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CHEMSEX, HIV RISK BEHAVIORS AND ACCESS TO SERVICES AMONG MEN WHO HAVE SEX WITH MEN AND TRANSGENDER WOMEN IN PHNOM PENH CAMBODIA: AN EXPLORATORY STUDY

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National Center for HIV/AIDS, Dermatology and STD

KHANA

UNITED FOR A STRONGER COMMUNITY

Authors: Sovannary Tuot, Kiry Heng, Sovannarith Samreth, Vohith Khol, Steve Wignall, Vichea Ouk, and Frits van Griensven

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ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ATS	Amphetamine type substances
Covid	Coronavirus infection disease
Crystal meth	Hydrochloride crystallized methamphetamine
ED	Erectile dysfunction drugs
GFATM	Global Fund to fight AIDS, Tuberculosis, and Malaria
GBL	Gamma-butyrolactone
GHB	Gamma-hydroxybutyrate
HIV	Human Immunodeficiency Virus
IDI	In-depth interview
IQR	Inter quartile range
KHANA	Khmer HIV/AIDS NGO Alliance
MDMA	3,4-methylenedioxy-N-methamphetamine
Meth	Methamphetamine
MHC	Men's Health Cambodia
NCHADS	National Center for HIV/AIDS, Dermatology, and STD
NECHR	National Ethics Committee for Health Research
NGO	Non-Government Organization
PrEP	Pre-exposure prophylaxis
RDS	Respondent-driven sampling
RTS	Risk-tracing sampling
SD	Standard deviation
STI	Sexually transmitted infection

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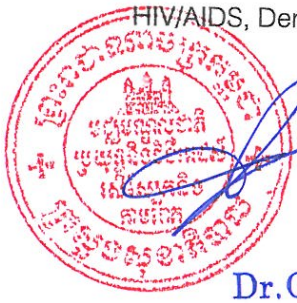
We hope that the finding from this study will be used to guide and design effective innovative HIV prevention interventions targeted this risk behavior and contribute to reduce new HIV infection in Cambodia.

Phnom Penh, 26 / Dec / 2022

Director of the National Center for
HIV/AIDS, Dermatology and STD



Dr. OUK VICHEA

ABSTRACT

Background: Chemsex, or sexualized drug use, is the intentional use of psychoactive drugs to increase sexual pleasure, usually (but not only) by men who have sex with men (MSM) and transgender women (TGW). Chemsex is increasing among MSM/TGW and has likely contributed to the ongoing and expanding HIV epidemic in this population in Cambodia. Chemsex is also associated with increased risk for transmission of other infectious diseases and several negative mental and physical health effects. Accurate knowledge of user demographics, routes of administration, risk practices, types of drugs, settings, and ways of engagement into Chemsex among MSM/TGW in Cambodia is currently lacking. Studies are needed to better understand Chemsex practices and its effects to increase risk awareness, design appropriate prevention strategies and increase access, uptake, and quality of HIV and other services.

Methods: We conducted a mixed-methods (quantitative with structured questionnaire and qualitative with in-depth interview) exploratory study among active MSM/TGW Chemsex users aged 15 years and older living in Phnom Penh. The study was conducted from 25 August to 18 September 2022. Participants were eligible if they had been using Chemsex drugs for sexual pleasure in a setting with two or more participants at least once in the past 12 months. Risk-tracing sampling was used as the recruitment strategy. Quantitative data were analyzed using SPSSX. Qualitative data were directly translated from the Khmer-language digital audio recording into English. Excel was used to search and code the underlying themes.

Results: The study started from four seeds, two of whom were MSM and two were TGW. A total of 135 active MSM/TGW Chemsex users were enrolled, and 15 in-depth interviews were conducted. Participants were relatively young (28.1 years, range 16 to 43 years), and most were not living alone (70.4%). Respondents reported high numbers of sexual partners and frequent attendance of Chemsex events. During the past year crystal methamphetamine (68.8%) and ketamine (50.4%) were the Chemsex drugs of choice, while a substantial number (28.9%) did not know what type of drug they had used. Some were also found to have injected crystal meth (13.3%) during this period. Non-condom use during anal intercourse was common (15.6%), despite condoms (71.9%) and lubricants (82.2%) being readily available. Uptake of frequent HIV testing was low (66.7%) and only few had ever heard or had used HIV PrEP, even though a majority had had recent contact with an HIV outreach worker. The internet and social media were most frequently mentioned (85.2%) for identifying and recruiting Chemsex partners. Non-consensual sex (17.7%) and drugging before or during Chemsex (9.7%) appeared to be relatively common. Chemsex use was problematic in many cases with almost half (49.6%) showing signs of dependency and addiction. An important role was found for the exchange of Chemsex in return for money and drugs.

Conclusions: HIV risk behavior in this population of Chemsex users was found to be high in combination with limited uptake of HIV prevention and other services. Increased and improved HIV prevention activities, including outreach, are urgently necessary. Drug use treatment and addiction management services should be initiated, where possible combined with primary Chemsex prevention among young MSM/TGW. Risk tracing strategies and social media may provide important avenues to identify, reach, educate and recruit potential and active Chemsex users for HIV prevention and other services.

1 INTRODUCTION

1.1 BACKGROUND

Sexualized drug use, often called Chemsex, is the intentional use of psychoactive drugs to increase sexual pleasure, usually by men who have sex with men (MSM) and transgender women (TGW). Chemsex drugs are used before and during sex by MSM/TGW to facilitate long-lasting sexual intercourse, usually (but not always) with multiple consecutive sexual partners or during group sex [1, 2]. In Southeast Asia, the drug of choice in Chemsex is hydrochloride crystallized methamphetamine (*Crystal Meth or Ice*) usually in combination with erectile dysfunction drugs (ED), such as Viagra, Cialis, and their generic equivalents. Other substances that may be used during Chemsex are tablets of amphetamine (*Yaa Baa or Yaa Maa*), methamphetamine (*Meth or Tina*) and 3,4-methylenedioxy-N-methamphetamine (MDMA) (*Ecstasy or E*). Because of similarities in their chemical structure and stimulant effects on the brain and nerve system, these latter drugs are commonly grouped as amphetamine-type substances or ATS. Another Chemsex stimulant drug is mephedrone and its congeners (*M-cat, Salts, or Meow*) [3]. Reportedly, this drug is commonly used in the West, but little is known about its use in Southeast Asia. Gamma hydroxybutyrate (GHB) or its pre-cursor gamma butyrolactone ((GBL) (*G*) and ketamine (K) are also used during Chemsex, but these agents are classified as anesthetics rather than stimulant drugs. Finally, smoked marijuana, inhaled nitrites (*Poppers*) and alcohol can be taken during Chemsex to extend or temporarily increase feelings of euphoria and excitement. However, by themselves these latter substances do not qualify as Chemsex drugs. Because of the central role of crystal methamphetamine in Chemsex, the remainder of this introduction will focus on the routes of administration, effects, epidemiology, and HIV transmission risk of the use of this drug.

1.2 ROUTES OF ADMINISTRATION

Crystal meth is usually smoked or inhaled through heat-activation. The drug is rapidly absorbed in the bloodstream through the lungs and transported to the brain, causing an almost instantaneous and intense high. Because of such experiences, crystal meth may result in more rapid addiction than other drugs or other routes of administration [4]. Water filtering is commonly used to decrease smoke temperature and remove toxins associated with the burning of crystal meth. Depending on local habits and user preferences, dry glass pipes and bowls may also be employed, where the smoke is inhaled directly (*called freebasing*), without going through a water cooling and filtering process. To maximize the yield and to further sexualize crystal meth inhalation some users perform a shotgun, which is a practice in which the smoked drugs are exhaled by one user into the mouth and lungs of another [5]. As instantaneous effects of traditional routes of administration tend to get less over time with more frequent use, some users look for ways to restore and intensify earlier experiences, such as through injection. Termed *slamming*, sexualized injection of stimulant drugs involves the use of disposable microfine insulin needles (or others if the latter cannot be obtained) and a strap to help identify and differentiate veins from arteries. Meth injectors usually dissolve their drugs (0.1 to 0.2 gram) directly in a water-filled syringe (preferably distilled water). Sharing of injection equipment among *slammers* seems to be infrequent, especially when compared to heroin injectors [6, 7]. Obviously, shortages of injection equipment may lead to sharing, which increases the risk of transmitting HIV, hepatitis, and other pathogens. Sometimes, crystal meth is also dissolved in water and inserted in the rectum using a flush syringe. This method is called *booty bump* and is usually applied as an injection alternative. The drug enters the bloodstream through the rectal mucous membranes from where it is transported to the brain. Supposedly, the effects of this rout of administration are like those obtained by injection.

1.3 PSYCHOACTIVE, PHYSICAL, AND MENTAL EFFECTS

Stimulant drugs mimic and increase the presence and effects of catecholamines in the brain and the central nervous system. Catecholamines function both as hormones and as neurotransmitters and include epinephrine (adrenaline), norepinephrine

(noradrenaline), dopamine and serotonin (sometimes also called "happy hormones"). Their higher-than-usual presence mobilizes and stimulates various brain functions, leading to rewarding effects such as increased energy, alertness, and sensory experiences, higher libido (but decreased sexual function), increased self-confidence, and deeper empathy [8, 9]. The acute and joint mobilization of these functions causes an intense rush and feelings of euphoria after primary ingestion of these drugs [8]. On the other hand, catecholamines, especially (nor)epinephrine, stimulate the sympathetic and somatic nerve systems. This expresses itself, among other effects, in increased heart rate and blood pressure, rapid breathing, teeth grinding, sweating, dilated pupils, increased reflexes and compulsive and repetitive behaviors [8, 9]. Stimulants have a prolonged half-life (8-10 hours) and a long duration of action. Continuous or increased intake (during one session) may not further increase desirable effects but may aggravate sympathetic and somatic reactions resulting in hypertension, tachycardia, cardiac arrest, hyperthermia, seizures, respiratory failure, coma, and death [8, 9].

Stimulant drugs are highly addictive for most people. Powerful sensations, extreme experiences of pleasure, and feelings of exploration and of navigating uncharted emotional territories are impressive, and users quickly desire to re-live these experiences over-and-over again. However, these feelings decrease the longer a person uses these drugs unless higher doses or more effective routes of administration are applied. When people stop using, they usually experience severe cravings and symptoms of withdrawal, such as lethargy, depression, joylessness, fatigue, and somnolence. These feelings reinforce the urge to re-use and ultimately addiction.

Long-term use of stimulant drugs has been found associated with a variety of negative health outcomes. Psychiatric conditions have been found to be correlated with duration and intensity of use and include psychosis, paranoia, delusions, hallucinations, depression, insomnia, and personality changes. Other effects are agitation, violence, and suicidal behavior [8, 9]. Extended use's physical health risks are cardiovascular and pulmonary disease, stroke, cerebrovascular problems, neurological complications, severe infection and inflammation of the gums, and tooth decay, especially in combination with smoking and crystal meth-induced consumption of sugary beverages [10, 11] .

1.4 EPIDEMIOLOGY OF STIMULANT DRUG USE AND HIV INFECTION

According to UNODC [12], globally in 2019, 27 million people were estimated to have used stimulant drugs in the past year, mostly crystallized methamphetamine or methamphetamine tablets. Of these, 9.9 million were estimated to reside in East and Southeast Asia [13]. Due to ATS use's underground character and illegal status, a limited number of country-specific data are available. In Thailand, the estimated number of methamphetamine tablet users increased from 100,000 to 700,000 during the past decade, whereas the estimated number of crystalized methamphetamine users increased from approximately 30,000 to 400,000 during the same time period [12]. Meanwhile, the market price of 1 gram of crystal meth in Thailand decreased from close to 100 USD (~3,500 Baht) in 2011 to less than 30 USD (~1,000 Baht) in 2019 [12]. Price declines in Cambodia have been similar to those seen in Thailand: the average price of a methamphetamine tablet decreased from 5 USD (20,000 Riel) in 2011 to 1 USD (4,000 Riel) in 2019 [12]. Although no specific data are available, it can be assumed that the decline in price of crystallized methamphetamine in Cambodia has been like that seen in Thailand. According to UNODC, the market for crystalized methamphetamine in Cambodia appears to have further expanded, as evidenced by a record seizure of 860 kilogram in 2020, exceeding the total amount seized in the four preceding years [13]. Another sign of the growth of crystallized methamphetamine use is that crystal meth users accounted for the largest proportion of drug treatment admissions in 2020 (4,025/4,427 [91%] of males and 205/223 [92%] of females) [13]. In addition to institutional information, various research studies and community-based data about stimulant drug use are available for some populations in Asia and the Pacific. For example, among a sample of 1,920 MSM in Bangkok, Thailand, reports of crystal meth use increased from 3.6% in 2003 to 20.8% in 2007 [14]. This increase was associated with sharp increases in HIV prevalence and incidence. In a follow-up study among 1,372 HIV negative men published in 2017, the incidence of crystal meth use for sexual pleasure was 3.8 per 100 person years (PY), which was correlated with incident HIV infection of 6.0 per 100 PY [15]. In a study among 622 MSM from Hanoi and Ho Chi Minh City, 14.3% had used methamphetamine for sex during the past six months [16]. Reportedly,

stimulant drug use was also highly prevalent among female and male sex workers in Vietnam [17, 18]. In studies conducted among sexually active TGW in Cambodia in 2016, 21.6% reported to have ever used such drugs in 2012 [19] and 10.1% reported to have used them during the past 12 months [20]. Of these women, 6.5% said to have used stimulants before or during sex in the past three months. In the 2012 study, 9.3% said to have injected drugs in the past 12 months, while in the 2016 study, 1.5% said to have injected stimulant drugs in the past three months [19, 20]. Stimulant drug use was also found widespread among female entertainment and sex workers in Phnom Penh and elsewhere in the country [21-23]. Data about the use of stimulant drugs for sexual pleasure among MSM in Cambodia are inconsistent. In a 2014 study among 367 MSM, 4.4% reported to have ever used illicit drugs [24]. However, in a risk-tracing snowball sample of 1,517 MSM in 2016, 57.7% said to have ever used such drugs [25]. More recently, in a cross-sectional survey in 2019 [26], 15.1% of 1,569 MSM reported to have used stimulants in the past 12 months, while in 1,025 TGW this figure was 6.1%. Injection of any type of substance was found to be rare [26].

1.5 TRANSMISSION RISK OF HIV AND OTHER INFECTIOUS DISEASES

Sexualized stimulant drug use carries an increased risk for transmission and acquisition of HIV, hepatitis, and other infectious diseases. This predominantly results from unprotected sexual intercourse, since stimulant use is associated with behavioral disinhibition, lowering of protective fear levels, increased self-confidence, and increased anticipation of sexual pleasure. Empathogenic effects increase the desire for closeness and intimacy, in which condom-use or other forms of behavioral protection are experienced as obstacles and therefore discarded [16]. Another characteristic of sexualized stimulant use is that it is often practiced in groups of like-minded people (also known as *high-sex or party-and play or PnP*). Parties can sometime last for hours, nights and days while some people leave, and newcomers arrive. Social media and dating apps play an important role in organizing and sustaining such parties [15, 27, 28] as well as in the supply of drugs [12, 13]. The availability of multiple sexual candidates, all in various states of (in) sobriety, allows intercourse with several consecutive partners, supported by the effects of ED. Apart from sexual pleasure, the latter drugs are also employed to offset sexual impairment (also known as *crystal dick*) resulting from the use of stimulant drugs, or from underlying conditions such as diabetes and HIV infection. Stimulant drugs as well as ED are also known to delay or obstruct orgasm and ejaculation. Their joint use may lead to prolonged and more vigorous sexual intercourse, increasing the likelihood of anogenital trauma or abrasions, which can supply a *porte d'entrée* for HIV and other sexually transmitted infections (STI). STI have also been documented to increase the probability of both the acquisition and transmission of HIV [29]. The within-group character of stimulant drug use leads to a form of assortative mixing (stimulant drug users select other users to have sex) which has been found associated with increased risk for HIV transmission [30]. This type of mixing often involves a higher background prevalence of established and acute HIV infection. The latter is of particular importance since HIV viral load and infectiousness are highest during this period. Ongoing role versatility (insertive and receptive role taking during anal sex between men) further increases HIV transmission risk, since the transmission probability for HIV between insertive and receptive anal intercourse is different by a factor of around 7 to 8 [31, 32]. Finally, sharing of stimulant drug use paraphernalia, such as wet and dry pipes, and shotgun practices may facilitate the transmission of respiratory pathogens, such as Covid-19. While ART does not protect against acquisition of the novel coronavirus and its sequalae, there are some indications that HIV infection may be associated with increased risk of Covid-19 diagnosis [33].

1.6 JUSTIFICATION

Chemsex is increasing among MSM/TGW in Southeast Asia [12, 13] and has likely contributed to the ongoing and expanding HIV epidemic in these populations in Cambodia and neighboring countries [15, 26, 34, 35]. Apart from HIV and other infectious diseases , Chemsex is associated with several negative physical health effects. Accurate and specific knowledge of user demographics, routes of administration, risk practices, types of drugs, settings, and ways of engagement into Chemsex among MSM/TGW in Cambodia is currently lacking. Studies are needed to better understand Chemsex practices and their effects in these populations to increase risk awareness, design appropriate prevention strategies and increase access, uptake, and quality of HIV services.

2 GOAL, OBJECTIVES, AND RESEARCH QUESTIONS OF THE STUDY

2.1 GOAL

The goal of the study is to chart, explore and better understand sexualized drug use practices and effects, user characteristics and experiences, and access and uptake of HIV prevention and other services among MSM/TGW in greater Phnom Penh, Cambodia.

2.2 SPECIFIC OBJECTIVES

The specific objectives of the study are:

- To assess user characteristics, drug use patterns and HIV risk behaviors
- To assess linkages to HIV prevention and care
- To explore pathways to sexualized drug use
- To explore perceived benefits and adverse effects of sexualized drug use
- To explore sexual culture of Chemsex

2.3 RESEARCH QUESTIONS

2.3.1 Effectiveness of risk-tracing sampling

To what extent can risk-tracing sampling (RTS) methodology (proposed for this study, see section 5.2) be used as a potential recruitment and peer-driven intervention strategy to find Chemsex users for study purposes and link them to HIV prevention and other services?

2.3.2 Assessment of demographic, sexual and drug use characteristics

What are demographic, sexual, and behavioral characteristics of MSM/TGW who engage in Chemsex? users? This includes age, education, gender, sexual identity and attraction, sexual and drug use histories, settings, practices, and perceived mental and physical negative side-effects.

2.3.3 Linkages to HIV prevention and care

To what extent are MSM/TGW Chemsex users accessing and using HIV prevention and other services (condoms and lubricants for anal intercourse, outreach worker contact, HIV testing and HIV Pre-Exposure Prophylaxis [PrEP]).

2.3.4 Exploration of pathways to Chemsex

How do MSM/TGW become involved in Chemsex? How do they access Chemsex networks? How are they recruited and/or recruit other candidates in their Chemsex network(s)? What is the role of social media and the internet in recruiting novices into Chemsex? How important are social media and the internet in acquiring Chemsex drugs?

2.3.5 Perceived benefits and adverse effects of sexualized drug use

What do MSM/TGW Chemsex users consider the main benefits and values of engaging in sexualized drug use? What adverse effects are experienced by Chemsex users? For example, unprotected sex, HIV, STI, non-consensual sex, sexual coercion, drugging, and rape and other forms of violence? Negative mental and physical health effects, stigma and discrimination, social and professional consequences.

2.3.6 Sexual culture of Chemsex

How can Chemsex be described from a sociological perspective? How do Chemsex users define Chemsex as an element of their sexual lives? How has it changed their sexual experiences, moved their sexual borders, affected feelings of intimacy and connectedness, increased their self-confidence and sexual wellbeing? What do they consider 'cool' and 'not cool' when doing Chemsex (i.e., what are social and sexual norms)? How is power distributed between those who have drugs and those who want part of it? Are there particular initiation rituals/sharing rituals based on age, status, power, and gender? What are criteria for allowing or disallowing people to enter networks of Chemsex users? What is the local vernacular to communicate about Chemsex and what are tokens and emojis used on the internet to indicate interest in Chemsex and recruit potential candidates. To what extent is there a differentiation based on socio-economic status, possession, or ability to acquire drugs, availability of a drug use setting, age, skin color, body characteristics, perceived confidentiality, and trust?

METHODOLOGY

3.1 STUDY DESIGN

The current study is descriptive and employed a mixed-methods exploratory design. A mixed methods study combines quantitative and qualitative data collection and analysis. Individually, these approaches answer different questions, so combining them provides a framework for understanding of factors of interest as well as of more in-depth findings.

3.2 STUDY POPULATION

The study recruited MSM/TGW aged 15 years and older who resided in the greater Phnom Penh area and who had engaged in Chemsex (defined as having used drugs [ATS, other stimulant drugs, GHB/GBL or ketamine] for sexual pleasure in a setting with two or more participants) at least once in the past 12 months.

3.3 SAMPLING METHOD

3.3.1 Quantitative component

Risk tracing sampling (RTS) was used to recruit study participant [36]. This method has been employed successfully among MSM/TGW in Cambodia previously [25]. Using this approach, MSM/TGW contacted by outreach workers or who come in for HIV counseling and testing at collaborating clinics were asked if they had Chemsex experience during the past 12 months. Those who responded affirmatively were asked to participate in the study and offered the opportunity to serve as “sampling seeds”. Seeds were tasked to recruit other Chemsex users from their social and sexual networks into the study. The final number of seeds depended on enrollment progress, but initially, this figure was set at five. Each seed was given five serially numbered coupons for use in recruiting other Chemsex users from their networks. If the “recruit” presented at the study site with such a coupon, was eligible and completed the quantitative questionnaire, the seed who recruited this individual would be given a financial incentive of USD 5. Recruits who completed the questionnaire received a similar financial incentive. Recruits then were offered the same opportunity as the initial seeds to recruit other Chemsex users from their networks using new sets of serially numbered coupons.

3.3.2 Qualitative component

In-depth qualitative interviews with active Chemsex users were held with every seventh recruit. For example, if the first was 7, then the next recruit to be invited would be 14, 21, 28, etcetera. If number 7 refused, number 8 was asked, and so on. Those who agreed to take part in the in-depth interview received an additional reimbursement for their time and travel of USD 5.

3.4 SAMPLE SIZE

3.4.1 Quantitative component

There are several studies investigating the epidemiology of Chemsex and its association with HIV infection and other factors among MSM/TGW in Southeast Asia. However, no studies have been conducted in the region exclusively enrolling MSM/TGW Chemsex users [15, 18, 20, 37]. Virtually all investigations among MSM/TGW Chemsex users originate from the industrialized world and usually enroll (a limited number of) users in the context of behavioral and pharmacological interventions [38-42]. These studies are commonly conducted among MSM/TGW volunteers and are powered to detect differences between treatment arms. As a result, their numbers cannot be used to inform the sample size of the current study.

The population size of active MSM/TGW Chemsex users in the greater Phnom Penh area is unknown. Active MSM/TGW Chemsex users may be reluctant to come forward and participate in the current study. Because of the illegal nature of drug user in Cambodia many Chemsex users may not be willing to make this behavior known to others, out of fear for disclosure and discrimination or for criminalizing or punitive measures. For this reason, we initially determined the number of active MSM/TGW Chemsex users to be enrolled in the proposed study to be N=100.

3.4.2 Qualitative component

A subsample of active users was enrolled in the qualitative component of the study. Literature suggests that qualitative interviews in a homogenous population start to saturate after 12 cases (the point at which no new concepts emerge from subsequent interviews and information becomes repetitive) [43]. Taking in account some variation around this number, it was aimed to recruit one out of every seven participants in the study. Hence, the total number of enrollees in the in-depth interview was n=15.

3.5 DATA COLLECTION METHODS

3.5.1 Quantitative data

Quantitative data were collected using a face-to-face interview on a tablet. The study instrument was developed in English, translated into Khmer, and cross-checked to ensure accuracy. In addition, the translated questionnaire was uploaded into KoboToolbox, an open-source data collection and management tool [44]. Finally, KoboToolbox was installed on tablet devices for the data collection process.

3.5.2 Qualitative data

Qualitative data were collected through audio recorded, face-to-face in-depth interviews by a trained Khmer-speaking interviewer, preferably someone from the MSM/TGW community with affinity to Chemsex. The location (in the greater Phnom Penh area) of the qualitative interview and the time it was held were decided by the participants. Methods of communicating about the research and the appointment for the interviews was determined by the participant and included telephone and social media.

3.6 DATA ANALYSIS

3.6.1 Quantitative data

Quantitative data was analysed descriptively using SPSSX [45]. Main outcome variables of interest were percentages of unprotected intercourse during Chemsex, types of drugs used, injection of methamphetamine, non-consensual sex, use of PrEP and uptake of HIV testing and knowledge of current HIV infection status.

3.6.2 Qualitative data

The qualitative interviews were directly translated from the Khmer-language digital audio recording into English by a professional translator. If deemed necessary or appropriate, coding was conducted in Excel to search for commonalities, themes and to assist in the analysis in general. The analysis was proceeded from the translated texts through coding to the writing-up of individual case studies and thematic analysis (i.e., looking for common themes, searching for trends and patterns).

3.7 ETHICAL CONSIDERATIONS

3.7.1. Ethical clearance

The study protocol and tools were approved from the National Ethics Committee for Health Research (NECHR), the Ministry of Health, Cambodia (178 NECHR)

3.7.2 Recruitment

The recruitment process and its various and gradual steps of informing prospective participants ensured that the participant was fully aware of the nature of the study, including the expectation of discussing issues related to sex and the use of drugs, and the fact that the qualitative interview would be audio-recorded. It was made clear that the participant was allowed to withdraw from the research at any time without providing a reason.

3.7.3 Age of respondents

Data collected as part integrated behavioural and biological surveillance and other surveys conducted in Cambodia show that MSM/TGW start HIV risk behaviour (including drug use) at an early age [20, 26]. To describe and understand these behaviours and to inform appropriate interventions, especially for young MSM/TGW, the minimum age to consent for enrolment in the current study was set at 15 years.

3.7.4 Informed consent

Before the start of each interview, a written informed consent form was signed. It contains a clear message that the participant can refuse to answer specific questions without adverse effects and that they may withdraw from the interview and/or

from the research process at any time without any explanation. Participants were given information on how and where they can access HIV and STI testing and other HIV services if they wish to do so after participating in the study.

3.7.5 Confidentiality and data safety

Details that could identify a participant were deleted or altered in the resulting research report and in publications that may emanate from the research project. Data were stored in a safe location at the office of the Khmer HIV/AIDS NGO Alliance on a computer with a password known only to the research team and its supervisor. No detailed identifying information about the participant were included in the data transcripts or on the data storage device; no contact details of participants were kept.

3.7.6 Benefits and incentives

The research team referred participants to community outreach workers or affiliated clinics for HIV and other testing. Study participants were offered educational health information, free condoms and lubricants, and referral to needed health services. Participants received USD 5 to compensate for their time and effort in this research study after completion of the quantitative questionnaire. In case the participant took part in the qualitative interview, they were paid another USD 5.

3.7.7 Community consultation

A consultation was held to inform the MSM/TGW community, get their input into the study design and seek their ascent for the project. After completion of the study, another community consultation is organized to share results and obtain feedback on findings and how they could be used to inform preventive interventions and efforts to increase access and uptake of HIV and other services for MSM/TGW.

4 LIMITATIONS OF THE PRESENT STUDY

This study has several limitations. First, our study population is not a random sample of active Chemsex using MSM/TGW in Phnom Penh. As a result, our findings cannot be generalized to the population of active Chemsex using MSM/TGW in Phnom Penh at large. Second, the absence of a solid sampling framework to draw and reach hidden and stigmatized populations for research limits our ability to recruit these vulnerable groups in studies. Third, respondent driven sampling (RDS) may provide an alternative approach, but our study was not powered enough to assess the level of independence of the resulting sample from its seeds. Besides the power requirement, several methodological and practical complications remain even if RDS is used [46]. Fourth, a factor negatively impacting the validity and reliability of our data is that drug use is illegal in Cambodia and respondents may therefore feel hesitant to disclose the real or full story of events. Fifth, the study team worked with Men's Health Cambodia (MHC) as a single source to recruit seeds who fulfilled the selection criteria. Sixth, the implementation period of the project was brief due to time constraints. The coupons given had an expiration period of only five days which period could be extended for two additional days if the participant agreed to complete the interview during the next week. Sixth, field researchers had to utilize photos of different types of drugs during the interview as participants from different groups and communities had different terminology when referring to the same types of drugs. Seventh, in a RTS of sexual and drug use acts, behaviors are linked, and our observations may therefore not be fully independent of each other, which has statistical consequences. Finally, participants with a high frequency of Chemsex event attendance may have a greater likelihood of inclusion in a RTS, thereby biasing our estimates of risk upwards.

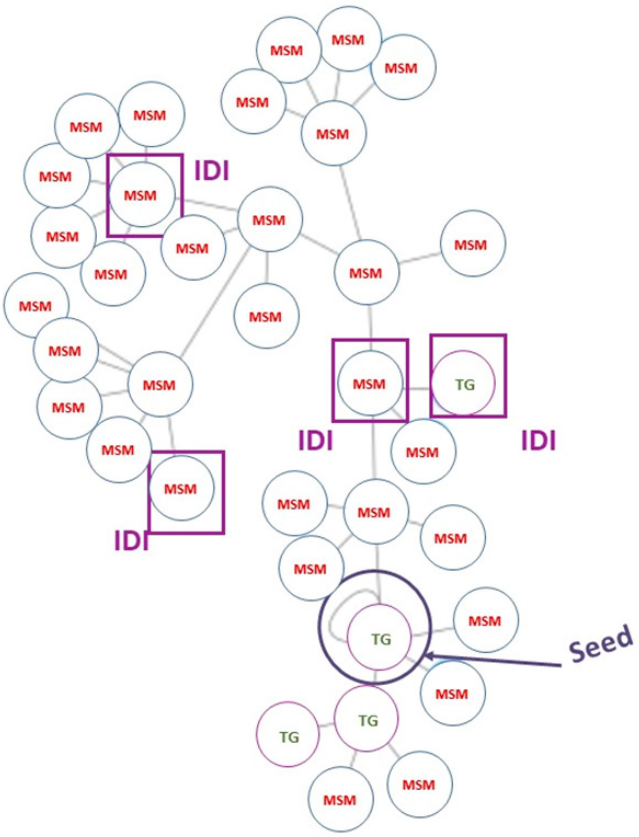
5 FINDINGS

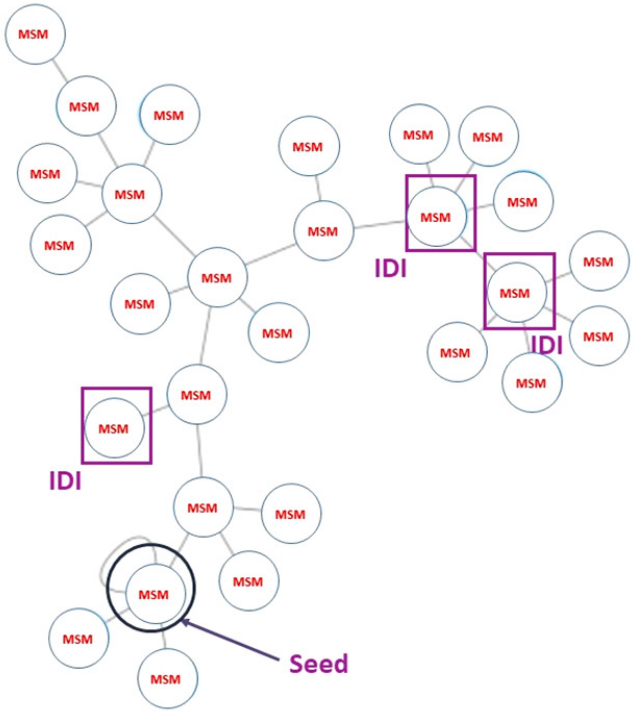
5.1 RECRUITMENT OF RESPONDENTS

The study started from four seeds, two of whom were MSM and another two TGW. A total of 135 active MSM/ TGW Chemsex users were enrolled between August 25 and September 18, 2022.

Seed 1 (MSM)

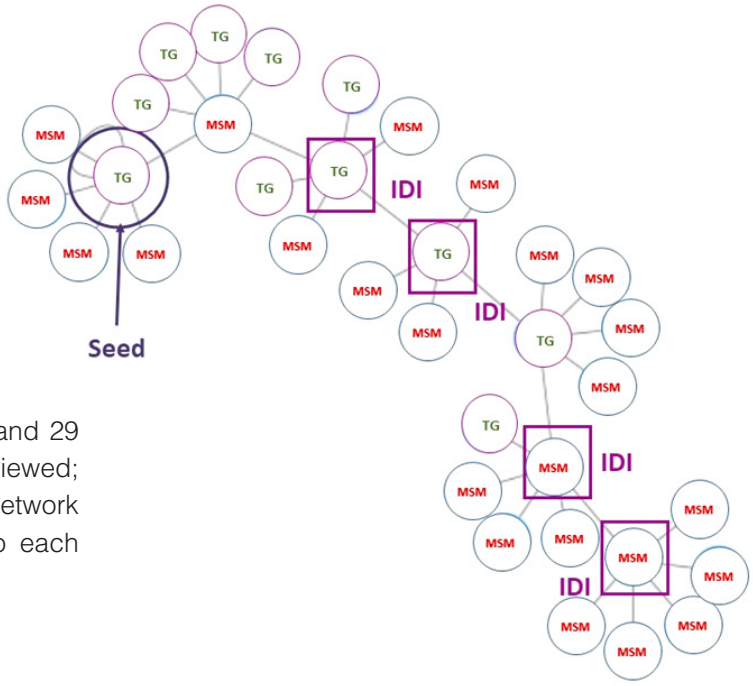
As we can see in this network, starting from an MSM seed, recruitment reached seven waves and enrolled 28 participants for interviews and three for in-depth interview (IDI); all participants are MSM.





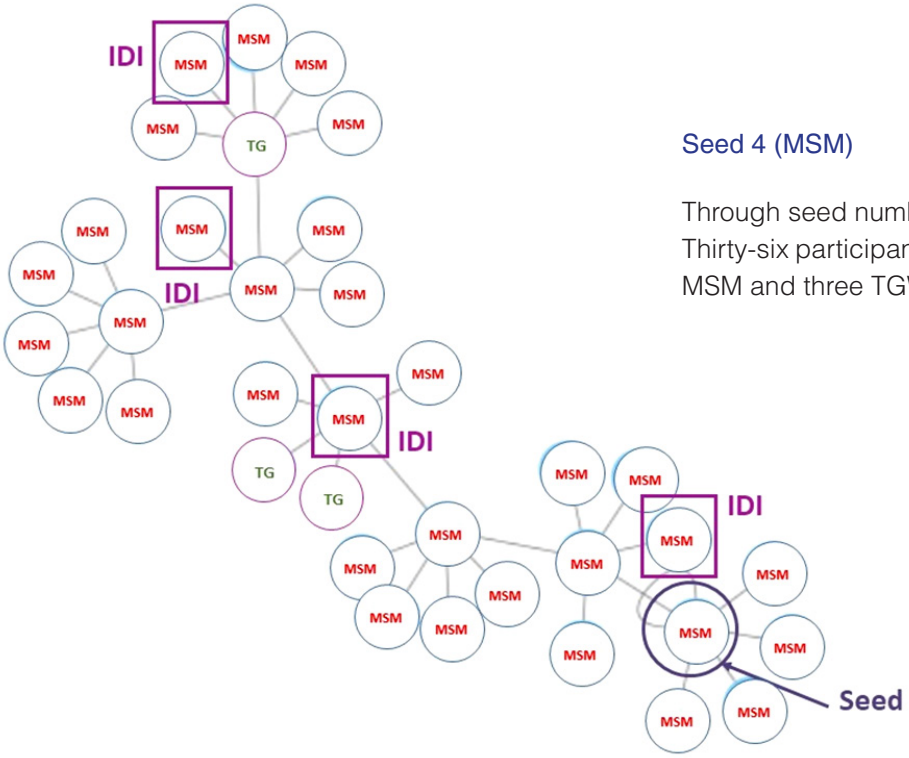
Seed 2 (TGW)

From this TGW seed, recruitment reached six waves and enrolled 36 participants (four TGW and 32 MSM) for interview and four for IDIs (one TGW).



Seed 3 (TGW)

Through his seed, 35 participants (11 TGW and 29 MSM) and four IDIs (three TGW) were interviewed; recruitment reached seven waves. The network shows that, MSM and TG are connected to each other in this community.



Seed 4 (MSM)

Through seed number four, six waves were reached. Thirty-six participants were recruited for interview (33 MSM and three TGW) and four IDIs (all MSM).

5.2 QUANTITATIVE COMPONENT

5.2.1 Socio-demographic profile of respondents

The mean age of participants was 28.1 years; the youngest was 16 years and the oldest 43 years. Fifty percent was 27.5 years or younger (table 1). All resided in the greater Phnom Penh metropolitan area and the far majority (70.4% or n=95) were not living alone. Almost half (48.2% or n=65) had completed higher secondary school or more. With respect to their sexuality, all were assigned male sex at birth, 67.4% (n=90) identified as homosexual or gay, and each 16.2% identified as bisexual (n=22) or as TGW (n=22). Most respondents felt sexually attracted to other men (n=106) or MSM (n=71) and fewer to women (n=31) and TGW (n=21) (table 1). None of the TGW felt attracted to other TGW (data not shown).

Table 1 Socio-demographic and sexual characteristics of participants

Characteristics	n (%)
Age (years)	
Range	16-43
Mean (SD)	28.1 (5.5)
Median (IQR)	27.5 (23.5-31.5)
Current living situation	
Live alone	40 (29.6)
Live with parents	34 (25.2)
Live with a relative (brother, sister, aunt, etc.)	23 (17.0)
Live with partner/spouse without children	16 (11.9)
Share room/rental house with friend(s)	20 (14.8)
Homeless/temple/on the street	2 (1.5)
Highest education completed	
Less than primary school	1 (0.7)
Primary school	27 (20.0)
Lower secondary school	42 (31.1)
Higher secondary school	43 (31.9)
Technical/Vocational college	5 (3.7)
University	16 (11.9)
Graduate/Professional school	1 (0.7)
Current sexual identity	
Homosexual, gay man	91 (67.4)
Bisexual	22 (16.2)
Transgender woman	22 (16.2)
Sexually attracted to (multiple answers possible)	
Men	106 (78.5)
Women	31 (23.0)
Transgender women	28 (20.7)
MSM	71 (52.6)

IQR, interquartile range; SD, standard deviation

5.2.2 Assessment of drug use characteristics

Of participants, 54.8% (n=74) had a history of smoking in the past 12 months, of which 20 (14.8%) smoked one pack of cigarettes or more per day. Almost all (94.8% or n=128) drank alcohol during this period, of whom 57.8% (n=78) got drunk at least once per week or more. Respondents answered to have used a variety of Chemsex drugs, both during their lifetime as well as in the past 12 months (table 2). Crystal methamphetamine and ketamine were the drugs of choice, their use during the past year being reported by 68.8% (n=93) and 50.4% (n=68), respectively. Use of amphetamine, methamphetamine, ecstasy, GHB and GBL and mephedrone were reported less frequently. Remarkably, 28.9% (n=39) of participants did not know what type of Chemsex drug they had used during in the past year (table 2). Finally, 31.1% (n=42) of participants said to have ever injected a drug into themselves.

Table 2 General and Chemsex drug use of participants

Drug use	n (%)
Ever smoked cigarettes in the past 12 months	
Yes	68 (50.4)
No	61 (45.2)
Yes (other cigarettes including electronic cigarettes)	6 (4.4)
Number of cigarettes smoked per day in the past 12 months	
1	6 (4.4)
2-5	20 (14.8)
6-10	18 (13.3)
11-15	9 (6.7)
One pack (one pack = 20 pieces)	8 (5.9)
More than one pack	12 (8.9)
I stopped smoking	1 (0.7)
Ever drank alcohol in the past 12 months	
Yes	128 (94.8)
No	7 (5.2)
Got drunk from alcohol in the past 12 months	
Never	2 (1.5)
About once a month or less	25 (18.5)
2 or 3 times per month	23 (17.0)
About once per week	14 (10.4)
2 or 3 times per week	25 (18.5)
Almost every day	20 (14.8)
Every day	19 (14.1)
I stopped drinking	0
Ever used Amphetamine tablets (*Yaa baa or Yaa maa*)	
Never	47 (34.8)
Ever	88 (65.2)
Used Amphetamine tablets past 12 months	
Yes	32 (23.7)
No	103 (76.3)
Ever used Methamphetamine tablets (*Meth, Tina*)	
Never	14 (10.4)
Ever	121 (89.6)
Used Methamphetamine tablets past 12 months	
Yes	10 (7.4)
No	125 (96.6)
Ever used Crystal Methamphetamine (*Crystal, Ice*)	
Never	96 (71.1)
Ever	39 (28.9)

Used Crystal Methamphetamine past 12 months	
Yes	93 (68.8)
No	42 (31.2)
Ever used Ecstasy (*E*)	
Never	37 (27.4)
Ever	98 (72.6)
Used Ecstasy past 12 months	
Yes	24 (17.8)
No	111 (82.2)
Ever used Ketamine (*K*)	
Never	83 (61.5)
Ever	52 (38.5)
Used Ketamine past 12 months	
Yes	68 (50.4)
No	67 (49.6)
Ever used Gamma-hydroxy butyrate (GHB) or Gamma-butyric lactone (GBL) (*G*)	
Never	20 (14.8)
Ever	115 (85.2)
Used GHB or GBL past 12 months	
Yes	15 (11.1)
No	120 (89.9)
Ever used Mephedrone (*M-cat, Salts, or Meow*)	
Never	27 (20.0)
Ever	108 (80.0)
Used Mephedrone past 12 months	
Yes	23 (17.0)
No	112 (83.0)
Don't know the type of Chemsex drug I used	
Never	59 (43.7)
Ever	76 (66.3)
Don't know the type of Chemsex drug I used past 12 months	
Yes	39 (28.9)
No	96 (71.1)
Did you ever inject a drug into yourself	
Ever	42 (31.1)
Never	93 (68.9)

5.2.3 Sexual and other behaviors during Chemsex

Table 3 shows the sexual and other behaviors during Chemsex in the past 12 months and other relevant periods. Equal numbers of users reported to be mostly “top” (insertive) (37.8% or n=51) or mostly “bottom” (receptive) (37.8% or n=51) during anal intercourse while having Chemsex. A minority (24.4% or n=33) assumed both sexual roles during this type of sexual behavior. Always condom use while having anal intercourse during Chemsex was reported by 32.6% (n=44), despite a majority saying that condoms (71.9% or n=97) and lubricants (82.2% or n=111) were available to them (all during the past 12 months). Group sex (with three or more

sexual partners) during Chemsex was reported by 51.4% (n=73). Slightly less than half (43.7% or n=59) reported to have used Viagra or a similar drug to facilitate anal intercourse during Chemsex. Use of "poppers" (inhaled nitrites) in combination with Viagra or a similar drug was reported by 47.8% (n=70). Only few participants (0.7% or n=9) said to have used marijuana together with these substances (table 3). Eighteen (13.3%) participants answered to have injected crystal methamphetamine as part of Chemsex use (all during the past 12 months). Of these, 15 (83.3%) did so at least once a month, usually with their own clean injection equipment (83.4% or n=15). Sixty-seven (49.6%) reported to have ever exhaled crystal methamphetamine smoke into the mouth and lungs from another user (performing a so-called "*shotgun*"). Ever having inserted water-dissolved crystal methamphetamine into the rectum (using a flush syringe and known as a "*booty-bump*") was found to be rare (5.9% or n=8).

Table 3 Sexual and other behaviors during Chemsex in the past 12 months (unless specified otherwise)

Behaviors	n (%)
Anal intercourse position during Chemsex	
Mostly top	51 (37.8)
Mostly bottom	51 (37.8)
Both	33 (24.4)
Used condom while having anal intercourse (from start to finish) during Chemsex	
Always	44 (32.6)
Almost always	17 (12.6)
Half of the time	16 (11.9)
Some of the time	37 (27.4)
Never	21 (15.6)
Availability of condoms when having Chemsex	
Yes	97 (71.9)
No	38 (28.1)
Availability of lubricants when having Chemsex	
Yes	111 (82.2)
No	24 (17.7)
Had group sex (3 people and more) during Chemsex	
Always	6 (4.4)
Almost always	15 (11.1)
Half of the time	13 (9.6)
Some of the time	49 (36.2)
Never	52 (48.6)
Used Viagra or a similar drug to facilitate anal intercourse during Chemsex	
Always	6 (4.4)
Almost always	17 (12.6)
Half of the time	14 (10.4)
Some of the time	22 (16.3)
Never	76 (56.3)

Used inhaled nitrates (*poppers*) or marijuana during Chemsex	
Inhaled nitrates	64 (47.4)
Marijuana	9 (0.7)
Both	6 (0.4)
Never used	56 (41.5)
Injected crystal meth (*slamming*) during Chemsex	
Yes	18 (13.3)
No	117 (86.7)
How often did you inject crystal meth during Chemsex	
Daily	0
More than once a week but not daily	6 (33.3)
More than once a month but not weekly	9 (50.0)
More than once per 6 months but not monthly	3 (16.7)
More than once per year	0
Once per year	0
How often did you use your own clean injection equipment	
Always	12 (66.7)
Almost always	3 (16.7)
Half of the time	1 (0.06)
Some of the time	2 (0.1)
Never	0
Did you ever exhale crystal meth smoke into the mouth and lungs of another user	
Ever	67 (49.6)
Never	68 (50.4)
Did you ever dissolve crystal meth in water and used a syringe to insert it in your rectum	
Ever	8 (5.9)
Never	127 (94.1)

5.2.4 Recruitment and other experiences during Chemsex

The far majority (85.2% or n=115) of participants reported to have used the internet or social media (dating site, chat, messenger service) to find sexual partners; of these 35 (30%) said to have used these services daily (table 4). The mean number of sexual partners recruited online was 27.6 (median: 11.0). Close to 50% (n=66) of respondents first engaged in Chemsex with a casual partner recruited online. Of all first Chemsex encounters, 66.7% (n=90) involved one or more casual partners. The mean number of Chemsex events attended in the past year was 38.1 (median: 9.5) and the average number of hours spent at these occasions was 4.0 (median 3.5). The person organizing the Chemsex event was usually the supplier (mentioned by 90 or 66.6% of respondents) of the necessary drugs. If such drugs were not available, 42.2% (n=57) said they were then ordered via internet/phone, while 17.0% (n=23) mentioned a street dealer as the source of the required substances (table 4). A relatively large number of participants (n=44 or 32.6%) said they were not aware of the involvement of drug use the first time they attended a Chemsex event. Non-consensual sex during Chemsex was reported by 17.7% (n=24) and 9.7% (n=13) said to have ever been drugged during this practice. In more than half of these cases (n=7 or 53.8%) this happened the first time they had Chemsex (table 4).

Table 4 Chemsex recruitment and experiences during the past 12 months (unless specified otherwise)

Recruitment and experiences	n (%)
How often did you use the internet or social media to look for sexual partners (dating site, chat, messenger)	
Never	20 (14.8)
Once a month or less	20 (14.8)
2 to 3 times per month	20 (14.8)
About once per week	16 (11.9)
2 to 3 times per week	24 (17.7)
Every day	35 (25.9)
Number of male sexual partners met through the internet and social media	
Range	0-720
Mean (SD)	27.6 (67.5)
Median [IQR]	11.0 (3.5-24.5)
First engaged in Chemsex through	
Boyfriend/sangsa	26 (19.3)
Friend	30 (22.2)
Casual partner (not on internet or social media)	13 (9.6)
Casual partner met on internet or social media	66 (48.9)
First engaged in Chemsex with	
Boyfriend/sangsa	45 (33.3)
Casual partner	66 (48.9)
Multiple casual partners	14 (10.4)
Boyfriend/sangsa as well as casual partner(s)	10 (7.4)
Number of times had Chemsex	
Range	1-240
Mean (SD)	35.1 (49.8)
Median [IQR]	9.5 (3.5-60)
Average number of hours spent while having Chemsex	
Range	1-13
Mean (SD)	4.0 (2.7)
Median [IQR]	3.5 (1.5-4.5)
Supplier of Chemsex drugs (more than one answer possible)	
A friend	32 (23.7)
My boyfriend/sangsa	33 (24.4)
I got it myself	45 (33.3)
Group of friends	59 (43.7)
Chemsex event organizer	90 (66.7)

Location to buy Chemsex drugs	
Bought from street dealer	23 (17.0)
Bought via the internet/phone	57 (42.2)
Chemsex event organizer had them	72 (53.3)
Knew beforehand encounter would involve Chemsex the first time you joined	
Yes	91 (67.4)
No	44 (32.6)
Ever had non-consensual sex when having Chemsex	
Never	111 (82.2)
Once	13 (9.6)
More than once	11 (8.1)
Ever been drugged (brought under the influence of drugs without your consent) before or while having Chemsex	
Never	122 (90.4)
Once	9 (6.7)
More than once	4 (3.0)
Drugged before or during the first time you had Chemsex	
Yes	7 (53.8)
No	6 (46.2)

IQR, interquartile range; SD, standard deviation

5.2.5 Linkages to HIV prevention and care

Of participants, 33.3% (n=45) said to have never or not recently been tested for HIV infection. Of those who were ever tested (88.9% or n=120), 3 (2.5%) said the HIV test result was positive. The remaining number either tested HIV negative (77.0% or n=104), didn't get the result (0.7% or n=1) or did not want to tell (8.8% or n=12). With respect to knowledge about HIV PrEP, 75.5% (n=102) said to have never heard about it or did but weren't sure what it was. Only one person indicated to be currently using PrEP (table 5). Seventy-five (55.6%) mentioned to have been in contact with an HIV outreach worker in the past 12 months. Regarding feelings of control about one's Chemsex use, 50.4% (n=68) indicated they could stop anytime. The remainder (49.6% or n=67) felt they weren't sure or were not able to stop. When it came to effectively stopping one's Chemsex use, only 14.1% (n=19) reported to have been successful in doing so. The majority said to have never tried (37.8% or n=51) or couldn't stop (48.1% or n=65). Participants agreed with several possible negative side-effects of Chemsex, overdose or physical health problems the most mentioned (87.4% or n=118), followed by penile or rectal trauma (44.4% or n=69), sexual coercion, violence, or rape (27.0% or n=28) mental health problems (23.0% or n=31), or having type of sex that would be regretted (12.6% or n=17).

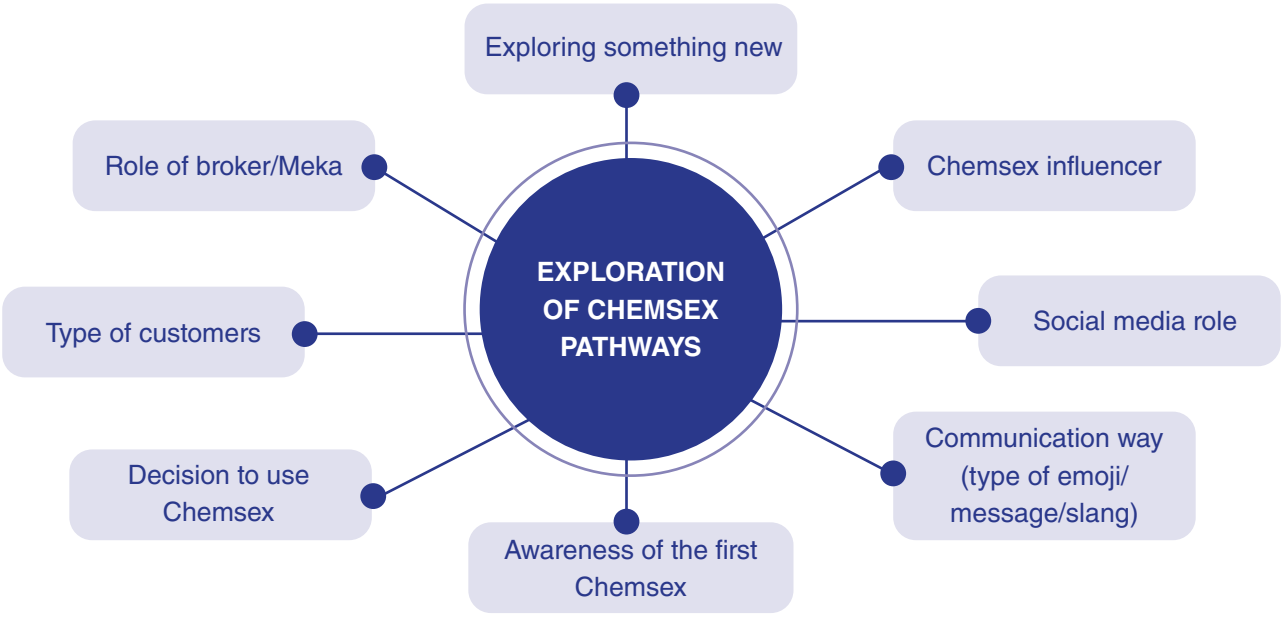
Table 5 Linkages to HIV prevention, mental and physical side-effects of Chemsex

HIV testing, mental and physical side-effects	n (%)
Ever been tested for HIV	
I have never been tested for HIV	15 (11.1)
I have been tested for HIV, but longer than 12 months ago	30 (22.2)
I have been tested for HIV in the past 12 months	90 (66.7)
The result of latest HIV test	
Positive	3 (2.5)
Negative	104 (77.0)
I didn't get the result	1 (0.8)
Don't want to tell	12 (10.0)
Ever heard about HIV PrEP	
I have never heard about it	55 (40.7)
I have heard about it, but I am not sure what it is	47 (34.8)
I know what PrEP is, but I am not using it	28 (20.7)
I know what PrEP is, and I have used it in the past	4 (3.0)
I know what PrEP is, and am using it now	1 (0.7)
Ever met HIV outreach worker	
No, never	37 (27.4)
Yes, I have, but longer than 12 months ago	23 (17.0)
Yes, I have met an HIV outreach worker in the past 12 months	75 (55.6)
Feelings of control about one's Chemsex use	
I am completely in control of my Chemsex use, I could stop anytime	68 (50.4)
I feel in control of my Chemsex use, but I am not sure if I could stop easily	45 (33.3)
I am not sure if I am in control of my Chemsex use, or if Chemsex is controlling me	16 (11.9)
I feel I am not in control of my Chemsex use, but I do not need help	4 (3.0)
I feel I am not in control of my Chemsex use, and I would like to get help	2 (1.5)
Ever tried to stop using Chemsex	
No, I never tried to stop	51 (37.8)
Yes, I tried to stop once, but I could not	22 (16.3)
Yes, I tried to stop more than once, but I could not	43 (31.9)
I tried and I stopped (in the past 12 months)	19 (14.1)
Believes about negative side-effects of Chemsex use (multiple answers possible)	
Overdose or physical health problems	118 (87.4)
Penile or rectal trauma	69 (44.4)
Sexual violence, coercion, or rape	28 (27.0)
Mental health problems	31 (23.0)
Having type of sex regretted later	17 (12.6)

5.3 QUALITATIVE COMPONENT

Fifteen IDI were conducted as part of the study. Three participants were TGW, while 12 were MSM. Through the interview, we found that six out of 15 injected drugs. The results from IDIs were categorized into three main key themes: exploration of pathways to sexualized drug use, perceived benefits and adverse effects of sexualized drug use, and sexual culture of Chemsex.

5.3.1 Exploration of pathways to Chemsex



5.3.1.1 Exploring something new

Results showed that the majority respondents (nine out of 15) started doing Chemsex because they wanted to try and explore something new. Chemsex boosted their sexual pleasure while sexual feelings with a partner decreased (two out of 15). Some started Chemsex to make money (two out of 15).

> *"I am the kind of man who has sex with men; for high fun/Chemsex, I wanted to know and wanted to try." MSM_Age 28_coupon_0063*

> *"First, my friend used that drug, and he introduced it to me; he told me that the drug could make the penis strong and enhance sexual pleasure, I asked him too; what do you feel? At that time, he was injecting; and he replied to you would know when you do it. Then I tried." TG_ Age 27_ coupon_0114*

> *"As I have told you, whenever I have sex, I usually practice Chemsex because we were drunk too. We went to the club, and we drank, we used it to enhance sexual pleasure, and we could go out with the customers, ... after earning money from having sex with clients, my boyfriend and I went to the club, drunk, and came back to the guesthouse to practice Chemsex for sexual pleasure every time." TG_Age 36_coupon_0106*

> *"At first, I had a partner, and we had normal sex, but when my partner used Chemsex, he introduced it to me. At that time, I did not want to use it; I thought that use or don't use Chemsex, I had the same feeling, so I decided not to use it. Later, I started feeling stressed and didn't want to have sex. My partner began to persuade me again, then I accepted it." MSM_Age 26_coupon_0043*

5.3.1.2 Chemsex influencer

Partners and close friends played an essential role as Chemsex influencers to future users (13 out of 15). Two respondents reported that they had decided to explore Chemsex by themselves.

> *"We did Chemsex to enhance sexual pleasure, no worry; in addition, it was more fun for group sex." TG_Age 36_coupon_0106*

> *"I had a sexual partner who was involved in Chemsex, then he introduced and told me that if we use a little bit, it is fun and makes our sex even stronger." MSM_Age 33_coupon_0157*

> *"Yes, I knew it was a drug, but I still wanted to try. At that time, I was TGW; there was a dancing event, and a group of adults invited me; when I arrived, there was another group of adults using the drug; I came in and asked about it, ...After doing the drug, I fell for sex; I asked my partner and he agreed; we had group sex (three people)." MSM_Age 43_coupon_0220*

5.3.1.3 Role of social media

The IDIs showed that most respondents used social media to find Chemsex partners (11 out of 15). The social media they used included Grindr, Blued, Facebook, and Twitter. Two respondents used social media to contact their clients and two reported that they didn't use social media for Chemsex.

> *"First, I chatted with my partner/others and shared each other's photos; if they look cool and handsome, I started approaching/dating them; most people who access Facebook, Blued, or Grindr know about Chemsex… First, we met through Facebook, Grindr, and Blued; then we dated; first, I didn't know about it, but he knew first, so he introduced to me; after doing it, the results were good." MSM_Age 22_coupon_0140*

> *"Normally, clients approached me through a broker, Facebook, Grindr, etc. I always find clients through those apps and sometimes they chatted with me to ask if I could go out with them." TG_ Age 36_coupon _0106*

> *"No signs, no social network at all right now. I didn't use a smartphone." MSM_Age 33_coupon_0171*

5.3.1.4 Communication way (type of emoji/ message/slang)

There are different words to engage someone for Chemsex, including "Hi", "high fun", "airplane emoji", "needle sticker", "fire sticker", "flying text", "Eat rice", TGW slang etc.

> *"In Grindr as I used to know, they used emoji of airplane or fire and needle sticker to contact each other. Those were the messages they chatted with me for high fun" MSM_Age 28_coupon_0063*

> *"We used our language, TGW slang (only our group understands and can communicate); we informed each other when we drunk." TG_ Age 36_coupon_0106*

5.3.1.5 Awareness of the first Chemsex

Nine out of 15 respondents reported that they were not aware about Chemsex the first time they engaged in it, while six said they knew it because they chatted or communicated about it first.

> *"My friend didn't say anything, whether it was a drug or anything else; he just mentioned that if you used this one, you would get high and comfortable, and as soon as you injected it, you would get high and want sex. It was the same as he said, but I was afraid of the syringe…" MSM_ Age 33_Coupon_0157*

> *"I didn't know about the drug; I just knew that it was a kind of thing to boost sex." TG_Age 24_ Coupon_0069*

> *"Yes, I knew, we drank first; he dated me for sex, then he persuaded me to do Chemsex; so we did it together to enhance sexual pleasure." MSM_ Age 22_Coupon_0140*

5.3.1.6 Decision to use Chemsex

Ten out of 15 reported that they decided to do Chemsex on their own, without any pressure. Four said that their partner tried to persuade them again and again, although they didn't want it and one did Chemsex for money to support their daily life.

> *"…Yes, of course, my first Chemsex was with my partner, anyway we decided to do it together because I wished to try it too. He usually persuades me to do it; since we have known each other and had sex for a while we feel boring, so after we start doing Chemsex, our feeling is back." MSM_Age 26_coupon_0043*

> *"He first convinced me he wanted to use it for fun. If I didn't use it, he couldn't use it alone, then he persuaded me, and later he said please believe me my friend, inject it, and you get high. I finally decided to use it; if we were walking on the same path, I agreed to let him inject me with the drug." MSM_Age 33_coupon_0157*

> *"It's related to livelihood issues. I needed to earn money at that time; we usually might meet good and bad people." MSM_Age 33_coupon_0171*

5.3.1.7 Type of customers

Among the four respondents who sold sex, their main clients were Chinese and Western, few were local.

> *"…Western clients too, but didn't practice Chemsex as many as Chinese clients... For local clients, we practiced Chemsex occasionally; if they didn't get drunk, they wouldn't use it, but if*

they drank, they practiced Chemsex to enhance sexual pleasure... if I went out with Chinese ten times, I practiced Chemsex 8 or 9 times to enhance sexual pleasure." TG_Age 36 _Coupon_0106

"Chinese do more Chemsex than Westerners. Most Chinese prefer group sex, while Westerners prefer one to one." TG_Age 27_Coupon_0114

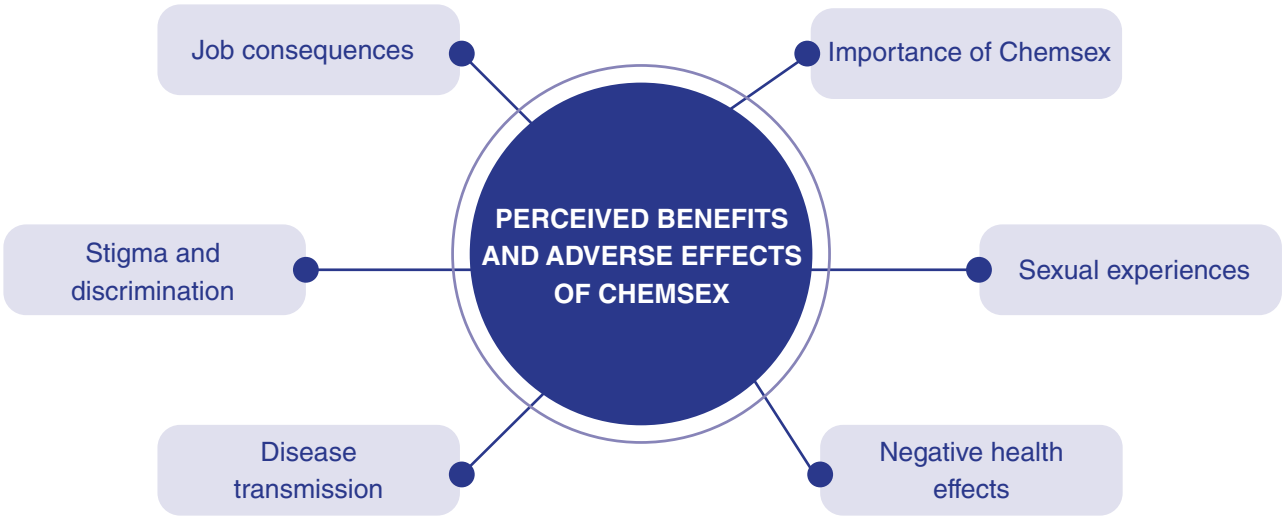
5.3.1.8 Role of broker/Meka

All four respondents who sold sex reported that they needed a broker (Meka/Taipan) to find clients for them.

"...the brokers usually inform us first about Chemsex. They first go to KTV then have Chemsex. If we are ok, then we go too... The clients sometimes have sex with others after us, and we too, after having sex with Chinese, the broker called that we have a Western client coming and accepted it, although 35$ or 45$, I accepted.", TG_Age 36_Coupon_0106

"Sometimes there is a broker, sometimes I find clients by myself as we have dating apps such as Grindr, Blued, and Facebook and by posting sexy photos, then they contact us." MSM_Age 22_ Coupon_0140

5.3.2 Perceived benefits and adverse effects of sexualized drug use



5.3.2.1 Importance of Chemsex

All respondents (15 out of 15) reported that Chemsex could help them to improve their sex performance. In addition, respondents also mentioned feeling closer, connectedness and releasing stress.

"When we did it, we felt high, craving; I felt that sex performance is better than before; my penis stronger. If I didn't use it, I didn't have a feeling for sex, so I need to have it to boost sex... without Chemsex, it might take 30 minutes. But when we did, it takes around 2-3 hours." MSM_Age 25_ coupon_0095

"The benefit was that, after doing it, it made me happy, high and craving for sex and longer sex. It made me want to have sex with my partner… It made me high and longer sex and group sex." MSM_Age 26_Coupon_0128

"The objective of doing high fun is sexual, most people prefer orgasm, longer sex, fun. Those are the reasons to do high fun... it helped us to boost sexual desire; my partner told me about those benefits, then after doing it, it was the same as what I had been told." MSM_Age 39_ Coupon_0164

5.3.2.2 Sexual experiences

Chemsex changed the sexual experience of all respondents (15 out of 15). It helped them to enhance their sexual pleasure, increase number of times having sex, feel connectedness, and all could reach orgasm.

"It made me want to have sex with my partner and do Chemsex again and again. Normally without Chemsex, we just spend around 3 minutes, but with Chemsex, we spend around 15 to 30 minutes; then, next time, we wish to do it again; for longer sex." MSM_Age 22_coupon_0140

"Without high fun, the receiver does not reach the orgasm, while doing high fun both of us reach." TG_Age 24_coupon_0069

"As I said, without Chemsex is different, not much sexual feelings and ejaculate in a short time. As the result, we didn't have the feeling. But when we practiced Chemsex, as I said, had sex for a longer period, high sexual feeling, all sex styles; those are the differences." TG_Age 36_coupon_0106

5.3.2.3 Negative health effects

Respondents reported many negative effects from doing Chemsex, including forget using a condom (four out of 15), drug overdose (two out of 15), drug addiction and mental health issues. In addition, the respondents reported loss of energy/weight, headache, and lack of sleep.

"*The negative was that after doing Chemsex, I feel sad… I felt blue and sad; I didn't know why it happened to me too… Sometimes I forget to use a condom." MSM_Age 26_coupon_0128*

"Most of the time, whenever practicing Chemsex, we couldn't control sex feeling, we rarely use a condom, especially group sex." TG_Age 36_coupon_0106

"...I am afraid the most is overdose; since I have been doing drug, I experienced an overdose once." TG_Age 27_coupon_0114

5.3.2.4 Disease transmission

Five out of 15 respondents responded that they couldn't control their feeling during Chemsex which led to sex without condom. However, three reported that they could control their mind or ask their partners/clients to use a condom. Most respondents worry about disease transmission including HIV, STI, Syphilis, hepatitis, and TB. One respondent said he didn't care about disease transmission.

"Be*cause of intimacy and trust toward the partner and the penis, sometimes it's strong and sometimes soft, it affects condom use, leading to sex without a condom." MSM_Age 33_coupon_0171*

"Yes, disease transmission. For me, as a bottom, while having group sex, we closed our eyes to get high, so we didn't know what would happen since there were many tops." MSM_Age 28_coupon_0063

"We may have sex without using condom, it leads to HIV and STI transmission." MSM_Age 35_coupon_0183

"I didn't think about it (disease transmission) as I had sex with an adult 16-17 years old. I didn't have sex with middle-aged men." MSM_Age 43_coupon_0220

5.3.2.4 Stigma and discrimination

Ten out of 15 reported that society, community, family, and friends couldn't accept them if they found out about their Chemsex. Five said they kept their use confidential; they weren't open about their Chemsex use.

"Society considers us who are doing Chemsex to be bad peo*ple… Society has a hard time accepting us, but for us as Chemsex users, we don't care much. We care about our fun and sex to reach what we want. But we behave normal whenever we go out, not let society judge who we are." MSM_Age 33_coupon_0157*

"We felt ashamed when we went out, when the community looked at us because we looked so pale,… People will discriminate us because we use *drugs. For me, I used to be good looking, but after doing drug, I changed. People around me didn't show friendliness to me." MSM_Age 39_coupon_0164*

5.3.1.5 Job consequences

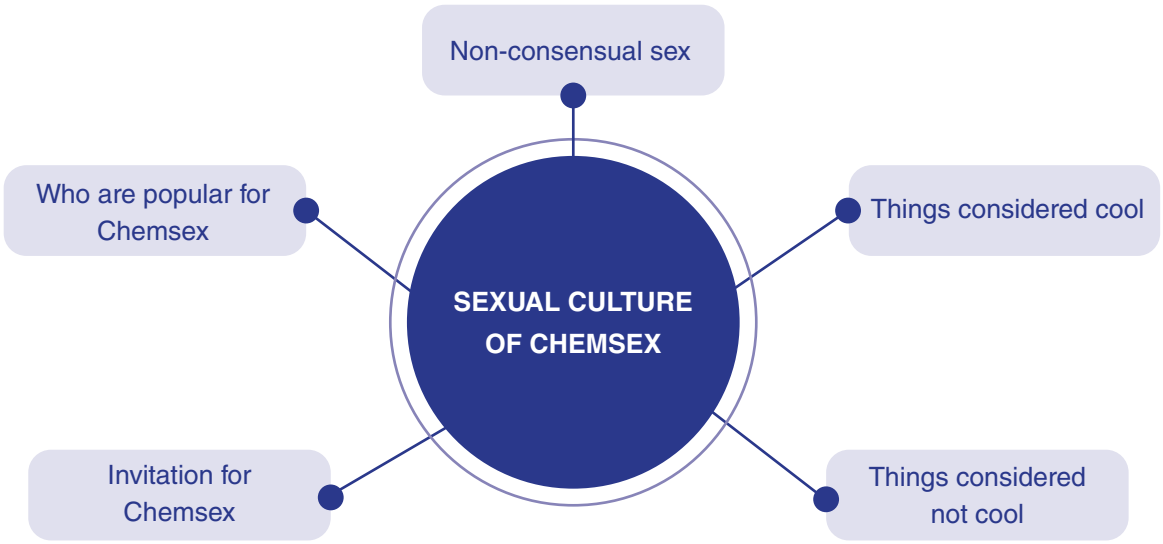
Eight out of 15 responded that doing Chemsex affects their daily activities (job/study) consequences. Moreover, those with a job reported to being blamed during their duty because of lack of concentration. Some respondents needed to take leave after doing Chemsex, while students were also affected as they felt dizzy after Chemsex.

"Sometimes, when I go to work, I get blamed. I couldn't concentrate, I felt dizzy." MSM_Age 26_coupon_0043

"Feeling exhausted, the day after Chemsex, I always apply intravenous therapy (IV) and relax. One day does Chemsex, one day relax after Chemsex." TG_Age 27_coupon_0114

"Since I did Chemsex, it affects my study, I couldn't control my feeling. I am addicted to sex… I have a job too, and it also affects my job." MSM_Age 25_coupon_0095

5.3.3 Sexual culture of Chemsex



5.3.3.1 Things considered cool

Group sex (four out of 15) and more sex styles (five out of 15) and versatile sex was considered cool among Chemsex users.

"Considering cool is group sex in the room, normally we don't do it alone, more partners the better, we prefer group sex." MSM_Age 26_coupon_0043

"Group sex is cool when doing Chemsex, from three persons up." MSM_Age 25_coupon_0095

"Chemsex is popular among our community of MSM/TGW. It's cool because it enhances sexual pleasure and attracts men. And sometimes we have versatile sex ...he agreed to be versatile during Chemsex, it depends on negotiation and persuasion and the use of money to buy sex." MSM_Age 43_coupon_0220

5.3.3.2 Things considered not cool

Some of the respondents report that one-to-one sex, slow and regular sex are considered not cool while doing Chemsex.

"Only two people sex, it's so traditional. I prefer group sex after doing Chemsex." MSM_Age 25_coupon_0095

"Not considered as cool, including being slow while having intercourse, have sex as he doesn't have any feelings." MSM_*Age* 33_coupon_0157

5.3.3.3 Invitation for Chemsex

Most respondents (nine out of 15) answered that those who own the drug determine who gets invited to the party. They know about the quantity of the drug, and about confidentiality. Respondents (three out of 15) also reported that they usually chat first to know who is invited and (three out of 15) always pay 50-50 to buy drug for the event.

"Yes, *those who own drug usually chat to ask partners whether they are receivers or inserters; how many people will participate, two or three? If the people who own drugs wish to have three, they will try to find another one and chat to ask us to make sure we are okay. Although we don't want to have sex with three, we have no idea to deny it as we don't pay anything for drug; we have to say ok." MSM_Age 33_coupon_0157*

They may limit the number of people joining because of the quantity of the drug, for example, there may only be enough drug for 2-3 people. In case it's not enough, sometimes we have to collect/share money to buy more. During Chemsex, there is no one who is the boss, we know each other, we experience and know clearly about the quantity we need, and we must share." MSM_Age 22_coupon_0140

*"Not really. Through my experience, I don't know where he got it. I asked him where he got it, he didn't tell me. Normally, be*fore doing it we all agreed, only two of us." *MSM_Age 28_coupon_0063*

5.3.3.4 Who are popular for Chemsex

Those who are experienced doing Chemsex get the trust of the group (seven out of 15) and are welcome to join the Chemsex event. Respondents also mentioned wealth and good-looking appearance (five out of 15) as important factors.

"T*hose who do drug are more welcome to Chemsex than those who don't, ... because Chemsex makes us feel good in sex and lasts long; moreover, when the receiver and inserter do Chemsex together, we have the same feeling." MSM_Age 33_coupon_0157*

"I can say those who have no budget and are not handsome/beautiful are not invited. Those who have a good body shape and good sex style, high education is also regarded popular." MSM_Age 28_coupon_0063

"Normally, we welcome all types of people, no matter we have never known/new faces, if they have money to share and are introduced by anyone of the group since it's popular among us." *MSM_Age 22_coupon_0140*

5.3.3.5 Non-consensual sex

Ten out of 15 respondents believed that non-consensual sex happens during Chemsex, including violence and persuasion by giving money or reward, while two of them experienced non-consensual sex themselves. Four said to have never experienced non-consensual sex.

"It ha*ppened to my friends; the clients wish to have sex, but they have no feeling, so sometimes the clients force them. We sell sex, and if we don't do Chemsex, we have no feeling to have sex with clients." TG_Age 27_coupon_0114*

"Yes, it's me, my case. While we chatted, he just invited to have sex as people usually do; didn't mention about high fun." MSM_Age 35_coupon_0183

*"I think it happened, but most of the time, there is no violence. They often try to persuade by awarding money and promis*ing to buy anything as a gift." "After doing Chemsex, most people are gentle and don't use violence as before..." MSM_*Age* 33_coupon_0171

6 DISCUSSION

In this study of Chemsex use among MSM/TGW in Phnom Penh, a relatively large number of active users (n=135) could be enrolled in less than one month. This velocity and ease of enrollment suggests that the population of active users among MSM/TGW in the Cambodian capital may be much larger than previously believed based on information obtained in recent cycles of IBBS [26, 47, 48]. The latter observation is corroborated by the large network sizes generated by the limited number of initial seeds, without a need for replacement with more effective ones.

The methodology used in this study shows that RTS may be an effective modality in accessing active Chemsex users for research purposes and inclusion in HIV prevention activities (such as HIV PrEP) and mental and physical health care (addiction management). Since Chemsex users are usually hidden due to criminalization, discrimination, and multiple stigmata (drug use, sexual identity, HIV risk behavior and HIV infection), the success of RTS is particularly appealing for these purposes. Another important finding is this context is the confirmation of the importance of social media in the recruitment of sexual partners and the organization of Chemsex [12, 13, 15, 27, 28]. Dating apps and other online channels were used with high frequency to solicit and select potential Chemsex partners, both directly through chat and messenger, and indirectly by the placement of profile tokens expressing Chemsex interest. Therefore, the internet may yet provide another important venue to identify, reach, educate and recruit Chemsex users for HIV prevention and other services.

Both the quantitative and qualitative components of this study document the existence of many HIV risk behaviors in combination with low uptake of HIV testing and a lack of knowledge and access to proven HIV prevention modalities, such as HIV PrEP. This despite most participants having had recent contact with an HIV outreach worker. This observation raises questions and asks for a review of the contents and effectiveness of outreach worker client communication. Condom use during anal intercourse when having Chemsex was found to be low, despite their availability in most situations. This confirms the breakdown of innate protective fear levels in combination with a strong desire for closeness and intimacy, in which condom-use or other forms of behavioral protection are experienced as obstacles and discarded [16]. Participants reported using of a wide array of different substances, both Chemsex and other agents. While crystal meth and ketamine were the drugs of choice during Chemsex, the simultaneous use of several other preparations points at the presence poli drug use as well, further complicating rehabilitation efforts. Apart from their drug use, participants reported large numbers of sexual partners and Chemsex encounters in the past year, in combination with a strong preference for group sex. A further critical piece of qualitative information identified was the role of sex work and the exchange of money and drugs in return for Chemsex. Sex work is a known risk factor for HIV infection and here likely further compounded by the psychoactive effects of sexualized drug use and reduced negotiation power associated with poverty, and Chemsex dependency. All together these factors emphasize the huge potential for further spread of HIV infection in and from this population.

Other risk behaviors observed with higher than expected frequency were a history of drug injection, recent accounts of "*slamming*" (injection of crystal meth) [8]. and performance of a "shotgun" (oral exchange of crystal meth smoke) [5]. While "*slamming*" usually involved people's own and clean injection equipment, it needs to be emphasized that this type of administration remains a highly effective route of transmission of HIV and other infectious diseases. In addition, crystal meth injection constitutes an intrinsic physical harm and is associated with increased risk for drug dependency [8]. On top of that, "*shotgun*" practices are highly likely to transmit covid-19 and other respiratory pathogens, which may lead to serious morbidity and in some cases increased mortality. This and the above information should be included in educational efforts among Chemsex users.

An adjacent problem found in our survey was the relative high prevalence of non-consensual sex and to a lesser extend "*drugging*" before or during Chemsex [2]. Chemsex novices and those vulnerable to these practices should be made aware if their existence and being offered strategies to manage such situations as part of programmatic activities. Even though we don't have specific information on the type of drugs used for "*drugging*", ketamine, GHB and GBL are the likely suspects because of their anesthetic properties.

Finally, almost half of participants said they were unable to control their Chemsex use, and only few reported to have been able to effectively stop it is the past 12 months. For these reasons, primary prevention of Chemsex should be a priority, but this activity should start at a young age, which may be complicated by the illegal nature of drug use. The signs of drug dependency are concerning, particularly in the long term, and apart from intensified HIV prevention activities, drug treatment and addiction management services for Chemsex users are urgently necessary.

7 CONCLUSIONS AND RECOMMENDATIONS

7.1 CONCLUSIONS

Risk tracing sampling was successfully employed to recruit active MSM/TGW Chemsex users for study purposes. Per seed network size, ease, and velocity of recruitment (N=135 within 25 days) suggest the prevalence and the number of MSM/TGW Chemsex users may be much higher than previously thought. The population of MSM/TGW Chemsex users appeared to be young. Of the wide array of substances taken during Chemsex, crystal methamphetamine and ketamine were the drugs of choice, and a high number of users also injected their Chemsex drugs, while exhalation and inhalation of crystal meth smoke between users was frequent. Condom use during anal intercourse when having Chemsex was low, despite the availability of condoms and lubricants to most users. Frequency of HIV testing and accurate knowledge of current HIV infection status was low. In addition, uptake of and knowledge about HIV PrEP was minimal, despite the majority having had contact with an HIV outreach worker in the past. Social media play a key role in the organization if Chemsex. Prevalence of non-consensual sex and drugging during Chemsex were higher than expected. Chemsex use was problematic in many cases with almost half showing signs of addiction. Risk for transmission of HIV and other infectious diseases was high.

7.2 RECOMMENDATIONS

Link tracing strategies and social media channels may provide important avenues to reach and access MSM/TGW Chemsex users for study purposes and HIV prevention and other services. Promotion of condom use and safer sex practices among MSM/TGW Chemsex users remain essential. Efforts to increase and promote more frequent HIV testing among MSM/TGW Chemsex users are necessary. Intensified messaging and outreach to increase knowledge and uptake of HIV PrEP among MSM/TGW Chemsex users are urgently needed. Moreover, communication skills and efficiency of HIV outreach workers should be reviewed and improved. Risks and strategies to avoid non-consensual sex and drugging during Chemsex should be included in programmatic activities. Last, primary Chemsex prevention activities and addiction treatment and management services for MSM/TGW should be initiated.

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9 APPENDIXES:

Questionnaire

Coupon number: [ ] [ ] [ ] [ ]

Chemsex Study Questionnaire

Study ID (Seed/Recruiter) [ ] [ ] [ ] [ ]

Date of interview (dd-mm-yyyy) _____ ___-___-____

Name of interviewer

Interview status 1. Agree |___| 2. Disagree |___|

Key Popula 1. MSM |___| 2. TG |___|

Age _____ _____

SECTION 1. Socio demographic profile of respondent

1. What is your sex assigned at birth?
    1. Male
    2. Female
    3. Intersex
2. What is the highest education you completed?
    1. Less than Primary School
    2. Primary School
    3. Lower Secondary School
    4. Higher Secondary School

5. Technical/Vocational College
6. University
7. Graduate or Professional School
8. (specify)_____Other

3. What is your current living situation?

1. Live alone
2. Live with parents
3. Live with a relative (brother, sister, aunt, etc.)
4. Live with partner/spouse without children
5. Live with partner/spouse and children
6. Share room/rental house with friend(s)
7. Share room/rental house with stranger/different family
8. Homeless/temple/on the street

4. What is your current sexual identity?

1. Homosexual, gay man
2. Heterosexual, 'full' man
3. Bisexual
4. Transgender woman
5. Other _____ (specify)

5. Do you feel sexually attracted to.....? (*Can endorse more than one category*)

1. Men
2. Women
3. Transgender women
4. MSN
5. Other_____ (specify)

6. What is the district in which you currently live? _____

7. What is the district and province where you were born? _____

SECTION 2. Drug use and sexual behavior

8. Did you ever smoke cigarettes in the past 12 months?

1. Yes
2. No
3. Yes (other cigarettes including electronic cigarettes)

If no skip to Q10

9. If yes, how many cigarettes did you smoke per day in the past 12 months?

   1. 1
   2. 2-5
   3. 6-10
   4. 11-15
   5. One pack (one pack = 20 pieces)
   6. More than one pack
   7. I stopped smoking

10. Did you ever drink alcohol in the past 12 months?

    1. Yes
    2. No

    If no skip to Q12

11. If yes, how often did you get drunk from alcohol in the past 12 months?

    1. Never
    2. About once a month or less
    3. 2 or 3 times per month
    4. About once per week
    5. 2 or 3 times per week
    6. Almost every day
    7. Every day
    8. I stopped drinking

12. Did you ever use any of the following drugs and if you did, did you use them during the past 12 months?

	Ever use?	*Use past 12 months?*
Amphetamine tablets *(Yaa baa, Yaa maa)*	1. Never 2. Ever	1. Yes 2. No
Methamphetamine tablets *(Meth, Tina)*	1. Never 2. Ever	1. Yes 2. No
Crystal methamphetamine *(Ice, Crystal meth)*	1. Never 2. Ever	1. Yes 2. No
Ecstasy (*Yaa E*)	1. Never 2. Ever	1. Yes 2. No
Ketamine (*Yaa K*)	1. Never 2. Ever	1. Yes 2. No
GHB or GBL (*G*)	1. Never 2. Ever	1. Yes 2. No
Mephedrone *(M-cat, meow, salts)*	1. Never 2. Ever	1. Yes 2. No
Don't know the type of drug	1. Never 2. Ever	1. Yes 2. No

13. During the past 12 months did you ever use any of the drugs you mentioned above before or during sex or to increase your sexual pleasure (this practice is also called Chemsex)?

    1. Yes
    2. No

    If no (2) you do not qualify for this study and can stop completing the questionnaire)

14. If you used any of these drugs and had sexual (anal) intercourse during the past 12 months, how often did you use condoms on that occasion (from the start to finish of the anal intercourse)?

    1. Always
    2. Almost always
    3. Half of the time
    4. Some of the time
    5. Never
    6. Did not have anal intercourse

15. If you used any of these drugs while you had sex during the past 12 months, how often did you have sex with partner (sex with 3 people and more, including yourself)?

    1. Always
    2. Almost always
    3. Half of the time
    4. Some of the time
    5. Never

16. If you used any of these drugs and had anal intercourse during the past 12 months, how often did you use Viagra or a similar drug to help you getting or maintaining an erection?

    1. Always
    2. Almost always
    3. Half of the time
    4. Some of the time
    5. Never
    6. Did not have anal intercourse

17. If you used any of these drugs while you had sex during the past 12 months, did you also use Poppers or Marijuana?

    1. Poppers
    2. Marijuana
    3. Both
    4. Never used

18. If you used any of these drugs and had anal intercourse during the past 12 months, how often were you a top (insertive), a bottom (receptive) or took both sexual positions?

    1. Mostly top
    2. Mostly bottom
    3. Both

19. Have you ever injected a drug into yourself in the past 12 months?

    1. Yes
    2. No

    [If no skip to 23]

20. During the past 12 months did you ever inject crystal meth (slamming) before or during you had sex or to increase your sexual pleasure?

    1. Yes
    2. No

    [If no skip to Q23]

21. How often did you inject crystal meth for sexual pleasure during the past 12 months?

    1. Daily
    2. More than once a week but not daily
    3. More than once a month but not weekly
    4. More than once per 6 months but not monthly
    5. More than once per year
    6. Once per year

22. If you injected crystal meth into yourself in the past 12 months, how often did you use your own clean injection equipment?

    1. Always
    2. Almost always
    3. Half of the time
    4. Some of the time
    5. Never

23. Have you ever dissolved crystal meth in water and used a syringe to insert it in your rectum?

    1. Yes
    2. No

24. Have you ever exhaled the crystal meth smoke from your lungs into the mouth and lungs of another user?

    1. Yes
    2. No

25. In the past 12 months how often have used the internet or social media to look for sexual partners (dating site, chat, messenger service)?

    1. Never
    2. Once a month or less
    3. 2 to 3 times per month
    4. About once per week
    5. 2 to 3 times per week
    6. Every day

26. In the past 12 months, how many male sexual partners did you meet through the internet?

    Number of men.....

27. When you first engaged in Chemsex, was this with a boyfriend/sangsa, one casual partner, or with multiple sexual partners at the same time?

    1. Boyfriend/sangsa
    2. Casual partner
    3. Multiple casual partners
    4. Boyfriend/sangsa as well as casual partner(s)

28. When you first engaged in Chemsex was this through a boyfriend/sangsa, a friend, a stranger you met or through the internet or social media?

    1. Boyfriend/sangsa
    2. Friend
    3. Stranger (not on social media)
    4. Internet or social media

29. How many times did you join Chemsex parties in the past 12 months?

    Number of times you joined Chemsex parties ……

30. The Chemsex parties you attended, how long on the average did they last?

    Number of hours: ……

31. At the parties you attended where there usually condom and lubricants available

Condom	*Lubricant*
1. Yes	1. Yes
2. No	2. No

32. During these parties who usually supplied the Chemsex drugs? (More than one answer possible)

    1. A friend
    2. My boyfriend/sangsa

3. I got it myself
4. Group of friends
5. Party organizer
6. Don't want to tell
7. Trader

33. The Chemsex drugs used during these parties, how were they usually bought? (More than one answer possible)

1. Bought from street dealer
2. Bought from the internet/phone
3. Party organizer had them
4. Don't know/no answer

34. The first time you attended a Chemsex party, did you know beforehand that it would involve the use of Chemsex drugs?

1. Yes
2. No

35. Did you ever have non-consensual sex during any of the Chemsex parties you attended?

1. Never
2. Once
3. More than once

36. Have you ever been drugged (brought under the influence of drugs without your consent) before or during a Chemsex party?

1. Never
2. Once
3. More than once

(If the answer is never (1) skip to Q39)

37. When you were drugged, was that the first time you experienced Chemsex or joined a party?

1. Yes
2. No

38. During the latest Chemsex party you joined, with how many men did you have sex?

Number of men ……

39. How often did you use condoms (from start to finish of the intercourse) during the last Chemsex party you joined?

1. Always
2. Almost always

3. Half of the time
4. Some of the time
5. Never
6. Did not have intercourse during the party

SECTION 3. Linkages to Prevention and Care

40. What has been your experience with HIV testing?

1. I have never tested for HIV
2. I have tested for HIV, but longer than 12 months ago
3. I have tested for HIV in the past 12 months

(If the answer is never (1) skip to Q42)

41. What was the result of your latest HIV test?

1. Positive
2. Negative
3. I didn't get the result
4. Don't/ want to tell

42. Have you heard about PrEP?

1. I have never heard about it
2. I have heard about it, but I am not sure what it is
3. I know what PrEP is, but I am not using it
4. I know what PrEP is, and I have used it in the past
5. I know what PrEP is, and am using it now

43. Have you ever met an HIV outreach worker?

1. No, never
2. Yes, I have, but longer than 12 months ago
3. Yes, I have met an HIV outreach worker in the past 12 months

44. To what extent do you feel you are in control of your Chemsex use?

1. I am completely in control of my Chemsex use, I could stop anytime
2. I feel in control of my Chemsex use, but I am not sure if I could stop easily
3. I am not sure if I am in control of my Chemsex use, or if Chemsex is controlling me
4. I feel I am not in control of my Chemsex use, but I do not need help
5. I feel I am not in control of my Chemsex use, and I would like to get help

45. Any bad experience of sexualized drug use? Multiple answers possible

    1. Overdose or harm to physical health
    2. Mental health problem
    3. Penile or rectal trauma
    4. Sexual violence, coercion or rape
    5. Had type of sex that I regretted later

46. Have you ever tried to stop using Chemsex?

    1. No, I never tried to stop
    2. Yes, I tried to stop once, but I could not
    3. Yes, I tried to stop more than once, but I could not
    4. I tried and I stopped (in the past 12 months)

THIS IS THE END OF THE QUESTIONNAIRE. THANK YOU FOR TAKING PART IN THIS STUDY!

Question Guide

Seed/Recruiter Number: _____

Coupon Number: _____

Date: _____

In-depth Interview with MSM/TGW Chemsex users

THEME 1: Exploration of pathways to sexualized drug use

1. Can you tell me how you became involved in Chemsex?

   Probing questions: What attracted you to use Chemsex? How/by who were you introduced? Role of 'Bong'/boyfriend? What was the role of social media and the internet making you interested? What is street language, tokens and emojis in social media used to express interest and recruit people into Chemsex?

2. Did you know about drugs when you first went to a Chemsex party? Was your initiation into Chemsex voluntary, or were you forced or drugged?

THEME 2: Perceived benefits and negative effects of Chemsex

3. What do you consider the main benefits and value of engaging in Chemsex?

   Probing questions: How important is Chemsex as an element of your sexual life? How has it changed your sexual experiences, moved your sexual borders, affected feelings of intimacy and connectedness, increased your self-confidence and sexual wellbeing?

4. What do you consider the most important negative effects of using Chemsex?

   Probing questions: Unprotected sex, HIV, STI, sex against their will, negative mental and physical health effects, stigma and discrimination, social and professional consequences.

THEME 3: Sexual Culture of Chemsex

5. What do you consider 'cool' and 'not cool' when doing Chemsex (i.e., what are social and sexual norms)? Please explain.

6. Do you feel that the people who own drugs are the one who determine who gets invited to Chemsex parties or not?

7. Do you feel that certain types of people are more welcome to Chemsex parties than others? If yes, what defines their popularity?

8. Do you think non-consensual sex happens at Chemsex parties? Please explain how this happens.

THANK YOU

COUPON

តើអ្នកមានស្គាល់ អ្នកទាំងនេះដែរឬទេ ?

○	○	○	○	○
កេទំកំណើត ជាមនុស្សប្រុស	មានអារម្មណ៍ផ្លូវភេទ ជាមួយមនុស្សប្រុស	រស់នៅ រាជធានីភ្នំពេញ	មានអាយុចាប់ពី ១៥ឆ្នាំឡើងទៅ	បានប្រព្រឹត្ត Chemsex យ៉ាងហោចណាស់ ម្តងក្នុងរយៈពេល១២ខែចុងក្រោយ

លេខកូដអ្នកផ្តល់ប័ណ្ណ (ត្រាប់ពូជ ឬអ្នកជ្រើសរើសបន្ត)៖.....

កាលបរិច្ឆេទផ្តល់ប័ណ្ណ៖.....កាលបរិច្ឆេទផុតកំណត់៖.....

សូមជ្រើសរើសមិត្តភក្តិរបស់អ្នកតាមលក្ខណៈនៃថ្ងៃ និងផ្តល់ប័ណ្ណបញ្ជូន ១សន្លឹក ដើម្បីឱ្យគាត់ចំពេញកម្រងសំណួរបែបបរិមាណវិស័យ ដោយប្រើបន្ទះឡែត្តាត (Tablet) ។ ប្រសិនបើមានសំណួរផ្សេងៗសូមទូរស័ព្ទមកលេខ៖.....

OKHANA

Tag returned Coupon:	C1	C2	C3	C4	C5
	○	○	○	○	○

អ្នកចូលរួមក្នុងការសិក្សាបែបបុរេរកៈ ការប្រើប្រាស់ថ្នាំញៀនក្នុងគោលបំណងផ្លូវភេទ អាកប្បកិរិយាប្រឈមនឹងការឆ្លងមេរោគអេដស៍ និងការទទួលបានសេវាសម្រាប់បុរសរួមភេទជាមួយបុរស និងបុរសប្លែងភេទជាស្ត្រីនៅក្នុងរាជធានីភ្នំពេញ ប្រទេសកម្ពុជា
បណ្ណនេះមិនអាចប្រគល់ទៅឱ្យអ្នកផ្សងមកជំនួសបានទេ សូមកាន់បណ្ណនេះមកជាមួយដើម្បីចូលរួមសង្កាសន៍

លេខកូដអ្នកផ្តល់បណ្ណ៖..... លេខកូដអ្នកកាន់បណ្ណ៖.....

កាលបរិច្ឆេទផ្តល់បណ្ណ៖.....កាលបរិច្ឆេទផុតកំណត់៖.....

ប្រសិនបើមានសំណួរផ្សេងៗសូមទូរស័ព្ទមកលេខ៖.....

OKHANA

សូមកាន់បណ្ណនេះមកជាមួយដើម្បីទទួលបានអត្ថប្រយោជន៍ C1

អ្នកចូលរួមក្នុងការសិក្សាបែបបុរេរកៈ ការប្រើប្រាស់ថ្នាំញៀនក្នុងគោលបំណងផ្លូវភេទ អាកប្បកិរិយាប្រឈមនឹងការឆ្លងមេរោគអេដស៍ និងការទទួលបានសេវាសម្រាប់បុរសរួមភេទជាមួយបុរស និងបុរសប្លែងភេទជាស្ត្រីនៅក្នុងរាជធានីភ្នំពេញ ប្រទេសកម្ពុជា
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លេខកូដអ្នកផ្តល់បណ្ណ៖..... លេខកូដអ្នកកាន់បណ្ណ៖.....

កាលបរិច្ឆេទផ្តល់បណ្ណ៖.....កាលបរិច្ឆេទផុតកំណត់៖.....

ប្រសិនបើមានសំណួរផ្សេងៗសូមទូរស័ព្ទមកលេខ៖.....

OKHANA

សូមកាន់បណ្ណនេះមកជាមួយដើម្បីទទួលបានអត្ថប្រយោជន៍ C2

អ្នកចូលរួមក្នុងការសិក្សាបែបបុរេរកៈ ការប្រើប្រាស់ថ្នាំញៀនក្នុងគោលបំណងផ្លូវភេទ អាកប្បកិរិយាប្រឈមនឹងការឆ្លងមេរោគអេដស៍ និងការទទួលបានសេវាសម្រាប់បុរសរួមភេទជាមួយបុរស និងបុរសប្លែងភេទជាស្ត្រីនៅក្នុងរាជធានីភ្នំពេញ ប្រទេសកម្ពុជា
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លេខកូដអ្នកផ្តល់បណ្ណ៖..... លេខកូដអ្នកកាន់បណ្ណ៖.....

កាលបរិច្ឆេទផ្តល់បណ្ណ៖.....កាលបរិច្ឆេទផុតកំណត់៖.....

ប្រសិនបើមានសំណួរផ្សេងៗសូមទូរស័ព្ទមកលេខ៖.....

OKHANA

សូមកាន់បណ្ណនេះមកជាមួយដើម្បីទទួលបានអត្ថប្រយោជន៍ C3

អ្នកចូលរួមក្នុងការសិក្សាបែបបុរេរកៈ ការប្រើប្រាស់ថ្នាំញៀនក្នុងគោលបំណងផ្លូវភេទ អាកប្បកិរិយាប្រឈមនឹងការឆ្លងមេរោគអេដស៍ និងការទទួលបានសេវាសម្រាប់បុរសរួមភេទជាមួយបុរស និងបុរសប្លែងភេទជាស្ត្រីនៅក្នុងរាជធានីភ្នំពេញ ប្រទេសកម្ពុជា
បណ្ណនេះមិនអាចប្រគល់ទៅឱ្យអ្នកផ្សងមកជំនួសបានទេ សូមកាន់បណ្ណនេះមកជាមួយដើម្បីចូលរួមសង្កាសន៍

លេខកូដអ្នកផ្តល់បណ្ណ៖..... លេខកូដអ្នកកាន់បណ្ណ៖.....

កាលបរិច្ឆេទផ្តល់បណ្ណ៖.....កាលបរិច្ឆេទផុតកំណត់៖.....

ប្រសិនបើមានសំណួរផ្សេងៗសូមទូរស័ព្ទមកលេខ៖.....

OKHANA

សូមកាន់បណ្ណនេះមកជាមួយដើម្បីទទួលបានអត្ថប្រយោជន៍ C4

អ្នកចូលរួមក្នុងការសិក្សាបែបបុរេរកៈ ការប្រើប្រាស់ថ្នាំញៀនក្នុងគោលបំណងផ្លូវភេទ អាកប្បកិរិយាប្រឈមនឹងការឆ្លងមេរោគអេដស៍ និងការទទួលបានសេវាសម្រាប់បុរសរួមភេទជាមួយបុរស និងបុរសប្លែងភេទជាស្ត្រីនៅក្នុងរាជធានីភ្នំពេញ ប្រទេសកម្ពុជា
បណ្ណនេះមិនអាចប្រគល់ទៅឱ្យអ្នកផ្សងមកជំនួសបានទេ សូមកាន់បណ្ណនេះមកជាមួយដើម្បីចូលរួមសង្កាសន៍

លេខកូដអ្នកផ្តល់បណ្ណ៖..... លេខកូដអ្នកកាន់បណ្ណ៖.....

កាលបរិច្ឆេទផ្តល់បណ្ណ៖.....កាលបរិច្ឆេទផុតកំណត់៖.....

ប្រសិនបើមានសំណួរផ្សេងៗសូមទូរស័ព្ទមកលេខ៖.....

OKHANA

សូមកាន់បណ្ណនេះមកជាមួយដើម្បីទទួលបានអត្ថប្រយោជន៍ C5

កម្រងសំណួរបរិមាណវិស័យនឹងត្រូវបានផ្តល់ជូនទៅអ្នកចូលរួមទាំងអស់គ្នាដើម្បីបំពេញតាមប្រព័ន្ធអេឡិចត្រូនិក។ កម្រងសំណួរនេះមានសំណួរចំនួន ៥០ ហើយនឹងត្រូវការពេលវេលា ៣០-៤០នាទី ដើម្បីបញ្ចប់។

កម្រងសំណួរនេះមានគោលបំណងក្នុងការស្វែងរកព័ត៌មានប្រជាសាស្ត្រសង្គម ថ្នាំដែលត្រូវបានប្រើប្រាស់ អាកប្បកិរិយាផ្លូវភេទ និងទំនាក់ទំនងជាមួយការបង្ការនិងថែទាំ។

អ្នកចូលរួមក្នុងការសិក្សានឹងទទួលបានការធ្វើតេស្តមេរោគអេដស៍ និងស្វាយ ដើម្បីដឹងពីស្ថានភាពសុខភាពប្រសិនបើពួកគេមានចំណាប់អារម្មណ៍។

National Center for HIV/AIDS, Dermatology and STD

#245H, Street 6A, Phum Kean Klang, Sangkat Prek Leap,
Khan Chhroy Changva, Phnom Penh, Cambodia.

Tel: (855) 23 432 090 | **Fax:** (855) 23 432 090

Website: www.nchads.org | **Email:** info@nchads.org