

# DRUG USE AMONG MEN WHO HAVE SEX WITH MEN

## Implications for harm reduction

### **About the Author:**

**Dr. Adam Bourne** is a Research Fellow with the Sigma Research group at the London School of Hygiene & Tropical Medicine. His research focuses on understanding HIV risk behaviour among men who have sex with men, as well as on health inequalities and the broader health and well-being of people from marginalised communities.

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## Introduction

Numerous studies have demonstrated that men who have sex with men (MSM) experience disproportionate levels of ill-health<sup>1-3</sup> compared to the general population, and are one of the highest risk groups for HIV in every part of the world.<sup>4</sup> MSM frequently face significant stigma and discrimination from their families, communities and, in some countries, are the subject of systemic repression and persecution.<sup>7</sup> Often this repression and stigmatisation can make accessing appropriate health services, where they exist, problematic.<sup>8,9</sup> A significant concern among health professionals and advocates who work to improve the health and well-being of MSM relates to the prevalence of drug use within the population, its uses and its associated harms. The chapter begins with an overview of the range of drugs taken by MSM, followed by a description of prevalence across the world (where such data exist) and a discussion of data quality. It then assesses the reasons for drug use by MSM and the harms that may be associated with such use. The final section highlights interventions to help reduce the harms associated with drug use among MSM.

### MSM, gay, homosexual, queer?

Terminology to describe men who are attracted to, or have sex with, other men is often carefully selected. Some men who are attracted to, or have sex with, other men may describe themselves as 'gay', while others do not. Some might use the term 'homosexual' (literally meaning they have a sexual orientation towards people of the same sex) or 'queer' (referring to a sexuality that deviates from the 'norm'). 'Men who have sex with men' (MSM) refers only to the act of sexual contact between two men and is rarely used by men themselves to describe their sexuality. Health professionals often use the term MSM because it relates to behaviour which, when considering issues such as HIV, other sexually transmitted infections (STIs) or drug use, is more important than the identity an individual might assign themselves. When working with this population it is important that you establish the term with which male clients or service users are most comfortable.

## The range of drug use among MSM

Studies indicate that MSM utilise a broad range of drugs. This chapter relates only to non-prescription drugs that are considered illegal or otherwise 'recreational' in most countries. The following is a list of drugs known to be used by MSM, and includes street names or regional variations.<sup>a</sup>

- » **Amphetamine** (speed, uppers, sulphate, whizz)
- » **Cannabis** (marijuana, Mary Jane, dope, pot, spliff, hash(ish), weed, puff, grass, herb, draw, wacky backy, ganja, hemp)
- » **Cocaine** (coke, Charlie, C, snow, blow, a toot, Bolivian/Peruvian/Colombian marching powder)
- » **Crack cocaine** (rock, base) – essentially a super-strength cocaine
- » **Crystal methamphetamine** (Crystal, Tina, meth, ice, crank) – essentially a super-strength amphetamine
- » **Ecstasy** (E, MDMA, X, XTC)
- » **GHB/GBL** (Gina, G, liquid ecstasy)
- » **Heroin** (smack, skag, junk, horse)
- » **Ketamine** (K, special K, vitamin K)
- » **LSD** (acid, a trip)
- » **Mephadrone** (MCAT, Meow-meow)
- » **Poppers** (amyl, butyl, isobutyl nitrate, aromas, liquid incense) – the formula frequently changes, but they are chemicals from the alkyl nitrite family.

## Prevalence of drug use among MSM

Establishing the prevalence of drug use among MSM in different parts of the world is challenging. In a large number of countries, homosexuality, or sex between men, is illegal, making the collection of data relating to sexuality challenging and complex. Even where research about MSM and drug use has been conducted, it is often difficult, or impossible, to compare because of inconsistent methodologies, such as different recruitment methods, a focus on different drugs or use in different settings or across varying time frames (e.g. within the last month, the last three months, within the past 12 months or drug use ever in life). In addition, the use of drugs may vary wildly not only from one region of the world to another but from one country to the next, between cities in the same country or even among different venues within the same city. As is the case with other populations, drug use among MSM in various areas can change significantly within short spaces of time, meaning that data collected can quickly become redundant.

The literature review that follows is written with the best data publicly available in English.

<sup>a</sup> For a detailed account of these drugs commonly used by MSM and their effects, see <http://www.drugfucked.tht.org.uk/>.

## Africa

There has been relatively little research in general conducted with MSM in African nations, and only a small number of studies that have specifically explored drug use. Much of the research that has been conducted relates solely to injecting drug use (IDU), with rates among MSM ranging from 3.4 to 12% in Malawi and 8% in Namibia,<sup>10</sup> all within the last six months, and 14% within the last year among MSM in Zanzibar.<sup>11</sup> Drug use among MSM in South Africa has received more attention than in other countries, with one study reporting that 11% of men described having sex while under the influence of drugs within the previous 12 months,<sup>12</sup> and further mixed-method research suggesting significant regional variation in drug use across different cities in the country.<sup>13, 14</sup> For example, crystal methamphetamine was the most commonly used drug among MSM in Cape Town, but dipipanone hydrochloride was more common in Durban.

## Asia

The 2010 Asian MSM Internet Sex Survey<sup>15</sup> included 10,861 respondents recruited online from China, Singapore, Malaysia, Taiwan, Hong Kong, Thailand, Japan, Indonesia, the Philippines, Korea and Vietnam. Table 1 displays the levels of reported drug use within the past six months (findings are not publicly available at country level). Data from this survey also indicate that drug use was significantly higher among MSM with diagnosed HIV, particularly with respect to crystal methamphetamine, ketamine and ecstasy. A 2009 study in Thailand identified an association between HIV prevalence and a history of drug use.<sup>16</sup>

**Table 1:** Levels of drug use among respondents in the Asian MSM Internet Sex Survey

Stimulant drugs	% Use in last 6 months
Crystal meth	4.0
Ecstasy	8.1
Cocaine	1.8
Poppers	6.1
Cannabis	3.6
GHB	2.3
Ketamine	5.3

Several other studies across the continent have explored lifetime usage of drugs, with levels ranging from 6% in Vietnam<sup>17</sup> and 11.7% in Taiwan<sup>18</sup> to nearly 65% in Japan<sup>19</sup> (although much of this variation can be accounted for by differences in sampling and recruitment).

Levels of IDU among MSM in Asia have generally been low.<sup>17, 20, 21</sup> There are currently no data publicly available on the prevalence of drug use among MSM living in Central Asian Republics.

## Australasia

Frequent gay community surveys in Australia and New Zealand provide a detailed picture of drug use among MSM in these countries, as displayed in table 2.

In Australia, the proportion of men reporting any IDU in the previous six months has remained stable at around 5–6% for the last ten years.<sup>26</sup> While the percentage of men using poppers has fallen slightly over the last nine years, still in 2009 an average of 31.8% of MSM across the country reported use within the previous six months. The Australian surveys typically identify higher rates of all drug use in Sydney compared to other parts of the country.

**Table 2:** Prevalence of drug use among MSM in Australasia within the previous 6 months

	Cocaine %	Poppers %	Cannabis %	Ecstasy %	Methamphetamine %	Ketamine %	Source
Australia (Sydney)	20.6	40.4	27.9	29.8	11.1	9.6	2011 Gay Community Periodic Survey Sydney <sup>22</sup>
Australia (Melbourne)	12.4	35.4	27.6	21.5	8.9	6.0	2011 Gay Community Periodic Survey Melbourne <sup>23</sup>
Australia (Adelaide)	7.1	21.9	34.6	17.2	9.5	2.1	2011 Gay Community Periodic Survey Adelaide <sup>24</sup>
New Zealand (Auckland)	7.3	40	37.5	21.2	7.9	5.7	2006 Gay Auckland Periodic Sex Survey <sup>25</sup>

## Caribbean

Prevalence data for drug use among MSM in the Caribbean is extremely scarce. Secondary analysis of a representative general household survey data collected in Puerto Rico<sup>27</sup> reported lifetime use of cannabis (63.4%), amphetamines (20%) and heroin (20%). A quarter of MSM reported using cannabis (24.4%) and cocaine (24.4%) in the past 12 months. The UNAIDS-sponsored Caribbean Men for Men Internet Sex Survey (CARIMIS) is underway at the time of writing and will report its findings in the summer of 2012. This survey will provide drug use data for each of the Caribbean nations and territories and will be a useful source of information for the development of future interventions.<sup>b</sup>

## Europe

Comprehensive data on drug use among MSM was collected as part of the European Man for Man Internet Sex Survey (EMIS). This online survey was open for completion in 25 languages in the summer of 2010 and recruited a total of 181,495 men. It asked questions about use of a range of drugs within the previous 4 weeks (as displayed in table 3). While country-level data will become available in the near future, at present EMIS data are reported on a European sub-regional level.

Research in the UK<sup>29</sup> that explored drug use levels among MSM within the previous 12 months reported levels ranging from 39.4% for poppers, 27.7% for cannabis, 18.5% for ecstasy and 4.7% for methamphetamine (with significant regional variations evident and highest usage in London.)<sup>30</sup> Drug use among MSM in Catalonia, Spain, within the previous 12 months followed a broadly similar pattern (poppers 40.8%; cannabis 26.0%; ecstasy 10.2% and methamphetamine 3.0%.)<sup>31</sup>

**Table 3:** Use of drugs among MSM across Europe within the previous four weeks

Region of residence	poppers use in last 4 weeks	cannabis (or LSD) use in last 4 weeks	Heroin/crack use in last 4 weeks	party drugs* use in last 4 weeks
West: Belgium, France, Rep. of Ireland, the Netherlands, the UK	28.3	13.8	0.4	10.6
North West: Denmark, Finland, Norway, Sweden	13.8	6.2	0.3	3.1
Central-West: Austria, Switzerland, Germany, Luxembourg	22.0	10.1	0.2	4.9
South West: Greece, Spain, Italy, Portugal	10.9	13.6	0.4	6.6
North East: Estonia, Lithuania, Latvia	6.2	4.9	0.2	2.3
Central-East: Czech Republic, Hungary, Poland, Slovenia, Slovakia	15.2	10.2	0.3	4.9
South East (EU): Bulgaria, Cyprus, Malta, Romania	7.9	5.9	0.3	3.0
South East (non-EU): Bosnia & Herzegovina, Croatia, Macedonia, Serbia, Turkey	7.7	8.6	0.4	2.5
East: Belarus, Moldova, Russia, Ukraine	8.3	5.2	0.3	2.4

\* Party drugs include ecstasy, amphetamine, methamphetamines, mephadrone, GHB, ketamine and cocaine. Adapted from EMIS Network.<sup>28</sup>

<sup>b</sup> See <http://www.carimis.org>

## North America

There are no publically available national MSM drug use prevalence data for the USA: prevalence is reported only at a city or state level. This approach is appropriate in terms of influencing local harm reduction interventions but makes country-level comparison difficult. Table 4 provides a snapshot of drug use prevalence in different cities, established via multiple surveys.

Similar levels of poppers use among MSM have been observed in Canada.<sup>35</sup>

A significant body of research has addressed methamphetamine use among MSM in the USA. This drug is commonly associated with euphoria, decreased sexual inhibition and hypersexual behaviour.<sup>36, 37</sup> Analysis of data collected annually between 1996 and 2007 in Los Angeles found levels of methamphetamine use within the last 12 months varying from 11% to 53%.<sup>38</sup> A longitudinal study of club drug using gay and bisexual men in New York found that 64.6% of their sample reported using methamphetamine within the previous four months.<sup>39</sup>

Levels of IDU among MSM in both Canada and the USA have typically been very low.<sup>2, 40, 41, 42</sup>

## South America

Between 1999 and 2002 a series of 19 sero-epidemiological cross-sectional surveys<sup>43</sup> were conducted among MSM in seven different South American nations: Argentina, Bolivia, Colombia, Ecuador, Paraguay, Peru and Uruguay. These surveys asked about history of drug use (ever) and analysed such usage in light of national HIV prevalence to identify significant associations. The surveys recruited a total of 13,847 MSM participants by opportunistic, community sampling, although the number of participants varied considerably between countries. Reported data from Peru appear incomplete; therefore, Peru is not included in Table 5.

**Table 4:** Prevalence of drug use among MSM across the USA

City/region (Year of data collection)	Methamphetamine %	Cannabis %	Ecstasy %	Cocaine %	Poppers %	Study type	Time frame of drug use	Reference
<b>New York (2007)</b>	6.2	27.9	8.38	12.03	24.46	Community survey of MSM (n=740)	Within the last 3 months	Carpiano et al. (2011) <sup>32</sup>
<b>Chicago (2002–2003)</b>	6	28	13	12	-	Household survey. Data from HIV-negative MSM (n=151)	Within the last 6 months	Fendrich et al. (2010) <sup>33</sup>
<b>San Francisco (1999–2001)</b>	23*	-	-	19	37	Randomised behavioural intervention of MSM accessing counselling (n=736)	Lifetime use	Colfax et al. (2005) <sup>34</sup>

\* Includes speed and any form of methamphetamine

**Table 5:** Reported drug use (ever) among MSM from six South American countries

Drug used (ever)	Colombia %	Ecuador %	Bolivia %	Argentina %	Uruguay %	Paraguay %
<b>Cannabis</b>	31.2	17.4	21.4	15.4	14.8	42.4
<b>Heroin</b>	2.4	0.6	0.0	0.4	0.2	4.3
<b>Cocaine</b>	14	4.9	17.2	6.7	21.9	26.4

[Adapted from Bautista et al.]<sup>43</sup>

## Broad patterns of drug use among all MSM

In reviewing this broad literature from across the globe, several patterns in MSM drug use emerge. Firstly, most drug use among MSM appears to be episodic, with weekly or monthly use far higher than daily.<sup>15, 29, 44</sup> This might suggest that *most* MSM who report drug use are not drug-dependent but instead use drugs for specific purposes (such as when partying, socialising or when seeking or having sex).<sup>45</sup> Episodic drug use may also reflect specific periods of stress or uncertainty, such as an HIV diagnosis, struggles in the process of 'coming out', or may occur in combination with periods of depression or anxiety.

Secondly, MSM, or gay men, are not a homogenous group in terms of drug use. Prevalence of use was very often higher among further marginalised or minority groups, such as ethnic minority gay men in the USA,<sup>46-48</sup> and is often higher among younger men.<sup>42, 49, 50</sup> Use of most drugs (except cannabis) tends to be higher among MSM living in large urban centres, particularly those with large gay populations such as Berlin, Sydney, London and San Francisco than it is among men in more rural areas.<sup>26, 30</sup>

Thirdly, polydrug use (taking more than one drug during the same session or within a fixed time frame) is common among MSM, particularly with regards to stimulants ('party drugs') such as ecstasy, cocaine, amphetamines or ketamine.<sup>34, 51</sup>

Fourthly, across the world, the prevalence of IDU, especially heroin, was generally very low. Other than in South Africa, reported levels of IDU in non-purposive samples rarely exceeded 5%. Previous authors<sup>52</sup> have suggested that the reason insufficient attention has been paid to drug use among MSM is specifically because levels of heroin use – often the focus of drug harm reduction services – have been comparatively low. In the absence of heroin-related health concerns, and those social or community harms such as crime which are often associated with problematic heroin use, the harm reduction needs of gay men have not always featured on the radar of policymakers.

## Harms associated with drug use among MSM

### *Harms to physical and mental health*

The physical and mental health harms associated with cocaine, heroin, ecstasy, cannabis, LSD and amphetamines are well documented, and are likely to be similarly represented in MSM.

Crystal methamphetamine is a super-strength amphetamine stimulant, which results in high-energy feelings of confidence,

invincibility or impulsiveness. Continuous stimulation of the nervous system by crystal methamphetamine has been known to cause anxiety, depression, confusion, insomnia, psychosis and suicidal ideation,<sup>53</sup> and long-term use may also result in a loss of motor control or memory.<sup>54</sup>

GHB/GBL (Gamma-butyrolactone) is a party drug that brings a sense of euphoria. It is usually sold diluted in water, although just an extra millilitre of GBL over a moderate dose can result in an overdose, the effects of which are often unconsciousness, coma or death by respiratory depression. GBL can be addictive (although this usually only develops over longer periods of time) and, therefore, can result in significant withdrawal effects.

After-effects of inhaling poppers can include headaches, skin rashes, sinus pains and burns, but only if the liquid comes into contact with the skin. They have also been known to cause nausea and vomiting. Inhaling poppers after taking anti-impotence drugs, such as Viagra or Cialis, can result in a dangerous drop in blood pressure.<sup>55</sup> This may be more likely to occur if also taking a protease inhibitor as part of HIV anti-retroviral therapy (ART).

There is evidence to suggest that the use of a range of drugs, particularly methamphetamines, GBL and ecstasy, might have a detrimental impact on adherence to ART.<sup>56, 57</sup>

### *Harms to sexual health and well-being*

The association between drug use (particularly methamphetamine, ecstasy and cocaine) and sexual risk behaviours is complex, and a comprehensive analysis of this literature is beyond the scope of this chapter (for a review, see Corsi et al.<sup>58</sup> or Romanelli et al.<sup>59</sup>). It is possible to say that there is a clear association between certain drug use and sex that carries a risk of HIV transmission. However, it is not clear whether this is causal or simply co-relational.

Significant attention has been paid to the role of methamphetamine in HIV transmission risk behaviours, particularly in the USA. This drug can cause feelings of hypersexualisation and is commonly utilised as part of sexual marathons (protracted periods of sexual activity) and group sex activities.<sup>60-62</sup> Ensuing rectal trauma facilitates the transmission of HIV. Numerous studies have suggested that the use of methamphetamine causes high-risk sexual behaviour,<sup>63-65</sup> perhaps via a myopic mechanism or the removal of sexual inhibitions. However, other studies have challenged this causal pathway.<sup>66, 67</sup>

Other associations with high-risk sexual behaviour have been identified in relation to ecstasy,<sup>68</sup> GHB/GBL<sup>69</sup> and ketamine.<sup>70</sup> Men who reported polydrug use in the recent past (up to three months) are more likely to report HIV risk behaviours than men who took only one drug.<sup>44, 47</sup>

Poppers cause blood vessels to dilate and also relax the anal sphincter muscle. This can make receptive anal intercourse more comfortable for some men. The process of vasodilatation, and the fact that sex may be rougher or last for longer while using poppers, means that their use during sero-discordant anal intercourse can increase the probability of HIV transmission by a factor of three.<sup>71,72</sup>

## Motivations for drug use

There has been relatively little research exploring the reasons or motivations for drug use among MSM or the personal and social context within which drug use occurs, particularly outside North America, Western Europe and Australia. Numerous authors<sup>52,73</sup> have highlighted that in most settings the majority of venues to meet other men for social and/or sexual interaction are those where alcohol is served and drug use is common. Clubs and bars are the centre of most 'gay scenes', and drug use itself is normalised within this environment. Drugs often serve a very deliberate purpose in helping individuals to relax, to socialise, to mitigate social unease and to gain confidence in seeking sexual partners.<sup>74</sup> The value of these actions and activities should not be underestimated by those seeking to support MSM to reduce any harm that may be associated with their drug use.

Further to this, a significant body of research indicates that (crystal) methamphetamines are often used by MSM to psychologically enhance sexual experience, to maintain sexual activity over long periods of time and to facilitate sexual desires by dissipating sexual inhibitions.<sup>75-77</sup> Drugs may also help MSM with diagnosed HIV, in particular, to 'cognitively escape' from fear of rejection and negative self-perception and to cope with broader emotional and physical demands of living with HIV on a daily basis.<sup>78</sup>

The best indicator of whether drug use is problematic, or is in danger of becoming so, is if the individual concerned considers their use in this way. As already discussed, drug use among MSM in general tends to be episodic in nature, but dependency can still develop and significant harm can result. For many men, drug use becomes problematic when the costs or side-effects associated with usage impinge on their ability to live the life they are comfortable or content with.

## Harm reduction interventions to meet the needs of MSM

Drug use interventions for MSM need to empower men with honest information about what the possible effects (both positive and negative) might be of taking a range of drugs. They should seek to support men, and those around them, to control or limit their use, or to limit the harms associated with such use, at times when they consider their drug use is causing harm to themselves or others. This can be accomplished in a number of ways, ranging from provision

of educational information to psychotherapeutic support and pharmacological interventions. Whatever the setting, interventions should take into account each man's personal circumstances, acknowledging that drugs can serve a useful purpose in their lives, particularly in terms of mitigating psychological unease or by facilitating social or sexual contact. Health professionals should take account of these motivations and work with men to identify what level or type of drug use they are comfortable with, and help to reduce harms associated with this use.

Numerous civil society organisations in Australia, Canada, Germany, Poland, the UK and USA have developed websites or printed information booklets that explain the effects of drugs commonly used by MSM, and describe ways in which any associated harms might be mitigated. They often also include information about the legal status of each drug, and provide referral information for direct contact services if readers consider their use problematic.

Provision of psycho-therapeutic services or counselling specifically designed to address problematic drug use among MSM varies considerably across the world and within individual countries. They are known to currently exist in Australia, Canada, Germany, New Zealand, Norway, South Africa,<sup>79</sup> Spain, Sweden, the UK and USA. A service in Hong Kong ran between 2007 and 2009. Such therapy includes drop-in advice, motivational interviewing, support groups and cognitive behavioural therapy. Many of these interventions appear grounded in evidence from evaluations of the general population (for review, see Shearer<sup>80</sup>), although there have been a number of evaluations of behaviour change interventions related to methamphetamine use specifically among MSM.<sup>81-83</sup> In many instances, such evaluated programmes focus on reducing harms to sexual health and the likelihood of contracting or transmitting HIV, with mixed success (for review, see Rajasingham et al.<sup>57</sup>). In a very small number of settings, primarily the UK and USA, pharmacologic interventions exist to address methamphetamine use, but their effectiveness is still uncertain.<sup>84,85</sup>

In Australia, and in many parts of Europe and North America, harm reduction services are situated within the HIV prevention sector, largely because of the association with sexual risk behaviours and because this sector is well established with strong links to the gay communities they serve. There is currently *no* provision of any harm reduction interventions specifically targeting MSM in Africa (except the Republic of South Africa), Asia, the Caribbean or South America. While MSM could access services for the general population (where they exist), previous research has reported that they often feel uncomfortable or unwelcome in such environments.<sup>52</sup> Drug use among MSM is frequently associated with 'gay scene' social activity or with sex, and many services for the general population may not be sufficiently knowledgeable, skilled or, indeed, accepting to help address drug use that occurs within these contexts.

## Case study: antidote @ London friend

This organisation works exclusively with lesbian, gay, bisexual and transgender (LGBT) people who use drugs, the majority being gay men in their 20 and 30s, mostly employed and financially self-supporting. In the past three to four years the drug use profile of their clients has shifted towards crystal meth and GHB/GBL, with many people using them in sexual contexts. There has been a trend to inject crystal, and for GBL use to rapidly escalate to dependence levels (dosing around every two hours), so the type of intervention has had to extend to medical (mainly prescribing for GBL detox), having been mainly psychosocial. This typically involves administering benzodiazepines in high doses (often > 100mg/24hrs),<sup>6</sup> which they offer in partnership with the NHS Club Drug Clinic, to help clients deal with withdrawal symptoms. Dependence on GBL is an entirely new phenomenon for members of the community, who have used other drugs, often without major problems, for many years.

Most service users do not fit the typical profile of mainstream UK drug services or the typical drug patterns presenting there. By offering a targeted service they are able to remove many of the barriers of users not identifying with generic support. Being an LGBT service means that people feel less judged and more able to talk about their full range of associated problems, which they may feel inhibited to do in generic services, particularly as it may involve talking about sexual behaviours they feel ashamed of.

They work around reasons for using, dealing with cravings and trigger situations, negotiating safer boundaries and improving well-being overall; these are all typical substance misuse interventions, but it is their provision in a safe and understanding LGBT environment which sets the service apart.<sup>c</sup>

## Conclusions

This review has highlighted the extent of drug use among MSM and summarised the range of harms that can be associated with their use. Drug use is common among MSM and is well established in gay social and sexual environments. Given the significant harms associated with many of the drugs that MSM use, harm reduction interventions that meet the specific needs of MSM should be prioritised in all parts of the world.

Establishing the prevalence of drug use among MSM living in Central Asian Republics, South America, the Caribbean and Africa is a research priority. Systematic population and local-level estimations for MSM populations are a necessary precursor to this. There is a need for more qualitative research in many parts of the world that explores the reasons why MSM use drugs and the personal and social context of this use.

Harm reduction practitioners should seek to understand variations in drug use among MSM in their local area and tailor interventions accordingly. They should attend to changes in such use over time, and be accepting of the social and sexual environments in which drug use often occurs. Harm reduction practitioners should also attend to ethnic or sexuality variation within MSM communities, acknowledging that further marginalised sections of the population are more likely to use drugs and for such use to be problematic. As the evidence base for prevalence, motivations, context and harms associated with drug use among MSM evolves, so it would be beneficial to develop toolkits for effective interventions for rollout in various settings.

As long as homosexuality – or acts of sex between men – is criminalised, and as long as MSM face stigma and persecution, it will remain a significant challenge to develop and deliver effective interventions to meet the complex needs that this review identifies. Legal and policy reforms relating to MSM are required in a large number of countries if prevention of HIV transmission and a reduction in other harms associated with drug use is to be realised.

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<sup>c</sup> See <http://www.londonfriend.org.uk>





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