Chemsex and its management (Adapted from HIV Manual www.hivmanual.hk)

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Introduction

In recent years "chemfun" has become a colloquial term used by gay men or other men who have sex with men (MSM) in Hong Kong to mean sex with psychotropic substances, commonly methamphetamine and γ-hydroxybutyric acid (GHB). It is also called chemsex or sexualised drug use in other places. Using drugs to enhance the sexual experiences in men, regardless of their sexuality, has existed in human history for centuries. Yet public concerns only appeared lately as we observed some of its grave consequences. These included resurgences of HIV and other sexually transmitted infections (STI), emerging cases of sexually transmitted hepatitis, social and mental health problems associated with addiction and tragically deaths from overdoses.

The past as prologue

The combination of drugs and sex was not a new or local phenomenon, nor was it a practice confined to the sexual minority group. Coca leaves, in which cocaine was derived from, have been used as an aphrodisiac for centuries. Effects of psychostimulants like amphetamines and cocaine on enhancing sexual desire and prolonging sexual activities were widely documented in the literature. Using these psychostimulants in a 'run' that lasted for several days and nights for sex was reported 50 years ago.[1] The phenomenon however did not receive much attention until the advent of HIV when researchers were eager to find out the risk factors associated with unsafe sex. In the late 80s, researchers had identified the association of unsafe sex with the use of cocaine and other drugs during sex in heterosexual women and gay men. Apart from the risks from sharing needles and paraphernalia, increased risks for HIV were related to low condom use, high number of sexual partners and prolonged and possibly traumatic sexual intercourse.

In MSM, using drugs to facilitate or enhance sex was not uncommon. Inhaling nitrates, also known as poppers, has been pursued to facilitate sex by gay men since the 1960s. Unlike other drugs, nitrates are not psychotropic substances. They act to dilate the blood vessels which lead to a drop in blood pressure and rise in heart rate that comes with a sense of warmness and euphoria. They also act to relax the smooth muscles of the anal canal, so that anal intercourse becomes less painful. The use of psychotropic substances like cocaine and cannabis in sex was also reported by a proportion of gay men over the years. From the sociological perspective, it is believed that the deep-rooted stigma and repression of their sexuality from the normative society has played an important role contributing to such phenomenon as part of the gay culture.

A seminal work by Lewis and Ross described the dance party culture attended by thousands of gay men on weekends to socialise, use drugs and have sex in Australia in the 90s.[2] The most common drug of choice was 3,4-methylenedioxymethamphetamine (MDMA), also known as ecstasy, and methamphetamine which was then considered a new drug. In fact, description of experiences of sex with these drugs were of little difference to what is practised today. The development of communication technology and the popularity of internet made gathering of men

from different communities and cities much more convenient. The development of internet chatroom, messaging platforms and later mobile phones with location-based social networks and applications in last decade has again facilitated the connection between gay men. Having sex with drugs has become more private and accessible to an even larger proportion of this minority group. The phenomenon has grown at unprecedented scale.

Chemsex – characteristics, motivations and harms

Chemsex or sexualised drug use was coined recently in the UK to characterise the phenomenon, facilitating systematic study of this burgeoning topic. Chemsex is defined as 'the use of drugs before or during planned sexual activity to sustain, enhance, disinhibit or facilitate the experience'.[3] Slamming is the practice of injecting drugs in chemsex, also known as slamsex. Depending on the local prevailing drugs of choice, some researchers defined chemsex as the use of any of a predefined set of drugs in sex, such as the 3-chems (methamphetamine, GHB and mephedrone) or the 4-chems (3-chems plus ketamine).[4] Characteristics of the psychotropic drugs commonly used in chemsex are listed in Table 1. Because of their sympathomimetic effects in causing vasoconstrictions, methamphetamine and other psychostimulants commonly cause erectile dysfunction. Some men might prefer to perform the receptive role in anal sex and/or turn to the use of medications like sildenafil to maintain an erection.

Table 1. Characteristics of psychotropic substances commonly used in association with chemsex

Drug	Other names	Available forms	Methods of use	Types and chemical functions	Onset & half life	Effects in chemsex
Methamphetamine	I, Ice, 雪糕	Crystals	fume inhalation via glass, pipe or bottles; blowing the fumes rectally, mixing with water for injection or rectal administration	CNS stimulant - enormous increase in brain levels of dopamine, serotonin and norepinephrine; sympathomimetic	Onset: few minutes; T1/2: 9 hours	Euphoria, increased energy and confidence, disinhibitions, enhanced sensations, enhanced sensation of touch, increased sexual desire, reduced feeling of pain, difficult erection, delayed orgasm
3,4-methylenedioxy-meth-amphetamine (MDMA)	E, Ecstasy, 糖	Tablets	Swallowed	CNS stimulant - increases brain levels of dopamine, serotonin and norepinephrine; sympathomimetic	Onset: 45 minutes; T1/2: 6 hours	Emotional warmth, sense of well-being or euphoria, feelings of intimacy, sensuality, and closeness to other people and decreased anxiety
Mephedrone*	Meow meow, MCAT	Powder, tablets	Swallowed, snorted, injected or administered rectally	CNS stimulant and hallucinogen; sympathomimetic	Onset: 10 mins (inject), 30 mins (sniff); T1/2: 30-90 mins	Euphoria, decreased hostility, improved sexual stimulation
γ-hydroxybutyric acid (GHB)	G, G 水, 迷姦水	Liquid, powder	Swallowed with or without mixing with soft drinks	CNS depressant - interfere with dopamine transmission, inhibits norepinephrine	Onset: 15 min; T1/2: 30-45 mins	Euphoria, lower inhibitions, increased libido, calming, enhanced orgasm, relaxing effects make receptive anal intercourse easier
Ketamine	K, K 仔	Powder	Snort	Hallucinogen, anesthetic agent	Onset: few minutes; T1/2: 2-3 hours	Dissociative feelings (feeling out of body, detached from the reality), euphoria
5-Methoxy-N,N-diisopropyltryptamine (5-MeO-DiPT)	Foxy, 零號膠囊	Tablets, powder	Swallowed or administered rectally	Hallucinogen	Onset: 20-30 minutes; T1/2: unknown	Euphoria, intense tactile stimulations
*Mephedrone is not commonly used in Hong Kong						

Chemsex includes diverse and complex interactions of sexual and drug-taking behaviours. It may involve two or more participants and can occur in sex-on-premises venues like saunas or clubs but commonly in private spaces like homes or rented rooms. As methamphetamine reduces the need to sleep with its longer half-life than other stimulants like cocaine, chemsex that involves methamphetamine often lasts for extended period, like 10-12 hours or even over a few days. Individuals may have varied pattern and frequency of chemsex. They may choose to stop after initial experiential use, some may continue or increase the intensity or frequency at different time points in their lives. In the UK, about 20% of HIV-negative MSM recruited in sexual health clinics and 30% of the sexually active HIV-positive men had recent chemsex history.[5,6]

Common motivations for chemsex are[3]

- Increasing sexual desire and pleasure
- Facilitating confidence during sex and displaying skills
- Enhancing feelings of connectedness and closeness
- Losing inhibitions, allowing sexual adventures and exploring limits
- Prolonging sex for multiple sex partners
- Managing negative feelings, like lack of confidence, self-esteem, internalized homophobia and stigma about being HIV positive

Harms to physical health and HIV risks

Lack of sleep and energy is often the most immediate problem chemsex users observed after lengthy period of sexual activities. Some may turn to over-the-counter hypnotics to initiate and replenish sleep.

Risks of overdoses of the drugs as listed in Table 2 are possible especially in those who are novice to the drugs, or in those who have developed tolerance i.e. when a larger amount of drugs is required to achieve the same preferred effect. Life-threatening conditions and deaths from GHB or methamphetamine overdoses had occurred. Inhaling nitrites together with medications to manage erectile dysfunction may result in severe hypotension and even shock. Cases of fatal interactions of MDMA with ritonavir (RTV) leading to raging MDMA level in the body were reported in the 1990s.

Table 2. Common withdrawal features, complications of chronic use and intoxication

Drug	Common withdrawal features with repeated use	Complications of chronic use	Risks of intoxication	What to do in overdose
Methamphetamine	Sedation, lethargy, increased appetite, mood changes (anxious, depressed), vivid or unpleasant dreams	Neurotoxic, causing decline in brain function. Weight loss and skin ulcers resulted from formication (feeling that bugs are crawling under the skin). Dependence, paranoid beliefs, hallucinations resembling schizophrenia, increased irritability and agitation	Paranoid beliefs, hallucinations, tachycardia, arrhythmia, hypertension, hyperthermia, rhabdomyolysis and acute renal failure, seizure, stroke, death	If there are signs of confusion, fever, profuse sweating, shallow breathing, patient should be taken to emergency department
MDMA	Lethargy, feeling lonely and miserable, muscle pain, increased appetite	MDMA is neurotoxic, potentially causing decline in brain function. There could be panic attacks and paranoid beliefs.	Loss of appetite, nausea, tachycardia, teeth grinding, sweating, dehydration, hyperthermia, seizure, death	
Mephedrone	Uncommon	Nasal irritation. May cause dependence syndrome especially with strong craving and tolerance. Potentially neurotoxic.	Paranoid beliefs, hallucinations, tachycardia, hypertension, agitation, paranoia, seizure, death	

Drug	Common withdrawal features with repeated use	Complications of chronic use	Risks of intoxication	What to do in overdose
GHB	Uncommon	Uncommon. A small proportion of people with daily use may develop dependence.	Narrow safety margin before going to a coma-like state, overdose can cause memory lapses, drowsiness, nausea and vomiting, respiratory and cardiovascular suppression, death	If breathing is disturbed or slowed, patient should be taken to emergency department
Ketamine	Mood changes (anxiety, depressed mood), poor sleep	Physical – abnormal biliary system strictures and dilatations with deranged liver function and even cirrhosis; chronic inflammation of the urinary systems with strictures, renal impairment presented with frequency, dysuria, hematuria and incontinence, cognitive impairment Psychological – dependence, depression, hallucinations	Uncommon. May cause hyperthermia, increased heart rate and hypertension and impaired consciousness.	If there are signs of confusion, fever, profuse sweating, shallow breathing, patient should be taken to emergency department
5-Methoxy-N,N-diisopropyltryptamine (5-MeO-DiPT)	Unknown	Unknown	Agitation, nausea, vomiting, panic, tachycardia, hallucinations, death	
Other sedatives	Autonomic hyperactivity, increased hand tremour, insomnia, nausea or vomiting, transient hallucinations, anxiety, seizures	Physical – cognitive deficits Psychological – dependence with building of tolerance and withdrawal symptoms	May cause memory lapses, drowsiness, confusion, unconsciousness, respiratory and cardiovascular suppression, death	If breathing is disturbed or slowed, patient should be taken to emergency department

A significant proportion of individuals practise unprotected sex in chemsex activities, especially when methamphetamine was involved. Overseas studies suggested chemsex was associated with transactional sex, group sex, fisting, sharing sex toys, increased sexual partners. In the UK, it was reported that on average there were 5 sexual partners per session of chemsex. This quickly opened up the sexual (transmission) network with new partners joining in at different sessions. With the prolonged sexual contacts and the ability for the stimulants to reduce sensation of pain, trauma and ulcers in the anal and genitalia are unnoticed. Sex partners who practise chemsex, in particular those who use methamphetamine could be more likely to be HIV-infected. A community survey in Australia showed that use of methamphetamine in the last 6 months was reported by 30% of gay men who were HIV positive and only 9% for those who were HIV negative.[7] Some studies showed that PLWHA using methamphetamine could be less adherent to antiretroviral therapy and more likely to have detectable HIV viral loads. All these biological, behavioural and network factors facilitate the transmission of HIV and other STI. Recent studies showed that gay men who practised chemsex were 3-5 times more likely to have HIV and other STI and 10-15 times more likely to have hepatitis C.[8,9] How the introduction of pre-exposure prophylaxis (PrEP) may modify HIV risks involved in chemsex is to be observed.

Should there be injection with possibility of sharing of equipment, risks of local infections from injections and blood borne infections increased.

In the longer term, with repeated chemsex, many would report difficulty in sustaining erections, premature ejaculation and failure to achieve the sexual gratification from sober sex.

Harms to mental health

Regular use of psychotropic substances in chemsex may lead to an addiction syndrome characterised by features like intense craving for the substance, psychological impairment like agitation and irritability, difficulty controlling the amount used. As listed in Box 1, these features are categorised as criteria for substance use disorder. The probability of developing such features depends on one's genetic or biological vulnerability, type of substances used and the frequency, duration and route of their administration. Epidemiological research has confirmed that individuals with substance use disorders are 2-5 times more likely to have any other mental conditions such as depression. The relationship can be causal, meaning either the mental conditions or drug use cause one another or that they stem from common risk factors like a history of trauma and impoverished childhood.

Box 1. Criteria of substance use disorders according to the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)

1. Substance is often taken in larger amounts or over a longer period than was intended 2. Persistent desire or unsuccessful efforts to cut down or control substance use 3. Great deal of time is spent in obtaining, using or recovering from the use of the substance 4. Craving or strong desire to use the substance 5. Recurrent use resulting in failure to fulfil major role obligations at work, school or home 6. Continued use despite having persistent or recurrent social or interpersonal problems 7. Important social, occupation or recreational activities are given up or reduced because of substance use 8. Recurrent substance use in situations which are physically hazardous 9. Continued substance use despite persistent or recurrent physical or psychological problems that is likely to be caused or exacerbated by substance use 10. Tolerance as defined as either a need for markedly increased amounts of the substance to achieve the desired effects or a markedly diminished effect with use of the same amount of substance 11. Classical withdrawal symptoms or the use of substance to relieve or avoid the withdrawal symptoms
Severity of the substance use disorder Mild: 2-3 criteria fulfilled over 1 year Moderate: 4-5 criteria fulfilled over 1 year Severe: 6 or more fulfilled over 1 year

Most evidence for mental health consequences of chemsex came from studies of drug use irrespective of the context of use in gay men. Being a member of the sexual minority per se is some 2-3 times more likely to have any mental conditions than the heterosexual counterparts. The overall proportion of mental conditions observed in the sexuality minority group with substance use disorder is even higher. A recent study in Australia showed that about 20-30% of online sample of gay men screened positive for at least moderate level of anxiety or depression. A higher level of mental conditions was associated with recent cannabis use and those who are dependent on methamphetamine – almost half of these men (46%) showed evidence of depression.[10] Common symptoms of depression included pervasive low mood, lack of interest in activities that were pleasurable previously, change of sleep pattern and appetite and if severe, feelings of guilt and hopelessness and suicidal idea.

Methamphetamine can induce psychosis with features similar to schizophrenia. Some studies have shown that up to 15-20% of chronic methamphetamine users developed psychosis. The risk is higher in those with regular, chronic or injection use. These were often characterised by auditory hallucinations and holding firm beliefs without sufficient evidence (delusions) that are often of persecutory nature like one is being monitored or being plotted against. Disorganised, violent or self-harming behaviours may result.

Harms to social health

If chemsex happens regularly, individuals may spend so much time in it that they lose track of time and otherwise usual engagement and activities. There would be reduced time for leisure activities like sports and gathering with friends and family. Relationships with their family, partners and friends may fall out. With the lack of sleep and withdrawal effects from the stimulants, they may become excessively lethargic and unable to perform as they normally do at work. They may become less patient and have more conflicts with others. While these negative consequences may be the motivators for individuals to reduce chemsex, for others, it might also be the reason that they continue to have chemsex to cope with these negative emotions, leading to a vicious cycle that perpetuates and intensifies the harms from chemsex.

Understanding the gay men syndemic – trauma, mental health, drug use, sexual risks and HIV

Mental health issues are prevalent among young people, key populations and PLWHA. Multiple health problems occurring in a population simultaneously experiencing poor physical and social conditions constitute a "syndemic". Factors such as mental or neurological disorders, alcohol and/or drug-use, childhood sexual abuse, intimate partner violence could interact synergistically, negatively impacting HIV-related behaviours, health and well-being.[11]

The syndemics model of health focuses on the biosocial complex, which consists of interacting, co-presenting, or sequential diseases and the social and environmental factors that promote and enhance the negative effects of disease interaction. The first syndemic identified and described in the literature, and the one most heavily investigated is known as SAVA (substance abuse, violence, and AIDS),[12] referring to three closely linked and interdependent conditions that coexist in the human body and social life of many MSM in low-income urban environments. Subsequently more literature emerged as regards other HIV-related syndemics, not confining to MSM. In the US, among non-white women with low income, high SAVA scores (based on counting cumulative psychosocial factors such as substance abuse, binge drinking, intimate partner violence, poor mental health, and sexual risk taking) were associated with reduced viral suppression and diminished treatment effectiveness.[13]

Apart from MSM, social and behavioural research in regions of diverse cultural settings revealed that the syndemic phenomenon was not uncommon among PLWHA, young people and key populations who are marginalised and highly stigmatised. An urgent, comprehensive HIV prevention strategy to address mental illness and substance use in the vulnerable population is needed to effectively respond to the HIV epidemic.

Characterising chemsex in Hong Kong

In Hong Kong, "chemfun" first appeared in mid to late 2000 in online chatrooms where gay men or other MSM looked for their sexual partners. It replaced the older terms 'EV fun' or 'EK fun', meaning sex with ecstasy and viagra or ecstasy and ketamine. At those times, ecstasy and ketamine were popular drugs of abuse along the fad of rave parties for both gay or straight crowds. With the enhanced efforts in tackling the drug abuse problem, the availability and quality of these drugs dropped markedly. Methamphetamine emerged to be more popular since late 2000. According to a local registry of drug abusers, the annual number of individuals who reported methamphetamine use increased 3 times in the last decade. Methamphetamine has

surpassed ketamine to become the most commonly abused drug in Hong Kong since 2015. Methamphetamine became the main drug of use in "chemfun" activities. With the expansion of communication technology and similar to elsewhere, more gay men met their sexual partners online. According to a recent local behavioural risk survey,[14] 66.4% of MSM respondents had reported using Lesbian, Gay, Bisexual and Transgender (LGBT) apps in the past 6 months to meet friends, in particular for younger age group. Meeting at private space like hotels and homes makes the use of drugs less risky.

Local community surveys showed that roughly 10% of MSM sampled reported recent history of chemsex. From the most recent community survey of MSM (PRiSM 2017), about one third of sampled MSM who were HIV-infected had chemsex with methamphetamine or GHB in the past 6 months, compared to less than 5% in those who were not HIV-infected. Among the HIV-infected MSM practising chemsex, consistent condom use was rare. Among all MSM with recent chemsex, injection rate was low (4.2%) but up to 44% of the injectors reported a history of needle sharing. From another local series of 117 HIV-infected gay or bisexual men in 2017 (unpublished data), methamphetamine stood out as the most commonly and frequently used substance. All methamphetamine users initiated its use at chemsex activities while less than half (45%) continued its use exclusively for chemsex. Three-quarters of all methamphetamine users fulfilled the criteria of substance use disorder according to DSM-5, with 45% in the severe category, indicating the progression often from starting "chemfun" as a pleasurable or exciting intimate sexual activity to the development of various forms of negative consequences from repeated substance use not only for chemsex.

Management of gay men or other MSM with chemsex or drug use problems

The goals for managing individuals with chemsex or substance use problems begin with motivating and engaging the patient in treatment, reducing the harms from substance use, improving their social or occupational functioning which may support the patient's achieving and maintaining abstinence. Algorithm A outlines the scope of assessment and areas for management. The process from assessment, developing framework of management and recovery could be highly varied in terms of complexity. This may be a one off process for an uncomplicated infrequent chemsex user who is a regular HIV tester on PrEP without mental or social problems. This can also be a long term continuous process for someone with multiple physical, mental and social problems requiring coordination of multidisciplinary care. The key areas to be addressed are described in this section and readers should refer to the tools and suggested readings at the end of the chapter for further details.

Disclosing a history of chemsex, which is commonly perceived as a heavily stigmatised behaviour may not be comfortable nor easy. It would be helpful to begin with simple non-judgemental conversations on chemsex.

It cannot be over-emphasised to establish and maintain a therapeutic relationship and alliance with gay men with chemsex or drug use problems. Skills from motivational interview (see below) while emphasising confidentiality are often helpful.

In the ***initial phase of assessment,*** the pattern of chemsex and drug use in other context should be explored. These included duration and frequency of use, routes of administration and features of substance use disorders.

An assessment on one's medical, mental (like features suggesting anxiety, depression and psychosis) and social assessment and functions (work, family, relationships, financial, or forensic problems) should be attempted. Preferably, the sexual history including sexual identity or orientation, relationships, sexual behaviours, interests, fantasies should be explored through non-judgemental and preferably open-ended questions.

Themes that often come up in counselling included stigma or discrimination for being gay or HIV positive, problems socialising with other gay men, relationships with partners or low self-esteem. Relevant social and support resources from relevant organisations could be enlisted. It is also not uncommon for individuals to reveal a history of trauma of either psychological, physical or sexual nature. Referral for specialist psychological treatment and relevant drug rehabilitation services/organisations may be necessary.

Based on the transtheoretical model (also called stage of change model) developed by Prochaska & DiClemente;[Algorithm B] understanding the patient's stage of readiness to change (pre-contemplation, contemplation, preparation, action, or maintenance stage) allows the clinicians to determine what motivational strategies are appropriate for the patient at that time.

Motivational interviewing is one of the most useful counselling tool that helps initiating behavioural change by exploring and resolving ambivalence. The core elements are expressing empathy by reflective listening, developing discrepancy from what one does to the goals desired (e.g. wanting to maintain good relationships with a partner who becomes so angry about one's chemsex practice), rolling with resistance and ambivalence (instead of giving judgemental authoritative comments and instructions) and guiding oneself to develop efficacy to make small changes to gradually achieve some goals (e.g. meet up with friends for hiking and try no chemsex for one weekend).

Management of individuals with chemsex depends on the assessment results and their motivations. Approaches to areas of concerns include:

a. encourage regular HIV and STI testing, including hepatitis B and C, regular check of blood pressure and heart rate; refer to treatment when needed
b. provide pharmacological treatments for concurrent mental conditions; consider screening for common mental disorders by using questionnaires like GHQ-9, GAD-7 and refer to specialist if necessary;
c. provide psychological treatments when appropriate: common modalities included motivational interview, cognitive behavioural therapy, craving management for drug use;
d. reduce complications due to substance use, provide harm reductions strategies including proper and consistent use of condom, use of PrEP, regular HIV and STI testing, reduce injection, do not share needles with others etc;
e. guide to return to sex without drugs
f. prevent relapse and understand triggers for relapse and alternative management for these triggers, manage underlying perpetuating factors leading to chemsex

A key element for individuals to reduce or quit chemsex is to be able to experience sexual gratification from sober sex. While some believe that sober sex is never as 'good' as chemsex, many others can enjoy sober sex after a period for recovery. It would be important to facilitate individuals to explore and discover ways and elements to enjoy having sex without chem.

Harm reduction strategies are an important component in the menu of management options for gay men who practise chemsex, especially when they are not ready to quit it altogether. Studies have shown that harm reduction-based therapy is effective to reduce the frequency and severity of methamphetamine use in gay men. Some examples are: to advise individuals to decide on the amount of drugs in advance and the limit, and to reduce the frequency of chemsex to less than, say, weekly.

Lapses and relapses are part of the recovery process. Without labelling these as failures, chemsex users should be encouraged and guided to reflect on the reasons for such and to modify the strategies and skills to prevent or minimise the harms from it.

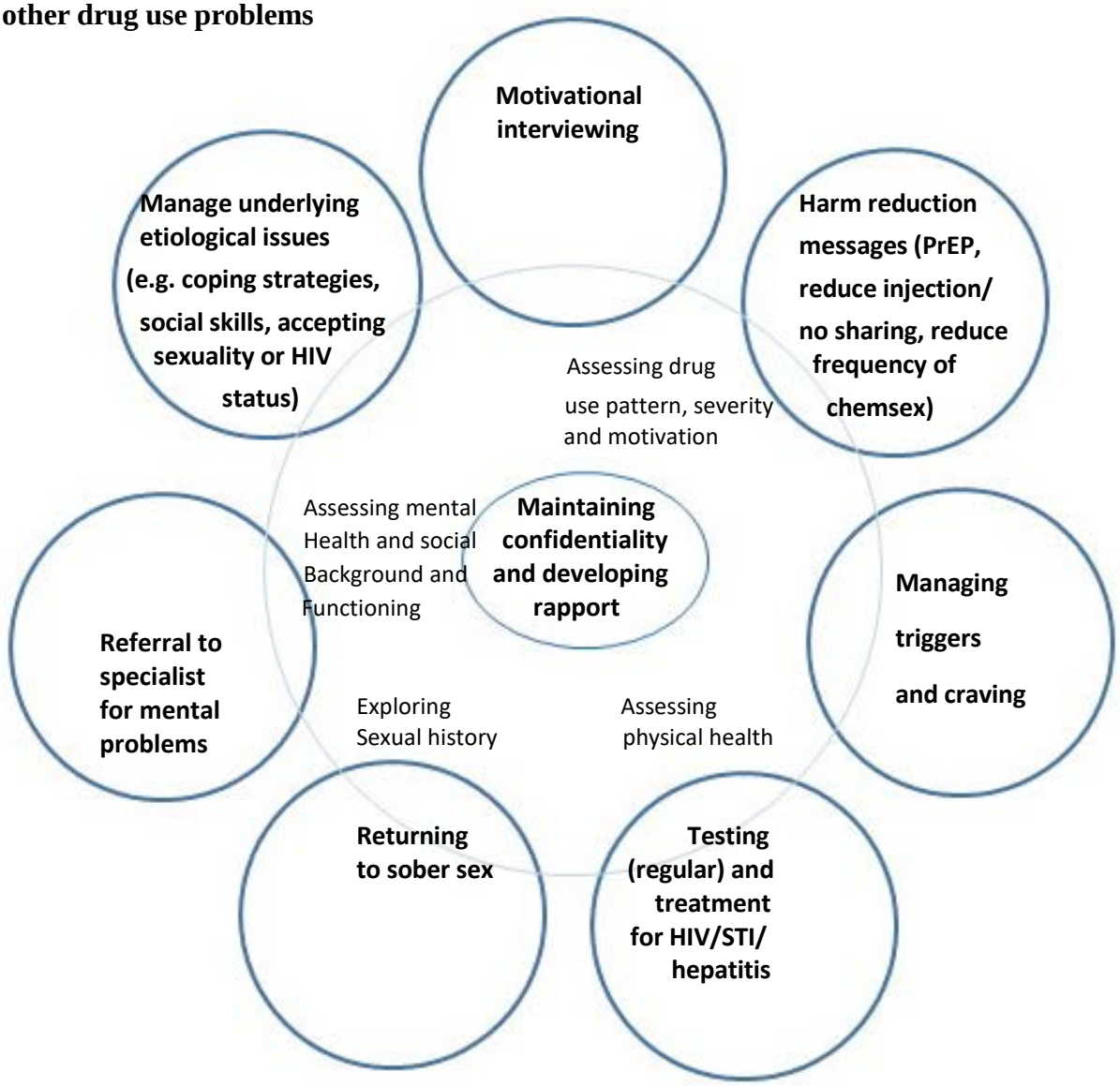
On the organisation level, ***specialised substance use treatment programmes*** that exclusively serve persons who self-identify as sexual minorities have been shown to be effective. To provide a LGBT-sensitive service, the service provider should develop relevant policies and procedures in the organisation. Staff attitude is an important factor of treatment accessibility because internal homophobia can be a barrier. A LGBT-affirming programme primarily targeting LGBT clients is recommended, which should contain LGBT-specific materials. However, if resource is not allowed, LGBT-sensitive programme can be implemented with adequate support provided to both staff and non-LGBT clients. The training provided to counsellors require additional assessment skills especially on LGBT identity, family of choice and skills to assist LGBT client to come out smoothly.

It is not uncommon for drug rehabilitation organisations to encounter sexual minorities using recreational drugs. Hence the chance of collaboration between drug rehabilitation organisations and AIDS organisations should be explored to enhance training on LGBT and HIV-related issues, in particular training on LGBT culture, LGBT sexual behaviour and HIV testing.

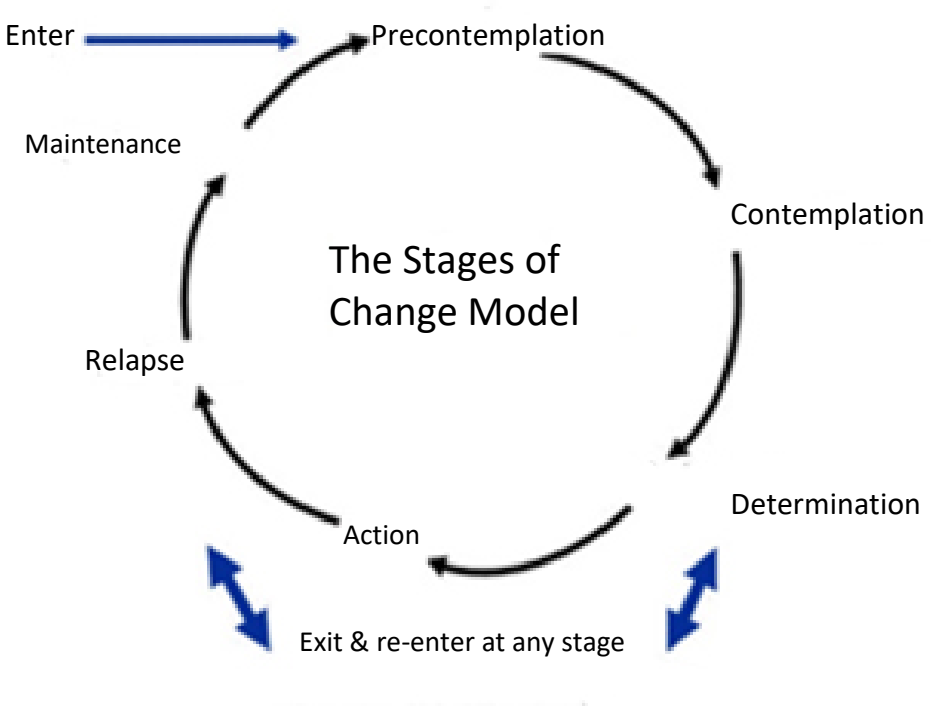
Chemsex in the heterosexual population

Numerous studies overseas had documented the higher risks of HIV among those involved in trading sex for cocaine. In Hong Kong, cocaine has never been as popular as in some western countries. A study in the 1990s showed that up to a quarter of men returning from Mainland China reported using psychotropic substances in the past year and about 40% of these men reported having sex after using the substances. The most common drugs were ecstasy, ketamine and cannabis. It was speculated that most of these sexual activities involved commercial heterosexual sex.[15] While update local data are lacking, it is likely that the use of psychotropic substance at sex was relatively uncommon in heterosexual sex and has not reached the same level of intensity and severity as we observed in gay men.

Algorithm A. A framework on assessment and management of gay men with chemsex or other drug use problems



Algorithm B. Stage of Change Model



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Test paper - **Chemsex and its management (Adapted from HIV Manual www.hivmanual.hk)**

Expiration Date: 2 August 2021

CME point / CNE point: 1 / PEM point: 0 (Midwifery related) #

- Please choose the best option.
- Answer these on the answer sheet and make submission by fax to Special Preventive Programme, Department of Health.

 # Please contact respective authorities directly for CME/CPD accreditation if it is not on listed below.

Accreditors	CME Point
Department of Health / HKMA/ HKAM / HKDU *(for practising doctors who are not taking CME programme for specialists)*	1
Anaesthesiologists	1
Community Medicine	1
Dental Surgeons	1
Emergency Medicine	1
Family Physicians	1
Obstetricians and Gynaecologists	1
Ophthalmologists	0.5
Orthopaedic Surgeons	0
Otorhinolaryngologists	pending
Paediatricians	1
Pathologists	1
Physicians	1
Psychiatrists	1
Radiologists	1
Surgeons	1

1. Which of the following correctly describes the sexualised use of drugs?

   A. The use of drugs to harness sexual libido
   B. The use of drugs to prevent over-excitation of neural pathways
   C. The use of drugs to enhance the pleasure of sexual activity
   D. The use of drugs before or after sexual activity to prevent cardio- and cerebrovascular events
   E. All of the above

2. Which of the following drugs is NOT used for chemsex?

   A. Popper
   B. MDMA
   C. Methamphetamine
   D. Sildenafil
   E. All of the above are commonly used for chemsex

3. Nitrates, also known as poppers, result in

   A. release of serotonin and dopamine, and hence the sensation of exhilaration
   B. dilatation of blood vessels, leading to a drop of blood pressure and a sense of warmth and euphoria
   C. relaxation of smooth muscles of anal canal, facilitating receptive anal sex
   D. (A) and (B)
   E. (B) and (C)

4. Which of the following has been observed with chemsex?

   A. Unprotected sex
   B. Marathon sex
   C. Group sex
   D. Escalation to habitual drug use and psychosis
   E. All of the above have been observed with chemsex

5. Which of the following associations is incorrect?

   A. Methamphetamine and formication
   B. MDMA and teeth grinding
   C. GHB and memory lapse
   D. Ketamine and dissociative feelings
   E. All are correct associations

6. Which of the following is NOT among the findings of PRiSM (2017) related to chemsex?

   A. Having been exposed to HIV prevention messages is associated with condom use during chemsex
   B. 10% of MSM had had recent use of chemsex
   C. 1/3 of HIV positive MSM had had recent use of chemsex
   D. Up to 44% of MSM shared needles during slamsex
   E. Methamphetamine was more popular than mephedrone for chemsex

7. Which of the following is a key principle in the management of chemsex of an MSM?

   A. In the initial assessment, it is important to set the boundary that drug abuse is a punishable offense
   B. As chemsex users display characteristics of drug addiction, the option of methadone should be offered
   C. It is important that counselling address the internalised stigma of being gay or HIV positive
   D. The gold standard of treatment success is the abstinence of chemsex for 6 months
   E. It is effective strategy to aim for sexual abstinence, taking advantage of the fact that chemsex is episodic and associated with sex.

8. All of the following are stages as defined by the transtheoretical model, EXCEPT

   A. Pre-contemplation
   B. Motivation
   C. Preparation
   D. Action
   E. Maintenance

9. All of the following are known strategies of the harm reduction approach for MSM chemsex users EXCEPT
   A. Reach agreement on the amount of drugs to be used for chemsex
   B. Provide HIV pre-exposure prophylaxis
   C. Provide disincentive when relapse occurs
   D. Reduce the frequency of chemsex
   E. All of the above are strategies of harm reduction

10. Which of the following is TRUE regarding chemsex in the heterosexual population in Hong Kong?

    A. Trading sex for cocaine is significant for female commercial sex workers
    B. Chemsex is relatively uncommon in the heterosexual population
    C. Condom use continues to be high among commercial sex workers who use chemsex
    D. Recent local studies have confirmed that the drug of choice is GHB for female commercial sex workers
    E. None of the above