

The Availability and Feasibility of Chemsex Services Within Sexually Transmitted Disease Clinics in the Netherlands

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The Availability and Feasibility of Chemsex Services Within Sexually Transmitted Disease Clinics in the Netherlands: A Cross-Sectional Survey Among Sexually Transmitted Disease Nurses

Ymke J. Evers, MSc,*† Luuk T.J. Levels, MD,‡ Nicole H.T.M. Dukers-Muijters, PhD,*† Geneviève A.F.S. Van Liere, PhD,*† and Christian J.P.A. Hoebe, MD*†

Objectives: Chemsex—using illicit drugs during sex—is prevalent among men who have sex with men (MSM) and associated with sexual and mental health harms. Sexually transmitted disease (STD) clinics are a frequently visited and trusted health care facility for MSM. This study assessed the frequency and extent to which chemsex is addressed by Dutch STD nurses.

Methods: Of the 24 Dutch public STD clinics, an online questionnaire was distributed in 20 STD clinics (83%) in 2019; the questionnaire was sent to 191 STD nurses, of whom 108 (57%) completed the questionnaire. The main outcome was addressing chemsex during regular MSM consultations, measured on a 5-point Likert scale (never-always). Items measuring knowledge, attitude, self-efficacy, and the social norm were also measured on a 5-point Likert scale (totally disagree–totally agree).

Results: Of the 108 participating STD nurses, 77 (71%) addressed chemsex regularly or always during MSM consultations. In general, STD nurses indicated to have sufficient knowledge about chemsex (mean [SD], 3.6 [0.5]) and a positive attitude toward addressing chemsex (mean [SD], 4.3 [0.5]). A need for training on chemsex was reported by 82 (76%) STD nurses, especially in signaling problematic chemsex (56/82; 68%). Three STD clinics (15%) had a protocol on addressing chemsex, and 3 STD clinics (15%) had referral pathways to addiction care.

Conclusion: Sexually transmitted disease nurses from Dutch STD clinics regularly addressed chemsex during MSM consultations. Our results show relevance of educating STD nurses on signaling problematic chemsex and arranging referral pathways to addiction care to optimize chemsex related health care.

From the *Department of Sexual Health, Infectious Diseases and Environmental Health, South Limburg Public Health Service, Heerlen; †Department of Social Medicine and Medical Microbiology, Care and Public Health Research Institute (CAPHRI), Maastricht University/Maastricht UMC+, Maastricht; and ‡Department of Sexual Health, Infectious Diseases and Environmental Health, Limburg North Public Health Service, Roermond, the Netherlands

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Correspondence: Ymke Evers, MSc, Public Health Service South Limburg, Heerlen, Limburg, the Netherlands. E-mail: ymke.evers@ggdzl.nl.

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Chemsex has been described as the intentional use of illicit drugs during sexual activities and typically occurs among men who have sex with men (MSM).^{1,2} The drugs included in the definition of chemsex might vary per country and calendar time. In the United Kingdom, chemsex includes the use of mephedrone, crystal methamphetamine, and γ -butyrolactone/ γ -hydroxybutyric acid (GHB).¹ In the Netherlands, ecstasy, GHB, and ketamine are mostly used by MSM during sexual activities.^{3,4} The European MSM Internet survey from 2017 showed that the proportion of MSM practicing chemsex in the Netherlands was highest compared with other European countries.⁵

From a public health perspective, chemsex has been associated with increased sexual risk behavior and sexually transmitted diseases (STDs).^{6–9} Moreover, MSM considering their chemsex to be problematic or MSM who are dependent on chemsex might face a risk of mental health harms, such as anxiety and depression.^{10–12} From a patient's perspective, studies in Ireland and the Netherlands have shown that a majority of MSM practicing chemsex might consider their drug use as relatively unproblematic.^{13,14} Experiencing a negative impact on daily life due to chemsex ranged from 9% to 25%, and up to one-third of MSM indicated that they would like to be counseled by professionals on chemsex-related issues.^{13,14} A study from our research group showed that MSM would like to discuss increasing self-control, safer drug use, and reducing the risk of acquiring HIV or an STD.¹⁴ In general, MSM preferred to address chemsex at the STD clinic they were attending.^{13–17}

Sexually transmitted disease clinics already play an important role in the prevention and cure of STDs in MSM. At least a proportion of MSM who practice chemsex regularly attend STD clinics and should therefore not be considered a hidden population.¹⁸ Because STD clinics are a trusted and frequently visited place by MSM, these clinics might play an important role in reaching MSM practicing chemsex and counseling on chemsex-related health issues. One study showed that addressing chemsex in consultations was reported in 80% of STD clinics in the United Kingdom.¹⁸ However, no data exist on the availability and feasibility of such chemsex services within STD clinics in the Netherlands. Therefore, we assessed (1) the frequency and the extent to which chemsex is addressed by STD nurses during MSM consultations, (2) encountered facilitators and barriers to address chemsex, (3) the needs for training in addressing chemsex, and (4) the proportion of STD clinics that have facilitators for addressing chemsex in place.

MATERIALS AND METHODS

Study Design

In the Netherlands, there are 8 centrally coordinated public sexual health centers with 24 outpatient STD clinics. The outpatient STD clinics in the Netherlands offer free and anonymous

STD testing, hepatitis B vaccinations, and sexual health counseling for risk groups, such as MSM, who were defined as men who had sex with other men. In 2018, 49,873 MSM visited one of the Dutch

STD clinics.¹⁹ They are advised to visit the STD clinic 2 to 4 times per year to test for STDs. They are routinely universally tested for common STDs, such as *Chlamydia trachomatis*, *Neisseria gonorrhoea*, syphilis,

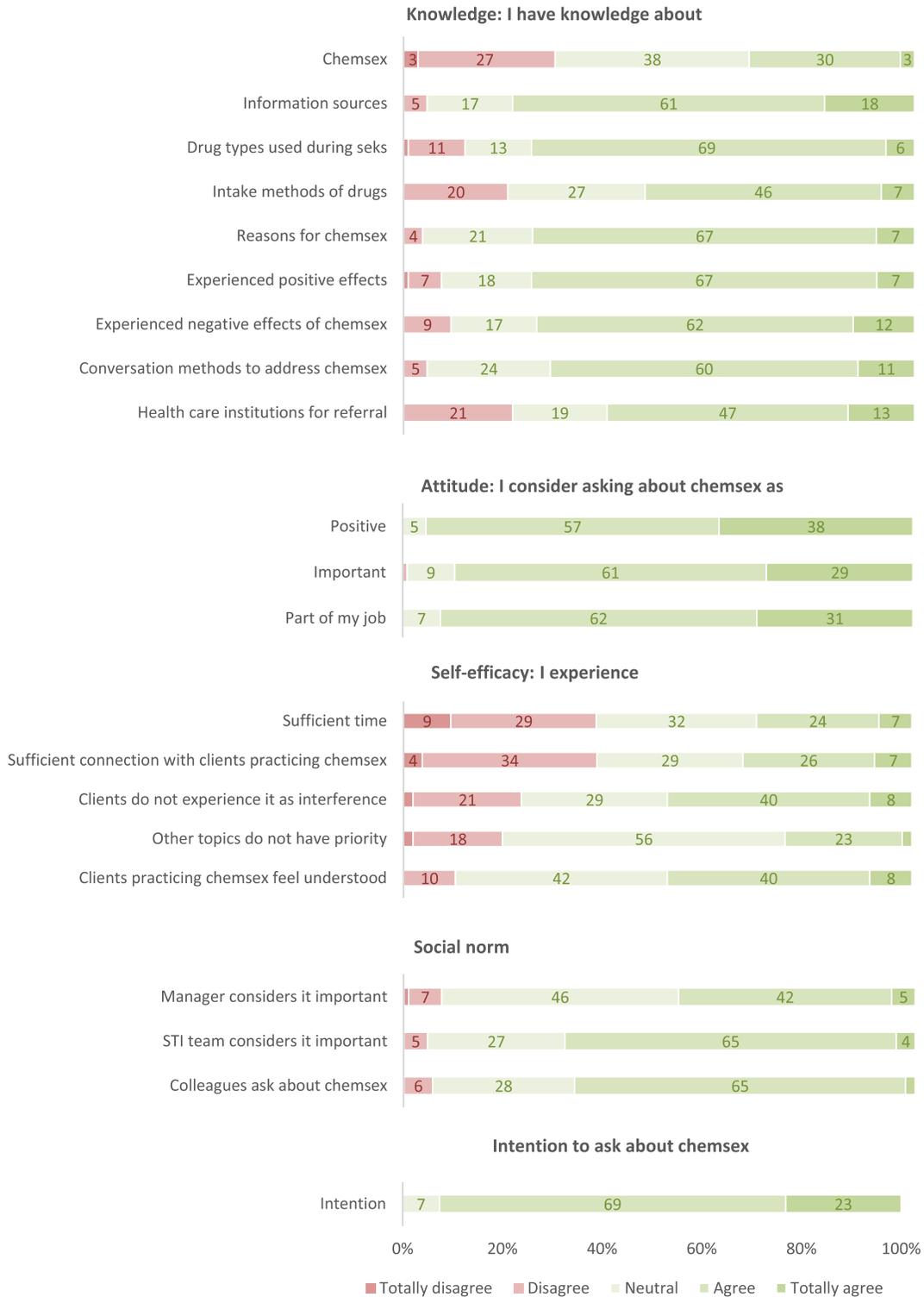


Figure 1. Experienced facilitators and barriers by STD nurses to address chemsex during regular consultations with MSM clients. Numbers in figure represent rounded percentages of participants who responded a specific answering scale. Green represents facilitators and red represents barriers.

and HIV. Each consultation further includes sexual health counseling, in which sexual risk behavior and sexual health issues are addressed. Sexually transmitted disease nurses generally provide this sexual health counseling. They are trained to use motivational interviewing for sexual health counseling. Sexually transmitted disease doctors are consulted in case of STD-related complaints or treatments. We developed an online questionnaire for STD nurses on addressing chemsex in cocreation with STD nurses and doctors. The questionnaire included both multiple-choice and open-ended questions about the frequency of addressing chemsex in STD consultation, encountered facilitators and barriers, and needs for training in addressing chemsex. The questionnaire was pilot-tested by 4 STD nurses. Completing the questionnaire took approximately 15 minutes. All 8 sexual health centers in the Netherlands participated in the study. The managers of the 8 sexual health centers were instructed to send the online questionnaire to all STD nurses working in all outpatient STD clinics in their region for 3 months from September 2019 to December 2019. Of the total of 24 outpatient STD clinics, 20 STD clinics (83%) participated in this study. The questionnaire was not sent to 4 STD clinics by the managers. In the participating clinics, the questionnaire was sent to 191 STD nurses, of whom 108 completed the questionnaire (response, 57%). On average, 5 STD nurses per STD clinic responded (minimum, 1; maximum, 17). Of the 108 participating STD nurses, 97 (90%) were women. Forty-one STD nurses (38%) were aged between 15 and 35 years, 38 (35%) were aged between 36 and 50 years, and 29 (27%) were 51 years or older. Half of STD nurses (51%) have been working at the STD clinic for less than 5 years.

Variables

Addressing Chemsex in STD Consultations

The main outcome in this study was the frequency of addressing chemsex in MSM clients during regular STD consultations by STD nurses. This was measured on a 5-point Likert scale (never, rarely, sometimes, often, always). Addressing chemsex during a consultation included at initiation of the STD nurse or at initiation of the client. Chemsex was defined as the use of drugs before or during sex in the past 6 months. The drugs included in this definition were crystal meth, cocaine, designer drugs (2,5-dimethoxy-4-bromophenethylamine, 3-methylmethcathinone, 4-fluoroamphetamine, 4-methylethcathinone), GHB, γ -butyrolactone, ketamine, 3,4-methylenedioxy-methamphetamine, mephedrone, speed, and ecstasy. The moment an STD nurse would ask about chemsex and the topics addressed were measured with multiple-choice questions (answering options in Supplementary File I, <http://links.lww.com/OLQ/A508>). Sexually transmitted disease nurses were also asked to estimate on a scale (0–100) the percentage of MSM visiting the STD clinic who practiced chemsex.

The Experienced and Desired Role of STD Nurses in Addressing Chemsex

A secondary outcome was the experienced and desired role of STD nurses in addressing chemsex. This was measured by a multiple-choice question that asked which health care organization should address chemsex (answering options in Supplementary File I, <http://links.lww.com/OLQ/A508>) and an open question asking what role STD nurses should have in addressing chemsex.

Facilitators and Barriers STD Nurses Encounter When Addressing Chemsex

Items measuring the concepts knowledge, attitude, self-efficacy, and social norm were measured on a 5-point Likert scale

(totally disagree, disagree, disagree/agree, agree, totally agree). If the total score of items of a concept had good internal reliability with Cronbach $\alpha > 0.7$ in our study population ($n = 108$), a mean score was calculated. Knowledge about chemsex was measured by 9 items (Cronbach $\alpha = 0.845$), attitude toward addressing chemsex by 3 items (Cronbach $\alpha = 0.862$), self-efficacy on addressing chemsex by 5 items (Cronbach $\alpha = 0.627$), the social norm of addressing chemsex among colleagues and managers at the STD clinic by 3 items (Cronbach $\alpha = 0.752$), and intention to address chemsex by 1 item. Items are presented in Figure 1.

Needs for Training in Addressing Chemsex

The needs for training in addressing chemsex of STD nurses were measured with a multiple-choice question (answering options in Supplementary File I, <http://links.lww.com/OLQ/A508>).

Facilitators for Addressing Chemsex in STD Clinics

In STD clinics, we measured the availability of facilitators for addressing chemsex, including the availability of a sexual history questionnaire that includes a question about drug use, a protocol on addressing chemsex in MSM clients (for questions that should be asked to identify problematic chemsex), contacts in regional addiction care to whom MSM experiencing problematic chemsex can be referred to, and the availability of a specialized chemsex program within the STD clinic.

Statistical Analyses

Firstly, data were analyzed in STD nurses ($n = 108$). We used descriptive statistics to assess the proportions of STD nurses who addressed chemsex, the moments they would ask about chemsex, the topics they asked about, and the health care organizations they would refer clients practicing chemsex to. Means and SDs were used to describe the current status of encountered facilitators and barriers. Univariable multilevel linear models were used to assess associations between encountered facilitators and barriers and the outcome frequency of addressing chemsex. Variables significantly associated with addressing chemsex in univariable analyses were included in a multivariable model. Multilevel models were used to take into account that STD nurses were nested within STD clinics. P values < 0.05 were considered statistically significant.

Second, data were analyzed in STD clinics ($n = 20$). We used descriptive statistics to assess the availability of facilitators for addressing chemsex in STD clinics, including the proportion of clinics that used sexual history questionnaires asking for drug use, the proportion of clinics that have a protocol on addressing chemsex, the proportion of clinics that have referral contacts to regional addiction care in place, and the proportion of clinics that have specialized chemsex support programs within their clinic. One response per clinic was randomly selected for these analyses. Multiple responses in one clinic were checked for consistency. When inconsistent answers were given on the availability of facilitators within one STD clinic, we checked this at the website or we asked a contact person of the concerning STD clinic.

Ethics Statement

This study was approved by the Medical Ethical Committee of the University of Maastricht (METC 2019-1468). Data were collected and presented in a deidentifiable manner.

RESULTS

Addressing Chemsex in STD Consultations

Of the 108 participating STD nurses, 105 (97%) reported to address chemsex with MSM clients during consultations: 3 (3%) never, 3 (3%) rarely, 25 (23%) sometimes, 37 (34%) regularly, and 40 (37%) always (mean [SD], 4.00 [0.99]). The proportion of addressing chemsex did not differ per STD clinic ($P = 0.92$). All but one STD nurse used motivational interviewing during consultations (99%). Sexually transmitted disease nurses estimated that half of MSM visiting the STD clinic practiced chemsex (mean [SD], 48% [24]). The most reported reasons to address chemsex were an indication in the sexual history questionnaire (60/108; 56%), on client's indication (55/108; 51%), on indication of previous consultations (51/108; 47%), during all consultations with MSM (41/108; 39%), and having a suspicion of drug use (37/108; 34%). The most reported topics to address with MSM practicing chemsex in addition to regular STD care were motives for having chemsex (83/108; 77%), unwanted sexual experiences (83/108; 77%), the drugs used (63/108; 58%), and frequency of chemsex (57/108; 53%) (Table 1). Referring MSM to other health care organizations was reported by 62 STD nurses (57%); they mostly referred to regional addiction care organizations (41/62; 66%), sexologists (26/62; 42%), general practitioners (23/62; 37%), or specialized chemsex services outside the clinic (21/62; 34%). Referral to online help was reported by only 8 STD nurses (7%).

Experienced and Desired Role of STD Nurses in Addressing Chemsex

Almost all STD nurses (101/108; 94%) indicated that addressing chemsex belongs to regular consultations in the STD clinic, and most STD nurses (102/108; 94%) agreed that all STD

TABLE 1. Chemsex-Related Topics Discussed by STD Nurses During Consultations With MSM Clients in Addition to Regular STD Care

Topics to Discuss With MSM Practicing Chemsex	n (% of Total Participants)
Chemsex (behavioral aspects)	70 (64.8)
• Used drugs	63 (58.3)
• Used combinations of drugs	36 (33.3)
• Frequency of chemsex	57 (52.8)
• Last time sex without drugs (sober sex)	34 (31.5)
• Injection of drugs	50 (46.3)
• Intention to have chemsex	31 (28.7)
Reasons to use drugs during sex	83 (76.9)
Health risks of chemsex (other than STD risks)	49 (45.4)
• Dependency	27 (25.0)
• Difficulty having sex without drugs	43 (39.8)
• Addiction	35 (32.4)
• Sexual health issues (e.g., decreased libido)	27 (25.0)
• Mental health issues (e.g., depression)	28.0 (25.9)
• Financial issues	7 (6.5)
• Social issues	18 (16.7)
• Overdose	11 (10.2)
Prevention of health risks of chemsex (other than STDs)	38 (35.2)
• Safe use of needles	24 (22.2)
• Not combining specific drug types	17 (15.7)
• Decrease the frequency of using drugs	18 (16.7)
• Stop using drugs	11 (10.2)
Unwanted sexual experiences	83 (76.9)

All STD nurses addressed STD topics standard, including sexual risk behavior, prevention of STDs and HIV (condom use and preexposure prophylaxis), STD testing, and possible treatment.

TABLE 2. Means and SDs of Concepts and Their Association With the Outcome Addressing Chemsex During Consultations With MSM Clients

	Mean (SD)	Regression Coefficient (95% CI) Univariable Linear Mixed Models	P
Knowledge	3.6 (0.5)	0.90 (0.59 to 1.21)	<0.001
Attitude	4.3 (0.5)	0.39 (0.03 to 0.75)	0.034
Self-efficacy			
Time pressure	3.1 (1.1)	-0.12 (-0.30 to 0.05)	0.174
Insufficient connection	3.0 (1.0)	-0.39 (-0.56 to -0.22)	<0.001
Interference	2.7 (1.0)	-0.24 (-0.43 to -0.05)	0.014
Other topics have priority	2.9 (0.8)	-0.10 (-0.35 to 0.15)	0.433
Insufficient understanding	2.5 (0.8)	-0.21 (-0.45 to 0.03)	0.082
Social norm	3.6 (0.5)	0.27 (-0.08 to 0.62)	0.130
Intention	4.2 (0.5)	0.56 (0.22 to 0.90)	0.001

CI indicates confidence interval.

nurses should have knowledge about chemsex. The most reported roles in an open question were addressing chemsex (38/108; 35%), referring clients to other health care organizations when needed (38/108; 35%), signaling chemsex and problematic chemsex (33/108; 31%), being a trusted party where MSM can openly discuss problems or questions (27/108; 25%), identifying risks of chemsex together with clients using motivational interviewing (26/108; 24%), and providing information on chemsex (20/108; 19%).

Facilitators and Barriers STD Nurses Encounter When Addressing Chemsex

In general, STD nurses indicated to have sufficient knowledge about chemsex, and having sufficient knowledge was positively associated with addressing chemsex (Table 2). Approximately 1 in 5 indicated that their knowledge about drug intake methods and health care institutions for referral was insufficient (Fig. 1). Sexually transmitted disease nurses had a positive attitude about addressing chemsex, and considered it important and part of their job (Fig. 1). Having a positive attitude was positively associated with addressing chemsex (Table 2). Most common barriers for addressing chemsex were experiencing time pressure and having insufficient connection with MSM practicing chemsex (Fig. 1). Having insufficient connection with MSM practicing chemsex was negatively associated with addressing chemsex (Table 2). Sexually transmitted disease nurses indicated that colleagues and managers considered addressing chemsex important (Fig. 1). Almost all STD nurses had the intention to address chemsex with MSM clients, and this was positively associated with addressing chemsex (Table 2). The only concept associated with addressing chemsex in the multivariable model was knowledge (regression coefficient = 0.63; 95% confidence interval, 0.25-1.00).

Needs for Training of STD Nurses in Addressing Chemsex

A training in the field of chemsex was received by 75 STD nurses (69%). The need for training in the field of chemsex was reported by 82 STD nurses (76%), of whom 29 STD nurses (35%) had not received a previous training. Sexually transmitted disease nurses reported that they would like to receive training in the following topics: determining whether chemsex is experienced problematic by MSM clients (56/82; 68%), health risks

TABLE 3. Chemsex Related Topics in Which a Need for Training Was Reported by STD Nurses

Needs for Training in Addressing Chemsex	n (% of Participants Who Indicated a Need for Training)
Addressing chemsex	43 (52.4)
Most used drugs during sex	41 (50.0)
Health risks of chemsex	56 (68.3)
Experienced positive effects of chemsex	45 (54.9)
Language use of MSM practicing chemsex	43 (52.4)
Risk analysis related to STDs	23 (28.0)
Risk analysis related to acute effects (e.g., overdose)	39 (47.6)
Risk analysis related to mental health issues	43 (52.4)
Interaction effects between drugs and medication	39 (47.6)
Determining whether chemsex is problematic	56 (68.3)
Short behavioral interventions	38 (46.3)
Sources where reliable chemsex information can be found	34 (41.5)
Referral pathways to other health care organizations	43 (52.4)
Motivational interviewing related to chemsex	28 (34.1)
Strategies to prevent health risks of chemsex	49 (59.8)
Unwanted sexual experiences	35 (42.7)

of chemsex (56/82; 68%), and strategies to prevent health risks of chemsex (49/82; 60%) (Table 3).

Facilitators for Addressing Chemsex in STD Clinics

Of the 20 participating STD clinics, 11 clinics (55%) used a sexual history taking questionnaire that includes a question about drug use and 3 clinics (15%) had a protocol on addressing chemsex in MSM clients. Three STD clinics (15%) had a contact person at regional addiction care to which they could refer MSM experiencing problematic chemsex. A specialized chemsex support program was available at one STD clinic (5%), and this concerned a chemsex consultation provided by trained peer educators.

DISCUSSION

Our study is one of the first studies that describe addressing chemsex from a health care provider perspective. Our study suggests that nearly all STD nurses (97%) working at the Dutch Public Health Service outpatient STD clinic addressed chemsex during their regular STD consultations with MSM clients. Most STD nurses addressed chemsex on a regular basis. Half of STD nurses indicated to address chemsex at initiation of the client. Sexually transmitted disease nurses were positive about addressing chemsex and considered it to be part of their job. They indicated that their role should be addressing chemsex, identifying risks, providing information, signaling problematic use, and referring MSM clients to other health care organizations when needed. Although a training in the field of chemsex was received by the majority of STD nurses, two-third still had a need for training. A protocol on addressing chemsex and referral paths to addiction care were lacking in most STD clinics and might need to be facilitated to help STD nurses addressing chemsex, signaling problematic use, and using adequate referral paths.

Previous studies have shown that MSM practicing chemsex felt comfortable to discuss chemsex-related issues at the STD clinic they were attending.^{13–16} Our study shows that most STD

nurses indeed addressed chemsex with their MSM clients. At all participating STD clinics in this study, both urban and less urban, chemsex was addressed. A study from the United Kingdom also showed that STD clinics in both urban and less urban regions reported chemsex consultations equally.¹⁸ A previous study from our research group already showed that chemsex was as prevalent among MSM living in urban areas and MSM living in nonurban areas in the Netherlands.⁴ The importance of prevention and care related to chemsex among MSM living in urban areas and MSM living in nonurban areas seems to be acknowledged by STD clinics in both urban and less urban areas.

In general, STD nurses had a positive attitude toward addressing chemsex, they considered it important and part of their job. They indicated that their managers and STD team were similarly positive to address chemsex. Taking into account that chemsex is highly prevalent among MSM in the Netherlands and is associated with sexual and mental health harms, and STD nurses considered it an important topic, incorporating chemsex in routine screening at STD clinics might be helpful and feasible to prevent these harms.

The majority indicated to have sufficient knowledge about chemsex, drugs used, intake methods, motives, and experienced positive and negative effects. Nevertheless, three-quarters of STD nurses still had a need for training in the field of chemsex, especially on the health risks of chemsex, connecting to the language used by MSM practicing chemsex, and determining whether chemsex was perceived problematic. Our study shows that having sufficient knowledge about chemsex was positively associated with addressing chemsex and hereby underpins the importance of providing training related to chemsex to STD nurses. A study in the United Kingdom also showed high interest in training in assessing problematic chemsex among STD health care providers.¹⁸ A study assessing the mental health impact of chemsex showed that drug use among MSM was associated with anxiety and depression only when the use was considered problematic or dependent.¹⁰ Several studies have shown that a majority of MSM did not consider chemsex problematic.^{13,14} For this group, regular STD prevention and care together with drug use–related harm reduction (e.g., information on safer drug use) might be sufficient. A previous study also showed that MSM practicing chemsex preferred to address the reduction of sexual and drug use–related health risks with health care professionals.¹⁴ To assess whether further help is needed, the following topics could be indicative: frequent chemsex, prolonged time no sober sex, experiencing a negative impact on daily life, and intending to change chemsex behavior.¹⁴ Our study shows that frequency of chemsex, difficulty to have sober sex, and several experienced health risks were discussed by approximately half of STD nurses. Because a protocol on chemsex was only available in 3 of the 20 participating STD clinics, it might be helpful to include these indicative topics in a protocol to assess problematic chemsex together with clients. Although a standard protocol could provide helpful guidelines, tailoring and acknowledgment of personal experiences remain important to increase the acceptance and efficacy of prevention and care strategies. Most STD nurses in our study discussed motives for having chemsex and hereby acknowledged experienced positive effects for clients. Furthermore, all STD nurses used motivational interviewing during consultations, and this is a tailored evidence-based technique to help clients weigh the pros and cons of a behavior and prevent health harms.²⁰

Another possible organizational improvement for STD clinics might be standardized referral pathways to mental health care and addiction organizations, as our study shows this facility in only 3. Several studies have argued that strengthening referral pathways and collaboration between STD clinics and addiction

and mental health care organizations are needed to serve the needs of MSM considering their chemsex problematic.^{18,21,22} Another possibility would be a specialized chemsex service within the STD clinic, with both the expertise of sexual health experts, and addiction and mental health care professionals. Such a specialized chemsex service has shown positive results in London.² Our study shows that this was currently not available in all but one STD clinic.

Our study should be interpreted alongside several methodological strengths and limitations. The proportion of STD nurses who indicated to address chemsex regularly might be slightly overestimated, as STD nurses who were positive about addressing chemsex might have responded more frequently than STD nurses who were negative. It was explicitly stated that the questionnaire was anonymous and answers were not visible for managers. Nevertheless, there might have been some social desirability and recall bias in questions about the frequency of addressing chemsex, related knowledge, and attitude. All 8 sexual health centers in the Netherlands participated in this study, and the response rate of participating outpatient STD clinics (20/24; 83%) was high, which increases the representativity of our study to sexual health care in the Netherlands. The generalizability of this study to sexual health care internationally might be limited to countries with a comparable organization of sexual health care, such as the United Kingdom. Similar studies in other relevant health care settings, such as alcohol and drugs institutions and general practitioners, would be important to get a complete overview of health care for MSM practicing chemsex. Moreover, STD clinics are a frequently visited and trusted health care facility for MSM, but it is likely that not all MSM practicing chemsex are currently seen at STD clinics. A recent study from the United Kingdom showed that 34% of app-recruited MSM practicing chemsex did not attend an STD clinic in the past year.²³ More research is needed on which strategies work best in reaching this hidden group of MSM practicing chemsex.

Overall, Dutch STD nurses working at STD clinics counseled MSM clients about chemsex on a regular basis. They indicated to have sufficient knowledge, but would like to receive additional training in health risks of chemsex, language of MSM practicing chemsex, and determining whether chemsex is perceived problematic. Sexually transmitted disease clinics are well positioned to address chemsex, signal problematic chemsex, and refer clients to addiction and mental health care organizations beyond regular STD prevention and care. To facilitate this, standardized screening for chemsex, a protocol with guidelines to signal problematic chemsex, and adequate referral pathways should be organized.

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