*, *312*(18), 1905–1917. <https://doi.org/10.1001/jama.2014.13259>
- Controlling Chemsex. (2024). Peer Mentoring. Retrieved 28.02 from <https://controllingchemsex.com/testimonials/peer-mentoring>
- Daniels, E., Atkinson, A., Cardoza, N., Ramakrishnan, A., Willers, D., & Reno, H. (2024). Social factors associated with congenital syphilis in Missouri. *Clinical Infectious Diseases*, *79*(3), 744–750. <https://doi.org/10.1093/cid/ciae260>
- Digiusto, E., & Rawstorne, P. (2013). Is it really crystal clear that using methamphetamine (or other recreational drugs) causes people to engage in unsafe sex? *Sexual Health*, *10*(2), 133–137. <https://doi.org/10.1071/SH12053>
- Drückler, S., Spelman, J., van Rooijen, M., & De Vries, H. J. C. (2021). Sexual consent and chemsex: A quantitative study on sexualised drug use and non-consensual sex among men who have sex with men in Amsterdam, The Netherlands. *Sexually Transmitted Infections*, *97*(4), 268–275. <https://doi.org/10.1136/sextrans-2020-054840>
- Drysdale, K. (2021). ‘Scene’ as a critical framing device: Extending analysis of chemsex cultures. *Sexualities*, *26*(5-6), 604–619. <https://doi.org/10.1177/1363460721995467>
- Drysdale, K., Bryant, J., Dowsett, G. W., Lea, T., Treloar, C., Aggleton, P., & Holt, M. (2021). Priorities and practices of risk reduction among gay and bisexual men in Australia who use crystal methamphetamine for sex. *International Journal of Drug Policy*, *93*, 103163. <https://doi.org/10.1016/j.drugpo.2021.103163>
- Drysdale, K., Bryant, J., Hopwood, M., Dowsett, G. W., Holt, M., Lea, T., Aggleton, P., & Treloar, C. (2020). Destabilising the ‘problem’ of chemsex: Diversity in settings, relations and practices revealed in Australian gay and bisexual men’s crystal methamphetamine use. *International Journal of Drug Policy*, *78*, 102697. <https://doi.org/10.1016/j.drugpo.2020.102697>
- Evers, Y. J., Hoebe, C. J. P. A., Dukers-Muijters, N. H. T. M., Kampman, C. J. G., Kuizenga-Wessel, S., Shilue, D., Bakker, N. C. M., Schamp, S. M. A. A., Van Buel, H., Van Der Meijden, W. C. J. P. M., & Van Liere, G. A. F. S. (2020). Sexual, addiction and mental health care needs among men who have sex with men practicing chemsex – a cross-sectional study in The Netherlands. *Preventive Medicine Reports*, *18*, 101074. <https://doi.org/10.1016/j.pmedr.2020.101074>
- Ferlatte, O., Salway, T., Samji, H., Dove, N., Gesink, D., Gilbert, M., Oliffe, J. L., Grennan, T., & Wong, J. (2018). An application of syndemic theory to identify drivers of the syphilis epidemic among gay, bisexual, and other men who have sex with men. *Sexually Transmitted Diseases*, *45*(3), 163–168. <https://doi.org/10.1097/olq.0000000000000713>
- Field, D. J., de Wit, J., Davoren, M. P., O’Reilly, E. J., & Den Daas, C. (2023). Chemsex, anxiety and depression among gay, bisexual and other men who have sex with men living with HIV. *AIDS and Behavior*, *27*(10), 1–7. <https://doi.org/10.1007/s10461-023-04041-z>
- Flynn, P. (2015, November 22). Addicted to chemsex: ‘It’s a horror story’. *The Guardian*. <https://www.theguardian.com/world/2015/nov/22/addicted-to-chemsex-gay-drugs-film>
- Freestone, J., Bourne, A., Layard, E., Prestage, G., Murray, J., & Siefried, K. J. (2022). Playing at the edges, navigating sexual boundaries, and narrating sexual distress: Practices and perspectives of sexuality and gender diverse people who use GHB. *International Journal of Drug Policy*, *108*, 103811. <https://doi.org/10.1016/j.drugpo.2022.103811>

- Freestone, J., Ezard, N., Bourne, A., Brett, J., Roberts, D. M., Hammoud, M., Nedanoski, A., Prestage, G., & Siefried, K. J. (2023). Understandings, attitudes, practices and responses to GHB overdose among GHB consumers. *Harm Reduction Journal*, 20(1), 121. <https://doi.org/10.1186/s12954-023-00857-z>
- Freestone, J., Storer, D., Siefried, K., Bourne, A., Prestage, G., Ezard, N., Maher, L., Stirling, R., Xiao, B. J., Murphy, D., Degenhardt, L., & Hammoud, M. (2025a). Implementation and formative evaluation of a peer-led chemsex intervention targeting sexualised crystal methamphetamine and GHB use: The M3THOD study. *Harm Reduction Journal*, 22(1), 181. <https://doi.org/10.1186/s12954-025-01329-2>
- Freestone, J., Xiao, B., Siefried, K., Bourne, A., Ezard, N., Maher, L., Stirling, R., Degenhardt, L., Varma, R., Prestage, G., & Hammoud, M. (2025b). Exploring experiences of talk therapies among gay and bisexual men seeking to reduce or abstain from using crystal methamphetamine in the context of chemsex. *Drug and Alcohol Review*, 44(3), 711-722. <https://doi.org/10.1111/dar.13999>
- Gaudette, Y., Flores-Aranda, J., & Heisbourg, E. (2022). Needs and experiences of people practising chemsex with support services: Toward chemsex-affirmative interventions. *Journal of Men's Health*, 18(12), 57-67. <https://doi.org/10.22514/jomh.2022.003>
- Giacalone, S., Barberi, F., Ramoni, S., Casazza, G., Cusini, M., & Marzano, A. V. (2023). Sexualised drug use and chemsex in Italy: A questionnaire study based on a cohort of clients attending a STI outpatient service in Milan. *International Journal of STD & AIDS*, 34(14), 1034-1041. <https://doi.org/10.1177/09564624231193055>
- Gorman, A. (2019, February 18). As drug use rises, so does syphilis: Report. *ABC News*. <https://abcnews.go.com/Health/drug-rises-syphilis-report/story>
- Government of Western Australia Department of Health. (2021). Metropolitan syphilis outbreak response action plan. https://www.bhs.health.wa.gov.au/~/_media/Corp/Documents/Health-for/Sexual-health/SORG/Metropolitan-Syphilis-Outbreak-Response-Action-Plan
- Graf, N., Dichtl, A., Deimel, D., Sander, D., & Stöver, H. (2018). Chemsex among men who have sex with men in Germany: Motives, consequences and the response of the support system. *Sexual Health*, 15(2), 151-156. <https://doi.org/10.1071/SH17142>
- Grant, J. S., Stafylis, C., Celum, C., Grennan, T., Haire, B., Kaldor, J., Luetkemeyer, A. F., Saunders, J. M., Molina, J. M., & Klausner, J. D. (2020). Doxycycline prophylaxis for bacterial sexually transmitted infections. *Clinical Infectious Diseases*, 70(6), 1247-1253. <https://doi.org/10.1093/cid/ciz866>
- Grov, C., Westmoreland, D., Morrison, C., Carrico, A. W., & Nash, D. (2020). The crisis we are not talking about: One-in-three annual HIV seroconversions among sexual and gender minorities were persistent methamphetamine users. *Journal of Acquired Immune Deficiency Syndromes*, 85(3), 272-279. <https://doi.org/10.1097/qai.0000000000002461>
- Guerra, F. M., Salway, T. J., Beckett, R., Friedman, L., & Buchan, S. A. (2020). Review of sexualized drug use associated with sexually transmitted and blood-borne infections in gay, bisexual and other men who have sex with men. *Drug and Alcohol Dependence*, 216, 108237. <https://doi.org/10.1016/j.drugalcdep.2020.108237>
- Hakim, J. (2019). The rise of chemsex: Queering collective intimacy in neoliberal London. *Cultural Studies*, 33(2), 249-275. <https://doi.org/10.1080/09502386.2018.1435702>
- Hammoud, M. A., Bourne, A., Maher, L., Jin, F., Haire, B., Lea, T., Degenhardt, L., Grierson, J., & Prestage, G. (2018a). Intensive sex partying with gamma-hydroxybutyrate: Factors associated with using gamma-hydroxybutyrate for chemsex among Australian gay and bisexual men – results from the Flux Study. *Sexual Health*, 15(2), 123-134. <https://doi.org/10.1071/SH17146>
- Hammoud, M. A., Jin, F., Maher, L., Bourne, A., Haire, B., Saxton, P., Vaccher, S., Lea, T., Degenhardt, L., & Prestage, G. (2020). Biomedical HIV protection among gay and bisexual men who use crystal methamphetamine. *AIDS and Behavior*, 24(5), 1400-1413. <https://doi.org/10.1007/s10461-019-02739-7>
- Hammoud, M. A., Vaccher, S., Jin, F., Bourne, A., Haire, B., Maher, L., Lea, T., & Prestage, G. (2018b). The new MTV generation: Using methamphetamine, Truvada™, and Viagra™ to enhance sex and stay safe. *International Journal of Drug Policy*, 55, 197-204. <https://doi.org/10.1016/j.drugpo.2018.02.021>

- Harney, B. L., Bruneau, J., Martel-Laferrière, V., & Larney, S. (2025). An exploratory intersectional analysis of syphilis prevalence among people who inject drugs in Montreal, Canada. medRxiv, 2025.2006.2005.25328916. <https://doi.org/10.1101/2025.06.05.25328916>
- Hegazi, A., Lee, M. J., Whittaker, W., Green, S., Simms, R., Cutts, R., Nagington, M., Nathan, B., & Pakianathan, M. R. (2017). Chemsex and the city: Sexualised substance use in gay bisexual and other men who have sex with men attending sexual health clinics. *International Journal of STDs and AIDS*, 28(4), 362–366. <https://doi.org/10.1177/0956462416651229>
- Heritage, F., & Baker, P. (2022). Crime or culture? Representations of chemsex in the British press and magazines aimed at LGBTQ+ men. *Critical Discourse Studies*, 19(4), 435–453. <https://doi.org/10.1080/17405904.2021.1910052>
- Hibbert, M. P., Porcellato, L. A., Brett, C. E., & Hope, V. D. (2019). Associations with drug use and sexualised drug use among women who have sex with women (WSW) in the UK: Findings from the LGBT sex and lifestyles survey. *International Journal of Drug Policy*, 74, 292–298. <https://doi.org/10.1016/j.drugpo.2019.07.034>
- Home Office. (2017). Drug strategy 2017. <https://www.gov.uk/government/publications/drug-strategy-2017>
- Íncera-Fernández, D., Riquelme, A. R., Sánchez-Ocaña, A., Montesinos, F., & Gámez-Guadix, M. (2025). A systematic review of intervention strategies aimed at chemsex users. *International Journal of Drug Policy*, 140, 104795. <https://doi.org/10.1016/j.drugpo.2025.104795>
- Íncera-Fernández, D., Román, F. J., & Gámez-Guadix, M. (2022). Risky sexual practices, sexually transmitted infections, motivations, and mental health among heterosexual women and men who practice sexualized drug use in Spain. *International Journal of Environmental Research and Public Health*, 19(11), 6387. <https://doi.org/10.3390/ijerph19116387>
- Jennings, J. M., Wagner, J., Tilchin, C., Schumacher, C. M., Thornton, N., Hamill, M. M., Rompalo, A., Ruhs, S., Rives, S., Ghanem, K. G., & Latkin, C. (2021). Methamphetamine use, syphilis, and specific online sex partner meeting venues are associated with HIV status among urban black gay and bisexual men who have sex men. *Sexually Transmitted Diseases*, 48(8s), S32–S39. <https://doi.org/10.1097/olq.0000000000001452>
- Kidd, M. (2025). *Chief Medical Officer's statement declaring syphilis a Communicable Disease Incident of National Significance*. Australian Government Department of Health, Disability and Ageing. Retrieved 24.11.2025 from <https://www.health.gov.au/news/cmo-statement-syphilis-cdis>
- Kidd, S., Grey, J., Torrone, E., & Weinstock, H. (2019). Increased methamphetamine, injection drug, and heroin use among women and heterosexual men with primary and secondary syphilis — United States, 2013–2017. *Morbidity and Mortality Weekly Report*, 68(6), 144–148. <https://doi.org/10.15585/mmwr.mm6806a4>
- King, J., Kwon, J., McManus, H., Gray, R., & McGregor, S. (2024). HIV, viral hepatitis and sexually transmissible infections in Australia: Annual surveillance report 2024 ISSN 2206-1630. T. K. Institute. https://www.kirby.unsw.edu.au/sites/default/files/documents/Annual_Surveillance_Report_2024_STI_1.pdf
- Knight, R., Karamouzian, M., Carson, A., Edward, J., Carrieri, P., Shoveller, J., Fairbairn, N., Wood, E., & Fast, D. (2019). Interventions to address substance use and sexual risk among gay, bisexual and other men who have sex with men who use methamphetamine: A systematic review. *Drug and Alcohol Dependence*, 194, 410–429. <https://doi.org/10.1016/j.drugalcdep.2018.09.023>
- Kong, F. Y. S., Kenyon, C., & Unemo, M. (2023). Important considerations regarding the widespread use of doxycycline chemoprophylaxis against sexually transmitted infections. *Journal of Antimicrobial Chemotherapy*, 78(7), 1561–1568. <https://doi.org/10.1093/jac/dkad129>
- Kurtz, S. P. (2005). Post-Circuit blues: Motivations and consequences of crystal meth use among gay men in Miami. *AIDS and Behavior*, 9(1), 63–72. <https://doi.org/10.1007/s10461-005-1682-3>
- Liao, M., Kang, D., Tao, X., Cox, C., Qian, Y., Wang, G., Yang, C., Zhu, X., Zhang, N., Bi, Z., & Jia, Y. (2014). Syndemics of syphilis, HCV infection, and methamphetamine use along the east coast of China. *BMC Public Health*, 14(1), 172. <https://doi.org/10.1186/1471-2458-14-172>
- Liao, M., Kang, D., Tao, X., Li, J., Qian, Y., Wang, G., Jiang, B., Bi, Z., & Jia, Y. (2013). Dual epidemics of syphilis and methamphetamine use among drug users in Shandong Province of China. *AIDS Care*, 25(10), 1236–1244. <https://doi.org/10.1080/09540121.2013.764384>

- Lunchenkov, N., Cherchenko, N., Altynbekov, K., Terlikbayeva, A., Primbetova, S., Gryazev, D., German, E., Batyrgaliev, U., & Steinert, J. I. (2024). "A way to liberate myself": A qualitative study of perceived benefits and risks of chemsex among gay, bisexual, and other men who have sex with men in Almaty, Kazakhstan. *Drug and Alcohol Dependence*, 264, 112464. <https://doi.org/10.1016/j.drugalcdep.2024.112464>
- Mainline. (2022). Mainline strategic plan 2022 – 2026. Mainline. https://mainline.nl/wp-content/uploads/2023/11/Strategic_Plan_2022-2026_public_version1.pdf
- Maxwell, S., Shahmanesh, M., & Gafos, M. (2019). Chemsex behaviours among men who have sex with men: A systematic review of the literature. *The International Journal on Drug Policy*, 63, 74–89. <https://doi.org/10.1016/j.drugpo.2018.11.014>
- McGaughy, G., Richardson, D., & Vera, J. (2023). Harm reduction services for people engaging in chemsex in Brighton, UK: A pilot qualitative study. *International Journal of STD & AIDS*, 34(13), 940–944. <https://doi.org/10.1177/09564624231188752>
- McKetin, R., Lubman, D. I., Baker, A., Dawe, S., Ross, J., Mattick, R. P., & Degenhardt, L. (2018). The relationship between methamphetamine use and heterosexual behaviour: Evidence from a prospective longitudinal study. *Addiction*, 113(7), 1276–1285. <https://doi.org/10.1111/add.14181>
- Molina, J.-M., Charreau, I., Chidiac, C., Pialoux, G., Cua, E., Delaugerre, C., Capitant, C., Rojas-Castro, D., Fonsart, J., Bercot, B., Bébéar, C., Cotte, L., Robineau, O., Raffi, F., Charbonneau, P., Aslan, A., Chas, J., Niedbalski, L., Spire, B., & Meyer, L. (2018). Post-exposure prophylaxis with doxycycline to prevent sexually transmitted infections in men who have sex with men: An open-label randomised substudy of the ANRS IPERGAY trial. *The Lancet Infectious Diseases*, 18(3), 308–317. [https://doi.org/10.1016/S1473-3099\(17\)30725-9](https://doi.org/10.1016/S1473-3099(17)30725-9)
- Møller, K., & Hakim, J. (2021). Critical chemsex studies: Interrogating cultures of sexualized drug use beyond the risk paradigm. *Sexualities*, 26(5-6), 547–555. <https://doi.org/10.1177/13634607211026223>
- Murali, V., & Jayaraman, S. (2018). Substance use disorders and sexually transmitted infections: A public health perspective. *BJPsyche Advances*, 24(3), 161–166. <https://doi.org/10.1192/bja.2017.14>
- Murphy, D. A., Race, K., Pienaar, K., & Lea, T. (2024). Remaking chemsex event networks in the age of HIV Pre-exposure Prophylaxis (PrEP). *Body & Society*. Advance online publication. <https://doi.org/10.1177/1357034X241298173>
- Pakianathan, M., Whittaker, W., Lee, M. J., Avery, J., Green, S., Nathan, B., & Hegazi, A. (2018). Chemsex and new HIV diagnosis in gay, bisexual and other men who have sex with men attending sexual health clinics. *HIV Medicine*, 19(7), 485–490. <https://doi.org/10.1111/hiv.12629>
- Pearce, L. A., Homayra, F., Dale, L. M., Moallef, S., Barker, B., Norton, A., Hayashi, K., & Nosyk, B. (2020). Non-disclosure of drug use in outpatient health care settings: Findings from a prospective cohort study in Vancouver, Canada. *International Journal of Drug Policy*, 84, 102873. <https://doi.org/10.1016/j.drugpo.2020.102873>
- Peeling, R. W., Mabey, D., Chen, X.-S., & Garcia, P. J. (2023). Syphilis. *The Lancet*, 402(10398), 336–346. [https://doi.org/10.1016/S0140-6736\(22\)02348-0](https://doi.org/10.1016/S0140-6736(22)02348-0)
- Pérez Chacón, G., Saha, A., Phillips, E., Guy, R., Applegate, T. L., Causer, L., McGregor, S., & Hengel, B. (2024). Syphilis point-of-care tests: An Australian perspective. *Microbiology Australia*, 45(3), 127–131. <https://doi.org/10.1071/MA24036>
- Pienaar, K., Murphy, D., Race, K., & Lea, T. (2020). Sexualities and intoxication: "To be intoxicated is to still be me, just a little blurry"—drugs, enhancement and transformation in lesbian, gay, bisexual, transgender and queer cultures. In F. Hutton (Ed.), *Cultures of intoxication* (pp. 139–163). Palgrave Macmillan. https://doi.org/10.1007/978-3-030-35284-4_7
- Pienaar, K., Murphy, D. A., Race, K., & Lea, T. (2018). Problematising LGBTIQ drug use, governing sexuality and gender: A critical analysis of LGBTIQ health policy in Australia. *International Journal of Drug Policy*, 55, 187–194. <https://doi.org/10.1016/j.drugpo.2018.01.008>
- Pires, C. V., Gomes, F. C., Caldas, J., & Cunha, M. (2022). Chemsex in Lisbon? Self-reflexivity to uncover the scene and discuss the creation of community-led harm reduction responses targeting chemsex practitioners. *Contemporary Drug Problems*, 49(4), 434–452. <https://doi.org/10.1177/00914509221094893>

- Plotzker, R. E., Burghardt, N. O., Murphy, R. D., McLean, R., Jacobson, K., Tang, E. C., & Seidman, D. (2022). Congenital syphilis prevention in the context of methamphetamine use and homelessness. *The American Journal on Addictions, 31*(3), 210–218. <https://doi.org/10.1111/ajad.13265>
- Poulios, A., Apostolidou, A., Triantafyllidou, S., Krasidis, C., Petrou, I. V. P., Kakota, Z., Papadopetrakis, G., Kyprianou, E., Yiasemi, I., Georgiou, C., Nikolopoulos, G., & Minas, C. (2024). The distinction between chemsex and sexualized drug use among men who have sex with men. *Sexuality & Culture, 28*(3), 1276–1288. <https://doi.org/10.1007/s12119-023-10179-8>
- Power, J., Mikołajczak, G., Bourne, A., Brown, G., Leonard, W., Lyons, A., & Lucke, J. (2018). Sex, drugs and social connectedness: Wellbeing among HIV-positive gay and bisexual men who use party-and-play drugs. *Sexual Health, 15*(2), 135–143. <https://doi.org/10.1071/SH17151>
- Price, O., Webb, P., Grebely, J., Peacock, A., Medland, N., Read, P., Cooke, E., Hickman, M., Vickerman, P., & Degenhardt, L. (2025). Sexually transmitted infection prevalence and testing coverage among people who inject drugs: A systematic review. *Drug and Alcohol Dependence, 273*, 112732. <https://doi.org/10.1016/j.drugalcdep.2025.112732>
- Public Health Agency of Canada. (2020). Syphilis in Canada, technical report on epidemiological trends, determinants and interventions. https://publications.gc.ca/collections/collection_2021/aspc-phac/HP40-267-2020-eng.pdf
- Race, K. (2009). *Pleasure Consuming Medicine: The Queer Politics of Drugs*. Duke University Press. <https://doi.org/10.2307/j.ctv11smhxr>
- Race, K., Lea, T., Murphy, D., & Pienaar, K. (2017). The future of drugs: Recreational drug use and sexual health among gay and other men who have sex with men. *Sexual Health, 14*(1), 42–50. <https://doi.org/10.1071/SH16080>
- Raval, M., Gratrix, J., Plitt, S., Niruban, J., Smyczek, P., Dong, K., & Singh, A. E. (2022). Retrospective cohort study examining the correlates of reported lifetime stimulant use in persons diagnosed with infectious syphilis in Alberta, Canada, 2018 to 2019. *Sexually Transmitted Diseases, 49*(8), 551–559. <https://doi.org/10.1097/OLQ.0000000000001648>
- Reback, C. J., Fletcher, J. B., Swendeman, D. A., & Metzner, M. (2019). Theory-based text-messaging to reduce methamphetamine use and HIV sexual risk behaviors among men who have sex with men: Automated unidirectional delivery outperforms bidirectional peer interactive delivery. *AIDS and Behavior, 23*(1), 37–47. <https://doi.org/10.1007/s10461-018-2225-z>
- Reback, C. J., Grant, D. L., Fletcher, J. B., Branson, C. M., Shoptaw, S., Bowers, J. R., Charania, M., & Mansergh, G. (2012). Text messaging reduces HIV risk behaviors among methamphetamine-using men who have sex with men. *AIDS and Behavior, 16*(7), 1993–2002. <https://doi.org/10.1007/s10461-012-0200-7>
- Reno, H., Fox, B., Highfill, C., McKee, A., Trolard, A., Liang, S. Y., Stoner, B. P., & Meyerson, B. E. (2020). The emerging intersection between injection drug use and early syphilis in nonurban areas of Missouri, 2012–2018. *The Journal of Infectious Diseases, 222*(Supplement_5), S465–S470. <https://doi.org/10.1093/infdis/jjaa056>
- Rubin, R. (2024). Syphilis has surged for reasons that go beyond the pathogen that causes it. *Jama, 332*(2), 92–95. <https://doi.org/10.1001/jama.2024.2978>
- Salamanca, S. A., Sorrentino, E. E., Nosanchuk, J. D., & Martinez, L. R. (2015). Impact of methamphetamine on infection and immunity. *Frontiers in Neuroscience, 8*, 455. <https://doi.org/10.3389/fnins.2014.00445>
- Schmidt, R., Carson, P. J., & Jansen, R. J. (2019). Resurgence of syphilis in the United States: An assessment of contributing factors. *Infectious Diseases, 12*, 1178633719883282. <https://doi.org/10.1177/1178633719883282>
- Shaw, S., Lapple, A., Reimer, J., Ross, C., Nowicki, D., Elliott, L., & Plourde, P. (2019). P768 the evolution of an infectious syphilis epidemic in a Canadian urban setting. *Sexually Transmitted Infections, 95*(Suppl 1), A330–A330. <https://doi.org/10.1136/sextrans-2019-sti.826>
- Shoptaw, S., & Reback, C. J. (2007). Methamphetamine use and infectious disease-related behaviors in men who have sex with men: Implications for interventions. *Addiction, 102*(Suppl 1), 130–135. <https://doi.org/10.1111/j.1360-0443.2006.01775.x>

- Singer, M. C., Erickson, P. I., Badiane, L., Diaz, R., Ortiz, D., Abraham, T., & Nicolaysen, A. M. (2006). Syndemics, sex and the city: Understanding sexually transmitted diseases in social and cultural context. *Social Science & Medicine*, 63(8), 2010–2021. <https://doi.org/10.1016/j.socscimed.2006.05.012>
- Sisnowski, J., Rogers, T. J., Pearson, J., Del Fante, S. N., Hermanson, J., Rees, T., & Bell, C. (2025). Implications of high prevalence of recreational drug use among cases of infectious syphilis: Insights from state-wide surveillance data, South Australia, July 2022 – September 2023. *Communicable Diseases Intelligence*, 49, 49.049. <https://doi.org/10.33321/cdi.2025.49.049>
- Sivak, L., Reilly, R., Lockton, J., Treloar, C., Roe, Y., McKetin, R., Butt, J., Ezard, N., Winkenweder, H., & Ward, J. (2023). Psychosocial stress and methamphetamine use: A mixed-methods study of intersectional stigma and Aboriginal and Torres Strait Islander methamphetamine use. *International Journal of Drug Policy*, 121, 104189. <https://doi.org/10.1016/j.drugpo.2023.104189>
- Stardust, Z., Kolstee, J., Joksic, S., Gray, J., & Hannan, S. (2018). A community-led, harm-reduction approach to chemsex: Case study from Australia's largest gay city. *Sexual Health*, 15(2), 179–181. <https://doi.org/10.1071/SH17145>
- Strong, C., Huang, P., Li, C.-W., Ku, S. W.-W., Wu, H.-J., & Bourne, A. (2022). HIV, chemsex, and the need for harm-reduction interventions to support gay, bisexual, and other men who have sex with men. *The Lancet HIV*, 9(10), e717–e725. [https://doi.org/10.1016/S2352-3018\(22\)00124-2](https://doi.org/10.1016/S2352-3018(22)00124-2)
- Stuart, D. (2019). Chemsex: Origins of the word, a history of the phenomenon and a respect to the culture. *Drugs and Alcohol Today*, 19(1), 3–10. <https://doi.org/10.1108/DAT-10-2018-0058>
- Tao, Y.-T., Gao, T.-Y., Li, H.-Y., Ma, Y.-T., Li, H.-J., Xian-Yu, C.-Y., Deng, N. J., & Zhang, C. (2023). Global, regional, and national trends of syphilis from 1990 to 2019: The 2019 global burden of disease study. *BMC Public Health*, 23(1), 754. <https://doi.org/10.1186/s12889-023-15510-4>
- Tomkins, A., George, R., & Kliner, M. (2018). Sexualised drug taking among men who have sex with men: A systematic review. *Perspectives in Public Health*, 139(1), 23–33. <https://doi.org/10.1177/1757913918778872>
- Treloar, C., Hopwood, M., Drysdale, K., Lea, T., Holt, M., Dowsett, G. W., Aggleton, P., & Bryant, J. (2021). Stigma as understood by key informants: A social ecological approach to gay and bisexual men's use of crystal methamphetamine for sex. *International Journal of Drug Policy*, 94, 103229. <https://doi.org/10.1016/j.drugpo.2021.103229>
- U.S. Preventive Services Task Force. (2022). Syphilis infection in nonpregnant adolescents and adults: Screening. Retrieved 08.01 from <https://www.uspreventiveservicestaskforce.org/uspstf/recommendation/syphilis-infection-nonpregnant-adults-adolescents-screening>
- Ward, J. S., Hengel, B., Ah Chee, D., Havnen, O., & Boffa, J. D. (2020). Setting the record straight: Sexually transmissible infections and sexual abuse in Aboriginal and Torres Strait Islander communities. *Medical Journal of Australia*, 212(5), 205–207.e201. <https://doi.org/10.5694/mja2.50492>
- Weatherburn, P., Hickson, F., Reid, D., Torres-Rueda, S., & Bourne, A. (2017). Motivations and values associated with combining sex and illicit drugs ('chemsex') among gay men in South London: Findings from a qualitative study. *Sexually Transmitted Infections*, 93(3), 203–206. <https://doi.org/10.1136/sextrans-2016-052695>
- World Health Organisation. (2024). Syphilis. Retrieved 23.01 from <https://www.who.int/news-room/fact-sheets/detail/syphilis>
- World Health Organisation. (2025). *Global HIV, hepatitis and STIs programmes: Men who have sex with men*. World Health Organisation. Retrieved 23.01 from <https://www.who.int/teams/global-hiv-hepatitis-and-stis-programmes/populations/men-who-have-sex-with-men>
- Ye, X., Li, F.-R., Pan, Q., Li, Z., Yu, G.-Q., Liu, H., Liu, J., Huai, P. C., & Zhang, F.-R. (2022). Prevalence and associated factors of sexually transmitted infections among methamphetamine users in Eastern China: A cross-sectional study. *BMC Infectious Diseases*, 22(1), 7. <https://doi.org/10.1186/s12879-021-06987-8>
- Zule, W. A., Costenbader, E. C., Meyer, W. J., Jr., & Wechsberg, W. M. (2007). Methamphetamine use and risky sexual behaviors during heterosexual encounters. *Sexually Transmitted Diseases*, 34(9), 689–694. <https://doi.org/10.1097/01.olq.0000260949.35304.22>

Author Biographies

Jack Freestone is a Post-Doctoral Research Fellow at the National Centre for Clinical Research on Emerging Drugs (NCCRED). His research focuses on drug monitoring and early response systems, with particular experience in sexualised crystal methamphetamine and GHB use and peer-led interventions for diverse communities.

Krista J. Siefried is Clinical Research Lead and Deputy Director at the National Centre for Clinical Research on Emerging Drugs (NCCRED) and Senior Lecturer at UNSW's National Drug & Alcohol Research Centre. She leads clinical research and trials on substance use disorders, with a strong focus on methamphetamine-related harms and treatment.

Kerryn Drysdale is Senior Research Fellow at the Centre for Social Research in Health at UNSW Sydney. Her research uses cultural and public health perspectives to explore health inequities, LGBTQ+ social scenes, and sexualised drug use, including crystal methamphetamine-related practices, and community-engaged harm-reduction scholarship.

Joel Murray is a Policy & Evaluation Specialist at the Australian Injecting and Illicit Drug Users League (AIVL), where they lead policy, advocacy, and representation strategies to advance peer-led harm reduction and health equity for people who use drugs. They have extensive public health and evaluation experience.

James Ward is Professor and Director of the Poche Centre for Indigenous Health at the University of Queensland and an infectious diseases epidemiologist. A Pitjantjatjara and Narungga man, he leads national research on Aboriginal and Torres Strait Islander health, infectious disease prevention, and policy-relevant responses to methamphetamine and other community health challenges.

Nadine Ezard is Professor of Public Health at UNSW Sydney and Director of the National Centre for Clinical Research on Emerging Drugs (NCCRED) at UNSW's National Drug & Alcohol Research Centre. An addiction medicine specialist, she leads research on evidence-based treatments and harm reduction, with particular expertise in methamphetamine and other emerging drugs, nationally and internationally.

Brendan Clifford is a Senior Research Fellow at the National Centre for Clinical Research on Emerging Drugs (NCCRED). A clinician-researcher with nursing and public health experience, he uses interdisciplinary methods to advance health equity and evidence-based care, focusing on policy, practice and responses for people affected by drug-related harms.

Adam Bourne is Professor of Public Health and Director of the Australian Research Centre in Sex, Health and Society (ARCSHS) at La Trobe University and Visiting Professorial Fellow at the Kirby Institute, UNSW Sydney. His research advances LGBTIQ+ health, sexual health, alcohol and other drug use, and HIV prevention and wellbeing.