

Final Draft

Chemsex in Asia: A Community Manual on Sexualised Substance

Use among MSM

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# **Executive Summary**

Achieving the global target to eliminate HIV transmission among men who have sex with men (MSM) faces additional challenges from the lack of effective and scaled intervention to address a part of the population who use drugs in sexual settings (colloquially known as *chemsex*). In this report, we intend to deliver a practical toolkit for community-based organisations (CBOs) who work to improve health outcomes for MSM, particularly in Asian countries. This manual provides the contextual information on *chemsex* practices among MSM in Asia and offers information and interventions to respond to the situation appropriately.

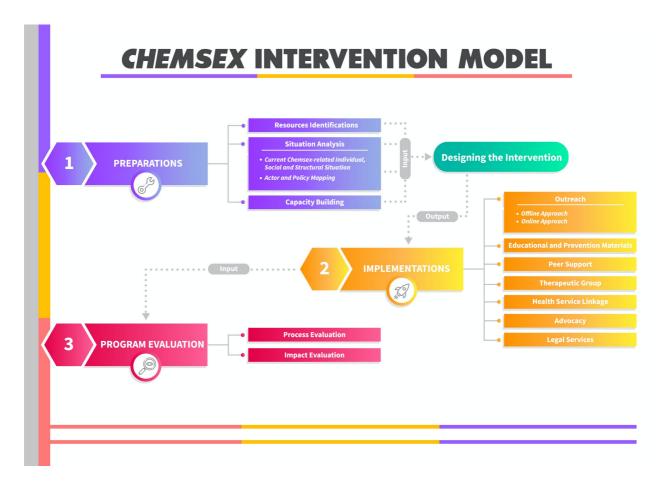
Chemsex is a term generally used to describe the psychoactive substance use by MSM at the sex event-level, which typically includes mephedrone, GHB/GBL, or crystal methamphetamine. In Asia, the definition of chemsex (local terms: high fun, chemfun) seems to be adjusted to reflect the local pattern that may involve different drugs such as poppers, ecstasy, 5-metoxy-n or foxy, cocaine, ketamine, cannabis, or non-prescription drugs. Overall, the prevalence of this practices among MSM in Asia ranges from 3.1% to 30.8%. Several reasons influencing the decision of MSM in Asia to practice chemsex include the direct benefit of using the drug, persuasion from peer network, and external prejudice directed towards MSM existence. For now, the practice is more likely to be done by MSM who live in urban areas, have higher educational degree and income, and engage in habitual online behaviours, can be categorized as money boy, and have been identified as HIV+.

The use of drugs in sexual context has a strong relation with sexual risk behaviours that contributes to the increased risk of HIV transmission among MSM. The risk behaviours include higher sex frequency, unprotected sex with multiple partners, group sex, inconsistent condom use, internal ejaculation, lower expectation of sex partners to use condom, less concern on sex partners HIV and Sexual transmitted infection (STI) status, and imbalanced power relations. Consequently, the *chemsex* practice increases the odds of contracting HIV and other sexually acquired infections. In addition, some evidence indicates that *chemsex* practice is associated with mental health issue, such as suicidal risk, depression, and anxiety. The interplay between social inequities, substance use, and other health conditions can mutually reinforce health disparities such as HIV.

The evidence surrounding the increasing level of drug use during sex and its associated risks has encouraged various intervention recommendations. The proposed interventions generally include online and offline approaches. Intervention components such as awareness campaigns focusing on HIV prevention and SDU, social media-based risk calculator which includes SDU and risk behaviours for MSM to learn their objective risk of HIV, or intervention delivery through MSM social networking application. In addition, the intervention should integrate rights-based and network-based methods within the existing services for MSM. Until now, various organisations have offered examples on how to implement the program. Some of them combine multiple approaches such as community engagement, facilitating

users' needs, professional clinical intervention, collaborating with drug-based organisations, or promoting safe practice and wellbeing. Nevertheless, some challenges remain to be addressed, including but not limited to the lack of appropriate data, funding limitation, stigmatisation and punitive law, hidden population, limited universal coverage, unfriendly health services, and the lack of patient's confidentiality.

This manual offers *chemsex* intervention model that can be categorised into three main components: preparation, implementation, and evaluation. Any organisations can adjust the model contents to be suitable with their local context.



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# **GLOSSARY**

MSM	Men who have sex with men	
	Males who are engaged in sexual activity with people of the same sex, regardless of how they identify themselves or their sexual orientation.	
ATS	Amphetamine-type stimulants	
	A group of drugs that stimulates central nervous system, including methcathinone, fenetylline, ephedrine, pseudoephedrine, methylphenidate, and MDMA or 'ecstasy'.	
СВО	Community-based organisation	
	Local non-governmental groups that represent community and work for the needs of community.	
Chem fun	A local terminology generally utilised by MSM communities in Asia to refer to the use of drug in sexual contexts.	
Chemsex	Chemical sex	
	Psychoactive substance use at sex event-level, typically mephedrone, GHB/GBL, or crystal methamphetamine. It may also be included as a subset of SDU.	
Chill fun	A local terminology generally utilised by MSM communities in Asia to refer to the use of drug in sexual contexts.	
Club drugs	A type of drugs popular and often used at nightclubs, music festivals, parties, etc. (e.g. ecstasy, GHB, ice).	
EDA	Erectile dysfunction agents	
	A medication that enhances the effects of natural chemical (nitric oxide) produced by the body to relax muscles in the penis. This increases blood flow and allows penis to get an erection in response to sexual stimulation.	
EDD	Erectile dysfunctional drug	
	A medication that enhances the effects of natural chemical (nitric oxide) produced by the body to relaxes muscles in the penis. This increases blood flow and allows penis to get an erection in response to sexual stimulation.	

GBL	Gamma butyrolactone
	A type of chemical related to GHB; GBL converts to GHB inside the body after swallowing.
GHB	Gamma hydroxybutyrate
	A type of a depressant that affects several nerve pathways in brain, produces euphoria, relaxation, and sociability. It is also known as 'liquid ecstasy', 'G', blue nitro, cherry meth, 'liquid X'.
Heteronormative	A perception or belief that heterosexuality is the default or normal expression of sexuality.
High fun	A local terminology generally utilised by MSM community in Asia to refer to the use of drugs in sexual contexts.
HIV	Human immunodeficiency virus
	A type of virus that attacks immune system, making it incapable of protecting the body from infections.
Homophobic	A range of negative attitudes and/or feelings toward homosexuality.
KP	Key Population
	Sub-populations that face much higher rates of HIV and AIDS than general population and are most at risk for contracting HIV, such as people who inject drugs, MSM, transgender persons, sex workers and prisoners.
Money boy	A (usually young) male who earns money by offering sexual services.
Overdose	Excessive use of drugs or substances at a time.
PEP	Post-exposure prophylaxis
	An HIV prevention for HIV negative people by taking antiretroviral drugs to prevent HIV infection after a possible exposure to HIV.
PnP	Party and play
	A local terminology generally utilised by MSM communities in Australia and/or United States to refer to the use of drug in sexual contexts.
Polydrug	The use of several types of drug (usually illegal) by an individual at the same time or in a sequence.

Poppers	Inhaled liquid chemical (alkyl nitrites) that is used as a recreational drug. It is the same substance used by medical professionals to treat heart disease by increasing blood flow. Other names: amyl nitrate, butyl nitrite, liquid gold, nitrite inhalants.
PrEP	Pre-Exposure Prophylaxis
	An HIV prevention for HIV negative people by taking antiretroviral drugs to prevent HIV infection before a possible exposure to HIV.
PWID	People who inject drugs
	A term to refer to people who inject drugs. They are one of the most vulnerable groups to HIV infection.
SDU	Sexual drug use
	The use of illicit drugs just before or during a sexual activity. SDU includes wider variety of drugs; however, the definition of SDU needs to be reflective of the local pattern that may include different drugs.
Seroconversion	A period of time when the immune system starts to develop HIV antibodies.
STI	Sexual transmitted infections, also known as sexually transmitted diseases (STDs).
	Infections or diseases that are usually transmitted from one person to another through sexual contact.
Viagra	A type of EDD to treat erectile dysfunction

# **PREFACE**

Achieving the global target to eliminate HIV transmission among men who have sex with men (MSM) faces additional challenges from the lack of effective and scaled intervention to address a part of the population who use drugs in sexual settings. This manual aims to provide a practical toolkit for community-based organisations (CBOs) who work to improve health outcomes for MSM, particularly in Asian countries. In their latest report, UNODC (1) points to the urgency of addressing the intersectionality of drug use and sex among MSM populations. Recreational use of drugs – mostly amphetamine-type stimulants (ATS) – is popular among this subgroup of MSM population (2,3). Studies show that these and other drugs [poppers, stimulants, and erectile dysfunctional drugs (EDD)] increase the risk for HIV seroconversion among the MSM cohort (4). Motivations for using the drugs include enhancement of pleasure in sex, a sense of belonging, and coping with daily problems (5). Drug use in sexual contexts have also been shown to facilitate high-risk sexual practices such as condomless sex and group sex (6). The escalation of drug use in MSM communities has led to increased risk of HIV transmission.

This manual provides the contextual information on sexualised drug use (SDU – colloquially known as *chemsex*) practices among MSM in Asia and offers information and interventions to respond to the situation appropriately. We employed multiple approaches to understand the situation, including reviewing Asia-specific published literature related to the use of drugs in sexual settings to build an evidence base report. We also reviewed descriptions of the experience of SDU intervention implementation in several countries in Asia, Europe, and Australia. Finally, we incorporated user stories from across Asia, in order to highlight the contextual factors, namely the motivation to use and barriers to accessing services related to drug use in sexual settings. We looked for common principles underlying SDU practices among MSM in Asia and effective interventions in responding to the issues.

The manual covers definitions, risk behaviours, health outcomes, and existing programs addressing SDU among MSM and that are essential in promoting MSM health and curbing the spread of SDU-related sexually transmitted infections, including HIV. This information can be found in the first four sections of this manual. At the end of the section, step-by-step suggestions for implementing SDU interventions are provided based on lessons learned from existing interventions.

# SECTION I: CONTEXTUAL INFORMATION

# 1.1. How sexualised drug use is different from *chemsex*?

The use of drugs in sexual settings has various terminologies that can be used interchangeably depending on the context of what is used and where they are utilised. The most common academic terminologies to describe the practice are "Sexualised Drug Use" (SDU) and "chemsex". The first terminology is often used to describe the use of illicit drugs just before or during a sexual activity (7). This term encapsulates a wide array of drugs, many of which are considered forbidden by law. Chemsex terminology is specifically used to describe the psychoactive substance use at the sex event-level: typically, mephedrone, GHB/GBL, or crystal methamphetamine <sup>(7,8)</sup>. The term was first coined in a local gay community in London to describe a combination of using "chems" (nick-name for methamphetamine and GHB/GBL) and a preference for the "sexual environment" (9). Other drugs such as Viagra, alcohol, amyl nitrates or poppers, ketamine, and/or cocaine are used as occasional additions. However, these drugs are excluded from the *chemsex* definition due to the distinct desired pleasure and disinhibition that drive and define the phenomenon  $^{(9,10)}$ . Later, the term gained popularity in other European cities. UNODC (1) specifies the definition as any combination of crystal methamphetamine, mephedrone, and GHB/GBL used by MSM before or during sex, to facilitate a long sexual session with multiple sex partners. Due to its specificity, chemsex is considered as a subset of SDU.

In Asian contexts, the definition of sexual substance use seems to be expanding according to local situations. Some studies fully adopt the *chemsex* terminology <sup>(11–13)</sup>. However, most studies have adjusted the SDU definition to include other popular drugs used by MSM within the local context they examine, such as *poppers* <sup>(14)</sup>, ecstasy <sup>(15)</sup>, 5-metoxy-N or *foxy* <sup>(16,17)</sup>, cocaine <sup>(18)</sup>, ketamine <sup>(19)</sup>, cannabis <sup>(20)</sup>, or non-prescription hypnotic drugs <sup>(21,22)</sup>. These adjustments are necessary if the definition of SDU is to be reflective of the local pattern that may involve different drugs<sup>(10)</sup>.

Sexualised substance use (SDU)	Chemsex
A wide range of drugs used just before or during	Any combination of methamphetamine,
a sexual activity – usually includes all popular	mephedrone, and GHB/GBL used by MSM
drugs used by MSM in the area, including:	before or during sex to facilitate a long sexual
methamphetamine, poppers, ecstasy, foxy,	session with multiple sex partners.
ketamine, and other new psychoactive drugs.	

While understanding the differences between SDU and *chemsex* at the global and regional level is important, a grounded intervention should adopt the local MSM community's common terminologies. Several offline and online expressions have been used to describe the use of drugs for sexual purposes. In Asia, offline and online terminologies seem to be created

to express the situation of being high and having fun at the same time. In the offline domain, the terms used include "High Fun", "Hi Fun", "Fun", "Chill Fun", "Chilling", and/or "Chem Fun" (22–25). While at the online domain, the activity is symbolically expressed through various coded words and emojis such as snowflakes, ice cream, lightning, fire, and/or airplane, cold, pop, or smell (24,26). The utilisation of local expressions in interventions will lead to greater acceptance and engagement from the intended target group.

# User Voices: Chemsex in our language

"In dating apps, we call it high fun or HF. We usually type HF [in the profile] or put" fire" emoji as the logo."

(Indonesia, INA01, 22 years old, 6 months of practising SDU)

# 1.2. How prevalent is sexualised drug use in Asia?

Understanding a behaviour's prevalence is often helpful to reflect the burden generated by a health-related problem in a particular population and assess the need for preventive action (27). In recent years, numerous evidences concluded the use of drugs among MSM in sexual settings is common in Asia, but the prevalence is varied. The source of variations might be due to the different types of the drug being assessed, the duration of using drugs, the sub-population being observed (general MSM, sex workers MSM), or the scope of the study (single location, multiple locations, or national level). Therefore, the rate of prevalence in each country should be reviewed carefully.

Overall, the prevalence of SDU practices among MSM in Asia ranges from 3.1% to 30.8% (*see Table 1*). The prevalence that encompasses a broader range of drug types is ultimately higher than the prevalence that assesses single drug use in the practice. A similar situation can also be found in terms of duration of use. For instance, 16.9% of MSM in Thailand is reported to have been engaged with SDU in their lifetime. However, the rate is lower, ranging from 7% to 10.9%, among MSM who reported the practice in the past six months <sup>(28–30)</sup>. In specific MSM subpopulations like young MSM in Hong Kong, 8% of them practiced SDU in the past six months <sup>(31)</sup>. While among HIV positive MSM, the prevalence of SDU practice in Asia is 3%, and in Taiwan, it is 27% <sup>(32,33)</sup>. Despite the heterogeneity found in the prevalence, there is no doubt that drug use in sexual context is a common practice across Asian countries.

Table 1: SDU and Chemsex Prevalence among MSM across Asian Countries

Country	Category	Prevalence/duration of use
Thailand	SDU in general MSM	6PM: 7% <sup>(29)</sup>
		Lifetime: 16.9% (30)

	Young MSM: 5% (34)
Chemsex in General MSM	6PM 13.7% (35)
	Lifetime: 22.5% (11)
ATS during sex	3PM: 15.8% <sup>(36)</sup>
SDU general MSM	Lifetime: 10.2% (37)
SDU in HIV+ MSM	12PM: 27% among HIV+ (38)
SDU in general MSM	3PM: 9,7% <sup>(39)</sup>
	12PM: 27.3% <sup>(22)</sup>
SDU in general MSM	6PM: 21.6% (40)
SDU in general MSM	3PM: 13.7% <sup>(41)</sup>
SDU in general MSM	3PM: 0.8% <sup>(42)</sup>
	6PM 3.1% (43)
	6PM: 18.9% <sup>(44)</sup>
	12PM 22.8% (15)
	Lifetime: 30.8% (45)
SDU in HIV+ MSM	6PM: 3% <sup>(46)</sup>
SDU in general MSM	6PM: 14.7% <sup>(47)</sup>
SDU in HIV+ MSM	6PM: 8% <sup>(31)</sup>
Chemsex in general MSM	6PM: 12% (48)
	Lifetime: 11.3% (49)
	ATS during sex SDU general MSM SDU in HIV+ MSM SDU in general MSM

<sup>\*\*3</sup>PM (Past 3 months); 6PM (past 6 months), 12PM (past 12 months)

# 1.3. What is the common drug of choice in the practice?

By definition, the practices of *chemsex* among MSM in Asia involve both stimulant and nonstimulant types of drugs. Nevertheless, certain drugs are more popular than others. One study (50) shows that the most popular drugs used in the past six months among MSM in Asia include ecstasy (8.1%), Viagra (7.9%), poppers (6.1%), crystal-methamphetamine (4%), ketamine (5.3%), and GHB (2.3%). These drugs have different mental, behavioural, and psychical effects in most people who use them. An ongoing expansion of crystal-meth, ecstasy, and ketamine production in East and Southeast Asia has led to lower price and increasing demand <sup>(51)</sup>. The distribution of Viagra (or other erectile dysfunction drug - EDD) and Poppers are less likely to be strictly regulated in Asia. Internet retailers widely sell Poppers, and they are considerably cheaper than other drugs' prices (52; 53). This might partly explain the reasons for the popularity of using these drugs in Asia. Unlike the situation in other regions, it seems like the common effects, such as increased energy and euphoria, cannot be drawn as a sole decision to choose the drugs for SDU or *chemsex* practice in Asia. The practice of drug use in sexual context almost always involves use of more than one type of drug. Around 88% of MSM engaged in chemsex had used more than one drug in the past 6 months (29). The pattern of polydrug use during the practice seems to have increased recently (21)

The use of multiple drugs in sexual contexts contributes to lower health outcomes. Those who frequently use multiple drugs, including methamphetamine, GHB, Poppers, and EDD,

have been found more likely to be HIV-positive and diagnosed with an STI <sup>(48)</sup>. Since polydrug use is strongly associated with sexual behaviours linked to the risk of acquiring STIs and HIV, such as condomless sex, multiple sex partners, or receptive condomless sex with an unknown HIV+ partner(s) <sup>(55)</sup>. Another health problem occurring due to intentional multiple use is overdose, particularly concerning problematic re-dosing GHB/GBL <sup>(8)</sup>. Overdose can also occur unintentionally. The quality of the drug is often compromised because of black market distribution. GHB adulteration with Sildenafil – erectile dysfunction medicine – has been reported and might cause chest pain, shortness of breath, and dizziness. When GHB is combined with other substances, treatment becomes more complicated <sup>(56)</sup>. Polydrug use in sexual practice carries with it the risk of other medical problems.

#### User voices: Some of us are mixing the drugs

"We still maintain a level of 1-1 because, at that level, I find myself shaking and excited, and there is no need to change... 1-1 means a half of Ice pill and a half of candy [MDMA]... when using, grind it, then heat it with silver paper, then the smoke comes out. We breathe in and start to smoke"

(Vietnam, VIE03, 29X years old, practising more than a year ago)

# 1.4. What motivates MSM to practice *chemsex*?

There are several reasons influencing the decision of MSM in Asia to practice *chemsex* that can be categorised as proximal factors, interpersonal factors, and broader institutional factors <sup>(57)</sup>. The proximal reasons are related to the direct benefit resulted from using drugs to enhance sexual pleasure. For instance, one-third of Thai MSMs preferred substance use during sexual intercourse since it can reduce users' anxiety and reluctance to have sex, which increases mutual sexual pleasure <sup>(26)</sup>. Similarly, a study among MSM in China shows that increased sexual pleasure and pain relief in sexual intercourse are accounted for the most common reasons *poppers* are used and required by their partner(s) <sup>(54)</sup>. In other words, the personal and direct benefits experienced by MSM have influenced their decision to continue the practice.

The next reason is related to MSM's interpersonal factors or interactions with their peer network. A study in Vietnam found that MSM who perceive methamphetamine use for sex is popular in the MSM network are three times more likely to engage in recent methamphetamine use <sup>(58)</sup>. The persuasion-induced substance can also arise from social media and gay social networking apps <sup>(21)</sup>. When a dating app user feels satisfaction from receiving persuasive messages, it is possible to predict substance use behaviours as much as 60% <sup>(26)</sup>. The success rate of this persuasion is relatively high. For instance, about half of *poppers* users had recommended the drug to their partners or friends, and almost 90% of them began to use it because of the recommendation <sup>(54)</sup>. Observing SDU among peers and being exposed to information supporting SDU on social media/gay apps would affect MSM's perceptions related to SDU, which would influence the occurrence of SDU.

# REASONS TO PRACTICE CHEMSEX

# Proximal factor • Reduce user's axiety • Increase mutual sexual pleasure • Pain relief • Popular in their network • Persuation from social media/dating apps • Stigma and societal rejection • Homophobic environment • Heteronormative social preasure • Lack of access to health services due to punitive drug law

In contrast, the last factor that shape MSM reasoning to the practice is related to institutional factor that provides external prejudice directed towards MSM self-being, such as stigma and societal rejection. Homophobic environment has resulted in marginalisation and minority stress, thus contributing to *chemsex* and associated HIV risks <sup>(59)</sup>. Experience of heteronormative social pressure has been associated with significantly higher odds of being intoxicated at last sex in Thailand <sup>(60)</sup>. Furthermore, in a country with punitive nature of existing drug laws – like in many Asian countries, having open conversations about *chemsex* to seek help from healthcare is challenging <sup>(57)</sup>. A combination of proximal, interpersonal, and institutional factors has shaped MSM's reasons and motivation to the practice.

# User voices: Why we are engaged in *chemsex*?

"I use it for fun when having sex, to create a fantasy while having sex."

(Indonesia, INA01, 28 years old, >2 years of practising SDU)

"Many sad stories, many things that I feel frustrated and unable to solve. I just seek it to forget everything".

(Vietnam, VIE03, 29 years old, >3 years of practising SDU)

# 1.5. Who are more likely to engage in *chemsex*?

Essentially, an appropriate intervention can only be provided when the practitioner understands the characteristics of the client. The prevalence of SDU and *chemsex* among MSM in Asia shows that only a portion of this population are engaged in the practice. Among those engaged in SDU, only a quarter of them use the drug weekly (22,26). The weekly use of SDU is also done by 9% of HIV+ MSM (33). A study on SDU among MSM in Indonesia indicates that MSM residing in urban areas are more likely to engage in the practice than those who live in rural areas (22). To date, the evidence points out that MSM with higher income and education are the main sub-population who use drugs in sexual contexts. These identifying characteristics are found among MSM who practice the use of drug in sexual context in Indonesia, Thailand, China, and Hong Kong (18,22,26,48,61). There seems to be inconsistency on whether younger age is associated with the practice. Age is associated with the practice in studies of China and Hong Kong, but it is absent in Thailand and Indonesia (18,22,29,48). Despite this debate, younger age MSM are significantly correlated with behavioural aspects of persuasion-induced substance use, and they have used club drugs to enhance sexual pleasure in Thailand (26,62). Higher education and younger age are also found among MSM who use only *poppers* in China <sup>(63–65)</sup>.

Furthermore, *chemsex* seem to be linked with habitual online behaviour among MSM. Compared with MSM who do not engage in *chemsex*, those engaged are four times more likely to make gay friends through gay mobile apps and almost two times more likely to use social media <sup>(48)</sup>. A study focused on MSM who use dating apps in Thailand shows that most of them use drugs with people they have been acquainted with via dating apps <sup>(26)</sup>. The participation of young MSM in Thailand's *high party* (14.3%) is also influenced by the people they meet via the Internet <sup>(34)</sup>. MSM who use *Poppers* in China have also been reported to be more likely to seek sexual male partners via Internet <sup>(63,65)</sup>. In Indonesia, MSM who use a combination of offline and online methods to find sex partners are more likely to use drugs in sexual settings <sup>(22)</sup>.

#### 1.6. Some MSM are more prone to the practice

Aside from the above profiles, particular sub-groups within the MSM population are more vulnerable to the practices. MSM who use drugs are almost three times more likely to have sex for money <sup>(19)</sup>. The prevalence of drug use among *Money Boy* in Asia is exceptionally high compared to general MSM <sup>(66)</sup>. Almost 90% of *Money Boy* in China use drugs in sexual setting in the past three months and is more likely to be younger than general MSM <sup>(17)</sup>. Furthermore, SDU prevalence among HIV+ MSM is also higher than general MSM in Asia. The study from an online survey in Asia shows 40% of HIV+ MSM have been engaged in SDU at least once in their lifetime <sup>(33)</sup>. A recent study in China also shows that drug use during anal sex was connected with the HIV+ group from 2014 to 2017 <sup>(67)</sup>. Particular attention should be given to these sub-group populations when developing *chemsex* intervention.

# 1.7. How can we use the risks awareness resulted from *chemsex* practice?

Interestingly, MSM who practice SDU and/or *chemsex* seem to be more aware of sexual risk resulted from their behaviour. Around 70% of MSM engaged in *chemsex* have had HIV testing in the past 1 year compared to 57% of those who do not engage in *chemsex* <sup>(48)</sup>. This might be due to the association between long-term drug use and the increased odds of HIV self-testing uptake <sup>(45)</sup>. Also, HIV+ MSM are more likely to use drugs in sexual contexts. However, a similar pattern also occurs in terms of Pre-Exposure Prophylaxis (PrEP) and Hepatitis C (HCV) testing uptake. The proportion of MSM who practice *chemsex* and have heard about PrEP is higher than those who do not practice (81% vs 55%) <sup>(48)</sup>. Also, having a recent *chemsex* habit in the past 3 months is a significant predictor of MSM's awareness of PrEP <sup>(49)</sup>. A cohort study in China found that *chemsex* in the last year significantly predicts HCV testing uptake during six months follow up period <sup>(68)</sup>. These positive characteristics can be used as a starting point in developing SDU and/or *chemsex* intervention as well.

## **Key Points:**

- SDU characterises a broader use of drugs while *chemsex* practice is generally limited to the use of methamphetamine, GHB/GBL, and mephedrone only, thus consider as a subset of SDU;
- The most popular drugs utilised by MSM in Asia are generally crystalmethamphetamine and *poppers*. However, it depends on the contextual factors of each country;
- Although diverse, the prevalence of drug use in sexual settings in Asia have been documented, and this informs target in the intervention;
- Various reasons have influenced MSM decision to engage in the practice, from proximal, social, and institutional factors;
- MSM living in an urban area, high education, and higher income are more likely to engage in SDU;
- The Internet has become the intermediary factor in the SDU practice that should be considered when developing a relevant intervention.

# SECTION II: RISK BEHAVIOURS AND HEALTH IMPLICATIONS

# 2.1. Does *chemsex* practice encourage certain risk behaviours?

Towards this date, many documentations on risks related to the use of drug in sexual contexts among MSM in Asia are mainly focused on exploring the relationship between sexual behaviours and practices. On average, MSM engaged in *chemsex* are almost four times more likely to have sex more than 15 episodes per month and two times more likely to pay for sex (19,48). Also, MSM who use drug in sexual settings are more likely to have more non-steady partners (18). MSM engaged in *chemsex* are three times more likely to have more than one male sex partners in the past 6 months (48). The number of sex partners is also relatively similar if the MSM only use *poppers* before sex (65,69). In Indonesia, the practice is more likely to be conducted with non-steady sex partners (22). As it is known, unprotected sex with multiple sex partners have contributed to the increased risk of HIV transmission among MSM.

There are certain features involving multiple sex partners behaviours. The Internet has become an essential mediator that makes finding sexual partners become easier for MSM <sup>(70)</sup>. MSM who use recreational drugs are two times more likely to choose the Internet as the main venue for seeking male sex partners than non-drug users. The likelihood of finding sex partners through the Internet is also applied for *poppers* user only <sup>(54,64,71)</sup>. In Thailand, finding casual sex partners from the Internet is strongly associated with *chemsex* party participation <sup>(34,73)</sup>. The involvement in group sex is seven times more likely to prevail among MSM engaged in *chemsex* <sup>(48)</sup>. At least 10.2% of MSM with SDU history have reported having group sex<sup>(19)</sup>. Comparably, engagement in group sex in the past three months is also prevalent among MSM who use *poppers* <sup>(64,71,74)</sup>. The likelihood of sexual risks increases with nuances surrounding multiple sex partners behaviours.

## User voices: and sometimes we forget about the risks

"When we are high, we are not interested in safety measure, we are only interested in taking drugs".

(Pakistan, PAK01, 25 years old, 4 years of practising SDU)

"If we feel safe with each other (in term of health status), then we would not use a condom. However, if it is the first time we use chemsex, then we usually use a condom. ... It is more often for me not to use condom. ... condom is the fifth priority, while faithful is the second priority. ... If we are faithful, then we do not need to use a condom".

(Indonesia, INA03, 40 years old, >7 years of practising SDU)

The various sexual risk behaviours that transpire in the practices will become tangible with an inadequate preventive measure. Various studies conclude that drug use in sexual contexts increases the odds of unprotected anal intercourse (UAI) from 2 to 6 times more likely among MSM in Asia (11,40,48,70). Reduction in the odds of using a condom consistently also occur among young MSM and MSM who only use crystal methamphetamine or *poppers* (31,71,75). Recreational drug before sex is also associated with having receptive UAI with internal ejaculation in the past 6 months and UAI with a regular partner (47,76). A study in Asia among HIV+ MSM shows the chance of UAI increased among those who have used recreational drugs before sex more than monthly compared to those only practicing SDU once a few times (77)

#### 2.2. What other elements should we consider?

Aside from the various evidence linking the use of drug in sexual context and high-risk behaviours in sexual practice, there are still additional elements surrounding the practice. A cohort study in China found no change in group sex and UAI in different reference periods<sup>(21)</sup>. This means that group sex and UAI are more likely to become an integral part of MSM behaviour during the practice. Careful consideration should also be placed for young MSM due to their vulnerable position during group sex or *ice party*, particularly when power relations and negotiations of sexualised bodies become relational and negotiable during the event <sup>(78)</sup>. The proportion of UAI is higher among MSM who use alcohol before sex than SDU <sup>(42)</sup>. Therefore, the contribution of alcohol use should also be considered within sexual risks surrounding the practice. Lastly, neither alcohol use nor drug use in sexual setting mediate the relationship between sexual compulsivity and UAI <sup>(43)</sup>. This study rejects the common assumption that drugs and alcohol have influenced users' ability to practice safe sex due to high sexual drives. To this extent, additional factors need to be understood surrounding MSM decision making concerning risk behaviours.

#### 2.3. Does *chemsex* practice increase the risk of HIV?

With abundant evidence connecting sexual risk behaviours to the use of drug in sexual practices, it is important to understand the extent to which the practices influence the rate of HIV among MSM populations in Asia. *Chemsex* practice is known to be correlated with group sex history and negatively correlated with the expectation of sex partners to use condom consistently and the concern on sex partners HIV status and STI history <sup>(49)</sup>. The practice seems to influence internal risk behaviours and reduce awareness of external risk factors. Also, SDU is marginally associated with non-disclosure of HIV status, although this association is particularly strong among those who practice weekly <sup>(33)</sup>. Engaging in *chemsex* is associated with being connected in the HIV genetic network in Hong Kong. This means that *chemsex* activity among MSM could form a hub of HIV transmission <sup>(79)</sup>. A combination of these factors has then increased the risk to acquire HIV.

Consequently, ample studies in Asia found a correlation between HIV status and *chemsex* practice. The odds of having HIV positive MSM engaged in the practice are twice as high

compared to non-HIV MSM in Changsa, China and Malaysia (11,19). In Hong Kong, the chance of self-reported and/or confirmed HIV+ is seven times more likely among MSM engaged in *chemsex* (48). In Indonesia, a higher proportion of self-reported HIV status is found among younger MSM (22). While in Shanghai, the odds of having HIV infection due to SDU practice are higher among Money Boy than general MSM (66). In Thailand, the incident of HIV increase five-folds among MSM who attended *chemsex* party(72). The result from various studies found that HIV status and HIV incidence are also associated with MSM who use *poppers*, particularly in China (42,64,65,80,81). The use of EDD combined with club drugs is associated with incident HIV infection. However, using them separately is not (34). However, among HIV positive MSM, *chemsex* engagement is less likely to be associated with newly detected HIV infections. The risk of HIV infections is also predominantly found among MSM who mainly use a combination of mainly methamphetamine, GHB, *poppers*, and EDD and extensive use of different types of drug (48). This suggests that although there is a strong association between the practice and HIV infection, the risk of transmission is varied with the intensity of drug use.

# **Chemsex and HIV**

- *Chemsex* practice influences internal risk behaviours and reduces awareness of external risk factors i.e. group sex, low expectation of sex partner to use condom, less concern of sex partner's HIV status
- Compared to general MSM, the rate of HIV infection is higher among those who use drug in sexual contexts
- The risk of getting HIV increases along extensive use of different types of drug

# 2.4. How about the risk of getting STI?

Beside HIV infections, the use of drugs in sexual setting is also correlated with other sexually acquired infections. MSM with STI diagnosis in the past 12 months are five times more likely to engage in *chemsex* in Hong Kong <sup>(48)</sup>. In China, the odds of self-reported syphilis and herpes infections among MSM engaged in SDU are around two-fold more likely than non-users <sup>(19)</sup>. The chance of having syphilis infection is even higher among HIV+ MSM who use drugs in a sexual context in the past six months <sup>(46)</sup>. The risk of STI seems to persist, regardless of the type of drugs utilised. Specific assessment on methamphetamine use or similar drugs for sexual purposes in the past 3 months found that the risk of STI increased almost three times <sup>(82)</sup>. Using club drugs for sex were also more likely to have HIV/STD infection <sup>(19)</sup>. Similarly, *poppers* users tend to report higher STI infections, except for syphilis <sup>(63,64,71,83)</sup>. Within the MSM population who practised SDU, Indonesia found that STI status is higher among young MSM <sup>(22)</sup>. MSM who use drug in sexual contexts are more prone to HIV and STI risks.

#### 2.5. To what extent is *chemsex* related to mental health?

Although limited, there is evidence that indicates the relationship between mental health issues and the use of drugs for sexual purpose among MSM in Asia. In Malaysia, the suicidal risk is positively associated with *chemsex* practice (11). While in Indonesia, the severe depression and anxiety among SDU users are higher in young MSM than the adult and older MSM <sup>(22)</sup>. At the same time, other studies point out an indirect situation that might suppress the mental health problem related to SDU. For instance, a study concludes that life satisfaction gives a protective effect on not using drugs during anal intercourse, suggesting MSM who are content with life will be less likely to decide to use drugs in a sexual setting<sup>(18)</sup>. Although sexuality disclosure might lower the psychological burden, sexual orientation disclosure to anyone other than a sexual partner is lower among MSM reporting sex while using drugs in China (15). However, the interpretation of the association between mental health and SDU should be evaluated with caution. MSM is also prone to mental health problems due to propagated homophobia from society and internal stigma (84,85). It is unfortunate that until recently there is no strong evidence explaining whether drug use, homophobia, or a combination of both more heavily influence the state of mental health among MSM who use drugs in sexual contexts.

# User voices: How chemsex influences our mental health

I had the illusion of not knowing what was real. (Vietnam, VIE03, 29 years old, >3 years of practising SDU)

"It impacts your mental health, more and more addicted to it, overdose like they do not know their limit. ... It is emotionally damaging".

(Pakistan, PAK02, 32 years old, 11 years)

# 2.6. Not only *chemsex* – multiplied risk of HIV among MSM

#### Story from the users: it's more than to seek sexual pleasure

"My problem is not a single problem. I have a problem with sex addiction, living as a gay man in Pakistan, and drug addiction".

(Pakistan, PAK01, 25 years old, 4 years)

The interplay between substance use and other health conditions can be mutually reinforcing by social inequities. The configuration of sexual orientation and SDU as social conditions are mutually reinforcing health disparities such as HIV infections (86,87). This cooccurrence of mutually complex health and social epidemics is conceptualised as syndemic (88). The

exploration of this theory concludes that drug use, mental health burden, and unprotected sex are all associated with young, gay, and bisexual men<sup>(89)</sup>. These phenomena can also be observed among MSM in Asia. In China, a combination of multiple sex partners or childhood sexual abuse and Poppers use prior to sex has increased HIV infection <sup>(69)</sup>. Similarly, MSM participants in Malaysia who reported significant depressive symptoms and *chemsex* were more likely to report unprotected anal sex, which is significantly related to HIV infection <sup>(11)</sup>. From a syndemic theory point of view, the use of drug in sexual settings cannot be seen as a single issue. Instead, multifaceted conditions involving drug use, high-risk behaviours, and mental health problems can potentially increase the rate of HIV infection among MSM in Asia.

# **Key Points**

- Sexual risk behaviour is higher among MSM who practice SDU, particularly among those who use drugs more frequently;
- MSM who use drug in sexual contexts are prone to HIV and STI risks.
- Some studies have started to link mental health with SDU even though sexualityrelated stigma experienced by MSM clouds this relationship;
- Multifaceted conditions involving drugs use, high-risk behaviours, and mental health problems can potentially increase the rate of HIV infection among MSM.

# SECTION III: SEXUALIED DRUGS USE INTERVENTION: BEST PRACTICES AND CHALLENGES

The evidence surrounding the increasing level of drug use during sex and its associated risks has encouraged various intervention recommendations. The proposed interventions generally include online and offline approaches. The Internet is considered a potentially useful tool for promoting intervention measures, particularly relevant in current MSM cultures and settings <sup>(90)</sup>. Intervention components such as awareness campaigns focus on HIV prevention and SDU, social media-based risk calculator which includes SDU and risk behaviours for MSM to learn their objective risk of HIV, or intervention delivery through MSM social networking application <sup>(57,70,91)</sup>. In terms of the offline approach, many suggestions emphasise the need to integrate rights-based and network-based methods within the existing services for MSM <sup>(47,92–94)</sup>. These intervention methods are deemed necessary to tackle the social structural determinants that have essentially become the main barrier in implementing HIV intervention among MSM populations.

This section provides an overview of how interventions around the globe have been implemented to respond to SDU practices among MSM. Besides some key activities, any relevant challenges from the program implementer and SDU users as target populations are also included to provide a comprehensive understanding. This section aims to stimulate brainstorming among CBOs, particularly in Asia, to create their own SDU-related program.

# 3.1. Existing Interventions

#### Case study 1: Lighthouse, Vietnam

"Not only listen, but engage them. They can become part of the intervention. Trust them and engage them to contribute to the community."

(Doan Thanh Tung – Lighthouse Executive Director)

Community engagement as the centre of intervention is the fundamental value of *chemsex* intervention provided by Lighthouse – an MSM-focused CBO in Ha Noi, Vietnam. Although the work only started in 2019, many innovative components emerged from the MSM community of their *chemsex* program. As a starting point, a community advisory board was created to inform the programmatic direction. The board comprised of key persons from the MSM community with extensive knowledge of the practice based on their personal experience. It informed each stage of the program cycle, including intervention design, collecting feedback from the community, evaluation, and programmatic adjustment. Participations of this advisory board could be provided in person and/or through the online mechanism. At the development stage, the inputs from the community advisory board were

utilised to shape the intervention contents. When the intervention was being implemented, peer-to-peer feedback from beneficiaries who accessed the services was also collected by the community advisory board. The board also participated in the evaluation stage to confirm necessary adjustment based on the results.

The inclination to situate the MSM community at the centre of the intervention also materialised in program implementation. Peer educators were recruited and trained to connect the target group with the services. Users could rate the accessed health services to encourage MSM-friendly services. There was a community workshop dedicated to discussing *High Fun* and its relevant information. The training for external healthcare providers was also emphasized to create friendly services for the MSM population to feel welcomed regardless of their sexuality. Moreover, advocacy to law enforcement and the Ministry of Health aimed to reduce criminalisation towards MSM who use drugs. Lighthouse believes direct engagement with the community is an essential strategy to understand better what is needed in the field.

The one-year effort of providing community-based interventions has resulted in various lesson learned. At least 30% of *chemsex* users were reached and capacitated to access relevant information, peer support, harm reduction package, and prevention materials, including PrEP and referral to HIV and STI services. The program has also cultivated various research interest towards SDU issues. Lastly, the complexity of drug use among MSM in sexual settings cannot be solved with a single intervention. Instead, it should include a combination of reaching, health promotion, structural barriers removal, service delivery, and advocacy.

# What can we learn from Lighthouse, Vietnam?

- A community-led framework can increase the likelihood of program utilisation and outcome;
- A community advisory board is beneficial not only as community representative but also to ensure community representation, quality assurance, and making sure that the intervention is developed according to contextual need;
- In addition, engagement and collaboration with other key stakeholders such as healthcare providers, law enforcement, and the ministry of health are necessary to provide uninterrupted intervention.

## Case study 2: Mainline, Netherlands

"...back then, we also saw there was a lack of non-judgmental information and healthcare provided to the users."

(Nick Veldwijk – Mainline Regional Manager Asia)

**Developing a program based on the users' attributes** has become the backbone of Mainline's *chemsex* intervention in Amsterdam, the Netherlands. *For* 28 years, Mainline has worked to improve the health and rights of people who use drugs domestically and internationally. Adapting to global phenomena, their launched the *chemsex* intervention in 2017. The program was initiated to respond to the rising phenomenon of injected methamphetamine use in sexual setting among the MSM population in the Netherlands. From the initial assessment, Mainline found that the users' characteristic varied and was shaped by layers of motivations, consequences, and cultural practices. Therefore, the intervention was developed to facilitate these differences, by including MSM who wanted to quit and MSM still actively engaged with *chemsex* practice.

Mainline offers various services with the framework. They provide individual and group counselling program called "drop-in sessions", focusing on supporting the users in managing their use, abstaining, or sexual wellbeing improvement. Variety of offline (i.e. booklet, brochure, DVD, informative books, games) and online materials relevant to *chemsex* were also produced to advance the users' understanding of the practice, thus helping them make an informed decision. The offline materials (see: https://english.mainline.nl/page/webshop) cover not only drugs information but also personal experience of the users, health-related risk factors, and life and social consequences resulted from drug use. Similarly, the website (see: <a href="https://sexntina.nl/en/">https://sexntina.nl/en/</a>) provides more detailed information on methamphetamine, self-control and safer use, risk minimisation, and quitting drug use. These materials are also promoted through outreach activities where *chemsex* practices were organised, such as sauna, dating apps, and private parties. Help and support are also provided through online counselling and chatting during working hours.

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Mainline also aims to broaden the *chemsex* intervention towards multisectoral institutions. Capacity building for healthcare providers has been conducted to increase their understanding and reduce stigma related to *chemsex* practices, including physical and mental health effects and underlying reasons to use the drugs in sexual contexts. Mainline also does advocacy work to the health department, law enforcement, and addiction care to seek their support and engagement in *chemsex* intervention. Aside from the acceptance towards the newly established *chemsex* intervention, the advocacy work has also resulted in an alliance for future collaboration and program sustainability. Mainline also organises experience sharing between community networks and experts organisations to improve existing services, including technical assistance and *chemsex* training module for organisations and stakeholders outside the Netherlands.

#### What can we learn from Mainline, Amsterdam?

Tailoring the program according to the local situations and users' need;

- *Chemsex* training for healthcare providers can contribute to reduce stigma and discrimination towards the users;
- Advocacy work is necessary to ensure government's acceptance and support towards the intervention;
- Networking and engagement with other community and stakeholders may contribute to the development of a different *chemsex* approach.

#### Case study 3: HOPE Clinic, Taiwan

**Professional clinical intervention** addressing *chemsex* practice is also available in Asia. An example of this can be seen from the HOPE clinic in Taiwan. HOPE stands for Healing, Empowerment, Recovery of *chemsex*. Intrigued by uncontrolled STI infections due to drug dependence among MSM that was higher than the general population, Min-Sheng Hospital decided to provide an integrative one-stop service for *chemsex* users.

The integrated health service model aims to improve MSM disease prevention and quality of life, particularly of those who use *chemsex* through organised and user-friendly health service management. This enables the client to be more open towards their drug use and risk behaviours, thus, increase clients attendance.

The HOPE clinic works with the mission to combine empowerment, treatment, and recovery mindset for their clients. The clinic provides both online and offline pre-registration for their clients as the starting point of their service. Based on the risk behaviour evaluation survey, the clients would be referred to a suitable health service. When a client is identified as SDU practitioner, they would receive substance use evaluation and counselling. Afterwards, subsequent services such as *chemsex* recovery group, PrEP counselling, and STI screening and treatment are provided. The model enables clients to view their blood test results, individually completed their psychological and *chemsex* assessment, and check-in on their service utilisation record. Healthcare providers can manage client membership systems, summarise health service statistics, and manage test results and survey data.

To improve their services, the HOPE clinic also conducts process evaluation. The sexually atrisk clients would be asked to assess the clinic's objectives, behavioural outcome, environmental outcomes, health, and quality of life. The result of this evaluation would then be utilised to improve the services.

# What can we learn from HOPE, Taiwan?

 Integrating SDU with other STI services is possible to provide a more comprehensive health package for MSM who use drugs in sexual contexts;

- Using self-assessment risk behaviours enables healthcare providers to offer tailormade health service according to client's conditions;
- Providing user-friendly services enables the clinic to attract more potential clients;
- Ongoing healthcare improvement can be provided based on process evaluation involving their clients;
- The sustainability of the services can be guaranteed by collaborating with the state hospital.

### Case study 4: Thailand

"If we don't know what to do, then we would not ask our client about this because we don't know what to offer them. Instead, we would try to identify other technical experts who can help build the capacity of our lay providers to screen for substance use and to provide primary interventions."

[Dr. Nittaya Phanupak, PhD – IHRI Executive Director]

"APCOM has sexual health campaigns for MSM in Asia, and since Chemsex is currently popular among MSM we should provide the relevant information for them to protect themselves." ['Bright' Thisanut Kaewnukul – APCOM Campaign Officer]

"We all learn from each other" seems to be an appropriate sentence to capture the joint efforts implemented in Thailand in response to the use of drugs in sexual settings among the MSM community. It started from anecdotal reports of local CBOs released around three years ago, seeking advice to respond to the increasing number of MSM clients with a history of taking drugs for sexual purposes. Motivated to provide the best course of action towards drug issue among the MSM population, the Institute of HIV Research and Innovation (IHRI) in Bangkok facilitated regular discussions among drug-focused and MSM-focused CBOs as a starting point. This became a process of sharing, listening, and exchanging experience for the CBOs, and thus allowed them to gain practical knowledge to support MSM clients who practised *chemsex*.

Furthermore, the capacity building for LGBT-focused NGOs was provided by Ozone Foundation – an NGO that serves people who inject drugs - and psychiatric to better understand drug issue. Ozone also developed a handbook on Chemsex in partnership with other civil society activists. The handbook became the practical guideline for the users and NGOs since it contains information regarding substance and its consequences, substance use management, and how to deal with law enforcement officers. Training module for KP lay service providers has also been updated with content on substance use among the LGBT population. Another support is also coming from a collaborative partner. APCOM – a community-based organisation working to improve the health and rights of MSM across Asia and the Pacific - provided the party toolkit and online information. The toolkit contains

information on how to organise a *chemsex* party in response to the increasing number of parties in Thailand. Also, additional information related to safer *high-fun* was launched in the microsite of the #TestBKK website. In this site, MSM can find information such as the type of drugs used by MSM in Thailand, their effect, how not to mix, and managing "coming down" (see <a href="https://www.testbkk.org/en/stay-safe">https://www.testbkk.org/en/stay-safe</a>). Since the #TestBKK is part of the #TestXXX regional campaign, the information is also shared in other participating countries.

Eventually, all of these newly developed materials were then translated into practice. KP lay providers from 10 clinics in seven provinces of Thailand started to include drug assessment using the Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) developed by WHO (see: <a href="https://www.who.int/substance\_abuse/activities/assist\_test/en/">https://www.who.int/substance\_abuse/activities/assist\_test/en/</a>) to gauge the harmfulness of their MSM clients' substance use. Psychiatrists also formally trained some major KP lay provider clinics to provide brief intervention according to their drug harmfulness level. All of these Chemsex-related interventions were provided in addition to standard health service (i.e. HIV, STI, and HVC testing and linkage to treatment) and prevention package (i.e. condom, lubricant, PrEP and PEP). So far, the KP lay provider clinics have contributed to more than 50% of HIV testing and PrEP in the country. The next plan is to tailor the training for those NGOs that focus on recruiting and reaching role. Although they said that "up until now, we are still in an ongoing development to refine the service package for MSM who SDU", Thailand has successfully started their collaborative role to tackle the chemsex issue among their MSM population.

#### What can we learn from Thailand?

- Acknowledging different approaches and different sub-populations of MSM who use drugs requires differentiated services – combining drug and MSM issues resulting in mutual collaborations;
- Taking into account how MSM in Thailand who practice SDU communicate through online applications and using drugs together at parties;
- Integrating SDU interventions into existing HIV programs.

# Case study 5: Australia

"[The end goal] is to manage their use [of drugs] better...help them understand their motivation and managing the harm."

[Associate Professor Adam Bourne – Deputy Director ARCSHS La Trobe University]

**Promoting safe practice and encouraging wellbeing** can be said as the underlying approach within Australia's harm reduction intervention in responding to drug use in sexual contexts among MSM, colloquially known as 'Party and Play' or (PnP). The phenomenon of *chemsex* in Australia has been primarily driven by the use of Methamphetamine and GHB, either through *slamming* (injecting), smoking, and/or *bumping* (snorting). At the same time,

Australia also has a long-established HIV program. This means that any relevant programs to reduce the risks of *chemsex* practice are readily available. MSM in Australia have free and easy access to needles and syringes at any time. HIV prevention program such as PrEP or Post Exposure Prophylaxis (PEP) is available through STI and HIV clinics. HIV and STI testing and treatment can be easily accessed through certified general practitioners. All of these services are supported by the publicly-funded universal health care insurance scheme. Therefore, *chemsex* intervention in Australia appears to be developed as an additional component on top of the existing standardised services to provide extra protection to its users.

In Australia, two key organisations provide *chemsex* intervention: Thorne Harbour in Victoria and ACON in New South Wales. Both of them were formerly known as the AIDS Council in their respective states. Thorne Harbour provides recovery support and regular therapeutic groups facilitated by professional counsellors or psychotherapists that sometimes focus on particular themes through a group approach (see <a href="https://thorneharbour.org/lgbti-health/mental-health/therapeutic-groups/">https://thorneharbour.org/lgbti-health/mental-health/therapeutic-groups/</a>). Specifically, *chemsex* users can participate in the Re-wired programs (wired refers to the type of sex gay guys have when using meth). The program offers an eight-week session for MSM to learn the skills and strategies to change their methamphetamine use and better manage their mental health. Participants can identify their specific goals around their use, motivation exploration and triggers, and develop strategies to achieve these long-term goals. Additionally, weekly peer-led support groups are also available to help change, control, or stop their methamphetamine use through a non-judgemental environment and participant-driven discussion.

Similarly, ACON runs substance support counselling up to 12 sessions that can be accessed by MSM seeking support in relation to their use (see <a href="https://www.acon.org.au/what-we-are-">https://www.acon.org.au/what-we-are-</a> here-for/alcohol-drugs/#pivot-point-alcohol-and-other-drug-online-resource). This counselling is based on the harm reduction approach to help clients reach their goals to manage, reduce, or quit their drug use. Additionally, MSM communities can also access the ACON Rovers program that promotes a culture of care at dance parties and events. This program provides onsite medical assistance, encourage people to take breaks and cool down, and basic health-related party needs. Legal resources and education for MSM can be accessed through ACON's Fair Play program that aims to make sure partygoers understand their legal rights and how to keep safe during the Mardi Gras Festival. This includes sharing legal and safety information, monitoring police operations, and providing support to people who have been searched or questioned by police. In running this project, ACON partners with the Inner City Legal Centre and Mardi Gras committee. Specifically targeting sexually adventurous men, ACON also delivers health promotion to MSM who are at higher risk of acquiring blood-borne viruses and STI through the SAM project (95). The project provides culturally appropriate information and education with artistic and stylised work created by and for community and online outreach through HowHard's website (http://www.howhard.com.au/), including information related to chemsex x practice. What seems to be central to ACON's approach is to support PnP communities in safer environments and reduce the stigma attached to drug use and sexually adventurous clients.

#### What can we learn from Australia?

- Support for MSM users can include therapeutic groups and peer-led support;
- Harm reduction approach can be applied to encourage safe practice and encouraging wellbeing among MSM who practice *chemsex*;
- *Chemsex* program can be advanced to reach particular events where the practice is likely to occur;

# 3.2. Challenges in providing SDU interventions

# 3.2.1. From implementers' perspective

Identification of relevant challenges is a common logic in any intervention development. Inevitably, this also applies to SDU among MSM. Here, we summarise the key challenges expressed by several key stakeholders from countries where SDU practices exist are as follow:

- <u>Lack of appropriate data</u> may influence the development of the evidence-based intervention. Some CBOs face difficulty to generate an accurate estimation of MSM who use drug for sexual purposes in their area of intervention. This might be related to limited funding or capacity to produce a rigorous study.
- <u>Lack of funding</u> is also related to the ability to provide a sustainable intervention for the users. Many SDU intervention programs, such as in Thailand, Vietnam, and Amsterdam, rely on external funding bodies with specific funding allocation duration. The government can actually provide ongoing and long term funding through national budget allocation. However, issues related to MSM and drug use are less welcomed by governments due to faulty belief, stigmatisation, or punitive law. This becomes problematic when any effort to engage with the issue is considered by government officials as an attempt to support the practice like in Pakistan and Vietnam.
- <u>Stigmatisation and punitive law</u> towards MSM and drug issues have also cultivated another challenge, particularly at the implementation level. For instance, condom distribution is restricted by policy in Indonesia. The discriminating nature towards MSM and drug issues also implicates how the follow-up service can be provided.
- <u>Hidden population</u> The users become \_harder to reach. This hidden nature of MSM also impacts popular hotspots during offline outreach to engage with MSM and gather pertinent information to expand the services. This creates challenges during offline outreach as well as information and material distribution.
- <u>Limited universal health coverage</u> In countries like Thailand and Indonesia, universal health insurance only covers minimum service coverage that matches the SDU health problem, such as HIV testing. Other required services like PrEP, needle and syringes, mental health assessment, or counselling are not part of the scheme. A limited number of psychiatrics and MSM-friendly clinics have restrained MSM who practised SDU to access professional health-related services.

### 3.2.2. From the users' perspective

The users' perspective is important to draw a complete picture in understanding the challenges surrounding the SDU practice. Results excerpted from interviews with nine SDU users in Indonesia, Pakistan, and Vietnam roughly describe the pattern from their perspectives. Social stigma related to sexual identity and punitive law related to drug use are the main barriers for MSM who use drugs in sexual contexts. In all three countries, homosexuality is still perceived as behaviour as opposed to the social norms and considered illegal. The situation can be worsened in a country with more conservative Muslim religious belief, such as Indonesia and Pakistan, since homosexuality is seen as sinful. This social view influences and is then translated into healthcare services.

Consequently, unfriendly services and fear of confidentiality breach are often experienced by these users. In terms of punitive law, most of the drugs being used in SDU is considered illegal in all three countries. Any activity related to the illicit drug is sentenced by imprisonment or mandatory rehabilitation verdict. A combination of stigma and punitive law perceived by SDU users has restrained their ability to reach relevant services. This population becomes more hidden and operates under the radar. The users understand that their drug use behaviour is against the law. With the lack of confidentiality protection from healthcare workers, they often assume that their drug use would be revealed to the public and may involve law enforcement. Hence, the users prefer to undisclosed their SDU practice or, worse, become reluctant to access health services.

"Our religion does not allow us to be ourselves, our families do not accept us." (Pakistan, PAK01, 25 years old, 4 years)

"They cannot guarantee the best confidentiality of the customer's information ..."

(Vietnam, VIE02, 22 years old, >2 years)

"For Chemsex, the first barrier is the law ... It is important to know what should we do when we have to face legal issue ..."

(Indonesia, INA03, 40 years old, >7 years)

Nevertheless, the users still consider their need to access health-related services as the consequences of their behaviour. Some users have experienced support from CBO, either for HIV prevention, social support, or health treatment. The existing approach from their peers seems to be well accepted by them due to safety and convenience. Hence, the extension of the CBO's role to further link them to health facilities and professional service come across as a promising method. One of the suggested interventions is to break the boundaries of drugrelated self-stigma among the users themselves. This may open the possibility for SDU users to seek help towards existing services.

"I want to have mental health services provided by health professionals. Currently we just have the assistances among communities."

(Vietnam, VIE01, 24 years old, >3 years)

"There are friends who do outreach to the community  $\dots$  then, we open up to them and health facilities at last  $\dots$ "

(Indonesia, INA03, 40 years old, >7 years)

"It is important to break the self-stigma about our drug use  $\dots$ "

(Indonesia, INA02, 22 years old, >3 years)

# SECTION IV: ESTABLISHING THE INTERVENTION

Interest in developing an intervention can be cultivated after realising the health burdens associated with SDU practice in a community. This section briefly explains the process involved in establishing an SDU intervention, including preparation, implementation, and evaluation. All the suggested processes presented below are based on the key information and examples of activity gathered in the previous sections of this manual. The intention is to provide hands-on suggestions for any CBO interested to start the intervention. However, we should bear in mind that the situation and resources of each CBO in Asia vary. Therefore, it is necessary to adjust each process according to the individual capacity and contextual factors within the organisation and the country.

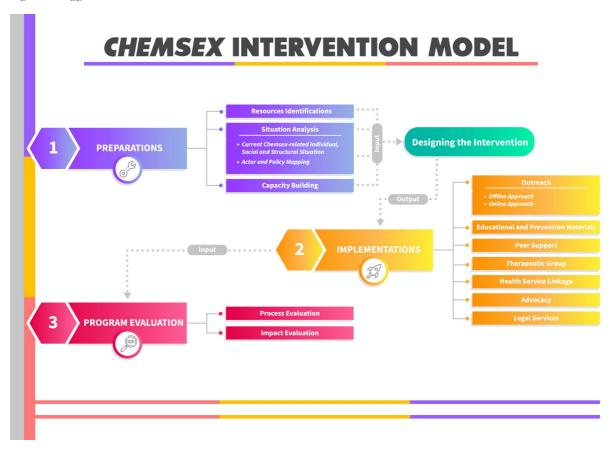


Figure 1: Suggested chemsex intervention model in Asia

# 4.1. Preparation

The first thing that needs to be clarified before implementing the intervention is to understand the internal and external capacity of the place where the program will be implemented. This including self-assessment towards the internal capacity, recognition of the problem, identifying cross-cutting stakeholders, listing related local policies, and strengthening the ability to deliver the program.

#### a) Identify your resources

An intervention needs resources to implement its activities. In this context, resources can be translated into funding, human resources, and support system. Resource identification determines the scope of SDU intervention. For instance, if the organisation has worked mostly on drug issues, there is a need to improve its capacity to understand MSM cultures before starting the SDU intervention. Otherwise, it will be hard to make the initial engagement due to lack of appropriate approaching method. This identification also applies in terms of obtainable financial assistance, the type of prevention materials accessible, the number of staff available, and the location of the site(s) of intervention.

There are various methods on how to identify internal resources. The easiest way is to sit and discuss the listed topics with all of the organisation's members. The discussion can be set up as freely as possible or in a more structured way like focused group discussion (FGD) where a facilitator leads the discussion following pre-determined topics. Other systematic approach can be adopted from the McKinsey 7S model (*see Figure 1*), which demonstrates the interconnectedness of the categorised elements implying that a domino effect may occur when changing one element to maintain an effective balance (96). The organisation can pick the central values and diagnose each element in formulating SDU as a new program for improvement. From this process, the organisation can then develop a <u>project</u> <u>development plan</u> that identifies what is needed to be done for the intervention to be up and running.

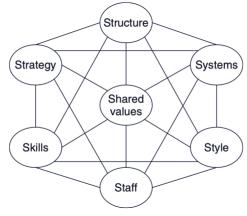


Figure 2: The McKinsey 7S model

(extracted from Channon & Caldart, 2015)

## b) Situation Analysis

'Situation analysis' is a common process found in programmatic development and implementation. The results from situation analysis are useful to determine the key elements that needs to be available in designing SDU intervention. According to

WHO, situation analysis is a fundamental assessment of the current health situation, and it should encompass the full range of the current and potential future health issues and their determinants (see:

https://www.who.int/nationalpolicies/processes/priorities/en/). A robust situation assessment may include components of social determinant of health, capacity of health system, future challenges, and stakeholders positions. The socio-ecological framework, which considers the complex interplay between individual, social, community, and policy factors that put people at risk, can be useful to guide the process (97,98). In the context of the use of drug in sexual settings, the framework has been modified to assess the various driving factors in the practice (57) (see figure 2). Through this framework, the local SDU practice can be assessed from individual, sexual/social network, community, and institution perspectives. This framework is suitable to be used, considering the multifaceted factors that accompany drug use among MSM in sexual settings (see section 1.5 and section 2.4).

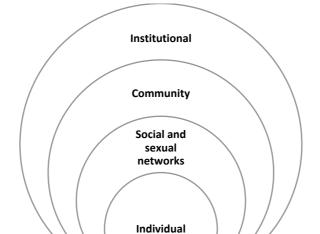


Figure 3: Adopted socio-ecological framework for SDU situational analysis.

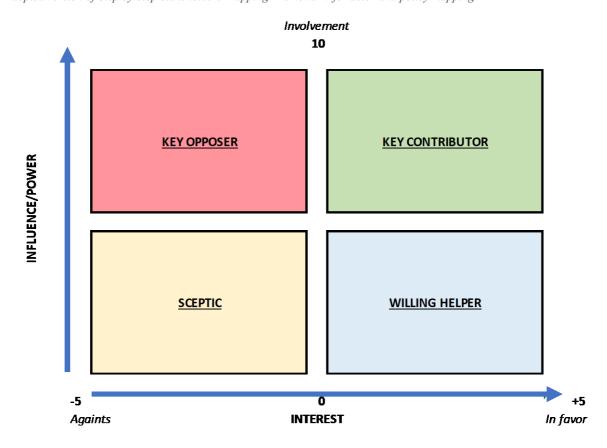
Assessment at individual level is primarily aimed to understand the prevalence, current culture, behaviour, and social determinant related to SDU practice among MSM in the area of interest (*see Sections 1.2; 1.5; and 2.1*). This information can be gathered through various methods depending on the capacity of each organisation. In Vietnam, Lighthouse conducted a survey that aimed to describe sexual behaviours, including those who use substance, to develop a harm reduction package that culturally responsive to the *chemsex* practice. Mainline conducted qualitative interviews with their clients to understand reasons of using, support needed, and health service gap for MSM who used drugs in sexual setting in Amsterdam. Other methods, such as online questionnaire or risk assessment short questionnaire, can also be distributed during online outreach or HIV testing. Questions to assess sexual and social network can be asked in conjunction to individual level assessment. Additional information such as the circle of sexual partners, *chemsex* peers, and

sexualised substance use mechanism within trusted close friend can be included in the sexual and social level assessment.

In contrast, community and institutional level assessment require different methods. In order to understand the extent of interaction that may influence the implementation of intervention, an organisation can undertake actor and policy mapping. The mapping enables the organisation to better understand the status quo of the policy and stakeholders landscape related to MSM's sexualised substance use issue. In addition, this process can also be beneficial to identify potential allies and future challenges when implementing the intervention. An adaptation from step by step mapping guide can be utilised to help with actors and policy mapping (99) (see figure 3).

First, you can identify any stakeholders and policies relevant to *chemsex* practice as a variable of interest to determine what and who are most essential to engage with. Second, prepare a diagram with two axes that represent the spectrum of low to high disposition towards the *chemsex* intervention. Third, position each of the variable according to their level of interest and influence/power. Fourth, prioritise the actors and policies based on their position. Actors and policies with high influence and interest can be considered as key contributors for the intervention. It will be strategic to direct the effort of engagement and collaboration towards this segment. Actors and polices with high influence/power but with low interest to the issue should be approached with caution as they may become the key opposer of the intervention. Furthermore, moderate attention can be given to actors and policies in the "willing helper" segment as long as regular communication and updates are maintained. They can become a strategic allies in a long run since they have manifested interest in the intervention. Lastly, actors and policies identified as the "sceptic" can be considered as the least important segment to be engaged with. Their lack of power and interest towards the intervention will less likely to cause a disturbance. However, their movement is still important to be monitored to avoid negative influence towards "key opposer" and "willing helper" segments.

Figure 4: Adopted version of Step by Step Stakeholders Mapping Framework for actor and policy mapping



## c) Capacity building

Once the organisation confirms the need and their ability to implement SDU intervention, the next preparation needed is the capacity building of the program implementer. The use of drug in sexual context among MSM may be a new phenomenon for some organisations, particularly when there are multiple reasons for drug use and challenges surrounding the practice (see section 1.4 and 3.2). The organisation can focus to build its capacity to improve understanding of SDU and skills to engage with SDU users. Each organisation can arrange their own training, involving local expert in the area.

Example of necessary *chemsex* -related capacity building are as follows:

- A good example is a practice from Thailand that involves various key experts such as drug-focused organisations and psychiatrists to increase local CBOs capacity in relation to SDU (see Section 3.1).
- Alternatively, Mainline provides an interactive e-learning program for health professionals (see <a href="https://www.eventbrite.nl/e/chemsex-part-one-e-learning-programme-2021-registration-129990554247">https://www.eventbrite.nl/e/chemsex-part-one-e-learning-programme-2021-registration-129990554247</a>). The training aims to increase the participants' understanding on *chemsex*, substance, and context.
- Organisations can also improve their knowledge and capacity through self-learning. European Chemsex Forum has compiled various *chemsex*-related information for this purpose. The information on *chemsex* intervention, care

- plans, and therapeutic models can be accessed through individual subscription to their group mailing list. You can register the mailing list from here (https://chemsex.groups.io/g/main)
- Materials from online platform "Chemsex Care Plan" (see:
   <a href="https://www.davidstuart.org/care-plan">https://www.davidstuart.org/care-plan</a> ) developed by David Stuart is also useful for organisations wanting to learn various advice related to the *chemsex* habit for their clients.

# 4.2. Implementation

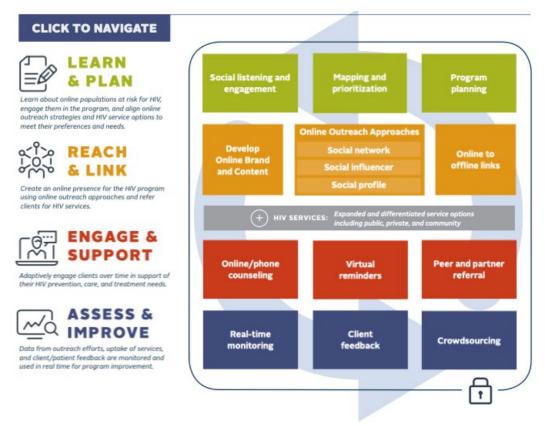
The next stage after completion of all preparation is implementing the SDU program. UNODC <sup>(1)</sup> emphasises the need to expand HIV harm reduction and sexual health services for those who practice *chemsex*. This includes peer outreach, harm reduction materials, and participatory approach in program development. Various good practices on *chemsex* intervention across the globe (*see Section 3.1*) are also available to be adopted by any interested organisations. The options of SDU intervention type are summarised below:

#### a) Outreach

This method is commonly used in order to reach MSM who use drug for sexual contexts. Through outreach, program implementers are able to promote the service, distribute prevention materials, open the network, and/or link the users to necessary health service. There are two outreach approaches that can be implemented in SDU intervention, offline and online methods. In the offline outreach method, the organisation will directly find and meet targeted population in the field, generally through peers and hotspots identification. However, the SDU and *chemsex* are considered as hidden practices. Many of these activities are done in private premises or in virtual domains (*see section 1.5*). Therefore, online outreach can be a useful tool in reaching the clients. The aim of online outreach is to broaden the relevant services by opening new channels to reach and support the targeted population through online and mobile platforms. The guideline (*see figure 3*) developed by FHI 360 and LINKAGES project

(https://www.fhi360.org/sites/default/files/media/documents/resource-linkages-vision-going-online.pdf) can be accessed to accelerate the HIV program impact and can be utilised to implement the approach in SDU intervention (100).

Figure 5: Framework Going Online developed by FHI 360 and LINKAGES project (2019) for SDU online outreach



Lighthouse Organization/Social enterprise has implemented both offline and online outreach to engage with MSM who practice *chemsex* in Ha Noi, Vietnam. For offline outreach, a combination of former SDU and non-user peer outreach workers are utilised to maximise client engagement. While for online outreach, the organisation provides the services using the most popular social media and dating apps accessed by MSM in the country. Dedicated website is also developed to link the users with health services.

#### Outreach tips!

- 1. Engage Chemsex peers and key leaders
- 2. Use friendly languages and approaches
- 3. Diversify outreach programs, both online and offline (i.e. hotspots, *chemsex* party)
- 4. Adjust harm reduction commodities to local needs

#### b) Educational and prevention materials

The basic tenet in developing education and prevention materials in SDU intervention is to reduce the risk and harm related to the use of drugs in sexual context among MSM. Therefore, understanding the risks factors (see Section 2.1), health outcome (see Sections 2.2 and 2.3), and characteristics (see Section 1.5) of the users should be considered in developing the materials. UNODC (1) recommends several key information that is appropriate to be developed in SDU intervention (see

table 4). This education materials can be distributed physically during offline outreach, disseminated in social media and website utilised in online outreach, placed in strategic place to reach MSM such as HIV care clinics or STI clinics. Several organisations have also developed dedicated websites to put specific information on the use of drugs in sexual contexts, such as Mainline in Netherlands through sexntina.com and ACON in Australia through howhard.com (see Section 3.1). The dedicated website can increase user access to find and learn the information relevant to their practice.

Table 2: Recommended educational material for SDU intervention

- Safer drug use and HIV harm recognition
- Safer sex
- Consent, respect for others, and reduction of sexual exploitation
- Transmission of STIs, HIV, HCV and HBV
- Sexual satisfaction and safety
- Dealing with drug-related emergency situations
- HIV-related stigma (i.e. SOGIESC-based stigma) and issues associated with HIV status disclosure and/or drug use
- Community and social networking opportunities that do not include drugs and sex

In terms of prevention materials, the sexual-related and drug-related prevention tools could be prepared for MSM who practice SDU. The basic prevention materials that can be part of SDU intervention include condom, water-based lubricant, needle and syringes. However, the availability of the prevention materials can be adjusted according to contextual factors surrounding SDU practice in each country (*see Section I*). For instance, in Thailand where *chemsex* party is popular, APCOM prepares Party Pack (a pack of condoms and water -based lubricant) that can be ordered by and delivered for free to MSM who participate in group sex or *chemsex* sessions (see: <a href="https://www.apcom.org/testbkks-new-approaches-to-thai-msm-who-use-drugs/">https://www.apcom.org/testbkks-new-approaches-to-thai-msm-who-use-drugs/</a>). While in Australia where GHB-overdoses commonly occur during *chemsex* practice, a measurement tool is available to reduce the harm associated with miscalculated GHB doses.

Beside printed prevention materials, medication-based prevention such as PrEP is also necessary to be promoted among HIV negative MSM who practiced *chemsex*. PrEP can be taken daily, on demand, or periodically. As you may know, PrEP is highly effective for preventing HIV for people who do not have HIV but are at very high risk of getting HIV (101,102). Since *chemsex* practice increases the risk of getting HIV (*see section 2*) offering this medication to the user is appropriate. Your organisation can collaborate with other PrEP clinic in local area for this service. Prior to offering the service, ensuring the HIV status of the client is important. Therefore, HIV test should always be performed to the potential client beforehand if your organisation provides HIV testing service. Otherwise, explain to the client that they will need to confirm their HIV seroconversion along with other test such as STI and kidney assessment

tests at the PrEP clinics. You can learn further information about PrEP from this website (https://endinghiv.org.au/stay-safe/prep/).

# c) Peer support

Peer support may be defined as a system of giving and receiving help on key principle of respect, shared responsibility, and mutual agreement of what is helpful. Therefore, peer support is not based on psychiatric model and diagnostic criteria (103). In the SDU context, peer support intervention is generally developed by and for the users themselves with the aim to strengthen individual ability to deal with various issues-related to SDU. The organisation plays a limited role as the initiator and logistics provider. For this intervention to be successful, the organisation should find a peer leader that has influential power to other MSM who practice SDU in the area. Generally, the topics and activities selected in the intervention are decided by the group members.

## d) Therapeutic group

Group therapy is a form of psychotherapy that involves one or more professional therapists working with several people at the same time—in this context, MSM who practice SDU. This intervention is primarily developed with the aim to assist MSM at addressing their problematic drug use at community level. Simultaneously, the intervention also facilitates many MSMs that are reluctant to discuss their drug use in sexual context in treatment settings for fear of being judged and experienced persecution. One of the example of this intervention is Re-Wired developed by Thorne Harbour Victoria, in Australia. The program assists MSM to reduce drug-related and sexual health risks through 6-week group treatment program, focused on the skills and strategies to manage their use and general wellbeing (104). Result from program evaluation show modest decrease of average drug use and psychological distress and moderate increase in wellbeing index.

## e) Health services linkage

Connecting the SDU users with relevant health services is essential to tackle the health related outcome that emerged from their high risk behaviours (see Sections 2.1, 2.3, and 2.4). When providing this intervention, the organisation should work with both the users and healthcare providers. The users should have adequate knowledge to justify their motivation to visit healthcare services. Therefore, the organisation can provide information on the important of accessing healthcare services and recommend the locations to access the services. Simultaneously, the healthcare providers should be prepared in providing appropriate and comfortable services for their MSM patients without stigma and prejudice (see Section 3.2). In order to meet this objective, the organisation can provide sensitisation training for healthcare providers on how to work with MSM, including health consequences related to SDU practice.

There are several approaches that can be utilised as an example of linking healthcare services to SDU users. Mainline has provided direct training for healthcare providers in Amsterdam, focusing on how to deal with MSM that attend the clinics with drug-related complaints. HOPE clinic in Taiwan and Prahran Clinic in Australia have adopted *chemsex* risk assessment developed by David Stuart (see: <a href="https://www.davidstuart.org/chemsex-risk-assessment">https://www.davidstuart.org/chemsex-risk-assessment</a>) to assess their MSM patients (105). In addition, IHRI in Thailand has provided ASSIST training that enable lay community providers to link the high drug dependence users to psychosocial support and offer PrEP services. Other health services that can be offered including: HIV testing, ARV treatment, mental health services, addiction counselling and rehabilitation, STI testing and treatment.

## f) Advocacy

Although it does not directly correspond with the users, advocacy can be considered as an integral part of SDU intervention mainly because homosexuality and drug use are still perceived as a 'sensitive' issue in most Asian societies (*see Section 3.2*). This can become a major challenge in providing a comprehensive SDU intervention. The main advocacy target in each country varies according to the contextual situation. In a country which adopts zero-tolerance drug policy, the law enforcement can be the main target of the intervention. Meanwhile, in a country with a strong religious belief, the community and healthcare providers can be the main target of the advocacy.

The organisation can utilise the results from actor and policy mapping in the preparation stage (see Section 4.1.b). The mapping allows the organisation to select the strategic institutions as the primary advocacy target. In implementing the advocacy process, the organisation can also collaborate with other organisations who share the same interest. For instance, Lighthouse has joint hands with drug organisation (name) in Vietnam to promote human rights for drug users, including MSM who practice SDU.

#### g) Legal services

The other program that can be provided for *chemsex* users is any services related to legal matters. This service is relevant since most of the countries in Asia considered drug use as an illegal practice and apply harsh punitive law against them. In addition, MSM is prone to receive homophobic-related stigma and discrimination from society. The organisation can provide the service directly or in collaboration with other legal institutions in the area. It will be helpful to review the result from internal capacity assessment and actor and policy mapping (*see section 1*) prior make the decision on how to providing the services. There are several type of services that can be provided in relation to *chemsex* intervention, such as:

- IEC materials in understanding law related to drug in the country
- Assistance with asserting legal rights as citizen/patients/clients, including training for MSM who practice *chemsex* to know and assert their rights

- Access to ARV treatment for those who is arrested or incarceration
- Community paralegal, including training and supporting non-lawyers as paralegal;
- Documenting human rights abuse against MSM who practice *chemsex*
- Referral to legal aid services
- Sensitisation of MSM issue for legal service institution

# 4.3. Program Evaluation

Once the SDU intervention is implemented, the organisation should be able to evaluate the performance and revise the program structure accordingly to increase the effectiveness and efficiency of the program. Moreover, the evaluation can also determine whether the intervention is appropriate for the target population. The evaluation process cannot be separated with the initial pre-determined outcome when designing the intervention (106). The outcome are the changes in participation, reactions, learning, actions, system and environment, and/or health outcome. However, measuring outcome or change (impact) may take a longer time to be measured, which in some cases are not applicable for CBOs. Rather than measuring change in outcomes, the organisation can conduct a process evaluation that examines whether the program has been carried out as planned. Simple monitoring and evaluation toolkit developed by MPact Global Action for Gay Men's Health and Rights can be used to learn what essential elements that needs to be considered when evaluating the MSM-focused program (https://mpactglobal.org/wp-content/uploads/2021/02/MPact-Evaluation Toolkit 6 spreads.pdf).

The RE-AIM evaluation framework can be helpful for organisations interested in understanding the impact of their SDU intervention (107) (see Table 4). This framework measures the five dimensions of public health impact. For organisations with limited resources, the evaluation can focus on Reach and Implementation since these two components can assess whether the program has been carried out as planned.

Table 3: RE-AIM Evaluation framework

Dimension	Component	Level
Reach	Proportion of the target population	Individual (MSM clients, staff)
	participating in the SDU intervention	
Effectiveness	Improvement in some targeted health or risk	Individual
	indicator	
Adoption	Proportion of work site/health clinics/health	Organisation
	office/communities that adopt the SDU	
	intervention	
Implementation	The extent of target population adherence to	Organisation
	safe practice	
	The extent of staff compliance to service	
	guideline	

Maintenance	The extent of which a program is sustained	Individual and organisation
	over time i.e. policy enforced, funding	
	support, risk behaviour reduced	

## Annex 1: List of *chemsex*-related resources

# Chemsex-related knowledge

- Educational material related to *chemsex* developed by Mainline <a href="https://english.mainline.nl/page/webshop">https://english.mainline.nl/page/webshop</a>
- Online Information on methamphetamine and harm minimisation https://sexntina.nl/en/
- Culturally appropriate information and education by and for MSM community developed by ACON <a href="http://www.howhard.com.au">http://www.howhard.com.au</a>
- Qualitative Scoping review examines socio-sexual context of SDU among MSM and transgender – developed by APCOM <a href="https://www.apcom.org/msm-transgender-women-and-drug-use-in-sexual-contexts-in-asia/">https://www.apcom.org/msm-transgender-women-and-drug-use-in-sexual-contexts-in-asia/</a>
- Safer chemsex practice developed by APCOM <a href="https://www.testbkk.org/en/stay-safe">https://www.testbkk.org/en/stay-safe</a>

## Community and expert engagement

■ European *Chemsex* forum - register through <a href="https://chemsex.groups.io/g/main">https://chemsex.groups.io/g/main</a>

### Training on *Chemsex*

Online course on *chemsex* – developed by Mainline
 <a href="https://www.eventbrite.nl/e/chemsex-part-one-e-learning-programme-2021-registration-129990554247">https://www.eventbrite.nl/e/chemsex-part-one-e-learning-programme-2021-registration-129990554247</a>

#### **Individual Assessment**

- Alcohol, Smoking, and Substance Involvement Screening Test (ASSIST) developed by WHO <a href="https://www.who.int/substance">https://www.who.int/substance</a> abuse/activities/assist test/en/
- Chemsex care plan developed by David Stuart <a href="https://www.davidstuart.org/care-plan">https://www.davidstuart.org/care-plan</a>
- Chemsex risk assessment for patients developed by David Stuart <a href="https://www.davidstuart.org/chemsex-risk-assessment">https://www.davidstuart.org/chemsex-risk-assessment</a>

#### Guideline

- Alcohol and other drug inclusive practice guideline developed by ACON - https://www.acon.org.au/wp-content/uploads/2019/02/AOD-Inclusive-Practice-Guidelines-for-Treatment-Providers\_A4\_v11.pdf
- Technical guideline on HIV prevention, treatment, care and support for people who use stimulant drugs developed by UNODC <a href="https://www.unodc.org/documents/hiv-aids/publications/People who use drugs/19-04568 HIV Prevention Guide ebook.pdf">https://www.unodc.org/documents/hiv-aids/publications/People who use drugs/19-04568 HIV Prevention Guide ebook.pdf</a>

#### **Implementation**

 Online outreach and HIV program - developed by FHI 360 <a href="https://www.fhi360.org/sites/default/files/media/documents/resource-linkages-vision-going-online.pdf">https://www.fhi360.org/sites/default/files/media/documents/resource-linkages-vision-going-online.pdf</a>

# **REFERENCES**

- 1. UNODC. Hiv prevention, treatment, care and support for people who use stimulant drugs. Technical guide [Internet]. UNODC. 2019. Available from: http://www.who.int/hiv/topics/idu/en/
- 2. Ruf M, Lovitt C, Imrie J. Recreational drug use and sexual risk practice among men who have sex with men in the United Kingdom. Sex Transm Infect. 2006;82(2):95–7.
- 3. Shoptaw S, Reback CJ. Methamphetamine use and infectious disease-related behaviors in men who have sex with men: Implications for interventions. Addiction. 2007;102(SUPPL. 1):130–5.
- 4. Ostrow DG, Plankey MW, Cox C, Li X, Shoptaw S, Jacobson LP, et al. Specific sex drug combinations contribute to the majority of recent HIV seroconversions among MSM in the MACS. J Acquir Immune Defic Syndr. 2009;51(3):349–55.
- 5. Bourne A, Weatherburn P. Substance use among men who have sex with men: Patterns, motivations, impacts and intervention development need. Sex Transm Infect [Internet]. 2017;93(5):342–6. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85025166842&doi=10.1136%2Fsextrans-2016-052674&partnerID=40&md5=8486b82b852d61eda2d39f0b188df964
- 6. Tomkins A, George R, Kliner M. Sexualised drug taking among men who have sex with men: a systematic review. Perspect Public Health. 2018;138(4):1–11.
- 7. Edmundson C, Heinsbroek E, Glass R, Hope V, Mohammed H, White M, et al. Sexualised drug use in the United Kingdom (UK): A review of the literature. Int J Drug Policy [Internet]. 2018;55(February):131–48. Available from: https://doi.org/10.1016/j.drugpo.2018.02.002
- 8. Bourne A, Reid D, Hickson F, Torres-Rueda S, Steinberg P, Weatherburn P. "Chemsex" and harm reduction need among gay men in South London. Int J Drug Policy [Internet]. 2015;26(12):1171–6. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-84940706287&doi=10.1016%2Fj.drugpo.2015.07.013&partnerID=40&md5=6b40484 8caf9745064dd78f5cc53c596
- 9. Stuart D. Chemsex: origins of the word, a history of the phenomenon and a respect to the culture. Drugs and Alcohol Today [Internet]. 2019;19(1):3–10. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85060586617&doi=10.1108%2FDAT-10-2018-0058&partnerID=40&md5=eae9f586af808083bad943ce4807d30b
- 10. Edmunson S, Hensbroek E, R G, Hope V, Mohammed H, White M, et al. Sexualised drug use in the United Kingdom (UK): A review of the literature. 2018;
- 11. Ng RX, Guadamuz TE, Akbar M, Kamarulzaman A, Lim SH. 03 [HIV & CAI] Association of co-occurring psychosocial health conditions and HIV infection among MSM in Malaysia: Implication of a syndemic effect. Int J STD AIDS. 2020;31(6):568–78.
- 12. Lim SH, Cheung DH, Guadamuz TE, Wei C, Koe S, Altice FL. Latent class analysis of substance use among men who have sex with men in Malaysia: Findings from the Asian Internet MSM Sex Survey. Drug Alcohol Depend [Internet]. 2015;151(ebs, 7513587):31–7. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med12&NEWS=N &AN=25865907
- 13. Wu HH, Shen YT, Chiou CS, Fang CT, Lo YC. Shigellosis outbreak among MSM living with HIV: A case-control study in Taiwan, 2015-2016. Sex Transm Infect.

- 2019;95(1):67-70.
- 14. Luo W, Hong H, Wang X, McGoogan JM, Rou K, Wu Z. [Non-SDU] 46. Synthetic drug use and HIV infection among men who have sex with men in China: A sixteencity, cross-sectional survey. PLoS One [Internet]. 2018;13(7). Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85050849161&doi=10.1371%2Fjournal.pone.0200816&partnerID=40&md5=956774d ae2754e96b5e9e5b10fbb4f21
- 15. Tang W, Mao J, Tang S, Liu C, Mollan K, Cao B, et al. 07. Disclosure of sexual orientation to health professionals in China: results from an online cross-sectional study. Hightow-Weidman L Terris-Prestholt F, Yang L, Peeling R, Fenton K, Huang S, Wang C, Zheng H, Vickerman P, Mitchell KM, Cheng Z, Best J, Tangthanasup TM, Wong NS, Tso LS, Zhang W, Li H BB, editor. J Int AIDS Soc [Internet]. 2017;20(1):21416. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med14&NEWS=N &AN=28361498
- 16. Wong NS, Kwan TH, Lee KCK, Lau JYC, Lee SS. Delineation of chemsex patterns of men who have sex with men in association with their sexual networks and linkage to HIV prevention. Int J Drug Policy [Internet]. 2020;75(9014759):102591. Available from: http://files/3060/Wong et al. 2020 Delineation of chemsex patterns of men who have se.pdf
- 17. Yu MH, Guo CM, Gong H, Li Y, Li CP, Liu Y, et al. 55. Using latent class analysis to identify money boys at highest risk of HIV infection. Public Health. 2019;177:57–65.
- 18. Chen X, Mo PKH, Li J, Lau JTF. 09. Factors Associated with Drug Use Among HIV-Infected Men Who Have Sex with Men in China. AIDS Behav [Internet]. 2020;24(6):1612–20. Available from: https://doi.org/10.1007/s10461-019-02660-z
- 19. Chen X, Li X, Zheng J, Zhao J, He J, Zhang G, et al. 22. [HIV] Club Drugs and HIV/STD Infection: An Exploratory Analysis among Men Who Have Sex with Men in Changsha, China. PLoS One [Internet]. 2015;10(5):e0126320. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med12&NEWS=N &AN=25950912
- 20. Wang Z, Mo PKH, Ip M, Fang Y, Lau JTF. Uptake and willingness to use PrEP among Chinese gay, bisexual and other men who have sex with men with experience of sexualized drug use in the past year. BMC Infect Dis. 2020;20(1).
- 21. Wang Z, Yang X, Mo PKH, Fang Y, Ip TKM, Lau JTF. 27. [HIV & CAI] Influence of social media on sexualized drug use and chemsex among chinese men who have sex with men: Observational prospective cohort study. J Med Internet Res. 2020;22(7):1–21.
- 22. Nevendorff L, Sindunata E, Alharbi R, Reswana W, Praptoraharjo I. Study Report Use of Drug / Substance in Sexual Settings among MSM in Indonesia. 2020;
- 23. Lim SH, Akbar M, Wickersham JA, Kamarulzaman A, Altice FL. The management of methamphetamine use in sexual settings among men who have sex with men in Malaysia. Int J Drug Policy [Internet]. 2018;55:256–62. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=129735657&site=eh ost-live
- 24. Tan RKJ, Wong CM, Chen MIC, Chan YY, Bin Ibrahim MA, Lim OZ, et al. Chemsex among gay, bisexual, and other men who have sex with men in Singapore and the challenges ahead: A qualitative study. Int J Drug Policy [Internet]. 2018;61(June):31–7. Available from: https://doi.org/10.1016/j.drugpo.2018.10.002
- 25. Guadamuz TE, Boonmongkon P. Ice parties among young men who have sex with men in Thailand: Pleasures, secrecy and risks. Int J Drug Policy. 2018;55:249–55.

- 26. Boonchutima S, Kongchan W. 60. Utilization of dating apps by men who have sex with men for persuading other men toward substance use. Psychol Res Behav Manag [Internet]. 2017;10(101514563):31–8. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=prem2&NEWS=N&AN=28138269
- 27. Phillips A, Acheson N. Basic epidemiology. Gynaecol Oncol MRCOG Beyond, Second Ed. 2014;1–14.
- 28. van Griensven F, Thienkrua W, McNicholl J, Wimonsate W, Chaikummao S, Chonwattana W, et al. Evidence of an explosive epidemic of HIV infection in a cohort of men who have sex with men in Thailand. AIDS [Internet]. 2013;27(5 PG-825–32):825–32. Available from: NS -
- 29. van Griensven F, Holtz TH, Thienkrua W, Chonwattana W, Wimonsate W, Chaikummao S, et al. (SIMILAR PARTICIPANT) 47. Temporal trends in HIV-1 incidence and risk behaviours in men who have sex with men in Bangkok, Thailand, 2006-13: An observational study. Lancet HIV [Internet]. 2015;2(2):e64–70. Available from: http://dx.doi.org/10.1016/S2352-3018(14)00031-9
- 30. Holtz TH, Thienkrua W, McNicholl JM, Wimonsate W, Chaikummao S, Chonwattana W, et al. 18. Prevalence of Treponema pallidum seropositivity and herpes simplex virus type 2 infection in a cohort of men who have sex with men, Bangkok, Thailand, 2006-2010. Int J STD AIDS. 2012;23(6):424–8.
- 31. Yeo TED, Ng YL. 19. Sexual risk behaviors among apps-using young men who have sex with men in Hong Kong. AIDS Care [Internet]. 2016;28(3):314–8. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=112860277&site=eh ost-live
- 32. Wu HH, Shen YT, Chiou CS, Fang CT, Lo YC. Shigellosis outbreak among MSM living with HIV: A case-control study in Taiwan, 2015-2016. Sex Transm Infect. 2018;1–4.
- 33. Wei C, Lim SH, Guadamuz TE, Koe S. [DUPLICATE] 26. HIV Disclosure and sexual transmission behaviors among an internet sample of HIV-positive men who have sex with men in Asia: Implications for prevention with positives. AIDS Behav. 2012;16(7):1970–8.
- 34. Thienkrua W, van Griensven F, Mock PA, Dunne EF, Raengsakulrach B, Wimonsate W, et al. 57. Young men who have sex with men at high risk for hiv, bangkok msm cohort study, thailand 2006–2014. AIDS Behav. 2018;22(7)::2137-2146.
- 35. Lim SH, Cheung DH, Guadamuz TE, Wei C, Koe S, Altice FL. Latent class analysis of substance use among men who have sex with men in Malaysia: Findings from the Asian Internet MSM Sex Survey. Drug Alcohol Depend [Internet]. 2015;151:31–7. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=109739485&site=eh
  - http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=109739485&site=ehost-live
- 36. Vu NTT, Holt M, Phan HTT, La LT, Tran GM, Doan TT, et al. 11. Amphetamine-Type-Stimulants (ATS) Use and Homosexuality-Related Enacted Stigma Are Associated With Depression Among Men Who Have Sex With Men (MSM) in Two Major Cities in Vietnam in 2014. Subst Use Misuse [Internet]. 2017;52(11):1411–9. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=124448761&site=eh
  - http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=124448761&site=ehost-live
- 37. Huang S-W, Wang S-F, Cowó ÁE, Chen M, Lin Y-T, Hung C-P, et al. Molecular epidemiology of HIV-1 infection among men who have sex with men in Taiwan in 2012. PLoS One. 2015;10(6).

- 38. Wu H, Xiu C, Fu X, Li M, Wang Z, Li X, et al. Syphilis associated with recreational drug use, depression and high-risk sexual behaviour in men who have sex with men: A case-control study in China. Sex Transm Infect [Internet]. 2019;95(4):267–72. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85062645566&doi=10.1136%2Fsextrans-2018-053878&partnerID=40&md5=73d9fa18061ef5d786fa90a690c46108
- 39. Ministry of Health Republic of Indonesia. Integrated Biological and Behavioural Survey Indonesia 2018-2019 Survei Terpadu Biologis dan Perilaku 2018-2019. 2020.
- 40. Koerner J, Shiono S, Ichikawa S, Kaneko N, Tsuji H, MacHi T, et al. 10. [CAI] Factors associated with unprotected anal intercourse and age among men who have sex with men who are gay bar customers in Osaka, Japan. Sex Health. 2012;9(4):328–33.
- 41. Schneiders ML, Weissman A. 05. Determining barriers to creating an enabling environment in Cambodia: results from a baseline study with key populations and police. J Int AIDS Soc [Internet]. 2016;19(4 Suppl 3 PG-20878):20878. Available from: NS -
- 42. Jiang H, Hong H, Dong H, Jiang J, He L. 13. HIV Testing and Risks of Sexual Behavior among HIV-Negative Men Who Have Sex with Men in Ningbo, China. Int J Environ Res Public Health [Internet]. 2020;17(4 PG-). Available from: NS -
- 43. Wang X, Wang Z, Jiang X, Li R, Wang Y, Xu G, et al. 01. A cross-sectional study of the relationship between sexual compulsivity and unprotected anal intercourse among men who have sex with men in shanghai, China. BMC Infect Dis [Internet]. 2018;18(1 PG-465):465. Available from: NS -
- 44. Wei D, Cao W, Hou F, Hao C, Gu J, Peng L, et al. 31. Multilevel factors associated with perpetration of five types of intimate partner violence among men who have sex with men in China: an ecological model-informed study. AIDS Care Psychol Socio-Medical Asp AIDS/HIV [Internet]. 2020;32(12):1544–55. Available from: https://doi.org/10.1080/09540121.2020.1734523
- 45. REN XL, WU ZY, MI GD, MCGOOGAN J, ROU KM, ZHAO Y. 54. Uptake of HIV Self-testing among Men Who have Sex with Men in Beijing, China: a Cross-sectional Study. Biomed Environ Sci [Internet]. 2017;30(6):407–17. Available from: http://dx.doi.org/10.3967/bes2017.054
- 46. He H, Wang M, Zaller N, Wang J, Song D, Qu Y, et al. 17. Prevalence of syphilis infection and associations with sexual risk behaviours among HIV-positive men who have sex with men in Shanghai, China. Int J STD AIDS [Internet]. 2014;25(6):410–9. Available from:

  http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med11&NEWS=N &AN=24285600
- 47. Cai Y, Lau JTF. 14. [CAI] Multi-dimensional factors associated with unprotected anal intercourse with regular partners among Chinese men who have sex with men in Hong Kong: a respondent-driven sampling survey. BMC Infect Dis [Internet]. 2014;14(100968551 PG-205):205. Available from: NS -
- 48. Wong NS, Kwan TH, Lee KCK, Lau JYC, Lee SS. 23. [HIV & CAI] Delineation of chemsex patterns of men who have sex with men in association with their sexual networks and linkage to HIV prevention. Int J Drug Policy. 2020;75.
- 49. Kwan TH, Lee SS. 04. Bridging awareness and acceptance of pre-exposure prophylaxis among men who have sex with men and the need for targeting chemsex and HIV testing: Cross-sectional survey. J Med Internet Res. 2019;21(7).
- 50. Wei C, TE G, SH L, Huang Y, Koe S, Wei C, et al. Patterns and levels of illicit drug use among men who have sex with men in Asia. Drug Alcohol Depend [Internet]. 2012;120(1–3):246–9. Available from:

- http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=104618967&site=ehost-live
- 51. UNODC. Synthetic Drugs in East and Southeast Asia. Latest developments and challenges. 2020;(May):1–91. Available from: http://www.unodc.org/southeastasiaandpacific
- 52. Xu J-J, Qian H-Z, Chu Z-X, Zhang J, Hu Q-H, Jiang Y-J, et al. 68. Recreational drug use among Chinese men who have sex with men: a risky combination with unprotected sex for acquiring HIV infection. Biomed Res Int [Internet]. 2014;2014(101600173):725361. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med11&NEWS=N &AN=24829916
- 53. Xu J-J, Zhang C, Hu Q-H, Chu Z-X, Zhang J, Li Y-Z, et al. Recreational drug use and risks of HIV and sexually transmitted infections among Chinese men who have sex with men: Mediation through multiple sexual partnerships. BMC Infect Dis [Internet]. 2014;14(1):642. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=109727922&site=eh ost-live
- 54. Zhang Z, Zhang L, Zhou F, Li Z, Yang J. 28. Knowledge, attitude, and status of nitrite inhalant use among men who have sex with men in Tianjin, China. BMC Public Health [Internet]. 2017;17(1):690. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med14&NEWS=N &AN=28870186
- 55. Sewell J, Miltz A, Lampe FC, Cambiano V, Speakman A, Phillips AN, et al. Poly drug use, chemsex drug use, and associations with sexual risk behaviour in HIV-negative men who have sex with men attending sexual health clinics. Int J Drug Policy [Internet]. 2017;43:33–43. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85012054804&doi=10.1016%2Fj.drugpo.2017.01.001&partnerID=40&md5=7eb490d d3dca670fac541a083000a016
- 56. Bernstein A. Gamma-Hydroxybutyrate (GHB) Withdrawal in a Patient with Polysubstance Use. J Psychoactive Drugs [Internet]. 2020;00(00):1–3. Available from: https://doi.org/10.1080/02791072.2020.1865591
- 57. Tan RKJ, Wong CM, Chen MI-C, Chan YY, Bin Ibrahim MA, Lim OZ, et al. Chemsex among gay, bisexual, and other men who have sex with men in Singapore and the challenges ahead: A qualitative study. Int J Drug Policy [Internet]. 2018;61:31–7. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=133280504&site=eh ost-live
- 58. Vu NTT, Holt M, Phan HTT, Le HT, La LT, Tran GM, et al. (DUPLICATE] 02. Amphetamine-type stimulant use among men who have sex with men (MSM) in Vietnam: Results from a socio-ecological, community-based study. Drug Alcohol Depend [Internet]. 2016;158:110–7. Available from: http://dx.doi.org/10.1016/j.drugalcdep.2015.11.016
- 59. Pollard A, Nadarzynski T, Llewellyn C. Syndemics of stigma, minority-stress, maladaptive coping, risk environments and littoral spaces among men who have sex with men using chemsex. Cult Heal Sex [Internet]. 2018;20(4):411–27. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85025839085&doi=10.1080%2F13691058.2017.1350751&partnerID=40&md5=834b 972147447132e6544945f2435a16
- 60. Chard AN, Metheny NS, Sullivan PS, Stephenson R. Social Stressors and Intoxicated

- Sex Among an Online Sample of Men who have Sex with Men (MSM) Drawn from Seven Countries. Subst Use Misuse [Internet]. 2018;53(1):42–50. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85027154955&doi=10.1080%2F10826084.2017.1322985&partnerID=40&md5=fddf6 46d3068254cc517a185813f5744
- 61. Duan C, Wei L, Cai Y, Chen L, Yang Z, Tan W, et al. Recreational drug use and risk of HIV infection among men who have sex with men: A cross-sectional study in Shenzhen, China. Drug Alcohol Depend [Internet]. 2017;181(ebs, 7513587):30–6. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med14&NEWS=N &AN=29031090
- 62. Mock PA, Raengsakulrach B, Wimonsate W, Ungsedhapand C, Thienkrua W, Dunne EF, et al. Young Men Who Have Sex with Men at High Risk for HIV, Bangkok MSM Cohort Study, Thailand 2006-2014. AIDS Behav [Internet]. 2018;22(7):2137–46. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=130360658&site=eh ost-live
- 63. Li D, Yang X, Zhang Z, Qi X, Ruan Y, Jia Y, et al. 33. [HIV] Nitrite inhalants use and HIV infection among men who have sex with men in China. Biomed Res Int [Internet]. 2014;2014(101600173):365261. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medc&NEWS=N&AN=24800219
- 64. Chu Z-X, Xu J-J, Zhang Y-H, Zhang J, Hu Q-H, Yun K, et al. X\_NonSSU 36. Poppers use and Sexual Partner Concurrency Increase the HIV Incidence of MSM: a 24-month Prospective Cohort Survey in Shenyang, China. Sci Rep [Internet]. 2018;8(1):24. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med15&NEWS=N &AN=29311552
- 65. Zhang H, Teng T, Lu H, Zhao Y, Liu H, Yin L, et al. X\_NonSSU 35. Poppers use and risky sexual behaviors among men who have sex with men in Beijing, China. Drug Alcohol Depend [Internet]. 2016;160(ebs, 7513587):42–8. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=med13&NEWS=N &AN=26796594
- 66. Yan H, Ding Y, Wong FY, Ning Z, Zheng T, Nehl EJ, et al. 24. [HIV manual] Epidemiological and molecular characteristics of HIV infection among money boys and general men who have sex with men in Shanghai, China. Infect Genet Evol. 2015;31:135–41.
- 67. Zhang Y, Wu G, Lu R, Xia W, Hu L, Xiong Y, et al. 56. [HIV] What has changed HIV and syphilis infection among men who have sex with men (MSM) in Southwest China: a comparison of prevalence and behavioural characteristics (2013-2017). BMC Public Health [Internet]. 2019;19(1 PG-1314):1314. Available from: NS -
- 68. Wang Z, Mo PKH, Fang Y, Ip M, Lau JTF. 25. Factors predicting first-time hepatitis C virus testing uptake among men who have sex with men in China: An observational prospective cohort study. Sex Transm Infect. 2020;96(4):258–64.
- 69. Jiang H, Li J, Tan Z, Chen X, Cheng W, Gong X, et al. 45. [HIV] Syndemic Factors and HIV Risk Among Men Who Have Sex with Men in Guangzhou, China: Evidence from Synergy and Moderated Analyses. Arch Sex Behav [Internet]. 2020;49(1):311–20. Available from:
  - http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=141680437&site=ehost-live

- 70. Duan C, Wei L, Cai Y, Chen L, Yang Z, Tan W, et al. X\_Non-SSU 39. Recreational drug use and risk of HIV infection among men who have sex with men: A cross-sectional study in Shenzhen, China. Drug Alcohol Depend [Internet]. 2017;181:30–6. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=126164036&site=ehost-live
- 71. Chen H, Yang Y, Huang Y, Dai Y, Zhang J. X\_NonSSU 16. Prevalence of poppers use and its sexual risks among men who have sex with men in southwestern China: a cross-sectional study. BMC Public Health [Internet]. 2018;18(1):N.PAG-N.PAG. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=131698659&site=eh ost-live
- 72. Piyaraj P, van Griensven F, Holtz TH, Mock PA, Varangrat A, Wimonsate W, et al. The finding of casual sex partners on the internet, methamphetamine use for sexual pleasure, and incidence of HIV infection among men who have sex with men in Bangkok, Thailand: an observational cohort study. Lancet HIV. 2018;5(7):e379–89.
- 73. P. P. F. van G, T.H. H, P.A. M, A. V, W. W, et al. The finding of casual sex partners on the internet, methamphetamine use for sexual pleasure, and incidence of HIV infection among men who have sex with men in Bangkok, Thailand: an observational cohort study. Lancet HIV [Internet]. 2018;5(7):e379–89. Available from: http://www.journals.elsevier.com/the-lancet-hiv/
- 74. Zhao P, Tang S, Wang C, Zhang Y, Best J, Tangthanasup TM, et al. X\_Non-SSU 38. Recreational drug use among Chinese MSM and transgender individuals: Results from a national online cross-sectional study. PLoS One. 2017;12(1).
- 75. Morineau G, Nugrahini N, Riono P, Nurhayati, Girault P, Mustikawati DE, et al. 41. [HIV] Sexual risk taking, STI and HIV prevalence among men who have sex with men in six Indonesian cities. AIDS Behav. 2011;15(5):1033–44.
- 76. Lim SH, Guadamuz TE, Wei C, Chan R, Koe S. 12. Factors associated with unprotected receptive anal intercourse with internal ejaculation among men who have sex with men in a large internet sample from asia. AIDS Behav. 2012;16(7):1979–87.
- 77. Wei C, Guadamuz TE, Lim SH, Koe S. 20. Sexual transmission behaviors and serodiscordant partnerships among HIV-positive men who have sex with men in Asia. Sex Transm Dis. 2012;39(4):312–5.
- 78. Guadamuz TE, Boonmongkon P. Ice parties among young men who have sex with men in Thailand: Pleasures, secrecy and risks. Int J Drug Policy [Internet]. 2018;55:249–55. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=129735673&site=eh ost-live
- 79. Kwan TH, Wong NS, Lui GCY, Chan KCW, Tsang OTY, Leung WS, et al. 59. Incorporation of information diffusion model for enhancing analyses in HIV molecular surveillance. Emerg Microbes Infect [Internet]. 2020;9(1):256–62. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85078689122&doi=10.1080%2F22221751.2020.1718554&partnerID=40&md5=24656da1897b382afa58e9dc0154bce7
- 80. Van Griensven F, Thienkrua W, Mcnicholl J, Wimonsate W, Chaikummao S, Chonwattana W, et al. 08. [HIV] Evidence of an explosive epidemic of HIV infection in a cohort of men who have sex with men in Thailand. Aids. 2013;27(5):825–32.
- 81. Wang L, Santella AJ, Wei X, Zhuang G, Li H, Zhang H, et al. X\_Non\_SSU 15. Prevalence and protective factors of HIV and syphilis infection among men who have sex with men in Northwest China. J Med Virol [Internet]. 2019;(i9n, 7705876).

- Available from:
- http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medp&NEWS=N&AN=31696951
- 82. Morineau G, Nugrahini N, Riono P, Nurhayati, Girault P, Mustikawati DE, et al. Sexual risk taking, STI and HIV prevalence among men who have sex with men in six Indonesian cities. AIDS Behav. 2011;15(5):1033–44.
- 83. Wang X, Li Y, Wu Z, Tang Z, Reilly KH, Nong Q. 32. [HIV] Nitrite Inhalant Use and HIV Infection among Chinese Men Who Have Sex with Men in 2 Large Cities in China. J Addict Med. 2017;11(6):468–74.
- 84. Meyer IH. Prejudice, Social Stress, and Mental Health in Lesbian, Gay, and Bisexual Populations: Conceptual Issues and Research Evidence. Psychol ogical Bull [Internet]. 2003;129(5):674–97. Available from: http://www.ncbi.nlm.nih.gov/pmc/articles/PMC4337813/%0Ahttps://doi.org/10.1080/15532739.2011.700873%0Ahttp://www.ncbi.nlm.nih.gov/pmc/articles/PMC5491368/%0Ahttp://dx.doi.org/10.1016/S1473-3099(12)70315-8%0Ahttp://rochester.summon.serialssolutions.com/2.0
- 85. Pachankis JE, Clark KA, Burton CL, Hughto JMW, Bränström R, Keene DE. Sex, status, competition, and exclusion: Intraminority stress from within the gay community and gay and bisexual men's mental health. J Pers Soc Psychol. 2020;119(3):713–40.
- 86. Link B, Phelan J. Social conditions as fundamental causes of health inequalities. Handb Med Sociol Sixth Ed. 2010;3–17.
- 87. Singer M. Aids and the health crisis of the U.S. urban poor; the perspective of critical medical anthropology. Soc Sci Med. 1994;39(7):931–48.
- 88. Baer HA, Singer M, Susser I. Medical anthropology and the world system: critical perspectives. Praeger; 2013.
- 89. Halkitis PN, Moeller RW, Siconolfi DE, Storholm ED, Solomon TM, Bub KL. Measurement model exploring a syndemic in emerging adult gay and bisexual men. AIDS Behav. 2013;17(2):662–73.
- 90. Hidaka Y, Ichikawa S, Koyano J, Urao M, Yasuo T, Kimura H, et al. X\_Non-SSU 44. Substance use and sexual behaviours of Japanese men who have sex with men: A nationwide internet survey conducted in Japan. BMC Public Health. 2006;6.
- 91. Yun K, Xu J, Leuba S, Zhu Y, Zhang J, Chu Z, et al. Development and Validation of a Personalized Social Media Platform-Based HIV Incidence Risk Assessment Tool for Men Who Have Sex With Men in China. J Med Internet Res [Internet]. 2019;21(6):e13475. Available from: http://ovidsp.ovid.com/ovidweb.cgi?T=JS&PAGE=reference&D=medl&NEWS=N&AN=31215509
- 92. Chard AN, Metheny NS, Sullivan PS, Stephenson R. 43. Social Stressors and Intoxicated Sex Among an Online Sample of Men who have Sex with Men (MSM) Drawn from Seven Countries. Subst Use Misuse [Internet]. 2018;53(1):42–50. Available from: https://doi.org/10.1080/10826084.2017.1322985
- 93. Van Griensven F, Thanprasertsuk S, Jommaroeng R, Mansergh G, Naorat S, Jenkins RA, et al. Evidence of a previously undocumented epidemic of HIV infection among men who have sex with men in Bangkok, Thailand. Aids. 2005;19(5):521–6.
- 94. Guadamuz TE, Clatts MC, Goldsamt LA. 13. Heavy Alcohol Use Among Migrant and Non-Migrant Male Sex Workers in Thailand: A Neglected HIV/STI Vulnerability. Subst Use Misuse [Internet]. 2018;53(11):1907–14. Available from: http://search.ebscohost.com/login.aspx?direct=true&db=jlh&AN=130917548&site=eh ost-live
- 95. Stardust Z, Kolstee J, Joksic S, Gray J, Hannan S. A community-led, harm-reduction

- approach to chemsex: Case study from Australia's largest gay city. Sex Health [Internet]. 2018;15(2):179–81. Available from: https://www.scopus.com/inward/record.uri?eid=2-s2.0-85045193127&doi=10.1071%2FSH17145&partnerID=40&md5=f33bb2884a072ea096c2b33019c4a40c
- 96. Channon DF, Caldart AA. McKinsey 7-S model. Wiley Encycl Manag. 2015;1–2.
- 97. Bronfenbrenner U. Ecological models of human development. Vol. 3, Internation encyclopedia of education. 1994. p. 1643–7.
- 98. Richard L, Gauvin L, Raine K. Ecological Models Revisited: Their Uses and Evolution in Health Promotion Over Two Decades. Annu Rev Public Heal. 2011;3(2):307–26.
- 99. Dolfing H. The project success model: A guide to defining project success. 2015.
- 100. FHI 360, LINKAGES Project. GOING ONLINE TO ACCELERATE THE IMPACT OF HIV PROGRAMS. Washington DC US; 2019.
- 101. Brown AE, Mohammed H, Ogaz D, Kirwan PD, Yung M, Nash SG, et al. Fall in new HIV diagnoses among men who have sex with men (MSM) at selected London sexual health clinics since early 2015: Testing or treatment or pre-exposure prophylaxis (PrEP)? Eurosurveillance. 2017;22(25):1–6.
- 102. Estcourt C, Yeung A, Nandwani R, Goldberg D, Cullen B, Steedman N, et al. Population-level effectiveness of a national HIV pre-exposure prophylaxis programme in Men who have sex with men. Aids. 2021; Publish Ahead of Print (September 2020).
- 103. Mead S, Kuno E, Knutson S. Intentional peer support. Vertex [Internet]. 2013;24(112):426–33. Available from: http://www.intentionalpeersupport.org/wp-content/uploads/2014/04/Defining-Peer-Support.pdf
- 104. Burgess K, Parkhill G, Wiggins J, Ruth S, Stoovè M. Re-Wired: Treatment and peer support for men who have sex with men who use methamphetamine. Sex Health. 2018;15(2):157–9.
- 105. O'Reilly M. Chemsex case study: Is it time to recommend routine screening of sexualised drug use in men who have sex with men? Sex Health. 2018;15(2):167–9.
- 106. US Department of Health and Human Services Centers for Disease and Prevention. Introduction to Program Evaluation for Public Health programs: A Self-Study Guide [Internet]. Program Performance and Evaluation Office (PPEO). 2011. Available from: https://www.cdc.gov/eval/guide/index.htm
- 107. Glasgow RE, Vogt TM, Boles SM. Evaluating the public health impact of health promotion interventions: The RE-AIM framework. Vol. 89, American Journal of Public Health. 1999. 1322–1327 p.