

TECHNICAL DOCUMENT

APPROACH TO THE PHENOMENON OF CHEMSEX



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PRESENTATION

Chemsex has been defined as the intentional use of drugs for sexual relations over a long period of time among gay, bisexual, and other men who have sex with men. In Spain, chemsex is most common in large cities such as Barcelona and Madrid and in gay tourist destinations such as Maspalomas, Torremolinos, and Sitges. Concern over this phenomenon is growing, since intensive and continued chemsex can facilitate transmission of HIV and other infections and lead to problems and complications in terms of the physical, mental, and social well-being of persons who engage in it.

The Secretariat of the National AIDS Plan has promoted the drafting of this technical document with the aim of improving how chemsex is understood by the many different health professionals involved in its prevention and management. The aims of the document are as follows:

- ✓ To provide knowledge and tools for prevention of infection by HIV and hepatotropic viruses and other sexually transmitted infections (STIs) and of the problems associated with substance use in the context of chemsex.
- ✓ To promote management focused on the needs of users and patients by including approaches based on abstinence and on risk and harm reduction.
- ✓ To favor integrated approaches, with emphasis on how professionals and teams from various disciplines can complement each other, as well as how public health care services and LGBTQ+ community organizations can work better together.

We would like to thank the drafting team for taking up the challenge of bringing together multi- and interdisciplinary visions from various public bodies and community organizations in order to reach a broad sector of professionals, who, as part of their day-to-day practice, come into contact with users or potential users of chemsex but who have neither the knowledge nor the tools for prevention or integrated management.

This document is intended to facilitate management of chemsex among staff at centers caring for patients with addictive behaviors, STI centers, community organizations with services for persons engaging in chemsex, infectious diseases departments/HIV units, mental health teams, hospital emergency services, and primary care centers.

EXECUTIVE SUMMARY

The term “chemsex” arises from the pairing of 2 words, *chems* (*chemicals*) and *sex*. In the Spanish medical literature, chemsex has been defined as the intentional use of drugs

for sexual relations over a long period of time (a few hours to several days) by gay, bisexual, and other men who have sex with men (GBMSM). The key element in this definition is “time”, since the longer a person engages in chemsex, the greater his exposure to various risks and harm.

Not all drug consumption in a sexual setting is chemsex. Other types of consumption have been reported in sexual settings, for example, among the clients of female sex workers and in swingers’ clubs. However, these groups are characterized by different epidemiological and cultural circumstances and traits, and their sexual behaviors differ from those of persons who engage in chemsex. Chemsex is a specific type of drug consumption for sexual purposes associated with gay sex practices.

Chemsex usually takes place in private residences, although it can also be found in saunas, sex clubs, and cruising spots. It can be a solo activity, between 2 men, or in threesomes, and it often involves group sex. The substances most commonly associated with chemsex include GHB/GBL, mephedrone or other cathinones, methamphetamine, poppers, cocaine, ketamine, ecstasy, and Viagra. Multiple consumption is frequent. Routes of administration are varied, with intravenous injection—known in this context as *slamming*—entailing greater health risks.

Chemsex is more prevalent in large cities, such as Madrid and Barcelona, and in popular gay tourist destinations (Maspalomas, Torremolinos, Sitges). Available evidence indicates that, in Spain, 3 of every 10 patients seen at HIV clinics have engaged in chemsex. The incidence of reinfection by HCV is high in HIV-infected GBMSM.

Intensive and continuous chemsex can have serious health consequences, including a high risk of acquiring and transmitting HIV and other STIs, problematic substance use, addiction, mental health consequences, physical deterioration, hypersexualization of leisure time, reduced work or academic performance, and deterioration of primary solidarity networks. Interactions can occur between antiretroviral drugs for treatment of HIV infection and some chemsex drugs, both by increasing drug concentrations and by causing more rapid elimination of drugs from the body.

Taking up the challenge of chemsex in terms of public health requires an understanding of the reality of local scenarios and their connection with the larger picture. There are various potential areas for action with respect to users. The public departments and centers that play a key role in care in this setting include centers for treatment of addiction, STI centers, infectious diseases departments/HIV units, emergency departments, and mental health teams.

Community-based LGBTQ+ organizations act as a reference for this population in terms of information and support, and a major part of prevention, advice, and psychosocial care is provided through the community. In addition, the community provides a channel through which users can participate in the analysis of their needs and in the design of a prevention and care response. Training peers as health agents makes it possible to

intervene in areas where chemsex takes place, through access to information and resources. Interventions of this type can be run through online training.

It is necessary to define care circuits within the national health system and within community organizations in the larger cities. Where possible, the circuit should be simplified by including integrated consultations held by various professionals at the same site, for example, by bringing professionals treating addiction closer to resources that already help GBMSM. It is more effective to provide this care at the centers and services routinely attended by this population, as is the case of STI centers.

Care should be integrated, personalized, and user-based and should cover both abstinence and risk reduction. Sexual orientation, experience with HIV, and cultural conditions should be taken into account. Every attempt should be made to avoid moral judgments, discrimination, and stigmatization. The basic premise must be the user's needs as perceived by the user, taking into consideration his priorities and motivations, as well as the acceptability of the different therapies proposed. Chemsex should be included in the training programs of professionals who come into contact with the phenomenon, with priority given to key services in urban areas where it is most prevalent. This training must necessarily include the acquisition of LGBTQ+ cultural competencies.

Associations have been reported between gay dating apps and chemsex, with the apps being used to find sex partners for sessions or to buy, sell, and share substances. These tools can play a key role in channeling interventions for prevention and care.

GBMSM should undergo STI testing at least once a year. In high-risk users, screening is recommended every 3-6 months for HIV, syphilis, *Neisseria gonorrhoeae*, and *Chlamydia trachomatis* and every 12 months for HCV. From the perspective of harm reduction, pre-exposure prophylaxis should be evaluated in persons who engage in chemsex.

It is necessary to develop and reinforce epidemiological surveillance tools and information systems in order to obtain and analyze data on chemsex and on its patterns, as well as on its impact on an individual's health and on public health.

1. THE CHEMSEX PHENOMENON

1.1. Approach and definitions

The term “chemsex” originates from the fusion of the words *chems* (*chemicals*) and *sex*. At the end of the 1990s, *chems* was the term used in London among gay men who made contact (by telephone or text messaging) to purchase specific substances (1). There are reports of how some men who used these substances during sex began to call themselves the *chemsex club* (1). The term chemsex became popular in the gay community at the end of the 1990s, especially at the time of the launch of the gay dating platform gaydar.com in 1999, before entering the health care profession (1), the scientific literature (2,3), and the media (4,5).

In Spain, on the other hand, the term was first used among health care professionals working in sexual health and addictions and then in the media. However, at the collective level, the men who engaged in these practices had been using other slang terms such as session, high, party and play, high and horny, wired play, and chill (6,7).

There is no internationally agreed definition of chemsex. The literature continues to interpret the term using different criteria, for example, with respect to the substances taken or the profile of those who engage in it (7–12). Similarly, there are differences between countries (12) and between definitions from LGBTQ+ community organizations (7,10) and other, more scholarly sources (8,9,12).

In the Spanish medical literature, the term chemsex has been defined as “an intentional use of drugs for purposes of sexual relations over a long period (which can last from hours to days)” among gay, bisexual, and other men who have sex with men (GBMSM), whose key element is time, because the risk of exposure to various risks or and harm increases over time” (7,10). At European level, the position paper from the 2nd European Chemsex Forum defines chemsex as “a particular type of sexualised substance practice amongst gay and bisexual men, other men who have sex with men (MSM), and trans and non-binary people who participate in ‘gay hook-up culture’” (11).

It is precisely this recognition of chemsex as being linked to gay culture that is one of the aspects on which there is most agreement. Chemsex can only be understood in association with the circumstances affecting the gay population who engage in it and their way of experiencing their sexuality. This notion includes many elements: tolerance of and considerable permissiveness toward drug use (11); ease of access to drugs in this population, which is facilitated by the use of gay dating apps (6); considerable peer pressure (explicit or covert) with respect to taking drugs (10,11); culture of hook-up technologies and saunas (11,13); serophobia, and the damage caused by the HIV epidemic in this group (11); experiences with homophobia, as well as the importance of shared ritualized activities in a stigmatized group (11). Persons who engage in these

practices may be, in addition to persons living with HIV and/or HCV, persons with addictive disorders, sex workers, and migrants (11).

There is consensus in this field on the observation that not all drug use in the context of sex is chemsex (9,11). Drugs are taken in other sexual contexts, such as female sex work (14,15), clients of female sex workers (16), and in swingers' clubs (17). However, each of the abovementioned groups has different cultural, economic, and epidemiological characteristics and circumstances, and within the groups we can observe use patterns and sexual behaviors that differ from those observed in chemsex (9,14–17).

Various studies show that drug use by GBMSM (9,18–20) is more common than in the general population and has been associated with sexual risk practices (18,21–23). While drug use in this group is not new, what has varied gradually is the way in which it occurs (6). These changes have not been incorporated homogeneously in terms of geographic location or time. However, the fact that chemsex has grown and its impact has gained visibility has led it to be addressed as a phenomenon (6) that coexists with other types of consumption and sexual behaviors in this group.

The elements associated with consumption patterns and sexual behaviors among persons who engage in chemsex include the following:

- greater duration of some sexual encounters, leading to a *session* (7), which could entail sex with different partners, whether in a group or in sequence
- the consumption of specific substances
- the inclusion of other, less frequent, routes of consumption, such as injection (used by few people) (9)
- the collective imaginary of sexual references, codes, fascinations, and fantasies that act as a mechanism and support for chemsex

The expansion of this phenomenon could not be understood without facilitators, such as the appearance of the international circuit of gay recreational events and the increasing use of information technology and communications tools (smartphones, WhatsApp, dating apps) by GBMSM (6), which make it considerably easier to search for sex partners and acquire substances for individual or shared use.

1.2. Settings for chemsex

Chemsex sessions can be one-to-one (with a casual or stable partner), threesome, or group sex (7,24). Many gay men prefer the session to be with a single person or, at most, a threesome (7). Some people engage in chemsex alone while watching pornography or interacting online with other consumers, for example, via webcams (24,25).

While chemsex usually takes place in private residences, it can also occur in businesses aimed at the gay public, such as saunas, sex clubs, hotels, parties at private premises, premises with dark rooms, festivals with designated areas for sex, and cruising spots (open air sexual encounters) (25).

*Table 1. Distribution of participants according to the location of their most recent sexual encounter where they took stimulants and engaged in group sex (last 12 months) (n=1,004) **

	Location of most recent sexual encounter	
	n	%
Home of one of the partners	471	46.9
My place	216	21.5
Club or dark room in a bar	130	12.9
Sauna	125	12.5
Hotel room	26	2.6
Cruising spot**	25	2.5
Other	11	1.1

Source: Results for Spain from the EMIS-2017 survey (26).

**One participant did not answer the question; **Street, service area, park, beach, toilets*

The characteristics or dynamics of chemsex in this type of location and context have been reported in ethnographic qualitative studies carried out in Spain (24,27,28).

1.3. Most commonly used substances. Patterns of consumption

Various substances and drugs are used in chemsex. These include GHB/GBL (gamma-hydroxybutyrate/gamma-butyrolactone), cocaine, mephedrone and other cathinones (3-MMC, 4-MMC), poppers, methamphetamine, ketamine, ecstasy/MDMA, and drugs for erectile dysfunction. Polydrug use is common, as is mixing with alcohol (7,9). Some of these substances provide the high associated with increased sexual desire and loss of inhibition sought during sexual relations (1,29).

Table 2 presents the substances that are commonly used for chemsex (adapted from references (29,30)).

In Spain, GBMSM who engage in chemsex can use any available drug (24). Differences in consumption are observed not only according to the city or country, but also over time in a specific place for reasons associated with cost and/or quality of the drugs or because of fashions or trends at any given time. One example can be seen in the case of methamphetamine, which has become popular in recent years, is less expensive than cocaine, and has a more stimulating effect.

Polydrug use

Various studies performed in Spain and elsewhere have shown that polydrug use is common during chemsex sessions (9,21,31). In the multicenter ASTRA study performed in the United Kingdom in 2014, with a sample of 2,248 GBMSM, the authors found that approximately half of those surveyed consumed drugs for sexual purposes and, of these, 47% used ≥ 3 drugs and 21% used ≥ 5 drugs (21).

Specific drug-drug or drug-medication interactions can increase or reduce the effect perceived/sought, leading to excess use and favoring severe intoxication with physical consequences, such as overdose, and psychopathological consequences, such as psychotic episodes, depression, and suicidal behavior, which have been observed more frequently in persons who engage in *slamming* and polydrug use (30).

Similarly, multiple consumption of various substances with opposing effects enables the session to be prolonged, thus favoring mucosal lesions caused by long and more physically damaging sexual relations that can facilitate contagion by STIs. A chemsex session can last between 5 hours and several days (24).

While alcohol and cannabis are not usually associated with chemsex sessions, they are consumed before the session and have a disinhibiting effect. Consumption during or

after a session substantially increases the risk of interactions with other drugs or medications.

Table 3 shows the risks associated with drug-drug and drug-medication interactions (32).

Routes of administration

The drugs can be administered via several routes, for example, orally, inhalation, smoking, rectally, intramuscularly, and intravenously (*slamming*), the last of this list being more associated with health risks when injecting material is shared (33,34).

The most common injected drugs are methamphetamine and mephedrone, although some men also inject other, soluble drugs such as cocaine, MDMA, mephedrone, and ketamine or may even do so with a mixture of drugs (24). Syringes are generally used for insulin, drugs dissolved in saline solution, and intravenous, intramuscular, or subdermal injection. The effect is almost immediate (15-30 seconds) and potent.

Patterns of consumption

Various patterns of intensity and severity of consumption have been reported for chemsex, and the intervention is different for each of them (35):

- Experimental consumption.
Men having their first experience with chemsex who are potentially introduced to the practice by third parties, without the practice necessarily being repeated or continued.
- Occasional consumption.
Men may be associated with the circuit and calendar of recreational festivals aimed at the gay public. The sexual component has a central place in some of these events, with increased opportunities to spread new patterns of sexual behavior and consumption. Consumption is intensive and concentrated on specific dates, potentially leading to a pattern known as *binging*.
- Habitual consumption.
The characteristics of consumption and the prolongation of the chemsex sessions mean that these are generally held at the weekend, when most

potential participants have more free time. In addition to extending beyond Sunday, in large cities (and in vacation destinations that are popular among the gay public), this pattern of use can evolve to take place any day of the week.

- Daily consumption.

Some users develop daily consumption patterns (some substances can lead to physical dependency) that may not necessarily be linked to sexual activity.

In the case of sex workers, unlike other users, consumption and rest times are more irregular. The pressure to consume from some clients is also a differential element. This profile may involve greater vulnerability (24). Some of the sex workers are migrants, with considerable geographic mobility and, therefore, with some difficulty accessing social-health services and with poor primary support networks.

Table 2. Substances commonly used for chemsex

SUBSTANCE	COMMON NAMES	PRESENTATION	ROUTE OF ADMINISTRATION	EFFECT SOUGHT	ADVERSE EFFECTS AND COMPLICATIONS	DURATION
MEPHEDRONE Other cathinones: pentedrone, 4-MEC, 3-MMC, α-PVP	Meph, meow-meow, bath salts, bubble	Powder, crystals, tablets, capsules	Oral Sniffed Intravenous (<i>slamming</i>) Intrarectal	Stimulation, sexual excitation, euphoria, feeling of empathy	Dependence. Psychotic symptoms. Nervousness. Convulsions, dystonia. Renal, cardiological toxicity. Serotonergic syndrome	Oral: 4 h Sniffed: 1 h IV: 45 min
METHAMPHETAMINE	Wash, trash, crystal meth, chalk, crack, speed, (amphetamine sulfate)	Powder, crystals	Sniffed Smoked in a pipe Intravenous (<i>slamming</i>) Intrarectal	Stimulation, disinhibition, sexual excitation, increased confidence and self-esteem	Psychotic symptoms. Hypertension. Highly addictive. Xerostomia and tooth decay.	4-12 h
GHB/GBL	Ecstasy, liquid, G, gina, liquid ecstasy	Transparent liquid, slightly salty taste	Oral (drunk in small doses)	Sedation, relaxation of anal sphincter. Euphoria, disinhibition, drunkenness, sexual stimulation	Sleepiness, loss of motor control (with cumulative doses). Coma, death. Dependence. Withdrawal symptoms: Convulsions. Delirium. Psychotic symptoms.	Up to 7 h
ALKYL/BUTYL NITRATES	<i>Poppers</i>	Volatile liquid	Inhaled	Euphoria, wish to socialize. Excitation and increased sexual	Headache. Retinal toxicity. Hypoxia. Hemolytic anemia	1-2 min

				potency, prolonged pleasurable sensations		
MDMA	Ecstasy, M, crystal, x, Sextasy (with sildenafil)	Crystals, powder, and tablets	Oral	Stimulation, feelings of empathy, acceptance, and connection	Anxiety. Tachycardia, bruxism, "heatstroke". Affective symptoms with hangover during the following days	6 h
COCAINE	Coke, snow, blow, toot	White powder	Sniffed Smoked (freebase)	Activation, sexual excitation, hyperalertness	Paranoid and maniform symptoms. Adrenergic hyperactivation. Vasospasm and ischemia.	45 min
KETAMINE	Vitamin K, Special K	Powder, crystals, liquid	Sniffed Oral Intramuscular Intravenous (<i>slamming</i>)	Initial stimulation, relaxation, empathy, improved perception. Increased pain threshold. Dislocation	Mydriasis. Derealization. Falls caused by loss of motor control. Confusional/dissociative symptoms. Liver and kidney toxicity	2-3 h
5-PHOSPHODIESTERASE INHIBITORS	Sildenafil (Viagra®), vardenafil (Levitra®), and tadalafil (Cialis®)	Tablets	Oral	Maintenance of erections	Headache, dyspepsia, diarrhea, and transient visual abnormalities (blue vision). Loss of hearing. Coronary ischemia	4-8 h: sildenafil and vardenafil 36 h: tadalafil

Source: Adapted from (29,36)

Table 3. Risks of interaction between specific drugs and medications

DRUG/MEDICATION	DRUG/MEDICATION	INTERACTIONS	RISKS
Sildenafil, tadalafil, vardenafil, avanafil	Poppers	Potent vasodilator effect	Severe hypotension
GHB	Alcohol, benzodiazepines	Increased GHB intoxication, accumulation of GHB	Central nervous system abnormalities, respiratory depression, coma, death
Methamphetamine	Mephedrone	Hyperactivation of the sympathetic nervous system	Hypertension, tachycardia, hyperthermia, dehydration, cardiovascular events, psychosis, nervousness
ANTIRETROVIRALS with boosters: Ritonavir/Cobicistat	Ketamine, sildenafil	Inhibition of CYP3A4	Increased levels of ketamine and sildenafil in the body
ANTIRETROVIRALS with boosters: Ritonavir/Cobicistat	GHB*, mephedrone, methamphetamine, MDMA	Inhibition of CYP2D6	Increased levels of GHB, mephedrone, methamphetamine, and MDMA in the body

Source: Adapted from reference (32)

* GHB can be metabolized by CYP3A4 and CYP2D6, although there are no data from human studies

1.4. Reasons for engaging in chemsex

Identifying and understanding the reasons why a certain number of GBMSM take drugs for sex is important when attempting to specify preventive and care interventions for this group. Most studies provide multiple reasons at the individual, contextual, community, and structural levels that interact and exist simultaneously.

The main studies analyzing the reasons why GBMSM engage in chemsex have done so using a qualitative approach, which makes it possible to learn the meanings, evaluations, and attributions each person makes with respect to his experience of drug consumption for sex and its relationship with the gay social scene (24,37-43). While categorization varies depending on the conceptual framework adopted, all authors agree on a first set of reasons associated with the instrumental use of drugs to achieve more powerful sensory sexual experiences. Specifically, they all highlight the following: effect of substances that increase the intensity of desire, excitation, and orgasm; better sexual performance due to better erections, retardation effect, and refractory period; and the possibility of having more sexual relations with the same partner or other partners. Users also seek better physical stamina and prolonged duration of sex sessions. Consumption of some substances generates euphoria and sexual disinhibition and makes it possible to carry out sexual fantasies and engage in extreme sex practices that could be painful without the effect of the drugs (eg, *fisting*) or

relationships that involve domination, violence, and aggressiveness and that usually carry a considerable moral burden.

Another major reason for participating in chemsex sessions is the intense emotions and sensations experienced, the search for a shared intimate space with other men, and the wish to experience stimulating situations such as group sex. Many participants report the effect of losing personal limits, the feeling of sexual freedom and of intense feelings of connection and emotional intimacy, as well as a fusion with the body of their partner, even if he is unknown. Also very valued are the increase in self-esteem and sexual confidence when trying to pick someone up, the ability to relate to other men in a sexual context, and the feeling of being physically more attractive. Some participants perceive taking drugs for sex as part of gay culture or identity, thus inducing a strong feeling of belonging and acceptance by the group. This is an alternative means of group socializing, of mixing with people, of creating social networks with other men, and of becoming emotionally involved with sex partners who use drugs (24,38,39).

In addition to the abovementioned reasons, we can consider psychological and/or social factors that have also been associated with use of drugs for sex. Study participants identify the practice of chemsex as a means of escape from difficult or painful personal situations (24,37-43). Some men report chemsex as a strategy to address internal conflicts arising from their homosexuality or feelings caused by the stigma associated with HIV infection, a means of managing anxiety and maintaining emotional stability, and a means of relieving the feeling of unwanted loneliness that is very common in this group (24,38,40). Reference is sometimes made to group pressure in the sense that most participants use or report positive sexual experiences when using drugs (24).

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2. CHEMSEX IN SPAIN

One of the difficulties when approaching chemsex in Spain is that, as this is a relatively recent phenomenon, few studies have analyzed it. Moreover, the lack of consensus on a definition, owing in part to the complex nature of the phenomenon, makes it difficult to compare studies carried out in Spain and in other settings.

Therefore, when data on chemsex are analyzed, it is important to take this fact into account, since differences in the definition of chemsex used affect not only comparability, but also the results obtained. For example, some of the questions in EMIS 2017 do not cover use of GHB/GBL, thus potentially underestimating its prevalence.

Concern over the emergence of chemsex was first raised with the publication from Antidote in 2013 (1). This service, which provides care to LGBTQ+ drug users warned of a change in the pattern of consumption among GBMSM, with a greater use of methamphetamine, mephedrone, and GHB/GBL in a sexual setting, as well as higher frequencies of injection drug use. Furthermore, it was stressed that this increase had been more substantial in GBMSM living with HIV.

From this point on, several studies have tried to shed light on the reality of this situation in Spain, either with analysis of secondary data or with studies carried out to do so. Below, we provide information on the most relevant studies.

While the EMIS-2010 survey did not collect information on chemsex per se, it did explore drug use in general among GBMSM. In a study published by the Sigma group (2), the authors measured the frequency of use of GBL/GHB, ketamine, methamphetamine, and mephedrone—all of which are frequently used for chemsex—during the previous month in 44 European cities. The highest values were recorded in 10 cities: Brighton (16.3%), Manchester (15.5%), London (13.1%), Amsterdam (11.2%), Barcelona (8%), Zurich (7%), Berlin (5.3%), Madrid (5%), Dublin (4.4%), and Valencia (4.3%). Assuming that not all use of these drugs was for sex and that, therefore, the data could be overestimated, the prevalence of chemsex may be between 4% and 10% in the cities mentioned.

A global analysis was also performed of the factors associated with use of these drugs, revealing that the size of the city of residence was the factor most frequently associated with use (the larger the place of residence, the greater the consumption of drugs), although other important factors included being diagnosed with HIV infection and a higher number of sexual partners. An analysis of data from participants in EMIS-2010 living in Spain revealed the association between drug use and a greater prevalence of sexual risk practices (3), although as this was a cross-sectional study, no cause-effect relationship could be established.

The year 2016 saw the publication of the results of an online survey carried out by the organizations Imagina Más and Apoyo Positivo and completed by 486 GBMSM who had engaged in chemsex, defined as substance use in a sexual context during the previous year (4).

As the inclusion criteria were consumption of any type of drug in a sexual context and the survey was taken mainly in 2 cities, it did not provide data on prevalence. However, it did make it possible to identify the sociodemographic and use profile of the participants.

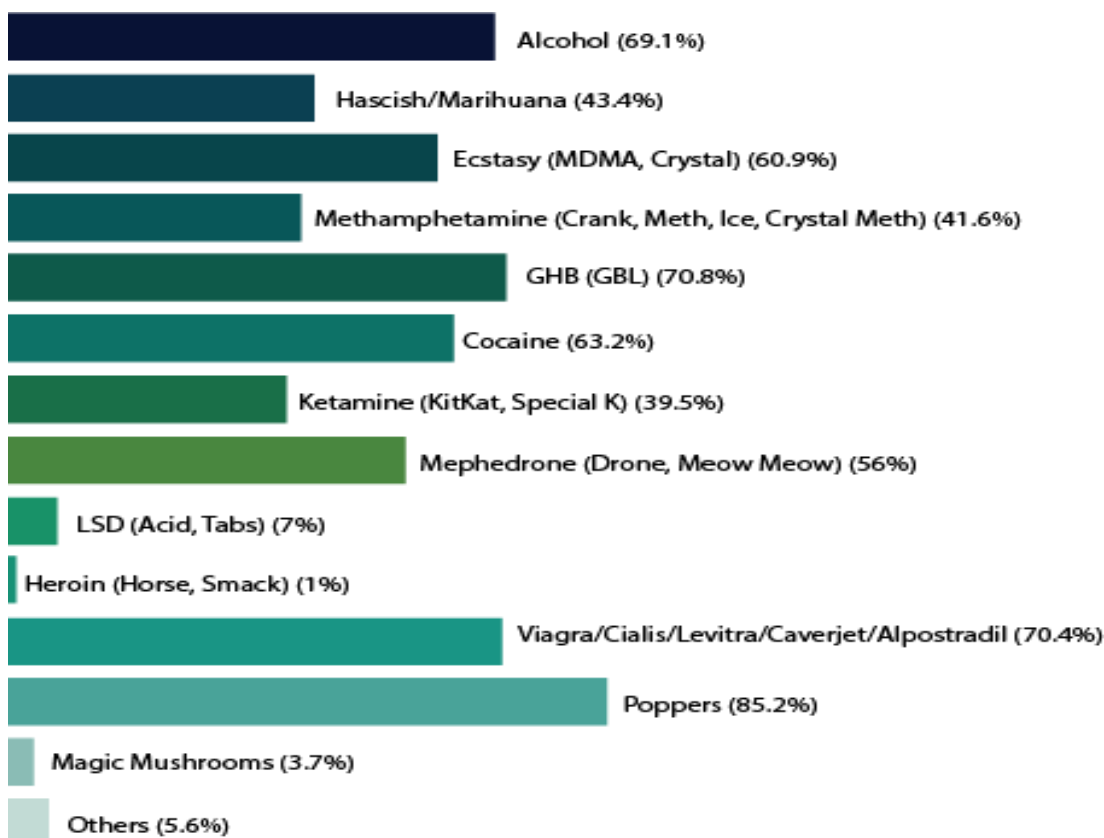
The profile of the respondents was GBMSM living mainly in Madrid (47%) and Barcelona (42%), aged 25 to 45 years (83%) and university education or higher (68%).

The most commonly consumed substances (in order of frequency) were poppers, Viagra® or similar, GHB/GBL, alcohol, cocaine, ecstasy, mephedrone, methamphetamine, and ketamine (Figure 1). The

drugs were taken in sessions by 74% of the participants, although 34% also reported taking them with a partner. Mephedrone was more commonly consumed in Madrid (73.7%) than in Barcelona (37.9%), whereas methamphetamine was more commonly used in Barcelona (51.9% vs. 38.2%).

These data from 2016 reveal a pattern of consumption that differs from that which was typically reported in England, where cocaine and ecstasy seemed to be the more common drugs. Lastly, the percentages of monthly users of some of these drugs revealed a pattern of repeated use in 1 in every 4 users.

Figure 1. Frequency of use of the different types of drug



Source: Adapted from the report “Aproximación al chemsex en España” (Approach to chemsex in Spain) (4)

Other studies have approached the prevalence of chemsex in specific groups since the publication of the study. Table 1 presents a summary of some of these studies.

Table 1. Studies estimating the frequency of chemsex in subgroups of GBMSM in Madrid.

Year	Population	Sample size	Definition of chemsex	Frequency
2014 (5)	GBMSM recently diagnosed with HIV in the Sandoval STI clinic in Madrid.	61	Unprotected sex under the effect of drugs (including alcohol) during the previous year	77%

2017 (6)	HIV-negative GBMSM attending Gay Pride in Madrid	339	Use of psychoactive substances for sex during the previous 6 months	51%
2016-2017 (7)	HIV-infected GBMSM attending HIV hospital services in Madrid	742	Intentional use of mephedrone, MDMA, methamphetamine, amphetamines, GHB/GBL, ketamine, or cocaine during sex in the previous year	29%

Source: Adapted from (5,6,7)

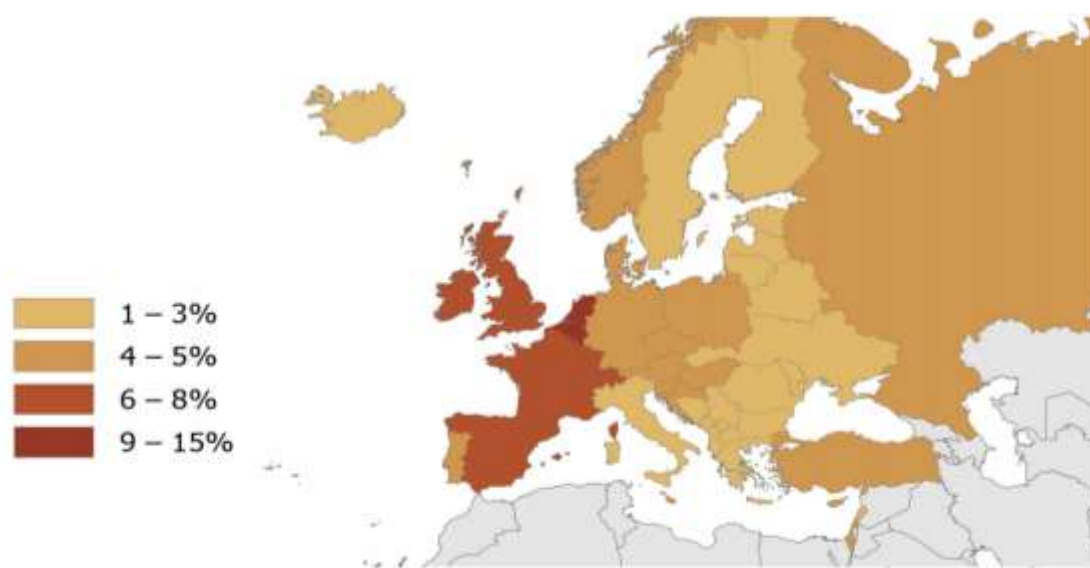
While they refer to different populations, these data again reflect how the use of a more accurate definition could affect the measure of frequency.

The online survey EMIS-2017 was carried out in Europe, Canada, and the Philippines. The [final report](#) of the results from 50 countries was published in August 2019. A total of 127,792 surveys were completed; of these, 10,652 were by GBMSM living in Spain (8).

In contrast with the study performed in 2010, the objectives of EMIS-2017 included an assessment of the practice of chemsex and a description of the pattern of consumption and the sociodemographic profile of the users. The study asked respondents about the use of stimulants (ecstasy/MDMA, cocaine, speed, methamphetamine, mephedrone, and ketamine) to make sex more intense or last longer.

Based on this question and assuming that the nonstimulants could be underrepresented, the following map (Figure 2) shows the frequency of chemsex during the month before the survey in several European countries.

Figure 2. National frequencies of chemsex during the month before the survey (n=126,258)*



Source: EMIS-2017 (8). *Losses n=1534

The highest frequencies of chemsex were recorded for Holland and Belgium (9%-15% of participants), followed by Ireland, United Kingdom, France, and Spain (6%-8%). Nevertheless, given that the phenomenon was recorded mainly in large cities, the national results could be masking an even greater local prevalence.

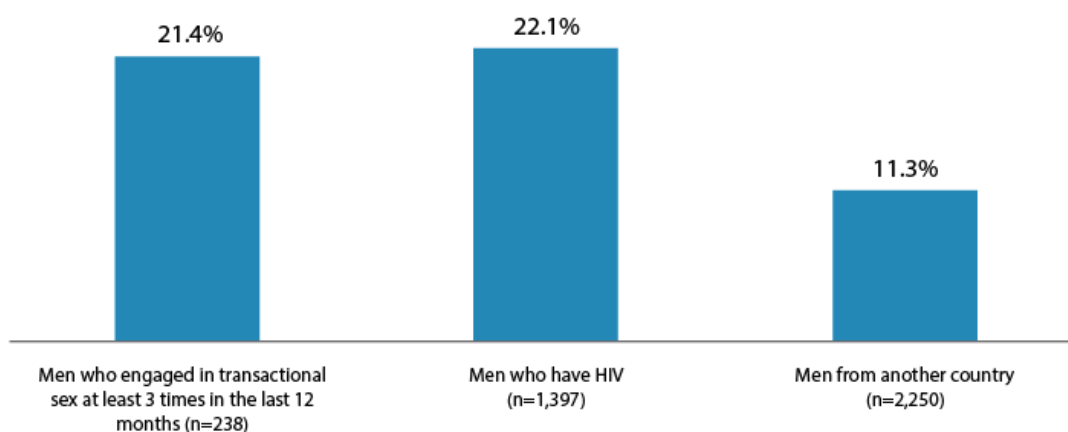
In Europe, the report shows the frequency of injecting drugs. While this is not high in absolute terms (1.2% of participants had injected during the previous year), the main drugs taken via this route of administration were those associated with chemsex. Of the respondents who had injected a drug during the previous 12 months, 52% used methamphetamine, 31% mephedrone, and 25% other synthetic drugs similar to mephedrone. In Spain, among men who reported having consumed drugs during their most recent sexual encounter with a casual partner or threesome with their steady partner, injecting drugs on that occasion was reported by 2.3% (n=17) of those who had consumed Viagra, ecstasy, MDMA, amphetamine, methamphetamine, mephedrone (or other synthetic stimulants), GHB, or cocaine.

These findings are consistent with the results of other studies in Spain on the use of injecting drugs by GBMSM, which show that this is a minority practice (7,9), although *slamming* could be under-reported owing to negative attitudes within the group (10). The study performed by Imagina Más and Apoyo Positivo revealed that 10% of those who had engaged in *slamming* had shared injecting material (4).

Data from Spanish participants show that among men who had had sexual relations during the previous 12 months, 14.1% had engaged in chemsex during the period and 7.6% had done so during the previous 4 weeks (Figure 2) (11). In addition, 9.5% reported having engaged in chemsex with more than 1 man (threesome or group sex) during the previous 12 months, indicating, in contrast with the 14.1% reported overall, that this practice also takes place in couples.

Furthermore, the practice of chemsex during the previous months was even higher in some subgroups of GBMSM, such as those who reported having charged or paid for sex, HIV-infected men, and men born outside Spain (Figure 3).

Figure 3. Prevalence of chemsex in subgroups of GBMSM.



Source: EMIS 2017. Percy Fernández-Dávila et al, SEISIDA 2019 (11)

Prevalence also differed geographically. As reported at the annual meeting of the Spanish Society of Epidemiology (Sociedad Española de Epidemiología), the highest prevalence values were

recorded in the Balearic Islands (12.4%) and Catalonia (10.6%), followed by Madrid (8.8%), Canary Islands (7.3%), Community of Valencia (6.5%), Aragon (5%), and Asturias (4.8%) (12). The practice of chemsex was more prevalent in some capitals than in their autonomous communities (Table 2). Given that the design of this study did not take autonomous representation into account and that the number of respondents in some communities was small, the data should be interpreted with caution. The indicator was calculated only for communities with more than 100 participants. Crossing the data with data on residence in cities of more than 500,000 inhabitants, also revealed indicators for some cities.

Table 2. Use of stimulants (ecstasy/MDMA, cocaine, speed, methamphetamine, mephedrone, and ketamine) during the previous 4 weeks to make sex more intense or last longer.

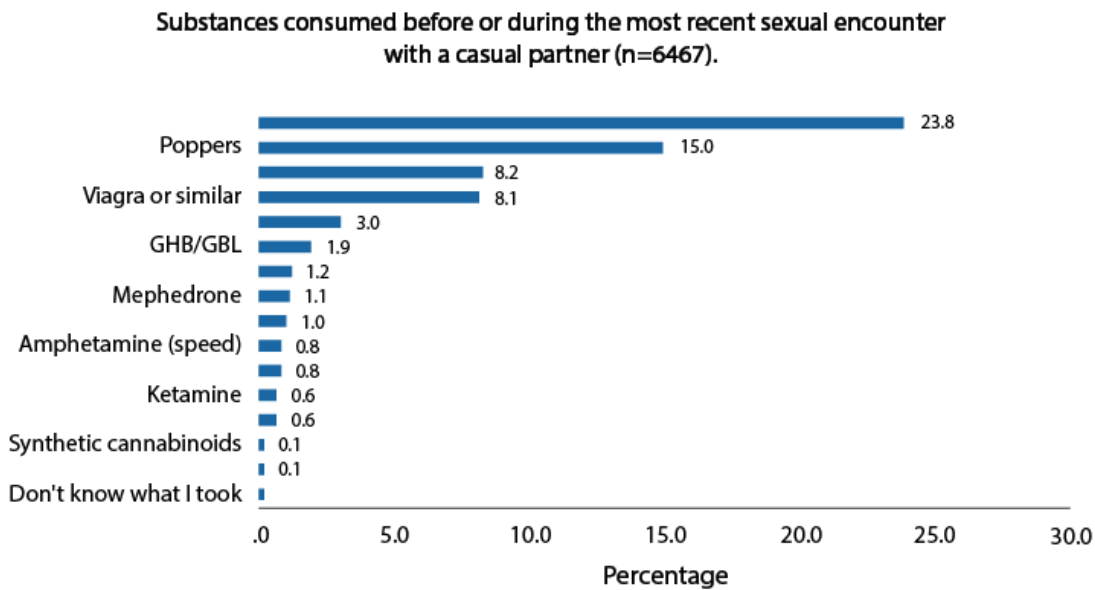
Community	%	City	%
Balearic Islands	12.4	Barcelona	13.7
Catalonia	10.6	Madrid	9.7
Community of Madrid	8.8	Valencia	7.5
Canary Islands	7.3	Zaragoza	5.2
Community of Valencia	6.5	Sevilla/Malaga	4.8
Aragon	5		
Principality of Asturias	4.8		

Source: EMIS-2017 data for Spain. C Folch et al. SEE 2019 (12)

According to participants who reported having used stimulants and had sex with more than 1 man at the same time during the previous 12 months, the most common locations for the sexual encounter were a private home (68.4%) and commercial sex premises (sauna, sex club, dark room in a bar) (24.5%), thus highlighting the role of private spaces for chemsex in our setting (11).

Furthermore, within the framework of EMIS-2017 in Spain (13), 41.1% of men who had had their most recent sexual encounter with a casual partner or threesome with their stable partner had consumed alcohol or drugs during sex. Within this group, the most commonly consumed substances were alcohol (23.8%), poppers (15.0%), cannabis (8.2%), Viagra® or similar (8.1%), and cocaine (3.0%) (Figure 4). These substances were also the most reported in Europe, except for cocaine, which, globally, was reported by 1.0%, with GHB being the fifth most common drug (2.6%).

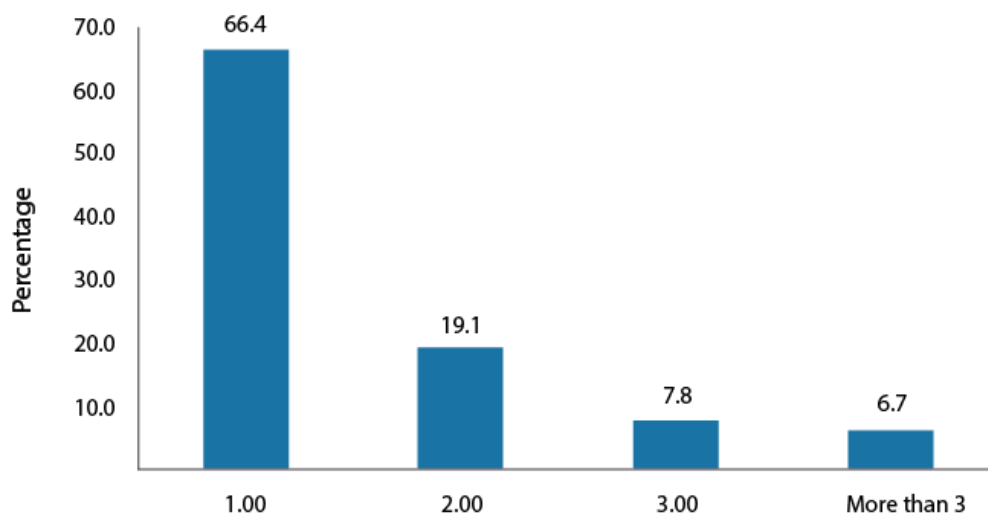
Figure 4. Substances consumed before or during the most recent sexual encounter with a casual partner (n=6467).



Source: EMIS-2017 data for Spain (13)

Among men who reported having consumed drugs during their most recent sexual encounter with a casual partner (Figure 5) or during a threesome with their stable partner, 33.6% reported consuming multiple drugs, that is, more than 1 substance at the same time. The percentage of respondents who reported 3 or more substances was 14.5% (13).

Figure 5. Number of substances consumed before or during the most recent sexual encounter with a casual partner (n=2569).



Source: EMIS-2017 data for Spain (13)

Polydrug use was also addressed in previous studies carried out in Spain. U-SEX, which involved 742 HIV-infected GBMSM, showed that 29.1% of participants had engaged in chemsex during the previous year and that, of these, 45.4% had used 3 or more drugs per session (7). A study carried out in Madrid in 2016 among users who attended an addiction center because of mephedrone dependency reported that 100% of users consumed 3 or more substances (14).

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3. UNDERSTANDING CHEMSEX: CULTURAL COMPETENCE

3.1. Cultural competence and gay sexual culture

Acquisition of cultural competence has been defined as the process by which health professionals attempt to acquire awareness, knowledge, and skills that enable them to work effectively within the cultural context of the family, the individual, and the community (1,2). This recognition of the importance of culture and cultural diversity in health care was first promoted by the WHO in the 1980s (3).

Sociocultural factors such as stigmatization, bullying, and LGBTQ+-phobic attacks have an impact on the health and well-being of those who experience them. Available evidence shows that lesbian, gay, and bisexual people are 2 to 3 times more likely than the general public to present longstanding psychological or emotional problems (including suicidal ideation and suicide, substance use, and self-harm) (4). We must not assume that the health care requirements of this group are associated exclusively with sexual health (5).

Various national and international reports confirm incidents of discrimination toward LGBTQ+ persons in Spain (6), some of which occur in health services (7), where negative experiences are more likely to be reported, such as problems communicating with health professionals and dissatisfaction with the treatment and care received (4). Some of these persons fear that if they reveal their sexual identity or orientation to a health professional, they may be subject to discrimination or worse treatment (5).

The combination of elements such as stigmatization, marginalization, minority stress, and maladaptive coping (including drug use) contributes to participation in syndemic “risk settings”. The notion of syndemics refers to a correlation between health problems and psychosocial factors that act by increasing vulnerability, for example, to contracting HIV infection (8,9). Based on such a theoretical approach, chemsex could be one of the settings where risk behaviors are expressed as the result of this accumulation of factors.

Gay men comprise a diverse population composed of persons of different ages, ethnic origins, nationalities, educational levels, and economic situations. There are many ways of living the fact of being gay, and this diversity also manifests in gay culture, which is characterized by the coexistence of different sexual subcultures that in turn form part of the very wide-ranging manifestations of human sexuality.

Gay sexual culture is the result of a dynamic and historical process of cultural construction. It is based on a set of shared references, which include elements of communication themselves, such as the use of codes and symbols (10) to express preferences, roles, attributes, and desires. Other manifestations of this sexual culture are expressed via a preference for specific sexual games or practices, the choice of clothing, sex toys, the design of sex clubs, and the codes and norms of behavior and interaction in sex clubs.

Some GBMSM have specific and differentiated sexual and erotic imaginaries and behaviors, such as bareback culture (11), chemsex culture (12), leather and fetish culture (13), and the culture of dating apps such as Grindr (14).

Some authors speak of gay culture as a culture of leisure (15), arguing that, when family economic obligations are reduced, available time and resources can be invested in managing leisure time, including sexual leisure. In recent years, this element has become the subject of growing economic interest for the market to the extent that, in addition to advances in rights, freedoms, and social acceptance of the group, GBMSM have clearly become part of a model of consumption.

Sex plays a central role in the social life of many gay men and is closely associated with the way in which they mix and enjoy their daily, weekly, and vacation leisure time. Part of the supply in the gay leisure industry is hypersexualized (16). The saunas and premises with dark rooms that appeared years ago have been progressively joined by new businesses such as sex clubs, online pornography, contact apps and webpages, and large-scale international gay events and festivals, where erotic and sexual aspects play a key role.

The graphic, artistic, commercial, and media representation of gay men does not show the real diversity of the group. The media and industry tend to exploit specific prototypes of men and interpretations of masculinity, thus contributing to the reproduction of certain stereotypes. Thus, images of muscular bodies loaded with eroticism or directly sexualized images take on a greater role than other possible representations. Being young, in shape, and well-endowed takes on a specific weight in this context.

Stereotypical images and the cult of the body beautiful may have an impact on the community imaginary by exerting structural pressure on other gay men (17) in the sense that a set of beauty standards that are unattainable for the majority is established. Some of the norms that govern sexual desirability and behavior are based on a hyperbolic model of virility, which feeds on the assimilation and internalization of socially constructed structures of desire (18), to the extent that we see behaviors based on discrimination and rejection within the group itself toward those who do not correspond to specific hegemonic models of masculinity. This aspect is clearly visible in the discourse used in some profiles on gay dating apps (18,19).

3.2. The role of apps and gay leisure circuits in facilitating chemsex

The use of gay contact apps based on geolocalization technology plays a key role in the different elements that may facilitate the practice of chemsex or are recurrently associated with it. Since these technologies make it considerably easier to find new sexual partners at any hour of the day throughout the week, they quickly became very popular in this group.

Dating apps are now part of gay culture. For many, apps are the usual way to look for sex and meet other men, thus displacing traditional spaces for hooking up within this group, to the extent that they have become stiff competition for gay venues. In addition, some sources believe that they are the reason many such businesses have closed (20,21).

Links have been reported between the use of dating apps and chemsex. Evidence shows that users use the app to find sex partners for sessions or to buy, sell, and share substances (10). In addition to the references to these activities, the codes and symbols used in this mode of communication reflect numerous complementary aspects of the sex culture surrounding the phenomenon of chemsex. In other words, besides furnishing contacts, the apps have become a virtual space capable of generating slang and feedback in terms of the codes, fantasies, and fetishes associated with the imaginary of the gay community.

Given the small size of screens, and because of the increasing importance of communication based on images, the language used in the apps takes the form of short texts: the user expresses what he has to offer or is looking for as concisely as possible. References to substances are often encrypted or camouflaged in such a way that it is not obvious or explicit for other users or for the moderators of the apps.

Some of the expressions used in the profiles seen on apps refer to specific preferences or practices, such as fisting, or games with body fluids (*water sports*). We can also observe terms to reflect duration, intensity, absence of protection (*bareback, bb*), and consumption via injection (*slamming*) (10).

Some of the codes associated with chemsex, such as the terms *chems* or *chill*, are used in many countries and are easily interpreted. Other terms are autochthonous. The communication observed is highly varied and dynamic. It is easy to create a combination of emoticons or an acronym. As soon as other users copy the idea and reuse it, a collective communication code is born.

Once contact is established, tools other than apps can be used (eg, WhatsApp) (22). These complement and facilitate encounters, much in the same way as those that make it possible to find a place to meet. As for chemsex, information and communications technology has certainly generated an experience that makes it very easy to make contact, even for people who travel or have just reached a new city or country. The idiosyncrasy of chemsex, as known today and thanks to the ease and speed of searching and communication between contacts, would not have been possible a few decades ago.

In addition to these technologies, another element that plays a key role in facilitating chemsex is the existence of international circuits of macroevents aimed at the gay public in different cities throughout the year, where sex as a leisure activity is a more than relevant component.

According to the World Travel & Tourism Council (WTTC), LGBTQ+ tourism accounts for 10% of tourist volume worldwide and 16% of spending in this sector. Spain is a very popular destination for this type of tourism, and this success has been recognized internationally. Every year, the country is estimated to receive some 7 million gay tourists (23), who generate income of more than €7,200 million (24).

The main centers of attraction for gay tourism in Spain are Madrid, Barcelona, Maspalomas, Torremolinos, Sitges, and Ibiza. In Europe, Madrid is the largest event in LGBTQ+ Pride, whereas the Barcelona Circuit Festival is the largest gay festival. The largest LGBTQ+ event in Europe to date was *WorldPride* in Madrid in 2017. Studies from the tourist sector show that Spain is continuously voted the country that offers the best vacation experience for these tourists (25).

Several Spanish companies form part of this business sector, with tours throughout the year. The market includes festivals in Europe, America, Asia, and Australia. For example, some companies in Madrid and Barcelona organize annual festivals and tours around the world in some 50 cities (26,27). The largest festival, that of Barcelona, attracts some 70,000 participants, of whom around 70% are from abroad (28). In the case of the Canary Islands, Maspalomas brings together around 200,000 participants every May during the gay pride celebration (29).

Some dating apps make it possible to register the trips the user has scheduled, offering a calendar of international events and making it possible to confirm attendance at the festivals and to view the profiles of other users who have confirmed their participation.

Large numbers of gay men visit Spain as tourists (as well as others who do so to study or for professional reasons), and Spanish tourists—logically—visit other countries. Both the large volume of trips and events mentioned and the fact that Spain is a major tourist destination for this group leave gay men in Spain very exposed to the trends in substance use and sexual behaviors in this population observed at international level.

In summary, chemsex in Spain is not only limited to Spaniards and residents, but it is also engaged in by tourists during their stay (22). The existence of international gay leisure circuits could facilitate and contribute to a more rapid spread of new patterns of sexual behavior; therefore, it would be interesting to study the extent or dimension of this element in the spread of the phenomenon.

3.3 Chemsex slang

Gay slang comprises terms and communication codes that bring together many cultural and social aspects that are typical of the group and represent an element of identity and empowerment. It is used mainly by LGBTQ+ persons, although some of the expressions (eg, come out of the closet) are now used outside this setting (30). During the time when homosexuality was criminalized (30), slang served as a specific language or even secret way of communicating that was very associated with eroticism and enabled users to hide their nonnormal sexual identity or orientation and thus avoid discrimination and LGBTQ+-phobic attacks.

The evolution of LGBTQ+ slang has been very plastic and dynamic (32). The vocabulary generated around the culture of chemsex is yet another example. Those who engage in these practices have coined their own jargon (33), which they use in their leisure time, gay dating apps, and other cultural and social contexts.

The jargon includes, for example, names to refer to chemsex itself (*chill, session*), the substances used (*G, drone, crank, keta*), and the adverse consequences of its use (*comedown*). The expressions used sometimes soften the aspect they refer to, to the extent that they gently become a cultural element of the group (34). One recurring example is the term *slam* or *slamming*, which obviates the social use of expressions such as “injecting drugs” or “shooting up” and thus distancing the chemsex user from other types of user (35).

Globalization and use of new technologies and dating apps have played a crucial role in the development of chemsex slang, which is one of the areas where these expressions are increasingly found (36).

The use of chemsex slang, as occurs in other social settings, reproduces numerous sexist, homophobic, serophobic, and discriminatory stereotypes (37), whose impact generates oppression and vulnerability. Similarly, terms such as “bottom”, “camp”, and “butch” (for trans women)” are common in this group, affecting particularly those who are more vulnerable, such as transgender persons, persons living with HIV (38), and persons who engage in chemsex (17).

Knowledge of this slang is a basic competence that is necessary for prevention, sensitization, and care for users in this setting.

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4. IMPLICATIONS FOR HEALTH

4.1. Sexual health and sex life

Sexually transmitted infections (STIs) are a serious public health problem. Every day, more than 1 million people contract an STI (1). These infections can be caused by viruses (human papillomavirus [HPV], herpes simplex virus [HSV], human immunodeficiency virus [HIV], and hepatitis A, B, and C virus [HAV, HBV, HCV]), bacteria (*Neisseria gonorrhoeae*, *Chlamydia trachomatis*, *Mycoplasma genitalium*, *Treponema pallidum*, *Shigella*), protozoa (*Trichomonas vaginalis*, *Giardia lamblia*, *Entamoeba histolytica*), ectoparasites (*Pediculosis pubis*, *Sarcoptes scabiei*), and fungi (*Candidiasis*). STIs are often asymptomatic or accompanied by mild symptoms that do not facilitate early diagnosis. The various clinical pictures include urethritis, cervicitis, proctitis, pharyngitis, ulcers, dermatitis, and hepatitis (2). In some cases, STIs have severe repercussions for reproductive health that go beyond the immediate impact of the infection itself and include infertility, fistulas, arthritis, and epididymitis (3,4).

Sex practices under the effect of drugs reduce the perception of risk. Drugs can remove inhibitions and lead to hypersexuality, which facilitates prolonged sessions of unprotected sex with a greater number of partners and group sex. Data from a center caring for gays, bisexuals, and other men who have sex with men (GBMSM) who consume drugs in London, UK, reveal that users report a mean of 5 sexual partners per chemsex session (5). These substances also make it possible to increase the duration of sexual activity, thus facilitating the onset of erosions and injuries to the penis and rectum (6). The risk can increase with slamming or behaviors with a higher risk of injury, such as anal fisting, which occur more easily given the increased pain threshold brought about by the effect of some drugs (7).

Various studies have shown that sexual practices in the setting of a chemsex session are significantly associated with infrequent use of condoms (8,9). A study performed in the UK in several centers caring for GBMSM found that users who engaged in chemsex more frequently had unprotected sexual relations (oral and anal) than those who did not use drugs for purposes of sex (10).

A European study reported that GBMSM who participated in chemsex sessions were 5 times more likely to contract HIV infection, 4 times more likely to contract a rectal bacterial STI, and 9 times more likely to contract HCV than GBMSM who did not engage in chemsex (11). In Spain, a strong association has also been observed between chemsex and acquisition of HIV infection and STIs. In Madrid, 88.5% of persons recently seroconverting to HIV (persons for whom there is evidence of negative HIV serology approximately 6 months before diagnosis) had used drugs during the previous year. Of these, 87% had had unprotected sex under the effect of substances such as mephedrone and GHB (12). HIV infection is highly prevalent among people who engage in chemsex.

The results of the U-Sex Study show that 82% of GBMSM who had participated in chemsex sessions reported having been diagnosed with an STI, the most frequent being syphilis, gonococcus, chlamydiosis, and, less commonly, HCV infection (13). A diagnosis of acute HCV infection has been associated with unprotected anal sex under the effect of drugs, especially in HIV-infected patients (14). Similarly, slamming carries a high risk of bloodborne viruses, such as HIV, HBV, and HCV; this risk is especially high when injecting material is shared. Based on the above, chemsex can be considered a high-risk practice, in terms of both transmission and acquisition of HIV and other STIs.

Chemsex constitutes a setting where efforts aimed at preventing and detecting these infections should be intensified.

While the literature is less systematic when reporting the negative effects of chemsex on sex life and sexuality in a wider sense, data from qualitative studies and the experience of psychosexual therapists and psychologists who see persons who practice chemsex show that this practice can also compromise the way a person lives their sexuality beyond the potential risk of HIV/STIs or lesions affecting the anus, rectum, and penis.

The use of certain drugs to increase the pleasure and intensity of sex can lead to increased consumption. Furthermore, this search for greater sexual intensity can have an effect on sexual satisfaction, leading sexual desire to become an insatiable drive. An example of this behavior of linking one relation to another can be seen in chemsex sessions, when the participants are ignored, and other men are sought for the following sexual encounter using geolocalization apps. A behavior that involves the search for greater intensity and pleasure, together with an unstoppable sex drive under the effects of drugs in the context of chemsex could lead to objectification of the other person, of one's sexual partner. Furthermore, continuous use of specific substances for sex could render the individual unable to enjoy sex without them. This is one possible aspect to be addressed during therapy.

The use of drugs does not help to clarify and set clear limits for sex games. Consumption of certain substances can increase disinhibition, alter perception of risk and pain, lead to temporary loss of memory and confusion (15), and even lead some participants to lose consciousness and thus become unable to give their consent for sex. Substance use under such sensitive circumstances makes it difficult to negotiate limits and disproportionately increases vulnerability.

When a person is under the effects of certain drugs without having slept properly or is in a highly sexualized and culturally permissive setting, his/her perception of what is going on may be somewhat confused (9). The person may feel less empathetic or sensitive to his sexual partner. In addition, he may feel that the nuances of communication are difficult to decode when the sexual partner is also intoxicated and that possible sexual attacks and abuse are not as evident as when perpetrated in other settings (16).

Reports from the victims of sexual attacks and abuse (including rape) and greater awareness of this situation by community organizations have led various bodies to prepare specific health-related messages surrounding sexual consent in the context of chemsex (15-19). In the case of Spain, however, this line of work has received little attention.

4.2. Mental health

Most studies on the consequences of or factors associated with chemsex focus mainly on STIs, with few publications examining the association between this phenomenon and psychological disorders (20).

The difficulties in performing comparable studies sometimes lie in the different concepts of chemsex used. Furthermore, it is important to bear in mind that chemsex may not have consequences for physical or mental health until it is used by persons with drug-related disorders or a psychiatric condition (eg, depressive or psychotic disorder) or both, ie, dual pathology (co-occurrence of a mental disorder and a disorder related to substance use).

In addition, while there are reports on the mental health consequences of some of the most used substances in chemsex, fewer studies examine the mental health consequences of this practice (21).

Recent meta-analyses indicate that drug consumption in general and in a sexual context is more common among the LGBTQ+ population and among GBMSM than among the heterosexual population (22). Moreover, anxiety and depression are more common in GBMSM than in heterosexual men (22).

The European EMIS-2017 study (23) used the PHQ-4 scale and found that 18% of respondents reported symptoms of moderate anxiety/depression during the previous 2 weeks, and 8% reported severe symptoms of anxiety/depression during the same period. Furthermore, 21% had had self-harm ideation during the previous 2 weeks, and 6% had had self-harming ideation for more than half the time during the previous 2 weeks. Since these data were not disaggregated by sexualized drug use, we have no information on whether the prevalence of symptoms of anxiety/depression or self-reported suicidal ideation was greater among GBMSM who consume drugs in a sexual setting than among those who do not.

In order to understand the association between mental health and chemsex, attempts have been made to analyze chemsex specifically from the perspective of minority stress theory and syndemic theory. In terms of minority stress theory, stressors such as stigmatization, prejudice, and discrimination affecting the GBMSM population would have an impact on mental health. In this context, substance use could act as a strategy for coping with the stress caused by stigmatization and discrimination (24) or by psychosocial problems where there are synergies that can contribute to the spread of a disease within a specific population (25). From these viewpoints and given the considerable concentration of syndemic factors in those who engage in chemsex, we could take into consideration the multiple types of discrimination experienced (such as sexual orientation or fear of a diagnosis of HIV infection) as factors that can affect physical and mental health, including substance use in a sexual setting (26).

In various qualitative studies performed in Europe, the participants reported psychiatric symptoms in the context of acute consumption such as irritability, anxiety, and aggressiveness, some of which required medical intervention because of anxiety and psychotic symptoms. Users also reported the long-term effects associated with use: memory alterations, personality changes, substance dependence, and need for treatment through mental health services (5). Qualitative studies performed in Barcelona with persons who engaged in chemsex revealed symptoms of depression and anxiety and problems associated with self-esteem and body image (27).

Studies performed outside Spain with HIV-infected GBMSM report that persons who engage in chemsex more frequently experience symptoms of anxiety and depression, as well as active consumption of tobacco and other drugs not associated with sexual settings (13). Retrospective studies of GBMSM who attend sexual health centers observed an impact on the mental health of persons who engaged in chemsex (15%), work absenteeism (14.1%), and accidental intoxication (4.8%) (7). Other studies performed among HIV-infected persons in Spain have shown that participants who engaged in slamming had more severe drug-related symptoms such as withdrawal symptoms, dependence, severe intoxication, suicidal ideation, and paranoid symptoms (21). Furthermore, it has been observed that suicidal ideation in patients who engage in slamming was associated with symptoms of depression and anxiety (21).

In the “Aproximación al chemsex en España” (Approach to chemsex in Spain) study (28), half of the participants reported that chemsex had not affected their personal, family, and/or occupational relationships. On the other hand, a high percentage reported that chemsex affected their personal and/or professional life sporadically (34.2%), frequently (8.8%), or always (4.1%). Depressive symptoms were reported sporadically (36.8%) and frequently (18.3%). A small percentage of men reported feeling depressed always (6.8%). As for possible psychotic symptoms, most respondents reported not having experienced them ever (68.3%), although a small group did in fact report that they had experienced psychotic symptoms sporadically (11.3%), frequently (6.0%), or always (1.4%). Symptoms of anxiety were experienced sporadically (32.1%) or frequently (16.5%), and a smaller percentage reported always feeling anxious (5.1%).

There have been series and case studies of psychotic disorders (29,30), serotonergic syndrome, and delirium in the context of chemsex, depending on the type of drug used (31), as well as of encephalopathy (32). Current interventional programs for persons who engage in chemsex in Spain (33) have reported a high prevalence of substance use disorder, depressive disorder, anxiety disorder, and psychotic disorder.

4.3. Addictive behavior

Addictive behavior is associated with a series of cognitive, behavioral, and physiological symptoms, as well as considerable difficulty for control of specific behaviors that are experienced as an urgent and unavoidable need. These can lead to dependence and, therefore, deterioration of family, affective, social, economic, and academic or occupational relationships. Addictive behavior was traditionally described as a disorder due to use of or addiction to substances. Today, the concept is much broader and encompasses other types of behavior not related to substance use.

A common neurobiological basis has been reported for certain addictive behaviors that activate the reward system in the brain (thus reinforcing the behavior), with the physiological mechanisms being the same as those of natural reinforcers (water, food, sexual behavior, exercise) and using the same neurotransmitters (dopamine, serotonin, and endogenous opioids).

This form of understanding addictive behavior has led the Fifth Edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (34) to include a chapter entitled “Substance-related and addictive disorders”, which, in addition to substance use, addresses compulsive gambling. In the case of internet gambling disorder, sex addiction, and other repetitive behaviors known as behavioral addictions, current evidence requires further research.

Similarly, the International Classification of Diseases (ICD 10), in its section on mental disorders and behavior, as well as in the chapter on use of psychotropic substances, addresses habit disorders and impulse control, including compulsive gambling. These disorders are defined as maladaptive, repetitive, and persistent behaviors that are not secondary to a known psychiatric syndrome and in which the individual repeatedly fails in his/her attempt to resist the impulse to perform the activity. These include persons with behavioral addictions (eg, sex addiction, addiction to geosocial apps/dating apps, and even addiction to physical exercise and shopping) who, owing to the lack of scientific data to establish diagnostic criteria, are not covered in manuals on mental disorders.

Substance addiction, or substance-related disorder (DSM-5), comprises maladaptive behaviors that are repeated compulsively and are very difficult to control and that comprise the frequent use of one or several substances and the time spent on a constant search for them despite the negative consequences they entail. Excessive use of drugs leads to very intense activation of the reward system in the brain (to the extent that the functioning and structure of brain circuits are modified) and, therefore, reinforces the use behavior owing to the intense pleasure experienced.

DSM-5 covers 10 substances in the section on substance-related disorders. However, other substances, known as new psychoactive substances, are not covered and could be included as “other substances” or in a more specific category, such as “stimulants”. In the context of chemsex, these substances include mephedrone, methamphetamine, GHB, poppers, and ketamine.

Sex addiction (which may be admitted as a disease in ICD 11) can be defined as a persistent pattern of failing to control intense and repetitive sexual impulses that lead the person toward compulsive sexual behavior and to neglect health and other interests and responsibilities, even though the person does not often experience the pleasure sought. It is not always easy to determine whether a behavior constitutes a problem or is simply a response to the sexuality desired by the person.

For now, the problematic behavior could be included in the diagnostic category of “hypersexuality” or excessive sexual drive (ICD 10). In the setting of chemsex, this addiction should always be considered in association with substance use, which directly affects it.

As for **addiction to dating apps and Internet**, there are currently no sufficiently solid scientific studies or criteria to consider inappropriate use of information and communications technology (ICT) a mental disorder. However, some people find it difficult to control their behavior, thus leading to interference with daily activities. In terms of chemsex, there have been reports of use of dating apps, Internet pornography, and cybersex. The approach to the user should include an evaluation of the time spent on these practices, whether these become increasingly frequent, whether they lead to other activities being abandoned, whether they negatively affect family and social relationships and other areas of a person’s life. The use of ICT tools makes it easy to meet other people for sex and to feel widely accepted, thus creating a positive effect in persons with low self-esteem and feelings of insecurity.

Health professionals who treat problematic behaviors in this field often find that in addition to problematic behaviors associated with substance use, those involving sexual practices and dating app and Internet use lead to considerable psychological and social malaise.

It is common to find that the maladaptive behavior was already present before the person started to engage in chemsex, although this was observed in an isolated or independent fashion (people who already had substance use problems, sex problems, or problems with the use of technology, albeit in another context). In addition, as seen in the previous section, there are usually other, more or less severe mental health problems/difficulties. When several of these problems co-occur, the clinical approach proves to be much more complex.

Lastly, it is important to remember that there may be as many people experiencing problems with substance use, sexual practices, and app/Internet use as there are with more severe addictions or behaviors. The basic difference could lie in the fact that one addiction affects all areas of a person’s life, thus hindering or preventing optimal daily functioning, whereas when use is problematic, this

may only affect a specific time and space in a person's life (eg, during chemsex), while all the other areas function perfectly.

This does not mean to say that problematic use does not entail negative consequences. However, the person's life is not based on or depends only on participation in the setting of chemsex (as seen in persons whose condition is more severe). It is also important to appreciate the difference and remember that while problematic use is a risk behavior that can progress to addiction, not all cases of problematic use lead to addiction.

4.4. Implications for health stemming from the use of injected drugs in chemsex

Drugs can be taken through several routes (oral, intranasal, inhalation, intravenous, intrarectal), although not all substances can be administered through all routes. The choice of one route or another generates specific health risks. Nevertheless, here, we address the risks arising from injection, given their more important implications for health. The Appendix on risk reduction according to route of use includes additional information on other routes.

Slamming is the slang term used to refer to injecting drugs in the setting of chemsex (35). The substances most frequently taken via this route are mephedrone and methamphetamine, although cocaine, ketamine, MDMA, amphetamines, methoxetamine, and other drugs can also be injected (35).

Injection involves crossing the skin with a needle to reach a vein; consequently, microorganisms may enter the body owing to a lack of asepsis, thus increasing the frequency of skin and soft tissue infection and the risk of mechanical lesions that can cause pain and hardening of the veins and compromise function (37). Furthermore, persons who inject stimulants more frequently engage in risk practices, such as sharing and reusing syringes (6).

The risk of infection increases with the practices shown in Table 1.

Table 1. Practices that increase the risk of infection with the use of injected drugs

Higher number of injections
Sharing contaminated injection material
Use of nonsterile techniques
Subcutaneous or intramuscular injection
Pumping (repeated extraction of small amounts of blood in the syringe before administering the full dose)
Use of stimulants
Crushing tablets or capsules in the mouth before injection
Licking the needle to facilitate injection

Incorrect injection of drugs commonly leads to puncture marks and indurated, thrombosed, and pigmented superficial veins. These lesions are almost always found on the upper limbs, although they may appear at other sites (eg, groin, back of the penis, neck, anus). Signs of inflammation and swelling are common if the infections are more severe or have crossed the vessel. Local ischemia

with necrosis can be seen in some cases, and tissues become susceptible to infection. These abnormalities lead to thrombosis and further compromise soft tissues.

Most infections caused by injecting drugs are caused by the subject's commensal flora, with *Staphylococcus aureus* and streptococci being the most common pathogens (38). However, infections may also be caused by other species of microorganisms such as *Candida*, *Pseudomonas*, *Escherichia coli*, and other enterobacteria (35).

Table 2. Physical lesions

Type of infection	Symptoms
Skin ulcers	Sore or lesion that appears on the skin or mucous membrane caused by a loss of tissue at the injection site. This type of lesion tends not to heal. Ulcers are common among nonrecreational drug users. The diagnosis is based on clinical findings, with no need for additional testing.
Pyomyositis	Infection of the muscle. Direct inoculation with bacteria seems to be the cause. Most patients with pyomyositis present with pain and swelling in the affected area.
Necrotizing fasciitis	Necrotizing fasciitis, whether associated or not with myositis, is the infection that most commonly requires immediate and appropriate treatment.
Anal fissures	Small tears in the anal mucosa or injection site leading to pain and bleeding during defecation.

Source: Adapted from (35,37,39,40)

Table 3. Localized and soft tissue infections

Type of infection	Symptoms
Skin abscesses	Accumulation of purulent material with a fibrous and inflammatory reaction that progresses with erythema, heat, and pain at the injection site. The consequences of spread to neighboring tissue can be disastrous.
Phlebitis	Pain and hardening of a vein caused by microorganisms or irritants when it is used for frequent injection
Thrombophlebitis	Phlebitis where blood clots obstruct the vein. These can lead to the formation of hematomas, thrombosis, septic thrombophlebitis, mycotic aneurysms, and traumatic arteriovenous fistula.
Septic thrombophlebitis	Septic thrombophlebitis is characterized by local pain, swelling, and fever associated with bacteremia and sepsis.
Cellulitis	Acute inflammatory process of infectious origin that affects the dermis and subcutaneous cellular tissue and usually manifests as an area of reddening skin that is edematous, hot, and painful.

Bone and joint infection	Most skeletal infections are caused by hematogenous seeding, although spread can also result from proximity to the areas of skin and soft tissue infected, which are often poorly cared for. Patients with osteomyelitis usually present with few abnormalities and only complain of local hypersensitivity and pain.
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Source: Adapted from (35,37,39,40)

Table 4. Generalized and distant infections

Type of infection	Symptoms
Bacteremia	Bacteremia is the presence of bacteria in the bloodstream that can cause metastatic infections if sustained over time.
Septicemia	Septicemia is a very severe form of infection that spreads throughout the bloodstream.
Infective endocarditis	Infective endocarditis is a microbial infection of the endocardium that is most frequently bacterial in origin. It affects the heart valves, mainly on the right side (tricuspid) and can cause pulmonary embolism. The patient may present with fever and pleuritic chest pain. Infective endocarditis is one of the most severe complications in injecting drug users.
Osteomyelitis Septic arthritis	Bone infection secondary to the presence of bacteremia or endocarditis.

Source: Adapted from (35,37,39,40)

4.5. Implications of chemsex for HIV-infected users

Approximately 3 of every 10 GBMSM seen in HIV clinics have engaged in chemsex (13). Most HIV-infected persons who attend clinics and who engage in chemsex report no serious associated problems. However, a minority of patients report problems arising from drug use, with a negative impact on health and well-being and on persons in their immediate circle. The physical consequences (STIs, overdose, infection, drug interactions) and psychological consequences (anxiety/depression, paranoia, psychosis) described in previous sections have a negative effect on the patient's personal and family life, as well as on work and social life.

This loss of structure associated with use-related problems makes follow-up at the HIV clinic erratic, with patients missing appointments at the HIV clinic, in other specialist areas, and for prescribed additional diagnostic tests.

The condition of active dependence or daily use of drugs or consumption of multiple substances and problematic alcohol consumption constitute a major barrier to optimal adherence. Therefore, in the clinical management of HIV-infected patients, it is essential to identify those with problematic consumption and/or harmful use of drugs and alcohol, to reduce the risks associated with consumption, and to address substance and alcohol use based on an interdisciplinary approach and through associated bodies with the aim of treating addictions (41).

The preliminary results of a 2019 report on taking antiretroviral therapy (ART) for 4 consecutive days versus 7 days demonstrated the noninferiority of daily dosing, irrespective of the type of ART (42). However, despite these preliminary results, it is important to remember that the main cause of virological failure is always a skipped dose. Skipping 1 or 2 doses during the 4 weeks preceding the laboratory work-up can lead to viremia in up to 13% of cases, with virological failure being more common as the number of skipped doses increases (43,44).

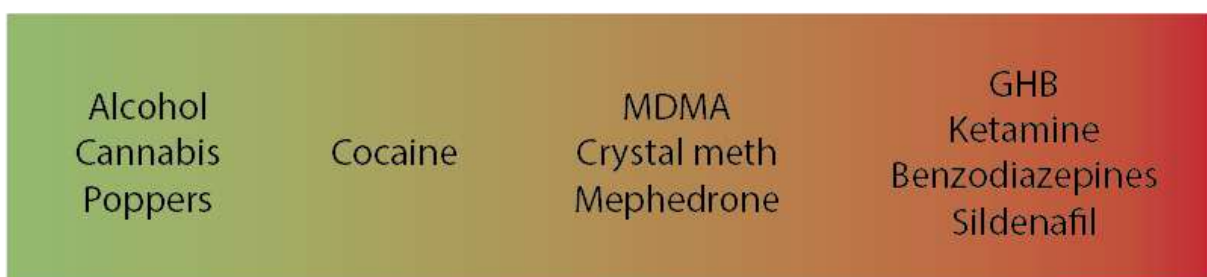
According to the March 2020 update by the Expert Panel of the GESIDA/National AIDS Plan Document on ART in HIV-infected adults, it is not recommended to administer ART for fewer than 7 days per week until longer-term data on durability and resistance are available.

Drug interactions should also be taken into account in the case of persons who consume drugs in their sexual relations (45), and some of the drugs taken interact with HIV medication. Occasionally, when drugs are combined with antiretroviral drugs boosted with ritonavir or cobicistat, the concentrations can increase, leading to an increase in toxicity and, potentially, overdose.

Patients are generally unwilling to speak spontaneously about drug use with their doctor. Similarly, some doctors are not familiarized with this problem or have not received training in effective communication that enables them to address the subject of drug use and/or sexuality in their office. The factors that may prevent a patient from reporting drug use include the lack of perception of use as a problem, the notion of disconnection between consumption and follow-up of the infection(s), and the lack of trust with respect to the doctor.

Most substances consumed in the context of chemsex are metabolized in the liver by cytochrome P450 (CYP). Some drugs or medications can act as inducers or inhibitors, thus leading to the onset of adverse effects owing either to increased concentrations or to suboptimal concentrations that reduce the effectiveness of the drugs. Therefore, the health professional must evaluate the possible drug interactions by visiting the various web pages that address this area and that are systematically updated (46-49). Figure 1 shows a scale running from green to red according to the risk of interaction, with green representing substances that carry a lower risk of interaction with antiretroviral drugs and red representing those with a greater risk of interaction (45).

Figure 1. Risk of interactions with antiretroviral drugs according to the drug used



Source: Adapted from (45).

4.6. Impact on personal relationships and primary support structures

Primary support structures are those relationships that provide help and cooperation within the immediate circle (family, friends, and neighbors). These are spontaneous, reciprocal, and bidirectional relationships and are based on emotional links associated with friendship and neighborliness.

Chemsex can deteriorate these networks (50), thus reducing the possibility of turning to them in times of need. This could be more serious in the case of migrants, whose networks are less solid in their host country. The process is usually progressive, depending on the problems arising from chemsex, thus making it difficult to perceive and anticipate the problem in its early phases (51).

Deterioration could be related to factors associated with chemsex, as follows:

- a) Poorer social life and leisure time. Systematic use of chemsex implies an investment in time to the detriment of other activities that would make it possible to renew and strengthen links with people in the primary support network.
- b) Stigmatization associated with drug use. The person does not dare to ask for help from those near him for fear of rejection or incomprehension.
- c) Homophobia and transphobia. The fact of belonging to a minority with a non-normative sexual and gender identity may have affected the person's links with his circle. Perhaps he does not wish to seek help for fear of being rejected, or even because of previous rejections, or because he cannot count on the acceptance of his family and closest friends.
- d) Immigration. The process of migration is often accompanied by a feeling of being separated from one's roots and psychological and emotional effects—especially if the process has been abrupt—that affect a person's life. He may also experience a lack of job opportunities, linguistic and cultural barriers, social uncertainty, unsatisfied basic needs, or a certain degree of frustration with the expectations generated during the process of migration. The migrant's administrative situation plays a key role in vulnerability and may act as an obstacle to health and social care.
- e) Sex work. Sex work is a highly stigmatized activity associated with strong prejudices and discriminatory attitudes and behaviors. Many sex workers are migrants whose administrative status is often irregular and who live far from their families. Given that drug use is more frequent in this group, the reference persons the migrant encounters may also commonly engage in drug use.

4.7. Other potentially affected areas

In addition to the health problems discussed in the previous sections, persons who regularly engage in chemsex are generally faced with situations that worsen their own circumstances and accelerate the need to seek help or treatment (51).

Intensive use of chemsex can cause considerable physical deterioration, since the user may neglect his diet and sleep. Some persons take part in sessions lasting 3, 4, or more days without sleeping or eating, leading to significant weight loss, which is evident to those in his immediate circle. While the user is initially unaware of this and continues to consume, he may reach a point where he becomes aware of his physical appearance, thus potentially leading to other, secondary psychological and behavioral consequences, including self-isolation in the form of not leaving the house in order to avoid being judged based on physical appearance or state.

The person who engages in chemsex may also experience problems with respect to work, ie, lateness or absence, especially on Mondays after a weekend session. Work performance may also be reduced, with a diminished ability to concentrate and organize oneself. Relationships with colleagues become more difficult as a result of the person becoming more irritable because of drug use or abstinence or increased isolation for fear that his behavior will be discovered. In the most severe cases, the person may not be promoted to positions of greater responsibility or could lose a position of responsibility, ending in dismissal or occupational disability (1). Spending on drugs combined with the loss of income can lead to a situation where the person affected may not be able to pay mortgages or loans, thus generating a situation of vulnerability that can finish in homelessness (1). Similarly, the person may have to return to the family home, with all the associated problems.

In the case of those who are still in education or finishing training, problems related to chemsex may manifest as reduced academic performance with less time for study, missing classes and examinations, and even dropping out.

Chemsex may also lead to legal problems. The person may be fined for possessing specific amounts of drug, for having bought drugs from third parties, or for consuming drugs in public. Legal problems can become more serious if drug trafficking is involved.

Some users can find themselves involved in other crimes that are rarely reported for fear of being accused of possession of drugs, a certain feeling of guilt, or the fear that family and friends may become aware of their behavior. There have been reports of damage and theft in homes where people engage in chemsex, as well as problems associated with online sharing of recordings or photographs of naked persons or persons having sex while under the effect of substances.

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5. PREVENTION OF ADDICTIVE BEHAVIORS IN THE CONTEXT OF CHEMSEX

The elements on which prevention of chemsex is based include the following:

5.1. Skills to address normalization of drug use and group pressure to consume

There is a myth that, in the gay world, “everybody does drugs”, or at least most people do. While drug use is more common in this population group, the myth can be debunked based on evidence:

- A minority of the gay population use drugs.
- The percentage of people who use drugs for sex in this group is even lower.
- The proportion of persons requiring professional care because of these practices is even lower.

The skills that can be improved or developed to reinforce protection against drug use (in general and in the context of sex) include the following:

- Self-knowledge: knowing oneself, one’s strengths and weaknesses, interests, and anything that “isn’t really my thing”.
- Self-esteem: how a person values him/herself can help with exposure to risk.
- Self-control: ability to direct and control one’s own behavior and feelings, for example by rejecting behaviors that, despite offering immediate positive effects, have long-term repercussions.
- Skills for establishing and maintaining social relationships and criteria for choosing them.
- Effective communication: a key tool in socialization that can prove particularly useful for handling new and different contexts.
- Critical thought: enables us to question offers and not be taken in by something that, deep down, we do not want.
- Decision-making: this skill enables us to take and stick to decisions that go against the general opinion and to control impulsiveness.
- Ability to cope with emotional pressure and group pressure. Coping formulas include the following:
 - Providing arguments in favor of one’s own choice.
 - Changing the subject (smokescreen).
 - Repeating the same response until the pressure is taken off (stuck record technique).
 - Distancing oneself from the situation where one is being pressured to take drugs.
 - Verbalizing an experience or personal feelings in front of the group, for example: “for you it’s a unique experience, for me it’s a very dangerous experience”.

5.2. Alternatives to sexualized leisure

Everyone needs a social and leisure setting in order to be able to meet other people. Leisure time provides a wide range of options for acquiring new skills, getting to know other people, experiencing sensations, seeking stimuli, and gaining a better knowledge of one’s own preferences. The development of some areas of gay culture and the way they are expressed have been significantly associated with the specific types of relationships, leisure, and erotica of gay men. As mentioned above, the leisure industry's offer for gay men includes highly sexualized options and formats connected with specific stereotypes. At the same time, alternative ways of being a gay man and social being are invisible in the sense that they are seldom represented. Some social groups, or

subcultures, have needs and preferences that are to a large extent invisible and are faced with various obstacles to achieving desired leisure experiences (1).

Within this leisure culture, geographic location and tourism itself play a fundamental role, as in internal migration (within one's own country) or migration abroad. Some gay men leave their villages or small cities in search of a large city with an LGBTQ+ or gay group that is visible and more widely accepted, where they can live free from the restrictions of their hometown or place of origin. Skeggs (2) stated that an understanding of restrictions on space is key to understanding how and why certain places can and cannot be used for leisure.

As alternatives to sexualized leisure from the perspective of selective prevention, it would be appropriate to strengthen meeting spaces that make it possible to interact and to create social and community networks (3). LGBTQ+ centers in some cities would be the best example of a community resource in that direction. Similarly, in addition to all generally available resources, there are several community, cultural, and sporting LGBTQ+ organizations that are inclusive in nature and make it possible to create rich and diverse recreational opportunities.

As for prevention, many of those who engage in chemsex often spend a large part of their free time in this sexualized leisure scenario. Some of those whose situation is more problematic find it difficult to enjoy other leisure activities, especially at the weekend. In cases requiring professional attention in this sense, one possible option is the development of an alternative and therapeutic leisure plan that includes education in healthy lifestyles and promotion of better health and well-being.

Interventions in therapeutic recreation should include a diagnosis and needs analysis, treatment, education, prevention, and health promotion, together with follow-up of the person's progress (4). Management of interventions of this type from the perspective of a model based on community organizations should begin with a multidisciplinary team that actively participates in each phase of the intervention by establishing a general recreation program, as follows:

1. First interview to evaluate the user's leisure needs and determine the benefits that can be gained from participating in the therapeutic recreation group. During the visit, the user can be informed and guided on recreational activities, norms, and the follow-up and evaluation plan.
2. Treatment:
Once the needs have been established, a personalized leisure plan is designed with the user. This combines therapeutic leisure activities, which are organized on the weekend (Thursday to Monday) and at times when the user generally took drugs. If the user has sufficient free time during the week, activities can be proposed with the aim of extending social networks and developing social skills. This approach to leisure time could provide the user with an opportunity to recover his balance, discover new motivations, reintroduce healthy behaviors, and improve his social skills in order to interact based on community and participative values.
3. Education, prevention, and health promotion:
Group activities can be used to boost education in healthy habits. Developing these programs in community settings or through coordination by a social organization also makes it possible to link the person with other sexual health activities and services that will in turn facilitate a multifactorial approach to the problem.

4. Follow-up and evaluation:

Therapeutic leisure programs should include a baseline and ongoing evaluation of the actions undertaken, which make it possible to assess the level of participation and personal satisfaction, levels of anxiety, improvement in social, leisure, and relationship skills, use of dating apps, and drug use.

Coleman and Iso-Ahola point to a lack of internal motivation to escape from the conditions that led to the state of defenselessness (desire to fit in with the group, loneliness, approval of social and professional success) (5). Therefore, it is important that the person in charge of therapeutic leisure:

- Knows the real needs of all those participating in healthy leisure activities.
- Accompanies participants in their feeling of belonging to the group and inclusion in the actions carried out.
- Accompanies the participants in the development of a sense of awareness of oneself and of internal control.
- Boosts the motivation for a change in negative attitudes and behaviors to ensure this development.
- Facilitates responsible alternatives, both within and outside the recreational therapy program, and guides users toward the creation of new networks.

Recreational therapy should have clear goals for treatment and education and address not only a person's emotional and psychological facets, but also the deconstructive element of this model of acquired toxic sociability. Thus, it will be possible to improve the development of participants' social relationships and skills, as seen in the community center Village.Berlin (6) or in the CASA centers of the community organization Apoyo Positivo (7), which have broader objectives in this recreational and community structure by creating safe spaces for a diverse community.

5.3 Identification of risk scenarios and situations of personal vulnerability

Chemsex can speed up or increase (8,9) in specific contexts or situations, for example, specific negative personal events:

- immediately after a diagnosis of HIV infection
- immediately after the end of a relationship with a partner
- after the death of a family member
- after moving to a large city
- in the context of sex tourism for MSM

In the case of the last point, choosing a destination that is popular with the gay public for vacation (or living in such a place) provides greater opportunities to become involved in chemsex. Furthermore, risk scenarios and the calendar for major events are well known. In order to reduce exposure to these events, awareness could be a strategy for anticipation and careful decision-making.

In terms of harm reduction, certain situations or actions are clearly risk scenarios. Increasing awareness of their implications could be a strategy for decision-making:

- Living in an urban area where many residents engage in chemsex and organize sessions or chill sessions.

- Attending a sex club or sauna during the early hours (when most clients have not slept and are using the premises as an after-work environment).
- Going to a new session or a chill session without having recovered from the previous one.
- Receiving invitations to participate in specific sessions knowing that they involve more aggressive practices (such as slamming) or more extreme sex practices.

Personal situations and elements that could increase vulnerability in this context are diverse. Being aware of them could act as a formula for adopting a more adjusted perception of risk. Some of these personal elements include the following:

- Health problems that could make the negative consequences of exposure worse (eg, insomnia, heart problems, glaucoma [high ocular pressure], previous problems with addiction or mental health).
- Being unemployed implies greater availability and the possibility of extending the weekend (2).
- Being alone: feeling isolated, unwanted loneliness (9,10), especially in larger cities.

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6. PREVENTION OF INFECTION BY HIV AND HEPATOTROPIC VIRUSES AND OTHER STIs IN THE CONTEXT OF CHEMSEX

The elements underlying the prevention of infection by HIV and hepatotropic viruses and other STIs in the setting of chemsex include the following:

6.1. Selective and indicated prevention

The National Strategy on Addiction 2017-2024 (1) includes universal, selective, and indicated prevention programs. This classification of prevention, which follows the proposal of Gordon (2), differentiates between 3 levels:

- Universal prevention: preventive actions aimed at the whole population.
- Selective prevention: actions aimed persons who, for different reasons (eg, socioeconomic, geographic) have more opportunities to consume than average, thus leading them to be known as risk groups. While they do not consume, their risk of doing so is very clear.
- Indicated prevention: actions aimed at a very specific group in the target population, namely, those who are already using drugs.

When designing prevention campaigns (both selective and indicated), it is necessary to make those who engage in chemsex the focus of the strategy. Their participation must be effectively guaranteed in the detection of needs, the design of strategies and preventive measures, and the selection of the most appropriate communications channels for dissemination.

Recent years have seen the undertaking of various preventive initiatives associated with chemsex. Most focus on the indicated level of prevention, with the publication of various materials, websites, and videos that include health messages to reduce risk among those who already engage in chemsex (3–5).

Given that these actions are absolutely necessary and relevant, they must be complemented by further selective preventive actions aimed at GBMSM who do not engage in chemsex (6).

Many of these men will have heard about chemsex. Some may have already been offered the chance to try it, for example, through gay dating sites or apps. At present, in Spain, many members of the gay community remain unaware of the dimensions and impact that chemsex is having on it.

A community health approach can be considered as one that (7):

- Understands a given health status as the result of a process
- Considers the factors that come into play throughout this process (at the individual, social, and structural levels) and tries to modify them
- Seeks the participation of the community (both in understanding their needs and in active participation in the response to these needs).

Given the social, psychological, and cultural characteristics of the phenomenon (8), this type of approach has proven able to provide a response to the problems of chemsex in indicated prevention programs (9,10). From the perspective of the importance it gives to underlying factors, the

community approach makes it possible to understand the need for selective prevention programs, since, although not all GBMSM engage in chemsex, many factors that can contribute to it are common to this group.

A community approach, with the abovementioned characteristics makes it possible to seek alternatives for more satisfactory socialization or new forms of masculinity and to identify other factors that play a major role for this group.

It is necessary to highlight the importance of teamwork in these approaches, not only for selective prevention, but also for indicated prevention in particular. In terms of social psychology, social interactions—particularly those that take place within a group—are those that reaffirm, validate, and reconstruct subjective aspects and identities (11). According to this focus, the community itself not only enables and normalizes patterns, relationships, and behaviors, but can also question them and propose alternatives.

6.2. Frequency of STI testing based on behavioral markers

Screening for HIV and STIs in GBMSM who engage in high-risk chemsex is a useful preventive tool, both at the individual level and at the public health level. Early diagnosis and treatment of STIs in asymptomatic users prevents the development of clinical pictures that can lead to severe complications in the short and long terms. Furthermore, it makes it possible to break the chain of transmission to other individuals and trace contacts, thus facilitating the detection of occult infections (12). Special mention must be made of rapid screening programs for asymptomatic users in whom the diagnostic-therapeutic response occurs in the shortest time possible, since they provide a greater benefit in terms of breaking the chain of transmission (13,14).

The frequency of diagnostic tests depends on the individual risk factors. For GBMSM, the recommended tests and their frequency are shown in the following table (12,15,16):

Table 1. Frequency of diagnostic tests

Etiology	Frequency	Test
HIV	Annual Every 3-6 months if the risk is increased.	Serology: 2 fourth-generation EIAs (Ag and antibodies). Confirmatory: WB or LIA
<i>N. gonorrhoeae</i> and <i>C. trachomatis</i>		PCR: pharyngeal or rectal swab, first void urine**
Syphilis		Serology: Treponemal test (MEIA, CLIA, or other EIA) + nontreponemal test (RPR).

HCV*		Serology: Anti-HCV IgG (Assess viral load when screening users with previous cured HCV infection).
HAV		Serology: Anti-HAV IgG (Vaccination is recommended in cases of negative serology).
HVB		Serology: Anti-HVB, HBsAg, and anti-HBc IgG. (Vaccination is recommended in cases of negative serology).

*In the case of HCV, annual screening is recommended, except in very-high-risk users such as injecting drug users or persons who engage in high-risk practices such as fisting.

**At least 2 hours should have passed since the previous void.

Source: Prepared in-house from a Consensus Document on Diagnosis and Treatment of Sexually Transmitted Diseases in Adults, Children, and Adolescents, March 2017 GeSIDA (Documento de Consenso Sobre Diagnóstico y Tratamiento de las Infecciones de Transmisión Sexual en Adultos, Niños y Adolescentes. Marzo 2017. GeSIDA).

Screening for other STIs such as *M. genitalium* and herpes simplex is not routinely recommended in clinical practice guidelines. Similarly, screening for human papillomavirus (HPV) is not routinely recommended, although vaccination against HPV is recommended in MSM aged <26 years, as is screening for cervical and anal dysplasia in some populations (12,17).

The frequency of screening for HIV and other STIs depends on sexual practices and associated risk. GBMSM are recommended to undergo screening at least once per year. High-risk users are recommended to undergo screening for HIV, syphilis, *N. gonorrhoeae*, and *C. trachomatis* every 3-6 months and every 12 months in the case of HCV. Users considered high-risk are characterized by the following (15):

- Condomless sexual practices (oral or anal).
- More than 10 sexual partners in the previous 12 months.
- Consumption of substances associated with chemsex.
- Recent diagnosis of HIV or STI.

Given that outbreaks of hepatitis A have been reported in GBMSM in recent years both in Spain and in other European countries, specific vaccination programs for this group are necessary in order to control the outbreaks and prevent further spread (18).

6.3. Surveillance of HCV reinfection

During the last 15 years, many outbreaks of acute HCV infection have been reported in GBMSM who believe that they may have acquired the infection during chemsex (19). These outbreaks have

contributed to the increased incidence of HCV infection, mainly in HIV-infected GBMSM. Ever since the introduction of HIV pre-exposure prophylaxis programs (PrEP), which include periodic screening for viral hepatitis, there has also been an increase in the incidence of acute hepatitis C in non-HIV-infected GBMSM who reported high-risk sex practices associated with chemsex (20,21).

Given the absence of an anti-HCV vaccine, persons who have eliminated HCV—either by treatment or spontaneous clearance—could become reinfected if they continue to engage in risk practices. Reinfection mainly affects persons who inject drugs (PWID) and GBMSM (mostly HIV-infected) who engage in high-risk behaviors associated with drug use and/or sexual practices.

In a cohort of HIV-infected GBMSM in various European cities whose HCV had been cured, the incidence of reinfection was 7.3 cases per 100 person-years. It was estimated that around one-third of the patients would become reinfected within 5 years after cure if they did not modify their risk behaviors (22). More recent data from the EuroSIDA cohort show that 13.3% of HIV-infected persons (GBMSM and PWID) who have been cured of their HCV infection in Europe become reinfected 2 years after having eliminated HCV (23).

In Madrid, a study that evaluated the rate of reinfection among HIV-infected GBMSM whose HCV infection had been cured found a reinfection rate of 5.93 cases per 100 person-years in men. This extremely high rate of reinfection contrasts with that observed in the same study in PWID, namely, 0.21 cases per 100 person-years, which means that the reinfection incidence rate was 23 times higher among GBMSM than among PWID (24).

Furthermore, this high incidence of HCV reinfection in vulnerable populations highlights the need to address reinfection in health services caring for HIV-infected persons and in hepatology departments. Experts stress that detection of HCV reinfection in a treated population should not be interpreted as a failure of the program, but should be considered in the context of specific efforts aimed at eliminating hepatitis C (25).

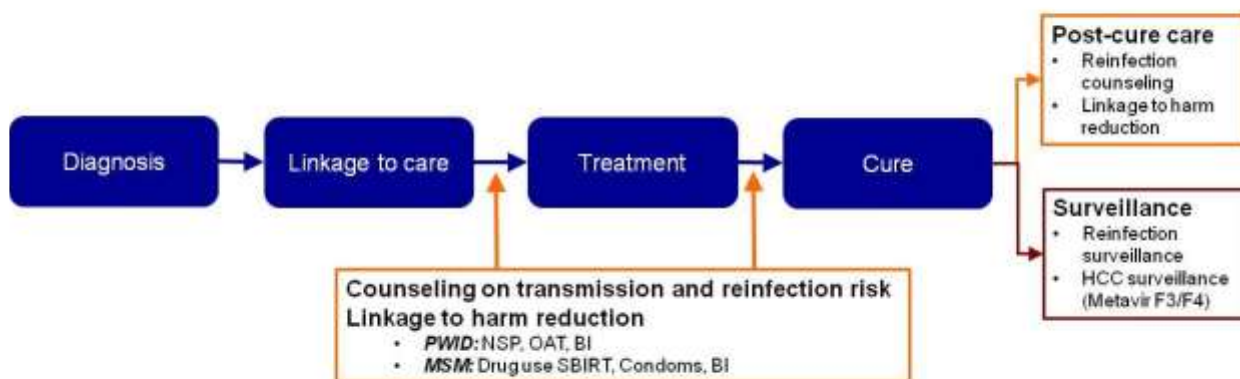
In this sense, the individual risk of HCV reinfection and assisted counseling to avoid it should be considered in the initial evaluation of each patient when treatment of HCV is evaluated. For its part, evaluation of risk should not be a reason for deferring HCV treatment. On the contrary, it should be used to design individualized education strategies and counseling and referral to other health or social-health services that enable GBMSM to reduce the risk of HCV reinfection after cure (26).

Together with individual factors, it is also important to take into account and address contextual factors. Clusters of HCV infection have been identified in networks of high-risk HIV-infected GBMSM, thus leading experts to think that treating a group or network of GBMSM simultaneously could be the most effective strategy for reducing population viral load (ie, the reservoir of GBMSM with active HCV viremia) and, together with risk reduction strategies after cure, for preventing reinfection.

The cascade of HCV care services does not end with cure of the disease. Surveillance of reinfection must be improved, extended, and converted into a routine aspect of clinical care. Therefore, it will be necessary to work with an agreed definition of HCV reinfection in clinical practice in order to monitor the disease, compare incidence rates in different settings and populations, and help to evaluate the effectiveness of risk and harm reduction interventions.

The following figure presents a model for integrating the approach to HCV reinfection into the HCV care cascade (25):

Figure 1. Model for integration of approach to HCV reinfection



*PWD-People who inject drugs, NSP-Needle/syringe services program, OAT-Opioid agonist treatment, BI-behavioral intervention, MSM-Men who have sex with men; SBIRT-Screening, brief intervention, referral for treatment as needed

Source: Adapted from (25)

This new approach entails a challenge for current care models in the National Health System. However, a change in paradigm involving multidisciplinary and network-based collaboration between health, social-health, and community services will maximize the curative and preventive effect of HCV treatment, improve health in general, and advance microelimination (27) of hepatitis C in GBMSM.

6.4. Annual calendar of the major gay recreational events

The gay recreation and tourism industry comprises a broad-ranging network of LGBTQ+ businesses. As seen at events such as FiterGay, this sector enjoys the support of the tourism departments of many cities and autonomous communities. The LGBTQ+ Pride celebrations are among the major events aimed at this population, attracting a considerable volume of national and international gay people. The various dates on which these events take place, both in Spanish and in European cities, has played a key role, making it easier to attend various events every year.

Although the International LGBTQ+ Pride Day is on June 28, the season for these celebrations starts in Maspalomas and Torremolinos during the month of May, followed by Ibiza, Madrid, Barcelona, and Sitges during the month of July, and, lastly, by Benidorm in September. Consequently, most events are during summer and the high tourist season. The annual calendar of gay events in these cities is supported by a rich festival circuit. While many are in summer, some of the more important festivals are in December.

Some festivals are attended by a differentiated public (28) within the gay collective. The images and the type of marketing used to advertise them are characterized by their marked sexual content. The current recreational circuit ties together freedoms and identities and open practice of recreational activities, including those linked to sex, and maintains many of the conditions that facilitate chemsex.

Therefore, it is essential to bear these dates and celebrations in mind. Recreational events and festivals for gay men provide an opportunity to intervene in prevention and/or harm reduction with

respect to chemsex and to publicize available services and resources to provide professional support to those who may need it. This preventive fieldwork has generally been carried out by community-based social organizations.

- Collaboration with networks of LGBTQ+ businesspersons and their involvement in the common objective of building healthier recreational activities (6), as a key to intervention in these spaces.
- The world of gay leisure includes highly relevant artistic expressions such as the transvestite world and DJs. Some of these artists, together with the involvement of relevant figures in the gay world, can help to tackle chemsex, transmit messages, and start a conversation on the phenomenon.
- Intervention in leisure spaces via various actions: distribution of material and information on prevention, testing, campaigns, etc.
- Community-based educational talks and actions on the phenomenon of chemsex, for example, at major gay events.

Another example of how to focus on collaboration with the leisure industry can be seen in programs that provide quality awards to businesses that make a commitment to public health, such as the former European program [Everywhere](#) and the current [Party+ New Net](#), which includes [Q de Festa!](#) Nits de Qualitat in Catalonia.

As for the channels available to reach this group, apps can also be used to intervene in prevention via high-quality, rapid communication and opportunities to meet. More and more community-based organizations are turning to profiles in order to ensure that information about their services, health messages, etc. is transmitted by relying on online educators who try to take advantage of the opportunities for access provided by this communication channel.

At the same time, it is necessary to record the prevention activities that are underway and identify opportunities to implement new actions. In order to boost these initiatives, spaces for dialogue and collaboration between stakeholders, including businesspeople involved in the sector, community organizations, and local government (29).

6.5 Lack of understanding with respect to people who engage in chemsex

Fear of misunderstanding and being rejected or judged can make persons who engage in chemsex wary of discussing the subject with friends, family, and professionals, even when they find themselves in a situation where they require help.

In recent years, the media have published various news items related to chemsex. Unfortunately, the media approach to the phenomenon has generally been sensationalist and lacking in rigor. Such an approach leads to disinformation and social alarm, with the risk of stigmatizing those who engage in the practice. Style manuals and guidelines on health topics should contain references for appropriate expression of this phenomenon by the media.

Gay dating apps aimed at GBMSM often carry derogatory messages aimed at other users of the app. This generally takes the form contacts in which a user may not be interested but that sometimes contain formulas that could be hurtful for other users, for example, “No drugs”, “No infections”,

“No oldies”, “No camp”. Some of these texts refer specifically to persons who engage in chemsex, especially those who inject drugs, a practice that generates more hostility. The texts of profiles on the apps sometimes contain expressions that may involve extra stigma for other users, such as HIV-infected men, commercial sex workers, and migrants. One approach to these aspects would be to provide educational material by inviting users, via articles and community discussion spaces, to use more respectful codes to express their preferences.

6.6 PrEP programs for men who engage in chemsex

In their criteria for indicating PrEP, Spanish guidelines include use of drugs in condomless sexual relations (30), thus making it possible to prescribe PrEP to some chemsex users. In addition, in some studies that analyze fulfillment of these criteria in potential PrEP users, this criterion was relatively more frequent than others (31,32).

From a harm reduction perspective, PrEP can be a desirable tool for persons who engage in chemsex, since it makes it possible to plan, with the help of health professionals, a care strategy to prevent acquisition of HIV infection.

Beyond the protective effect of PrEP against contracting HIV infection, it is necessary to point out other health risks for persons who engage in chemsex and for those for whom being part of a PrEP program could prove beneficial. The recommendations on these programs include quarterly STI screening and, depending on the individual needs, the offer of alternative methods for prevention of STIs, promotion of condom use, addressing associated problems, or referral to other social and health care resources (1).

The results of a study on implementation of PrEP in Spain revealed a general decline in the use of drugs among the participants. While the study did not aim to know the impact of PrEP programs on drug consumption, this finding was interpreted as a possible ability of these programs to broadly improve the sexual health of participants, including drug consumption. Some of the recommendations could be applied to chemsex (33).

Therefore, combined prevention programs including PrEP developed by professionals with technical knowledge and appropriate cultural competence could provide some users with an opportunity to take responsibility for and informed decisions about their sexual health and enable linkage to healthcare resources that answer their needs.

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7. PROPOSALS FOR INTEGRATED CARE IN CHEMSEX

7.1. General premises

Care for chemsex users should be based on the following general premises:

- Approach based on the user and integrated care (1) focusing on the person and not only on drug use, taking into account aspects such as sexual orientation/identity, gender perspective, experience of HIV, and other cultural factors. Similarly, the care circuit should act as a safe and confidential space where the person is not the object of moral opinions, discrimination, or stigmatization.
- Personalized therapy plan, including both approaches based on abstinence and on risk and harm reduction (1). It is also necessary to approach sexuality and experience of sexuality, which are basic aspects of therapeutic change.
- Interdisciplinary approach, with close collaboration between institutions and coordination between the different services and professionals involved, both in the public sector and in the community.
- Simplification of the care circuit for the user in larger cities, including integrated consultations with various professionals at the same center.

With respect to care for users in the public health system, advances should continue to be made in the following aspects:

- **Guarantee the right to suitable care for chemsex users in the public health sector**
Users with problematic use and/or substance addiction or behavioral addictions related to chemsex have the right to receive appropriate, high-quality care from the public health system under the same conditions as other users, independently of the types of substance or the settings in which these are consumed.
- **Include chemsex in training plans**
Training on chemsex should be allotted a proportional share in the annual public administration plan, especially in urban areas, where the phenomenon is more prevalent. Training should be aimed at professionals in public services whose participation is required in order to provide appropriate management of the health needs of users. This training must include the acquisition of LGBTQ+ cultural competence, which requires the participation of LGBTQ+ professionals with experience in the field.
- **Consider opportunities for and viability of providing care associated with chemsex in services already used by GBMSM**
Many men who engage in chemsex are reluctant to be referred to addiction and mental health centers, except when their situation has worsened, thus entailing an accumulation of lost opportunities for intervention at earlier stages. Available evidence and examples of good practice show that it is much more effective for care to be provided at the centers and services usually attended by GBMSM, such as those where they receive sexual health care (2,3).

- **Implementation of integrated approaches at the same center**
Given that chemsex users require care from various areas and specialties, in larger cities it would be desirable to have services or units such as those found in other parts of Europe, which integrate at least sexual health care, drug dependency, and mental health at the same center. Some STI centers have open clinics in the evening, where it would be feasible to offer care with respect to addiction, mental health, and peer support.
- **Define and publish the care circuit**
If there are no care resources that offer integrated care by the same team, it is necessary to define the care circuits in larger cities, with a list of centers or services users can be referred to for the care they need.
- **Recognize or certify centers whose teams have received training on chemsex**
In order to prevent users from being referred from one place to another, with no guarantee of being seen by appropriately trained professionals or that coordination mechanisms are in place during the process, centers or teams with an appropriate level of training and coordination should be identified and recognized.
- **Guarantee diversity of approaches, including risk and harm reduction (1)**
Reduction of risk and harm should form part of the care provided by all public health centers.
- **Improve the provision of care in the afternoon/evening timetable**
Care should be provided for chemsex users in the public sexual health and addiction services in the afternoons/evenings, since most users are socially integrated and have a normal working timetable. Making afternoons/evenings available would facilitate attendance, without the user having to leave work on a regular basis and without this becoming a major barrier to adherence, especially when the user does not wish his colleagues to know about his health problem.

A user-based approach should be the pillar of any strategy. Care should begin based on the needs as perceived by the user, taking into consideration his priorities and motivations, since this will make him more willing to become involved in the intervention.

The strategies the user is already employing (or that he is aware of but has not yet started applying) should be explored and the results assessed. Thus, more information can be gained on the personal resources upon which tailored preventive strategies can be built. It is essential to explore the acceptability of different proposals and the user's perception of the likelihood of carrying them out successfully. Therefore, the process is a participative one, in which it is necessary to follow up the effectiveness and usefulness of the strategies agreed upon.

Depending on the consumption pattern, the user can seek various interventions, including a place where he can obtain information about the drugs used in a sexual context, their effects, and risks, as well as treatment for substance dependence. Furthermore, it is important to evaluate the user's needs, which may be various, and include a space where he can talk about his experiences or concerns with respect to chemsex, meet people whose experiences are similar to his own and with whom he can speak freely without being judged, receive therapy, express the desire to give up chemsex or stop using drugs associated with this practice when he has experienced physical or

mental consequences, and search for a way to engage in risk-free chemsex. If these needs are taken into account, then the user can be offered a series of measures (see below).

7.2 Lessons learned

Any approach to chemsex requires an understanding of the reality of the local context and its association with the global context. Given that the areas to be acted on are very diverse (eg, sexual health, addiction, mental health, treatment of HIV and/or HCV, psychosexual therapy), it is necessary to increase the number of spaces available for dialogue and professional coordination with the aim of analyzing and agreeing on the most appropriate response (4).

Some countries, such as the UK, have been leaders in the development of public policy to organize care for users who require professional support with problems arising from chemsex (5). One of the keys to managing chemsex and on which there is international consensus can be summarized as the need for a joint approach to the various facets of sexual behavior and drug use. Pioneering experiences in cities such as London (6) have shown that STI centers and LGBTQ+ community organizations are 2 examples of spaces where it is easy to identify and approach users who require professional care for chemsex.

However, these users are generally reluctant to ask for help or be referred to traditional drug dependence centers, possibly because of the stigma attached to these centers, with a lack of references on their ability to approach the sexual face of chemsex or because some users have not yet assimilated the fact they require professional help. One way of eliminating these barriers is for addiction professionals to work in services that already help GBMSM (at least to hold the first visits there).

It is better to see the chemsex user in a place he goes to regularly (6), as is the case of STI centers, where users go for testing. LGBTQ+ community organizations are also a reference service for this population when requesting information and support. Referral to other centers does not always work, especially if this involves services where the staff do not have the necessary LGBTQ+ cultural competence to address the user appropriately.

Approaching and collaborating with services that have access to this population also make it possible to address users at earlier stages, before they develop serious problems. Chemsex users are therefore accompanied in the process of understanding whether they really have problems associated with this practice. Strategies sometimes include talks and informative group activities (7).

Ideally, it would be better to provide the user with a service that concentrates the main part of his care in one place. Dividing care between various centers hampers coordination and an integrated approach, thus increasing the risk that the user does not attend the clinic he is referred to (7). However, some of the services that could be better received by users do not have the capacity to address urgent situations, for example, severe mental health problems.

For some users, the possibility of having access to professionals who are members of the LGBTQ+ community (with appropriate training in managing chemsex users) considerably helps to establish a climate of trust that enables them to share their situation. However, it is important to note that having the same sexual orientation does not guarantee appropriate care if the health professional does not have the necessary skills or training, including a solid knowledge of addictions and risk reduction. Many initial demands for support are not aimed at abstinence (7).

A large part of prevention, counseling, and care can be provided through the community, and the perspective of the community should be included in the design of proposals for research and intervention. Community LGBTQ+ organizations promote and facilitate the participation of the community in the detection of needs, the creation of response strategies, and decision making on the implementation of these strategies (8).

It is considered good practice to offer services in which both public health professionals and community bodies can collaborate, thus favoring synergies and creating opportunities to explore how each can complement the other. Collaboration between professionals in these services should be reinforced to eliminate barriers and ensure fluid coordination (1).

7.3. Care circuits

As seen throughout this document, many men who engage in chemsex are unwilling to attend addiction centers (8-10). In addition, chemsex was only recently included in public health and addiction management plans and, therefore, in the development of appropriate care circuits for detection and management (health, social, and treatment at various levels).

Chemsex is currently addressed by a series of bodies, whose participation constitutes various care circuits, which are often recently created and can vary according to the city or autonomous community.

Health services

- Network of Centers and Services for Care of Addictions in different formats in the various Autonomous Communities, where all addictions, including chemsex, are addressed. This is particularly true of large cities, where the phenomenon has clearly been observed. These include approaches aimed both at abstinence and at reduction of risk and harm.
- STI clinics, or clinics specializing in sexual and community health, where problems can be detected and addressed in situ and in collaboration with other public and private resources.
- Infectious diseases services/HIV units, bearing in mind that a large percentage of persons who engage in chemsex have HIV infection. The approach to subjects such as drug use, drug interactions, and associated problems paves the way for care in cases of problematic chemsex and for detecting potential users.
- Hospital emergency departments, for emergencies such as overdose and psychotic episodes, are sometimes the first contact between chemsex users and the health system.
- Primary care centers can receive people requesting help because of chemsex or for various reasons, such as HIV testing and the physical and psychological consequences of drug use and for other health indicators. As this is a close and very accessible resource, it is important to create a response and information network in primary care to address problems arising from chemsex.
- Hospital mental health departments, where cases of dual pathology, depression, or any of the mental health consequences of chemsex can be managed. Such cases must be identified so that they can be suitably addressed.
- Mental health outpatient clinics and nonhospital dual pathology services, where the mental health consequences of chemsex can be appropriately managed.

In addition to public services, some of these resources can be found in the private sector, including sexual health clinics and laboratories, hospitals, private clinics, mental health and addiction care centers, and psychologists.

Community-based organizations

- LGBTQ+ community-based bodies
- Community-based bodies for HIV infection and sexual health, such as Comités Ciudadanos Antisida and other bodies that work in HIV.

These community resources address areas such sexual health, psychological support for affected persons, providing alternative recreational and group activities, and peer training as a means of promoting health and support. These are also the key agents for prevention in chemsex.

Given that chemsex users have diverse care needs or needs that may be affected in different areas, the intervention of professionals who address medical, psychological, and social aspects with a holistic approach is essential (11). Consequently, interinstitutional collaboration is necessary between various agents who complement each other in terms of the care they provide. Some specific services or centers are the main entry routes to the public care circuit, and some elements, if detected, can help to identify users who may already be experiencing problems arising from chemsex.

Persons who engage in chemsex may only have very occasional contact with the health services, for example when they develop an STI or attend the emergency department owing to toxicity or overdose or for post-exposure prophylaxis of HIV, or, in the case of PLWH, when they attend a routine visit. These may be unique opportunities to learn of potential chemsex-related problems (12).

The following table shows proposed indicators for suspicion of problematic use at the initial points of contact:

Table 1 INDICATORS FOR SUSPICION		
PHYSICAL PROBLEMS	PSYCHOLOGICAL PROBLEMS	SOCIAL PROBLEMS
Recurrent STIs, recent HIV and hepatitis infection	Histor of attempted suicide and/or current suicidal ideation Mood disorders and anxiety disorders	Isolation, progressive loss of contacts, and difficulty starting or maintaining emotional relationships
Intoxication requiring care in the emergency department and/or recurrent intoxication	Sleep disorders Feelings of shame Feelings of loneliness Burnout Irritability	Deterioration of the relationship with primary support networks Work absenteeism, especially at the beginning of the week
Injection-related complications	Emotional lability	Difficulty taking up previously enjoyed, pleasurable activities

Given the diversity of the actors involved in caring for chemsex users, it is essential to act as part of a network. An initial approach could involve defining levels of intervention and the necessary agents and actions to establish a therapy circuit providing integrated care with current resources (without duplicating actions) and identifying areas for improvement.

Models for an integrated approach are available. These propose simplifying the care circuit for the user by offering different types of care at the same center. One of the ways to start such a system is by bringing specific professionals closer to other services that already have access to persons who engage in chemsex. This can be based on the following steps:

- Via teams specialized in addiction, whose professionals travel to provide care in community organizations and STI clinics
- Via teams of professionals/peers/volunteers from community organizations who provide care to users who already attend infectious diseases services/HIV units, addiction centers, and other public health services
- A more complete model would involve integration of a single service for most aspects of care (eg, HIV, sexual health, mental health, addictions, psychosexual therapy)

Furthermore, in some cities, specific addiction centers have been appointed as reference centers, with most referrals being directed towards these services.

Table 2				
LEVELS OF INTERVENTION				
	Prevention and screening	Identification and initial approach	Motivational approaches, process of accompanying user	Treatment of addictions and sexual health, mental health needs
Where?	Community bodies STI centers Infectious diseases department/HIV unit	Community bodies STI centers Infectious diseases department/HIV unit Hospital emergency department Primary care centers	Community bodies STI centers Infectious diseases department/HIV unit Primary care centers Mental health centers Addiction centers	Addiction centers Community bodies Infectious diseases department/HIV unit STI centers Mental health centers
	Information, guidance, and counseling Reinforcement of protective behaviors Psychological education	Identification of problematic drug use patterns and/or high-risk sexual practices Diagnosis of STIs, hepatitis, and HIV and other diseases Treatment of acute situations: infection and/or intoxication Referral and coordination with other resources	Accompanying users Motivation and referral to the appropriate resource Facilitating an appropriate space for listening that is private, safe, and inspires trust for management of emotional aspects and restructuring of cognitive areas Alternative leisure options	Treatment of substance use disorders and drug-related sexual disorders. Treatment of mental disorders. Approach to other areas affected (personal, family, work) Management of emotions and behaviors Follow-up Alternative leisure options Referral and coordination with other resources

Approach?	Risk reduction (sexual practices and drug use) Approaches to abstinence	Risk reduction (sexual practices and drug use) Approaches to abstinence	Risk reduction (sexual practices and drug use) Approaches to abstinence	Treatment aimed at: Reduction of risk and harm (sexual practices and drug use) Approaches to abstinence
Type?	Individual intervention Group intervention Intervention with peers Face-to-face and online	Individual intervention Group intervention Intervention with peers Face-to-face and online	Individual intervention Group intervention Intervention with peers Face-to-face and online	Individual intervention Group intervention Outpatient intervention Intervention via admission Intervention with peers Face-to-face and online

7.4. The role of community organizations

Community organizations promote and facilitate the participation of the community at large in the detection of needs, design of response strategies, and taking of decisions on the implementation of these strategies. Community organizations have a long history in the care of sexual health from within and for the LGBTQ+ community. Some play a key role in the response to chemsex, in terms of both care for users and prevention.

One of the main approaches to chemsex made by community organizations is the creation of peer spaces to facilitate collection of key information provided by users. This information has many uses, including the following:

- improving knowledge of drug use in sexual contexts and its significance
- detecting users' needs
- facilitating user participation in the creation of adapted strategies to reduce harm in drug use and in sexual practices
- selecting more effective communication channels to reach this target population

Community organizations can also provide a framework for action based on rights and an integrated care approach that takes a holistic view of the person, including psychosocial, physiological, and medical aspects. Thus, care not only considers drug use and the contexts in which this takes place, but also includes other user needs that could affect the way users experience their sexuality.

Community organizations are usually characterized by free and confidential care services, thus making them easier to access. The fact that this care is provided within a framework of equality, with shared codes and context, makes it easier for users to feel comfortable, without the fear of being judged when they talk about their sexuality and the emotions that move them.

One of the contributions of community organizations is the fact that they take into account the experiences of users with respect to their sexual orientation and/or gender identity. As such, they offer the possibility of an in-depth approach not only to the person's behavior or harm reduction, but also to how they live their sexuality, with emphasis on key aspects of health, satisfaction, and care.

Community organizations can inform users about available public resources according to their needs (eg, 75% of those who use the "ChemSex Support" service of Stop Sida were unaware of other resources to address their addictions) (13) and can intervene to facilitate access and permanence in these resources, for example, through direct referral channels to establish relationships with health care agents and providing users with contact persons. Such organizations may also accompany users, when necessary.

Other options for collaboration include enabling (through the organization itself) the first contact with a health professional at the addiction center or addressing potential difficulties that could arise in this resource. The organization could also help by acting in such a way that

health agents from community services can carry out interventions in STI centers, primary care centers, and addiction centers.

It is necessary to highlight the role of community organizations and their teams in the response to chemsex. Both community organizations and other reference resources should be mutually aware of the services they offer, thus encouraging bidirectionality in referrals and teamwork that is coordinated and complementary.

Some community organizations provide information on LGBTQ+ diversity, chemsex, and the cultural competence necessary to address the phenomenon. For example, Stop Sida has participated in the creation of HIV units at the Can Ruti and Clínic hospitals in Barcelona and of references in primary health care STI services (14). Apoyo Positivo has provided training sessions in infectious diseases departments/HIV units, emergency departments, and other healthcare resources, as well as in LGBTQ+ organizations (15). These advances have in turn led to improved coordination and referral of users between services and the development of common protocols.

Community organizations can also disseminate strategies for reduction of specific harm via informative web pages and campaigns (eg, [ChemSafe](#) and [chemsex.info](#)) and in a more personalized way, through people who engage in or have engaged in chemsex. Their experience, knowledge, and profile enable them to communicate with the user as peers and to support them by providing tools to improve autonomy in decision making. This includes the possibility of training peers as health agents who can intervene in settings where users engage in chemsex, thus facilitating access to information and resources.

Community organizations have broad experience in bringing people closer to information and communications technology. This experience could be shared with services in the health system to expedite access to the target population. In this sense, recommendations can be made to facilitate this process without generating the user's rejection: interventions should not be invasive and should try to get closer to the user by being available and visible, from a perspective that facilitates informed decision making, without advising or deciding for him.

7.5. Other approaches: group care, peer interventions, online interventions, and involvement of partner, family, or friends in treatment

Group interventions

Group therapy is widely used in the treatment of addiction. Studies on prevention of relapse based on cognitive-behavioral therapy (16) show that there are no significant differences in effectiveness between the individual and group formats (alcohol and other drugs), although in the case of smoking, the group format has proven to be better than the individual format. Therefore, and despite the scarce scientific literature on specific groups for treatment of chemsex, group therapy should be taken into consideration as a tool for improving the health and quality of life of users (17).

If we accept that the user must choose his objectives for therapy, then many may not opt for abstinence as a first option in the initial stages. Instead, they may prefer to avoid or reduce the possibility of problems associated with use. Other users may decide at the outset that their objective is sustained abstinence (more common among users who are highly dependent and who have already made unsuccessful attempts to change). Therefore, a possible strategy could be for users to work in separate groups with the objective of reducing risk or achieving and maintaining abstinence.

The advantages of group interventions are as follows: increased linkage and frequency of follow-up of users at the center; improved adherence to pharmacologic treatment (where applicable); and sense of identification, cohesion, and belonging to the group. Groups can favor the discussion of “taboo” topics associated with sexuality in GBMSM (18) and can enable the user to overcome the feeling of being the only one being treated for chemsex. They can also facilitate the mirror-window effect in learning and help the health professional to anticipate possible relapses.

Below, we provide a small summary of topics or areas that should be addressed in group sessions, although these should not necessarily be followed in an established and systematic order, since they may arise from the concerns, needs, and priorities shared by the attendees or as a result of group experiences and dynamics.

- Proposed subjects for groups aiming to reduce risks:

Education on substance use (the search for pleasure, minimizing the dangers and risks associated with use). Sex and emotional education for GBMSM (17). Use of dating apps. Prevention and treatment of STIs. Love, affection, belonging, and family. Homophobia and internalized homophobia. Harassment, fear, and trauma. Other life and psychosocial difficulties (unemployment, feeling of separation from one’s roots, family and social isolation). Physical and mental health. Seeing abstinence as a possibility that has not been previously considered.

- Proposed subjects for groups aiming for abstinence from chemsex:

Prevention of relapses: Encouraging protective factors and reducing risk factors. Strategies for coping and problem solving. Social skills and interpersonal effectiveness. Aspects associated with sexuality, including sex without drug use. Alternatives for enjoyment of leisure time. Love, affection, belonging, and family.

Regardless of the type of group, a series of general common rules should be respected, such as respect (listening, avoiding judgment, avoiding providing solutions, not interrupting when someone is speaking, avoiding any other form of discrimination), commitment, punctuality, and confidentiality.

Peer interventions

Personal experience of coping from peers can act as a tool for change. This approach uses modeling techniques, which may help in the acquisition of new behaviors when the model is perceived as being representative of the user himself. In order to carry out the process of partnering, peers trained as health agents should undergo advanced training in counseling techniques and intervene from a perspective of unconditional acceptance and active listening without judging.

Peers can intervene in activities aimed at reducing risks or abstinence. Depending on the objectives, the various aspects to be addressed include the following: adapting information on the drugs used, their main effects, and risk situations; improving the perception of risk; facilitating reflection and decision making with respect to the user's sexual-emotional life and practices related to chemsex; promoting healthy sexual-emotional behavior and other healthy lifestyle habits; facilitating adaptive coping with sexual orientation or the fact of living with HIV; exploring alternative, healthy leisure options (1). Peers trained as health agents can act in outreach activities (eg, with sex workers) or at the head office of community organizations and other services. They can also intervene as on-line health agents by offering information via internet or mobile dating apps.

Involvement of family and friends in treatment

Support and empowerment of family members to improve the process of change is a key area that should be taken into account in interventions for addiction (19). However, given the nature of the problem, doubts may arise as to whether to include family members or about how to do so in the case of interventions with people who engage in chemsex.

In cases where the person who asks for help has not shared his difficulties with people from his immediate circle, he should be encouraged to take decisions in this respect. The objective would be to make him aware of the possible benefits of external support elements from his family or circle of friends and facilitate the development of the necessary communication skills should he decide to share his situation with the persons close to him. If the person decides to include his family, partner, or friends in the process, then he will always be consulted about the objectives to be set and the extent to which he wishes these individuals to participate in the intervention.

Interventions that involve family include understanding the nature of the problem and providing information so that, in agreement with the user, they can collaborate in controlling stimuli, reinforce the advances made, and identify signs of relapse (20). Similarly, interventions can be made with family members or the user's partner when conflicts between the user and these individuals act as triggers for the problem or maintain the problem.

Parents can show and express love and care. By investing time in their parent-child emotional relationship, they can help to reaffirm their love and mutual acceptance. In order to build relationships of trust and mutual support, it is very important to set limits and communicate

them clearly.

Partners and parents can work on various aspects of active listening without judgment. It is important to understand that no-one else is responsible for the user's decisions and to evaluate to what extent it is possible to influence a person. If a user is going to continue engaging in chemsex, then the partner and friends can help by agreeing on limits that will help to limit risk (21). Expressing affection and understanding can help to strengthen bonds.

Online care

Pilot experiences have been evaluated in England (22). These include programs for online group therapy and one-on-one counseling, to which users can connect via their mobile phone, computer, or tablet device. This type of program may prove beneficial for persons who live some distance from care centers or for those whose work timetable or other reasons prevent them from attending alternative services.

In addition, online interventions could prove beneficial for persons who are not yet clear about whether they wish to make changes and are therefore reluctant to engage in face-to-face counseling. Options such as online care could help users to become aware of any problems.

7.6. Information systems and epidemiological surveillance tools

The National Strategy on Addictions 2017-2024 (23) indicates that it is necessary to have epidemiological surveillance tools for current and future patterns in substance use and new addictions and associated health care and social problems. Thus, one of their strategic objectives is to develop and reinforce information systems and epidemiological surveillance tools in order to obtain and analyze current data on the phenomenon of addiction, its patterns and trends, and its impact on public health.

In the case of chemsex, current surveillance and information systems prevent us from knowing its consequences in terms of health and the needs for care arising from it. Therefore, they must be updated. The process of updating requires interinstitutional coordination and consensus efforts so that a consistent criterion for the definition of chemsex can be identified.

Implementation of these changes will require the participation of the agents involved, as well as the willingness and institutional support of technical staff and political decision makers. The parameters that help to highlight the impact of chemsex on health include demands for treatment of affected individuals in addiction centers and hospital emergency departments. The number of deaths related to the phenomenon should also be analyzed.

As for screening in chemsex, STI clinics, infectious diseases/HIV departments, and addiction centers, as well as LGBTQ+ organizations and other community organizations have already

implemented programs based on questions for routine detection of chemsex among their users.

As an example of data collection, Madrid City Hall has taken the pioneering step of implementing a process via which addiction centers offer the possibility of addressing the demand for treatment of chemsex users separately. The joint project between *Centre d'Estudis Epidemiològics sobre les Infeccions de Transmissió Sexual i Sida de Catalunya* (CEEISCAT) and the Stop Sida association has made it possible for the latter to use a new system for data collection based on a custom, validated questionnaire that can be administered during the first contact with users and updated every 6 months.

The health emergency resulting from the COVID-19 pandemic and its impact on chemsex users present new challenges when tackling this problem, many of which are associated with limitations in mobility and risk of transmission of the virus. This emerging situation saw the dissemination of specific informative materials and materials on prevention for chemsex users within the space of a few weeks (24-27).

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8. APPROACH TO CHEMSEX IN CARE SETTINGS

8.1. Addiction centers

Substance use disorders and behavioral disorders are complex conditions requiring an integrated approach (1) that is personalized depending on the severity of the addiction and the user's personal and social situation.

Addiction centers are integrated health care services comprising multidisciplinary teams that provide care to drug users from a biopsychosocial perspective and that have evolved to cover other types of addiction. Today, many such centers care for people with problems related to all types of substances, inappropriate use of information technology, and gambling problems (online and in-person). They also provide help to adolescents and young persons, as well as services such as family counseling.

Their teams usually comprise professionals from disciplines such as medicine, psychiatry, nursing, social work, social education, and occupational therapy. They are distributed throughout the country based on population and accessibility and provide specialized outpatient health care, diagnosis, and follow-up of users with addiction-related problems.

Referrals to these centers are often by the family physician. However, in centers with care programs for chemsex users, referrals are often from infectious diseases departments/HIV units or STI clinics (where users are screened for use of drugs in sexual settings). Other referrals are from LGBTQ+ community organizations, which are reference resources for many gay men and where it is common to speak openly without taboos about sex and drug use. Furthermore, users can also gain access to these centers on their own initiative.

The approach to the chemsex user in addiction centers should be based on an empathetic interview style—where the interviewer does not question, judge, or show surprise/rejection—or on a motivational interview style. The main objective should be to bond. The intervention should include the following:

- Diagnosis according to the diagnostic criteria of DSM5 for substance use disorder (2). Evaluation of polydrug consumption. Evaluation of areas affected.
- Evaluation of the link between substance use and sex life, motivations, and time using drugs. Assessment of whether all sexual relations are under the effect of substances, risk behaviors and practices, and perceived needs.
- Diagnosis of psychiatric disorder, if applicable.
- Request for blood test to determine the user's serologic status, if this is relevant.

Once the first visits have been held with each of the professionals, an individual therapy plan should be drawn up in conjunction with the user. This should set out the guidelines for treatment, making it possible to approach the problem from 2 perspectives:

For some GBMSM, the objective is to make use and sexual behaviors less risky and with fewer negative effects, as well as to attempt to make such practices more sporadic, maintain control, and try as much as possible to improve health and quality of life. In this case, it is important to work on gaining greater knowledge of substances and their interactions, management of craving, the meaning of addiction, and its association with behavior.

However, for others, the objective is to give up drug use completely during sexual encounters. In order to become abstinent, some users decide to give up sex temporarily. Sober sex may require a medium- to long-term effort, and the process may involve relapses. It is important to remember that substances such as alcohol or tetrahydrocannabinol (THC) play a role in reducing inhibitions and facilitating relapse.

A study performed at the Arganzuela Addiction Center in Madrid in 2016 aimed to describe the situation of users who attended the center with addiction problems. The authors found that 100% of users took multiple drugs (combining mephedrone with GHB/GLH and poppers in 65% of cases). The users were aged 24 to 54 years (median, 40 years), with 60% educated to higher level, compared with the remaining 40%, who had been educated to secondary level. Almost three-quarters (73%) were actively employed, and 53.33% lived alone. The mean interval between starting to use drugs and requesting treatment was 17 months, and users already had a well-established addiction (3).

The intervention also involves work on aspects associated with sexuality and personal development: sexual health, outness, history of mobbing or bullying, internalized homophobia, family support/uprootedness, sadness over seroconversion, lack of affection, feelings of loneliness (1), and strategies for conflict resolution and assertiveness. One of the areas to explore is exactly what motivates the user to use drugs for sex.

Health professionals should be trained to talk about sex, sexuality, and sexual practices in general, and especially those related to chemsex, without the user feeling judged. Therefore, it is necessary to reflect on one's own beliefs and prejudices about sex and sexuality and defuse attitudes and thoughts that may interfere negatively in the care and support offered. The fact that health professionals are acquainted with related terminology and are knowledgeable about chemsex may help users to feel more receptive to help.

Similarly, it may be possible to provide group interventions and, where necessary, temporary admission can be offered as a support to treatment.

8.2. STI clinics

At STI clinics, it is possible to identify persons who take recreational drugs for sex through the clinical history. Thus, an initial evaluation can be made of substance use in association with

sex and participation in chemsex sessions. This should include questions on the use of drugs as part of standard history taking.

Users who engage in chemsex should be evaluated specifically in these centers and offered screening for STIs/HIV infection at appropriate intervals, always taking into account both clinical and epidemiological suspicion. In order to determine the type of test and frequency, various factors, such as the number of sexual partners, types of sexual practice, and use of condoms must be taken into consideration.

Contact tracing is important in order to make an early diagnosis and interrupt transmission chains. Similarly, preventive measures should be intensified in order to avoid acquisition and transmission of STIs.

It would be appropriate to improve access to centers by extending timetables, eliminating potential administrative barriers, and providing care without appointment in urgent cases or for users who are already known and present higher-risk behaviors.

Finally, users in whom problematic use of recreational drugs is detected will be referred to another center for specialized evaluation. Every attempt will be made to ensure coordinated multidisciplinary follow-up so that satisfactory referral can be confirmed (1).

8.3. LGBTQ+ NGOs and other community organizations

LGBTQ+ community organizations have been pioneers in offering services aimed at addressing the care needs of chemsex users. The fact that this care is provided by peers who share cultural codes and references makes it easy for users to feel comfortable without being judged when talking about their sexuality and their underlying emotions.

One of the contributions of these services is that they take into account the life experiences of users with respect to their sexual orientation and/or gender identity, thus making it possible to address in depth not only the person's behavior or harm reduction, but also how they experience their sexuality, with detailed analysis of key aspects of health, satisfaction, and care.

Furthermore, these organizations also act during nonproblematic phases of use, often via peers trained as health care agents, with online and face-to-face interventions to reduce risk and harm, running and publication of campaigns, and distribution of questionnaires that enable the user to understand whether his use is problematic or whether he requires support.

Treatment of chemsex users should start with an understanding of the norms and social and

community values underlying the idiosyncratic nature of the gay population; hence the importance of appropriate cultural competencies when addressing HIV serostatus, substance use, and lifestyle.

The approach adopted by community organizations in this area includes the use of socioverbal and cultural elements that are characteristic of the group, addressing aspects related to sexuality and construction of masculinity and other traits reported in this setting (eg, cult of the body beautiful or sexual activity as a measure of success).

Community services coordinate with mental health resources and care for addiction, so that users who require it can be referred, even in severe cases where it is necessary to address urgent health needs. Community centers can develop 2-way protocols that facilitate mutual knowledge between the different resources (eg, mental health centers, addiction centers, social workers), which together make it possible to draw up personalized intervention plans and improve eventual incidents.

8.4. Infectious diseases departments/HIV units

Given that these departments/units focus mainly on persons with HIV infection, they are a key player in the detection of chemsex among HIV-infected gay men. Departments involved in the implementation of PrEP in the hospital setting can also identify chemsex users in this population group.

When unusual behaviors are observed during follow-up (eg, missing appointments, viral rebound, poor adherence to treatment, problems with one's partner or employer, other STIs, symptoms of anxiety/depression, visits to the emergency department, or change in attitude towards one's doctor), every attempt should be made to rule out drug-related problems.

A proactive approach during the clinical interview, which is marked by respect for the user's privacy and an empathetic attitude, would enable an appropriate relationship based on respect and trust, thus making it possible to identify potential cases. One means of showing the user that he is in a safe space where he can talk about drugs and sex with a health professional is by ensuring that leaflets and posters are visible in the clinic.

The initial history for all new patients should include questions aimed at detecting whether they use drugs during sex. This first interview can also help to identify patients who are more likely to engage in these practices in the future, generally young, sexually active homosexual or bisexual men. If they report not having engaged in chemsex to date, they should be followed up to determine their willingness to be involved in or attitude toward these types of practices. If they report having engaged in chemsex, follow-up will make it possible to monitor the patient's progress and to consider appropriate interventions where applicable.

Talking about chemsex can be favored by introducing the subject using formulas such as “I’d like to talk about something that is sometimes hard to talk about” or “Recently, I’ve been seeing persons who use drugs during sex” before moving on to more direct questions such as “Have you ever used drugs before or during sex?” “How about during the last 6 months?”. If the user answers in the affirmative, the history should be completed with a series of additional questions that make it possible to evaluate the type of use and the user’s risk profile, for example, “What drugs have you taken (mephedrone, GHB/GBL, crystal meth)?”, “Have you ever injected drugs?”, “Do you think your use is OK for you or would you like to reduce it or stop altogether?”, “When was the last time you had sex without using drugs?”, “Is your level of use causing problems in your sex life, family life, with your friends, or at work?”

All users who engage in chemsex should undergo additional medical follow-up. This should comprise screening for STIs and evaluation. STIs should be screened for when the user presents symptoms or, if he is symptom-free, every 6 months. Screening should include serology for syphilis, hepatitis C, and, in areas with a high incidence of STIs, PCR with 3 samples (urethra, anus, and pharynx) to detect the main causative agents (*Gonococcus*, *Chlamydia*). All chemsex users should be offered screening for anal dysplasia caused by human papillomavirus according to local protocols, as well as the tetravalent vaccine where indicated. In the case of centers whose care portfolio does not include any of these tests, referral structures should be in place (where possible) to ensure appropriate follow-up.

Management of persons who engage in chemsex via hospital HIV units should be aimed at minimizing the personal and community risk related to use and associated sexual risk practices. Therefore, every effort should be made to create a space for reflection where the person can become aware of the risks. The health professional can provide plans for reducing risk, including a description of the effects and complications most frequently associated with use. Similarly, information should be provided on potential interactions between the drugs used, antiretroviral therapy, and concomitant treatments.

Second, the health professional should identify whether the user has a problematic use profile based on key aspects such as defining the frequency of use and changes therein (increased frequency, amount, or initiation of polydrug use), identification of acute complications stemming from use (eg, loss of consciousness or psychotic symptoms), detecting STIs or other medical problems stemming from drug use, identification of psychological problems (eg, aggressiveness, nervousness, anxiety, depression, suicidal ideation, mania), and identification of social problems resulting from use (eg, at work, academic performance, family problems). While follow-up of chemsex users can be the same as that of other patients with HIV infection,

where use is problematic, the physician should consider more frequent follow-up (every 2-3 months) in order to support the appropriate referral process.

Users with problematic drug use, especially those with psychological or social complications related to use, should be referred to an addiction center, as well as to other services depending on their needs.

This period is particularly sensitive and risky for the user; therefore, until he receives the necessary care to address his drug use or problematic behaviors, he should have preferential access to professionals from the HIV unit, if possible, without the need for an appointment. Finally, if the user experiences suicidal ideation or psychotic symptoms, he should be referred urgently to an emergency department that provides psychiatric care.

When situations with a potential risk of transmission of STIs, HIV, or HCV are identified, it is important to complete contact tracing and take effective, early diagnostic and treatment measures to break the chain of transmission.

8.5. Mental health teams

Mental health teams are usually found in adult mental health centers and child and adolescent mental health centers. Although these are sometimes situated in hospital outpatient clinics, they are mainly found in the community or close to primary care centers or even separately from other health care facilities. Access to mental health teams is usually via referral by primary care teams, a hospital, or psychiatric emergency services. Persons with mental illness are advised to visit their nearest health center.

Patients are generally referred to mental health teams when they present psychiatric conditions that require specialized care, such as psychotic disorders, mood disorders, severe anxiety disorders, or abnormal behavior. While these disorders may be associated with substance use, the patient may also have comorbid conditions, that is, a diagnosis of mental illness, as well as a diagnosis of substance use disorder. In any case, co-occurrence of both diagnoses—known as dual pathology—reduces the patient's likelihood of improvement. In the case of substance use in chemsex, some users already have an underlying psychiatric condition that is complicated with drug use. Similarly, drug use may lead to the psychiatric condition.

Dual pathology in chemsex users requires simultaneous management of the psychiatric condition and of the substance use disorder in order to sufficiently improve the effectiveness

of treatment via coordination with teams specialized in the management of these disorders at reference addiction centers (drug dependency/addiction centers, care and follow-up centers, addictive behavior units). Persons with dual pathology should be treated at the same facility or by the same team, irrespective of whether this is a mental health team or an addictive behavior team, rather than being managed by 2 facilities/teams.

Mental health facility networks usually include—in addition to mental health centers—day hospitals, community rehabilitation services, day centers, and occupational centers. The professional from the reference mental health center of the person with mental illness must decide at each time point on the most suitable approach for the individual in order to ensure optimal improvement, stabilization, recovery, and rehabilitation. While substance use is generally an exclusion criterion for these facilities, in situations of abstinence or controlled use, some chemsex users with dual pathology could benefit from programs at the centers.

Although psychopharmacologic treatment is very useful for achieving symptomatic improvement in most mental disorders, the approach is multidisciplinary, and mental health teams include nurses specialized in mental health, psychology, psychiatry, and social work. Some centers also offer help from professionals such as rehabilitation staff, educators, social integration specialists, and educational psychologists.

Stigmatization is of the main limitations to the use of mental health teams by chemsex users, since mental illness carries a negative connotation that makes it difficult for the patient to accept his/her diagnosis. This, in turn, could perpetuate psychiatric symptoms and lead to a poorer general prognosis. Therefore, professionals from other areas should make every effort to facilitate and reinforce the need for care of mental health problems in reference teams.

The aspects to be evaluated in interviews with chemsex users include ensuring that the interview is undertaken carefully and empathetically, avoiding value judgments and listening openly and actively (4). The general history should include active questions on previous STIs, including HIV and HCV infection, thus paving the way for questions on sexual orientation and number of partners. A complete sexual history of the user would be desirable. Similarly, it would be necessary to investigate substance use and associated circumstances, as well as to evaluate at which stage of change the user finds himself.

In order to determine whether a person is affected by a mental disorder, it is important to determine whether the mental disorder is concurrent with or has been induced by substance use or whether it appeared previously. If a disorder is identified, it can be addressed using psychotherapy or drug therapy. Useful tools in this approach include elements of the motivational interview and affirmative sex therapy. If a substance-related disorder is

detected, then the patient should be managed for dual pathology, and both disorders should be treated simultaneously or referred to other facilities.

8.6. Hospital emergency departments

Management of chemsex users in hospital emergency departments could be a consequence of medical or psychiatric complications or even of severe conditions that require admission to the intensive care unit. The main reasons these patients are managed in the emergency department are as follows:

Physical complications:

- Injuries to the penis, tears in the anal mucosa, intestinal perforation, sexually transmitted diseases in the genital and anal areas, oral mucosa, or other.
- Abscesses on the limbs, penis, or other areas as a result of injecting drugs (*slamming*)
- Severe intoxication and coma requiring emergency interventions, intubation, and referral to the intensive care unit.
- Delirium (acute confusional state)
- Complications resulting from the drug used or a combination of various drugs, as well as interactions between drugs or between drugs and medication (see relevant chapter)

Psychopathological complications:

- Psychomotor agitation, acute psychosis, suicidal ideation or attempts.

Other:

- Request for postexposure prophylaxis
- Evaluation of possible sexual abuse/chemical submission

A proper approach in the emergency department requires professionals working in the unit to have the necessary attitudes, skills, and knowledge to intervene in the following areas (6):

- Detection and evaluation of complications related to chemsex
- Treatment of acute complications
- Brief intervention in the emergency department
- Appropriate referral, where necessary, to resources such as mental health, addiction centers, etc.

The need for a multidisciplinary approach in the emergency department is very important, since this is an area where the user can become aware of a problem he would not have seen otherwise. Such was the case of a patient referred from the Positive Support organization to

the emergency department, where he was evaluated and initially admitted to the ICU, then to internal medicine, and finally to psychiatry. After discharge, the patient was sent to the community body itself for follow-up (7).

Few studies have evaluated the reasons for emergency care because of substances used in chemsex. One was a retrospective analysis of episodes of intoxication caused by drugs of abuse in HIV-infected users who attended the Emergency Department of Hospital Clínic, Barcelona between January 2016 and June 2017 (8). The substances associated with chemsex were defined as amphetamines, GHB, poppers, and ketamine. Of 101 users with a mean age of 37 years, 93 (92%) were men. Of these, 56 (60%) were GBMSM. Among this population, the substances that most commonly led to acute intoxication were GHB (60%), amphetamines (56%), and cocaine (49%). The prevalence of chemsex was 87%. The main reason for use was leisure in 96 cases and attempted suicide in 5. Eleven patients had to be admitted to the ICU, and 2 patients from the sample died. Similarly, Alonso et al (9) reported a series of cases seen at Hospital Clínic, Madrid, where they highlight the need for detection of chemsex-related substances, especially mephedrone and other cathinones, based on specific toxicological tests that are not normally used in most hospitals. The authors recommend drug screening for all HIV-infected patients who go to the emergency department with signs of acute intoxication. This would make it possible to identify the drugs used and to apply the appropriate therapeutic measures immediately, as well as to ensure subsequent outpatient management with the aim of adjusting ART and thus avoiding interactions.

Studies of this type began to appear in Spain after the publication of 2 letters to the editor in the journal *Adicciones*, where chemsex (10) is proposed as an emerging phenomenon in Spain and its repercussions for users' mental health are described. The reply was made by Redondo et al (11) from Hospital Clínic, Madrid, who suggested that it was necessary to determine the substances used for chemsex during the assessment in the emergency department, potential interactions with ART, risks of STIs (including HIV and HCV), and evaluation of the use of PrEP.

Studies performed in other countries reflect hospital or emergency department care for patients with intoxication associated with *club drugs* such as cathinones, GHB, and methamphetamine, although they do not reflect the context of use. Therefore, it is not possible to confirm that they are used during chemsex. Of note, in the *ChemSex Study*, Bourne et al (12) reported that in their sample, most intoxications requiring medical care were due to GHB. The users described their experience in hospital as being very distressing and felt that hospital staff were censorious, thus compounding their own feelings of shame and horror.

Recommendations for management of the chemsex user in the emergency department:

- Together with the physical examination, it is important to take a clinical history without moral judgments, in a respectful and caring manner.

- Ask specifically about substance use, context, risk practices, and perception of risk.
- Assess the possibility of having experienced sexual abuse or attack.
- Consider that intoxications caused by new drugs may not be detected in standard toxicology work-ups.
- Consider a syndrome-based approach, taking polydrug use into account.
- Know the substances and their effects, as well as interactions.
- Evaluate the physical consequences: physical injuries, abscesses, overdose, coma.
- Evaluate psychiatric consequences: addictive disorders, psychosis, suicidal behavior.
- Evaluate the possibility of mental/substance use disorder: interdepartmental consultation with psychiatry.
- Evaluate admission to hospital: ICU, internal medicine, psychiatry.
- Provide options for therapy: community organizations with services for the care of chemsex users, mental health, addiction centers, sexual health clinics, infectious disease departments/HIV units.

According to the recommendations of the *Neptune* guidance on new psychoactive substances and club drugs (6) (not specifically for chemsex users), it would be advisable to refer patients to addiction centers in the following cases:

- Intravenous drug use
- Inability to reduce drug use after having tried.
- Repeated visits to the emergency department with mental, physical, or psychological health problems or owing to the user's social situation.
- Perceived need for help by the user or request by the user to refer his case to an addiction center.

These guidelines also recommend taking advantage of a brief intervention in an empathetic and warm setting and offering brief information based on a specific model, such as the FRAMES model (6). This includes the following aspects:

- Feedback from the professional caring for the person with respect to information on damage and risk.
- Returning responsibility to the user for his behavior and his decisions on substance use.
- Offering clear, impartial, and objective advice with respect to reducing the damage associated with use.
- Offering a menu of therapeutic strategies and options.
- Boosting the user's perception of self-efficacy.

Table 1 shows the symptoms of the various syndromes associated with intoxication by emerging psychoactive drugs and other classic drugs adapted to the substances used in chemsex.

Table 1. Guiding symptoms of various intoxication syndromes, emerging substances, and “traditional” substances

SYNDROME	SYMPTOMS	SUBSTANCES
Adrenergic syndrome	Psychomotor agitation, tachycardia, AHT, mydriasis, arrhythmia, intense vasospasm that can cause acute myocardial or cerebral infarction.	Cocaine Methamphetamine Phenylethylamines and derivatives (amphetamines and methamphetamines) MDMA Piperazines Dietary supplements and energy drinks based on ephedrine, caffeine, theobromine, guaraná Cathinones: mephedrone, 4-MEC, 3-MMC, other Methylphenidate
Serotonin syndrome	Altered mental status, restlessness, myoclonus, hyperreflexia, diaphoresis, chills, shivering, diarrhea, loss of coordination, hyperthermia	Mephedrone, other synthetic cathinones MDMA Amphetamine derivatives
Hallucinatory syndrome	Cognitive, behavioral, and sensory abnormalities and possible status dissociatus.	Cannabis and synthetic cannabinoids Vegetable extracts: tryptamines (ayahuasca, mushrooms, iboga) and phenylethylamines

		(mescaline, peyote, and San Pedro cactus) Synthetic drugs Dissociative: ketamine and derivatives, phenylcyclidine
Sedative-hypnotic syndrome	Diminished level of consciousness, confusion, hypoventilation, bradycardia, hyporeflexia, hypothermia, coma, death	Alcohol Benzodiazepines GHB Opiates Ketamine and derivatives

Source: Adapted from (13)

8.7. Primary care

Primary care physicians can play a major role in the detection of and approach to problems associated with the use of drugs in general and with chemsex in particular (1,14), especially in those areas where the phenomenon is more prevalent. The primary care setting is characterized by a series of aspects that make this approach easy, as follows:

- **Accessibility:** Young adults rarely visit health services, although their first contact is usually via primary care centers.
- **Longitudinal care:** Health professionals usually receive numerous visits during a patient's lifetime, thus enabling them to establish a relationship of trust.
- **Integrated approach:** Considering health from biological, social, and psychological perspectives through multidisciplinary teams, eg, family physicians, pediatricians, nurses, social workers, and social work assistants.
- **Specific training in communications techniques:** This aspect, which is characteristic of the primary care setting, facilitates the approach to intimate, private areas, for example, drug use and sexuality

The barriers perceived by health professionals include lack of time and specific knowledge, which apply to all health problems. However, appropriate interview techniques and basic notions of the phenomenon mean that primary care could be very efficient for treating drug use and chemsex.

For many users, a suitable interview concerning drugs and sexuality (with no moral or paternalistic tones, avoiding value judgments, attention to nonverbal language, and open questions) could be the first opportunity for evaluating the potential presence of a problem.

The growing number of professionals trained in motivational interview techniques could facilitate higher-quality and more efficient approaches and evaluations. Joint evaluation on

aspects directly related to the person, substances used, and contexts of use, as well as the person's experience with these contexts, his motivation for change, and his expectations could facilitate referral to the most appropriate resource.

The community aspect of primary care makes it possible to coordinate with specific social-health resources in the area, including forging links with community organizations that work specifically with this population.

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9. ABBREVIATIONS

AHT	arterial hypertension
AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
BASHH	British Association for Sexual Health and HIV
BB	bareback (condomless anal intercourse)
BHIVA	British HIV Association
CD4	CD4 lymphocytes
CEEISCAT	Centre d'Estudis Epidemiològics sobre les Infeccions de Transmissió Sexual i Sida de Catalunya (Epidemiological surveillance, monitoring and evaluation of HIV, STIs and viral hepatitis in Catalonia)
CLIA	chemiluminescent immunoassay
DJs	disc jockey
DSM-5	Diagnostic and Statistical Manual of Mental Disorders
EIA	enzyme immunoanalysis
EMIS	European MSM Internet Survey
G	slang term for GHB
GBMSM	gay, bisexual, and other men who have sex with men
GBL	gamma-butyrolactone
GESIDA	Grupo de Estudio de la Sociedad Española de Enfermedades Infecciosas y Microbiología Clínica (Study Group of the Spanish Society of Infectious Diseases and Clinical Microbiology)
GHB	gamma hydroxybutyric acid
HBsAg	hepatitis B Surface antigen
HAV	hepatitis A virus
HBV	hepatitis B virus
HCV	hepatitis c virus
HIV	human immunodeficiency virus
HPV	human papillomavirus
HSV	herpes simplex virus
ICD	International Classification of Diseases
IGG	immunoglobulin
LGBTQ+	lesbian, gay, bisexual, transexual, queer and other
MDMA	3,4-methylenedioxymethamphetamine (ecstasy)
MEIA	microparticle enzyme immunoassay
mg	milligrams
mL	milliliters
MSM	men who have sex with men
NGO	nongovernmental organization
PCR	polymerase chain reaction

PnP	party and play
PrEP	pre-exposure prophylaxis
RPR	rapid plasma reagin (test for detection of syphilis)
STI	sexually transmitted infection
TDF	tenofovir disoproxil fumarate
THC	tetrahydrocannabinol
ICT	information and communications technology
ICU	intensive care unit
IDU	injecting drug user
WB	Western blot
WTTC	World Travel & Tourism Council
3-MMC	3-methylmethcathinone
4-FMC	4-fluoromethcathinone or flephedrone
4-MEC	4-methyl-N-ethylcathinone

10. GLOSSARY

SLANG TERMS

Slang expressions used to refer to chemsex

Session, high, chill, chillout, party and play, “being on a session”, “getting high”, “inviting to chill”...

In written language, codes are also common, for example, candy emoticons.

Formulas such as *chems, PnP (party and play), H&H (high and horny)*.

Slang terms for substances

(see full table in Section 1.3.)

Sex practices

<i>BB, bareback</i>	condomless anal intercourse
<i>Cruising</i>	hitting on someone outdoors or in a club
<i>Fist, fisting</i>	anal intercourse with a hand or fist
<i>Water sports</i>	sex games with body fluids
<i>Slam, slamming</i>	use of injected drugs

LINKS OF INTEREST

There is a wide range of material concernin information and prevention in chemsex. Most are aimed at reducing associated risks:

<https://chemsex.info/>

<https://www.chem-safe.org/>

<http://gtt-vih.org/aprende/publicaciones/slamming>

http://gtt-vih.org/aprende/publicaciones/guia_chemsex

<https://www.davidstuart.org/chemsex-firstaid-sp>

<https://stopsida.org/videos/>

<https://apoyopositivo.org/blog/proyectos/practicas-chemsex/>

http://www.imaginamas.org/inicio/chemsex/?cli_action=1587468347.277