



Public Health  
England

Protecting and improving the nation's health

# Shooting Up Infections among people who injected drugs in the UK, 2015

An update: November 2016



# About Public Health England

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## Summary

### **HIV levels remain low, but risks continue**

In the UK, around one in 100 people who inject drugs is living with HIV. Most have been diagnosed and will be accessing HIV care. However, HIV is often diagnosed at a late stage among people who inject drugs. HIV transmission continues among people who inject drugs, and both injecting and sexual risks remain common. The emergence of injecting drug use around or during sex among some groups of HIV positive men who have sex with men is a concern, as is the recent HIV outbreak among people injecting heroin in Glasgow.

### **Many hepatitis C infections remain undiagnosed**

Hepatitis C remains the most common infection among people who inject drugs, and there are significant levels of transmission among this group in the UK. Two in every five people who inject psychoactive drugs are living with hepatitis C and around half of these infections remain undiagnosed. Around one in 20 of those who inject image and performance-enhancing drugs have hepatitis C.

### **Hepatitis B remains rare, but vaccine uptake needs to be sustained**

In the UK, around one in every 200 people who injected psychoactive drugs is living with hepatitis B infection. About three-quarters of people who inject psychoactive drugs report taking up the vaccine against hepatitis B, but this level is no longer increasing. Uptake of the hepatitis B vaccine is much lower among people who inject image and performance-enhancing drugs.

### **Bacterial infections continue to be a problem**

One-third of people who inject psychoactive drugs report having a recent symptom of a bacterial infection. Outbreaks of infections due to bacteria are continuing to occur in this group. Some of these infections are severe and can place substantial demands on the healthcare system.

### **Changing patterns of psychoactive drug injection remain a concern**

The increased injection of a range of stimulants, particularly the recently emerged psychoactive drugs such as mephedrone, is a concern. People injecting stimulants often report higher levels of injecting and sexual risk behaviours.

### **Provision of effective interventions needs to be maintained**

The provision of effective interventions, which act to reduce risk and prevent infections, needs to be maintained. These interventions include needle and syringe programmes, opioid substitution therapy and other treatments for drug use. Local areas need to be responsive to changes in drug use and risk and offer these interventions in appropriate settings. Vaccinations and diagnostic tests for infections need to be accessible and routinely and regularly offered to people who inject or have previously injected drugs in line with guidance. Care pathways and treatments should be available to those testing positive.

## Introduction

People who inject drugs are vulnerable to a wide range of viral and bacterial infections. These infections can result in high levels of illness and death. Public health surveillance of infectious diseases and the associated risk and protective behaviours among this group provides important information. This data is essential to understanding the extent of these infections, the risk factors for their acquisition and for monitoring the effectiveness of prevention measures.

This annual national report describes trends in the extent of infections and associated risks and behaviours among people who inject drugs in the UK to the end of 2015.<sup>a</sup> Further information can be found in the set of data tables that accompany this report.<sup>b</sup>

## HIV levels remain low but risks continue

Overall HIV infection is uncommon among people who inject drugs in the UK, with HIV prevalence among people who inject drugs in the UK low compared with many other European countries.<sup>1</sup> In England, Wales and Northern Ireland, 1.0% of the people who inject psychoactive drugs surveyed in 2015 had HIV<sup>2</sup>. Among those attending needle and syringe programmes in Scotland during 2015-16, 1.9% were HIV antibody positive. The prevalence of HIV among those who inject image and performance enhancing drugs, such as anabolic steroids, peptides and melanotan, in England and Wales was 0.56% in 2014-15.<sup>3</sup> These HIV prevalences are higher than the overall adult HIV prevalence in the UK which was estimated to be 0.19% in 2014.<sup>4</sup>

### Continuing risks

Many people who inject drugs remain at risk from HIV through their injecting drug use and also through sex. HIV can easily be transmitted through the sharing of needles and syringes. Overall, the level of needle and syringe sharing (either borrowing or lending a used needle or syringe) among those currently injecting psychoactive drugs has fallen across the UK. In Scotland, sharing of needles and syringes in the previous month fell from 22% during 2006-07 to 15% in 2014-15 among individuals attending drug treatment services (accompanying data, table 3a), while in England, Wales and

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<sup>a</sup> Where data have been previously published, only the proportions are usually given in this report. The numerators and denominators for these proportions can be found in the source publications.

<sup>b</sup> The data tables can be found on this webpage: <https://www.gov.uk/government/publications/shooting-up-infections-among-people-who-inject-drugs-in-the-uk>

Northern Ireland sharing of needles and syringes fell from 28% of those surveyed in 2005 to 16% in 2015 (accompanying data, Table 3a). The sharing of mixing containers and filters was almost twice as common as the sharing of needles and syringes.<sup>c</sup> Overall, in England, Wales and Northern Ireland the sharing of needles, syringes, mixing containers or filters was reported by 38% of those surveyed in 2015.<sup>2</sup>

Cleaning and reusing injecting equipment also remains common among those injecting psychoactive drugs. Overall in 2015, 29% (410/1,434) of those currently injecting psychoactive drugs surveyed in England, Wales and Northern Ireland reported injecting with a needle that had previously been used and which they had then attempted to clean.

Sharing injecting equipment is less commonly reported among people injecting image and performance-enhancing drugs. Among those surveyed in 2014-15 across England and Wales, 13% reported ever sharing a needle, syringe or vial of drugs.<sup>3</sup> This level of sharing was the same as that found in 2012-13. However, as individuals in this group are often injected by someone else, sharing may not always be recognised.<sup>5</sup>

People who inject drugs are also at risk of acquiring HIV through sexual transmission. Among those injecting psychoactive drugs surveyed across England, Wales and Northern Ireland, 66% reported anal or vaginal sex during the preceding year and of these, 40% reported two or more sexual partners.<sup>2</sup> Of those with two or more partners during the preceding year, only 22% reported always using condoms.<sup>2</sup> Among the men injecting psychoactive drugs surveyed across England, Wales and Northern Ireland the proportion who reported sex with men during the preceding year had increased from 5.2% (84/1,619) in 2005 to 8.9% (106/1,186) in 2015. The prevalence of HIV in this group of men who have sex with men (MSM) has increased in recent years to 12% (13/106) in 2015; this compares with 4.3% (37/863) over the period 2005 to 2014. This probably reflects the emergence of injecting drug use among some groups of often HIV positive MSM who take drugs around or during sex<sup>6,7</sup> – see box 1.

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<sup>c</sup> Of those currently injecting surveyed across in England, Wales and Northern Ireland<sup>2</sup> 31% (441/1,441) reported sharing mixing containers, and 27% (382/1,439) reported sharing filters.

### **Box 1: Sexualised drug injection among men who have sex with men (MSM)**

There are continuing concerns about the use and injection of a number of drugs, before or during sex among some sub-groups of MSM.<sup>6,7</sup> This sexualised drug use is often referred to as 'chemsex'. Chemsex involves the use of drugs before or during planned sexual activity to sustain, enhance, disinhibit or facilitate the experience.<sup>8</sup> Chemsex commonly involves crystal methamphetamine, GHB/GBL and mephedrone. There are particular concerns about the emergence of injecting drug use, typically of methamphetamine and mephedrone, during chemsex. The injection of drugs in this context is often referred to as 'slamming'.

Chemsex can involve a number of people and a diverse range of sexual activities; typically condoms are not used and there are reports of the injecting equipment being shared.<sup>6,7</sup> Although the scale of 'slamming' remains unclear, specialist lesbian, gay, bisexual and transgender drug services and sexual health services are continuing to see MSM who report this practice.<sup>9</sup> Sexualised drug use has also been reported to be a factor in the epidemics of sexually transmitted infections among MSM.<sup>9,10,11</sup>

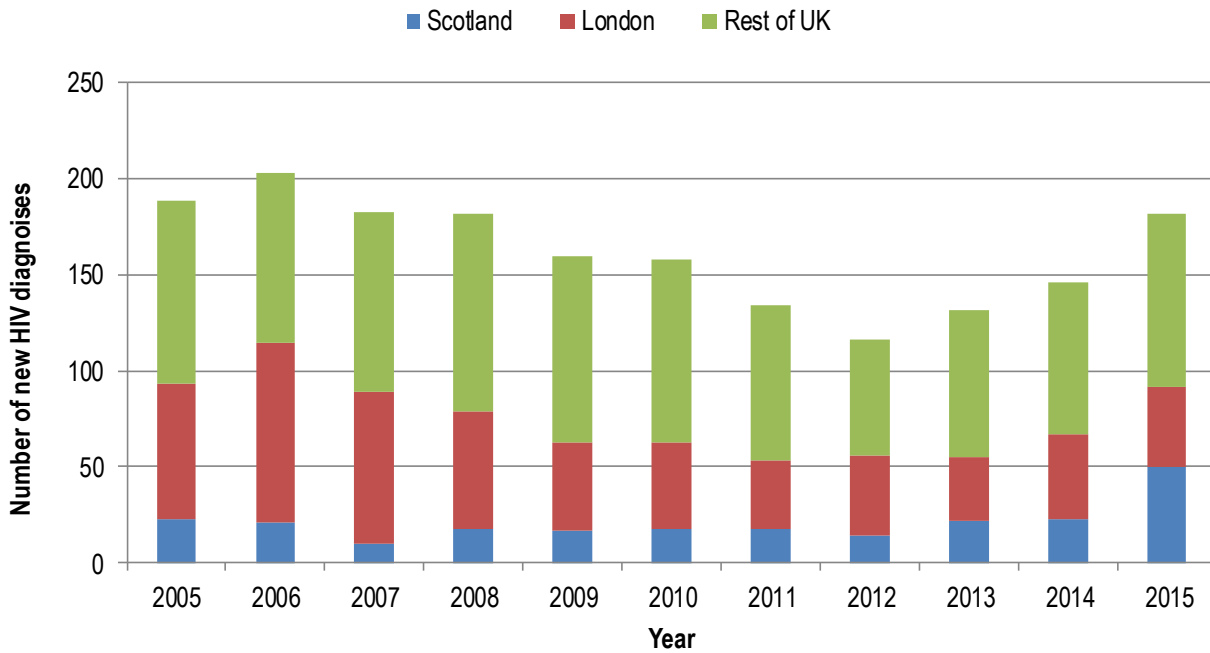
There is a need for a better understanding of the nature and extent of current injecting drug use among MSM, and for effective, targeted responses. Public Health England (PHE) has produced a briefing to support local responses to sexualised drug use, including injection, among MSM.<sup>12</sup>

People injecting image and performance enhancing drugs are more sexually active than those who inject psychoactive drugs. Among those surveyed in 2014-15 across England and Wales, 92% reported anal or vaginal sex during the preceding year, and of these, 51% reported two or more sexual partners.<sup>3</sup> Of those with two or more partners during the preceding year, only 17% reported always using condoms.<sup>3</sup>

### **New infections and diagnoses**

There were 182 new HIV diagnoses associated with injecting drug use in the UK in 2015 (accompanying data, table 1)<sup>13</sup>; this is similar to 189 reported in 2005 but higher than 146 diagnoses in 2014 (the annual average between 2005 and 2014 was 160). There was a marked increase in the number of diagnoses made in Scotland during 2015. Between 2005 and 2014 there were on average 18 new HIV diagnoses associated with injecting drug use each year in Scotland, in 2015 there were 50 new diagnoses (figure 1). This increase is due to an outbreak of HIV among people who inject drugs in Glasgow.

**Figure 1. Annual number of new HIV diagnoses associated with injecting drug use: 2005 to 2015**



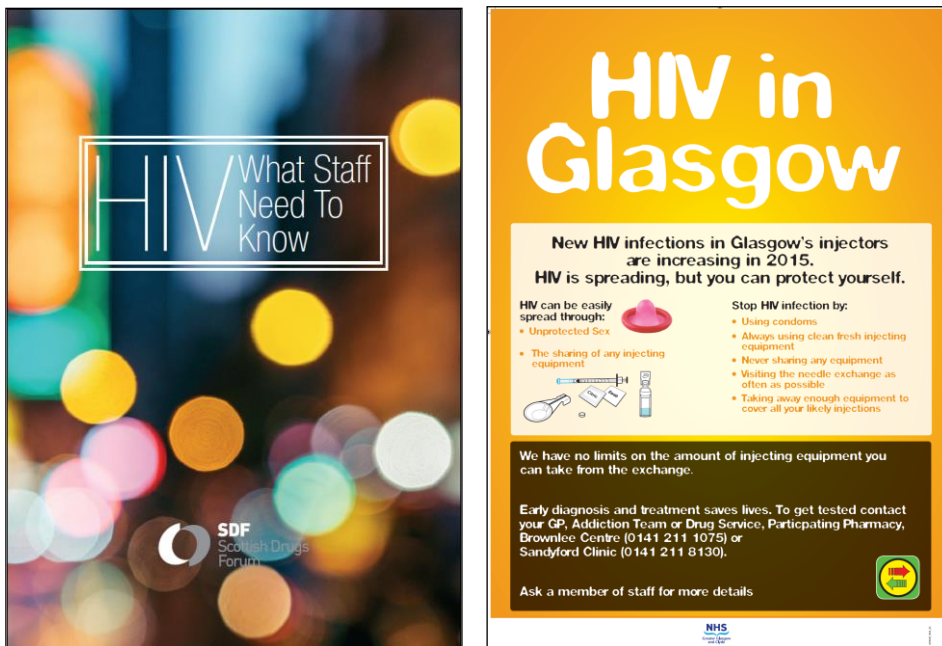
Data source: HIV and AIDS reporting system

Glasgow typically records around 10 new diagnoses of HIV associated with injecting drug use each year; 42 new diagnoses with this risk were reported within the 2015 outbreak, the majority with subtype-C virus. Data indicates that this increase in diagnoses is related to transmission among a population who inject psychoactive drugs within Glasgow city centre, mainly heroin with or without cocaine. This population is often homeless, with high levels of involvement in the criminal justice system. Though known to addiction services, they are frequently not sustained within drug treatment programmes. This outbreak is being managed through increasing awareness of the risks of HIV, education of the at-risk population and addiction services regarding HIV, increasing provision of needle and syringe programmes (eg greater evening availability), improving the frequency of HIV testing and its accessibility and proactively supporting the early treatment of those newly diagnosed so as to reduce the risk of onward transmission – see box 2.



## Box 2: Increasing HIV testing and awareness in Glasgow in response to the HIV outbreak

The HIV outbreak among people who inject drugs in Glasgow highlights the need to maintain HIV testing in this population even when the risk of HIV is perceived as low and despite other priorities for the individual. It was identified that in some services blood-borne virus testing for this population had been focused on hepatitis C, potentially delaying recognition of new cases of HIV. In response to the outbreak, HIV testing has been increased. This increase has primarily been within addiction and homeless services where there has been education and leadership to enable staff to offer regular HIV testing. Accessibility of testing has also been improved making blood-borne virus testing available in new settings, such as community pharmacies, and promoting opportunistic testing in hospital settings. Work to increase HIV testing has been supported by raising awareness among both people who inject drugs and those who work with them. Alongside raising awareness of HIV risk, there has also been a focus on updating perceptions and knowledge of HIV and the treatment of HIV.

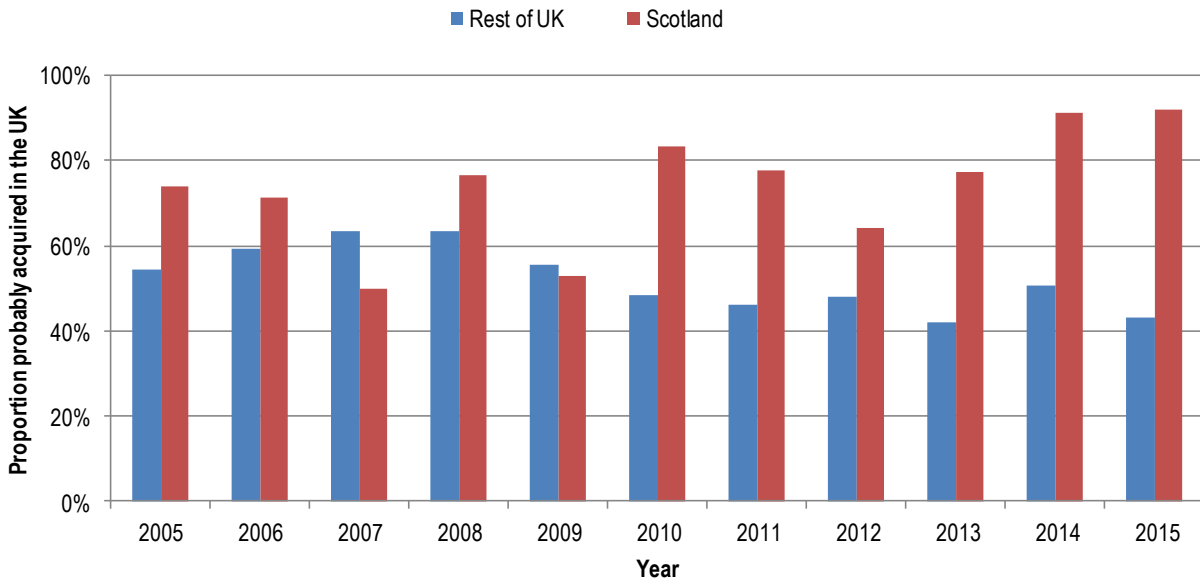


[http://www.sdf.org.uk/index.php/download\\_file/view/963/869/](http://www.sdf.org.uk/index.php/download_file/view/963/869/)

Data indicates that around half of the newly diagnosed HIV infections associated with injecting drug use were probably acquired outside of the UK. In Scotland, of the new HIV diagnoses in 2015 that were associated with injecting drug use, 92% had probably been acquired in the UK; this compared with only 43% of the diagnoses elsewhere in the UK (Figure 2).<sup>d</sup>

<sup>d</sup> Data presented here are the raw data, in the adjusted overall data 61% (Interquartile range 60% to 64%) had probably acquired in the UK in 2015.<sup>13</sup>

**Figure 2. Proportion of new HIV diagnoses associated with injecting drug use that were probably acquired in the UK: 2005 to 2015**



Data source: HIV and AIDS reporting system

HIV outbreaks and increases in HIV transmission among people who inject drugs have also occurred in a number of other European countries in recent years.<sup>14,15,16</sup> The most recent of these outbreaks in Dublin<sup>17</sup> has been linked to the injection of a synthetic cathinone, and homelessness.

Data indicates that HIV transmission among people who inject drugs across the UK is currently low overall. Infections were found among people who had recently started to inject psychoactive drugs<sup>e</sup> (accompanying data, table 1). Among those surveyed across England, Wales and Northern Ireland during 2015, HIV prevalence among recent initiates was the highest level seen in this group since the survey programme started in 1990. However, all of the recent initiates with HIV in 2015 were men who reported sex with men during the preceding year; these men may have acquired HIV through their sexual activities as in the UK MSM are the group most affected by HIV. These participants reported injecting drugs, such as mephedrone, that are often used during chemsex.

### Testing and care

The majority of those who inject psychoactive drugs reported ever being tested for HIV (79% in 2015 in England, Wales and Northern Ireland and 84% in 2015-16 in Scotland). Only 47% of those injecting image and performance enhancing drugs in England and

<sup>e</sup> A recent initiate is someone who had first injected drugs during the preceding three years.

Wales reported ever being tested for HIV in 2014-15; this is similar to the level of testing found in the previous survey of this group in 2012-13.

Although the majority of people who inject drugs living with HIV in the UK are aware of their infection, and most of those aware are accessing HIV treatment and care services<sup>18</sup>, late diagnoses remain a problem. In 2015, 45% of the HIV diagnoses among people who had acquired their infection through injecting drugs were made at a late stage of HIV infection (accompanying data, table 1c). This compares with 39% overall (for all the risk groups combined), and 30% of those exposed through sex between men.<sup>13</sup> People who are diagnosed late have a ten-fold risk of dying within a year of diagnosis compared with those who are diagnosed promptly.<sup>19</sup> In addition, those who have been diagnosed late have probably been living with an undiagnosed HIV infection for a number of years and may have been putting others at risk through sexual transmission in addition to the sharing of injecting equipment.

Owing to improved survival, the number accessing HIV treatment and care in the UK who had acquired their infection through injecting has increased over the past decade, with 1,909 people seen in 2015 (accompanying data, table 1c). Among the 500 people who inject drugs who were accessing HIV care with CD4 counts of 350 or less in 2015 (the recommended level to start anti-retroviral therapy prior to 2015), 94% were on anti-retroviral therapy (accompanying data, table 1c). Following a recent revision to the clinical guidelines, anti-retroviral treatment is now recommended for all those living with HIV.<sup>20</sup> In 2015, 94% of those seen for care who had acquired their HIV infection through injecting were on anti-retroviral therapy. Overall, of those in care who had acquired their infection through injecting 83% had a viral load of 50 or less, indicating viral suppression; this compares with 89% of those who had acquired HIV through heterosexual sex and 91% of those who acquired HIV through sex between men.<sup>13</sup>

Although HIV infections continue to occur among people who inject drugs, the overall HIV prevalence in this group in the UK is currently still comparatively low. Most of those with HIV are aware of their infection and uptake of treatment and care for HIV among those diagnosed is high. However, the emergence of new patterns of injecting drug use among MSM, the HIV outbreak among heroin injectors in Glasgow and the high proportion of people who inject drugs with HIV diagnosed late are a concern. These findings highlight the importance of accessible HIV testing services. HIV testing and prevention services for all groups of people who inject drugs need to be maintained in a range of appropriate settings, and these services should be responsive to changes in both drug use and sexual risks.

## Many hepatitis C infections remain undiagnosed

People who inject drugs are the group most affected by hepatitis C in the UK.<sup>21</sup> Around nine-tenths of the hepatitis C infections diagnosed in the UK are thought to have been acquired through injecting drug use. Across the UK, nearly 13,000 positive test results for hepatitis C were reported during 2015 (accompanying data, table 1a).

The overall level of hepatitis C transmission among people who inject psychoactive drugs in the UK appears to have changed little in recent years. In England, Wales and Northern Ireland, 24% of recent initiates to injecting surveyed in 2015 had been infected – this is a similar level to that seen in this group in recent years, but higher than the prevalence in 2005 of 18% (accompanying data, table 1a). Incidence in 2015 were estimated at between four to thirteen infections per 100 person years of exposure<sup>f</sup>. In Scotland, hepatitis C incidence among those who inject psychoactive drugs was estimated to be 11.5 infections per 100 person years of exposure during 2015-16<sup>g</sup>.

UK-wide data indicates that around half of those who inject psychoactive drugs have been infected with hepatitis C: with 58% of those surveyed in Scotland having antibodies to hepatitis C, 53% in Wales, 52% in England, and 27% in Northern Ireland (accompanying data, table 1a).<sup>2</sup> As around a quarter of those infected with hepatitis C naturally clear their infection, this data suggests that about two in five of those who inject psychoactive drugs are currently living with chronic hepatitis C infection in the UK.

The uptake of voluntary confidential testing for hepatitis C among people injecting drugs has increased across the UK. Among those attending needle and syringe programmes in Scotland during 2015-16, 92% of those surveyed reported having ever been tested for hepatitis C (accompanying data, table 3b); this is higher than the 74% reported by those surveyed in 2008-09 (figure 3). Among those injecting psychoactive drugs surveyed across England, Wales and Northern Ireland, it increased from 71% reporting they had ever been tested in 2005 to 86% in 2015 (figure 3; accompanying data, table

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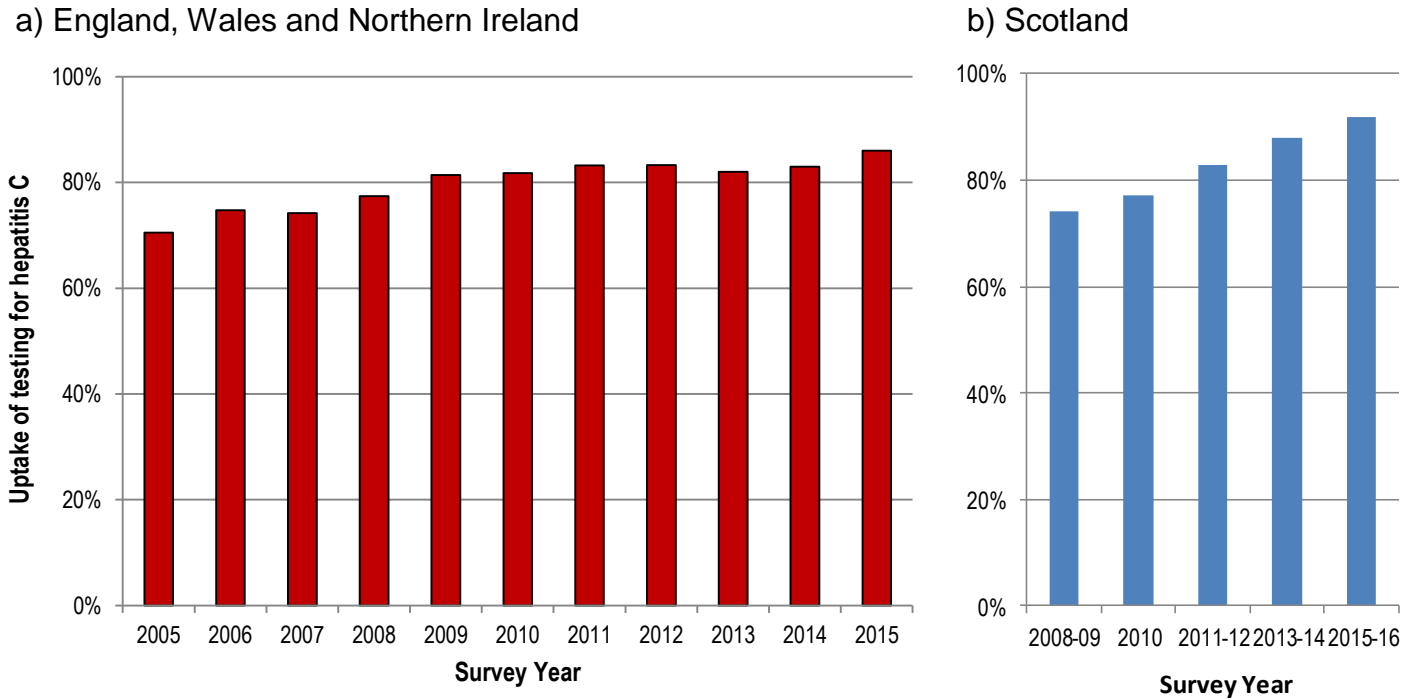
<sup>f</sup> In England, Wales and Northern Ireland, recent transmission is explored among the participants in the Unlinked Anonymous Survey<sup>2</sup> by looking for those who have recently developed antibodies to hepatitis C. This has been undertaken by testing the hepatitis C antibody positive samples collected in this survey for antibody avidity. Those samples with hepatitis antibodies with weak avidity and who also have hepatitis C RNA are likely to be from individuals who have recently been infected. The length of time that samples from recently infected individuals will have antibodies with weak avidity is uncertain, but this state may last from two to six months. Participants who had injected during the preceding year are included in the analysis, those who were anti-HIV positive are excluded.

<sup>g</sup> In Scotland, recent transmission explored in a similar way among participants in the NESI Survey by looking for those who test positive for hepatitis C RNA, but are negative for hepatitis C antibody. Individuals with hepatitis C RNA, but hepatitis C antibody negative are likely to have acquired their infections recently. The length of time that samples from recently infected individuals will have hepatitis C RNA without antibodies is assumed here to be 51 days.

3b). During 2015, countrywide levels of testing uptake were as follows: 86% in England, 81% in Wales and 94% in Northern Ireland.<sup>2</sup>

In 2015, among those injecting psychoactive drugs surveyed across England, Wales and Northern Ireland, only half (52%) of those with hepatitis C reported that they were aware of their hepatitis C positive status. This proportion has remained relatively stable over the past decade. Of those who were unaware of their positive status, 18% reported never having had a test for hepatitis C and of those unaware but tested, 41% reported that their last test had been more than two years ago.<sup>h</sup> Of those surveyed at needle and syringe programmes across Scotland in 2015-16 with hepatitis C, 42% reported that they were aware of their hepatitis C positive status.

**Figure 3. Uptake of the voluntary confidential testing for hepatitis C among people who inject drugs: a) England, Wales and Northern Ireland, and b) Scotland**



Data source: Unlinked Anonymous Monitoring survey of people who inject drugs (England, Wales and Northern Ireland) and Needle Exchange Surveillance Initiative (Scotland).

In England, the National Drug Treatment Monitoring System (NDTMS) found that among those who have ever injected drugs and who are in treatment for their drug use, the proportion who had been offered and accepted a hepatitis C test had increased to

<sup>h</sup> Of those participants from across England, Wales and Northern Ireland in the Unlinked Anonymous Monitoring Survey<sup>2</sup> who had antibodies detected in the sample they provided and who did not report being aware of their hepatitis C status, 100 out of 565 reported never having had a voluntary confidential diagnostic test for hepatitis C. Of those who had been tested, 143 out of 351 reported that their last test was prior to 2014.

64% in 2014-15 (accompanying data, table 3b). Although 95% of those who have ever injected drugs had been offered a hepatitis C test at the beginning of their most recent treatment period, only 57% had accepted that offer<sup>i</sup>. Data also indicate that care pathways for those with hepatitis C may need further improvement<sup>21</sup> – see box 3.

### **Box 3 Continuum of hepatitis C care among people who use drugs in England**

Data on all of the blood-borne virus testing undertaken at selected laboratories across England is collected through the sentinel surveillance of blood-borne virus testing. From the data collected in this system it is possible to assess the extent that those diagnosed with hepatitis C have received appropriate care. Analysis of data from those initially tested in specialist services for people who use drugs between 2005 and 2014 indicates that:

- of those who tested positive for antibodies to hepatitis C, 75% had also been tested for hepatitis C RNA within six months of their antibody test. The RNA test is used to identify current infection
- three-quarters of those undergoing RNA testing had a positive result indicating that they had current hepatitis C infection
- data on subsequent testing\* indicated that only 3.7% of those with current infection had evidence of receiving hepatitis C treatment within a year of their diagnosis
- of those who had evidence of receiving treatment, 43.5% had probably cleared their hepatitis C infection

Though this data needs to be interpreted very cautiously (as it relies on data linkage) it suggests improvements are needed to the care pathways for those with a hepatitis C diagnosis. It also suggests that few of those who use or inject drugs with a hepatitis C diagnosis before 2015 had been treated. However, this data precedes the wider availability of the newer more effective treatment regimens using the direct acting antivirals.

\* Four or more sequential hepatitis C RNA test results within a 390 day period of an initial positive RNA result are used as an indicator of the receipt of treatment.

In England and Wales, among those who only inject image and performance-enhancing drugs, 5.1% of those surveyed had antibodies to hepatitis C in 2014-15. This is similar to the 5.4% found in the first survey of this group which was undertaken in 2010-2011.<sup>3</sup> The prevalence of antibodies to hepatitis C in this group is lower than the prevalence among those who inject psychoactive drugs but higher than the level in the general

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<sup>i</sup> National Drug Treatment Monitoring System in England found that 64% (62,693/98,720) of people who have ever injected drugs and who are in treatment for their drug use had been offered and accepted a hepatitis C test in 2014-15, up from 53% (61,106/114,848) in 2009/10. Among those who have ever injected drugs, 95% (94,140/98,720) had been offered a hepatitis C test at the beginning of their most recent treatment period, however only 57% (62,693/94,140) had accepted that offer.

population (which is around 0.4% in England<sup>22</sup>). Only 41% of those injecting image and performance-enhancing drugs reported ever being tested for hepatitis C in 2014-15. However, this is an increase from the uptake of 23% found in 2010-2011.<sup>3</sup>

In Scotland, among those surveyed attending needle and syringe programmes who had only injected image and performance drugs during the past six months, 11% had antibodies to hepatitis C in 2015-16. Over a third (37%, 17/46) of those only injecting image and performance enhancing drugs in 2015-16 reported ever being tested for hepatitis C, up from 18% in 2010.

This data shows that hepatitis C continues to be a major problem among people who inject drugs in the UK, with high levels of transmission. About half of the hepatitis C infections among people who inject drugs are currently undiagnosed. This is because those with undiagnosed infection have either never been tested or have been infected since their last test. These findings suggest that the approaches used to encourage testing for hepatitis C, and other blood-borne viruses, may need further development. For example, Wales is moving to routine opt-out testing in the community of those at risk, to support earlier diagnosis and referral to treatment.<sup>23</sup> Interventions to reduce the transmission of hepatitis C, diagnostic testing services and care pathways for those infected need to be continued and where appropriate, expanded.

## Hepatitis B remains rare, but vaccine uptake needs to be sustained

The transmission of hepatitis B continues among people who inject drugs, but it has probably declined in recent years. The proportion of people who inject psychoactive drugs ever infected with hepatitis B in England, Wales and Northern Ireland has halved over the past 10 years, falling from 28% in 2006 to 13% in 2015 (accompanying data, table 1b). In 2015, only 0.41% had a current hepatitis B infection<sup>j</sup>, which is similar to the level seen in recent years. This suggests that only around one in 200 people who has injected psychoactive drugs is currently living with the hepatitis B infection.<sup>24</sup>

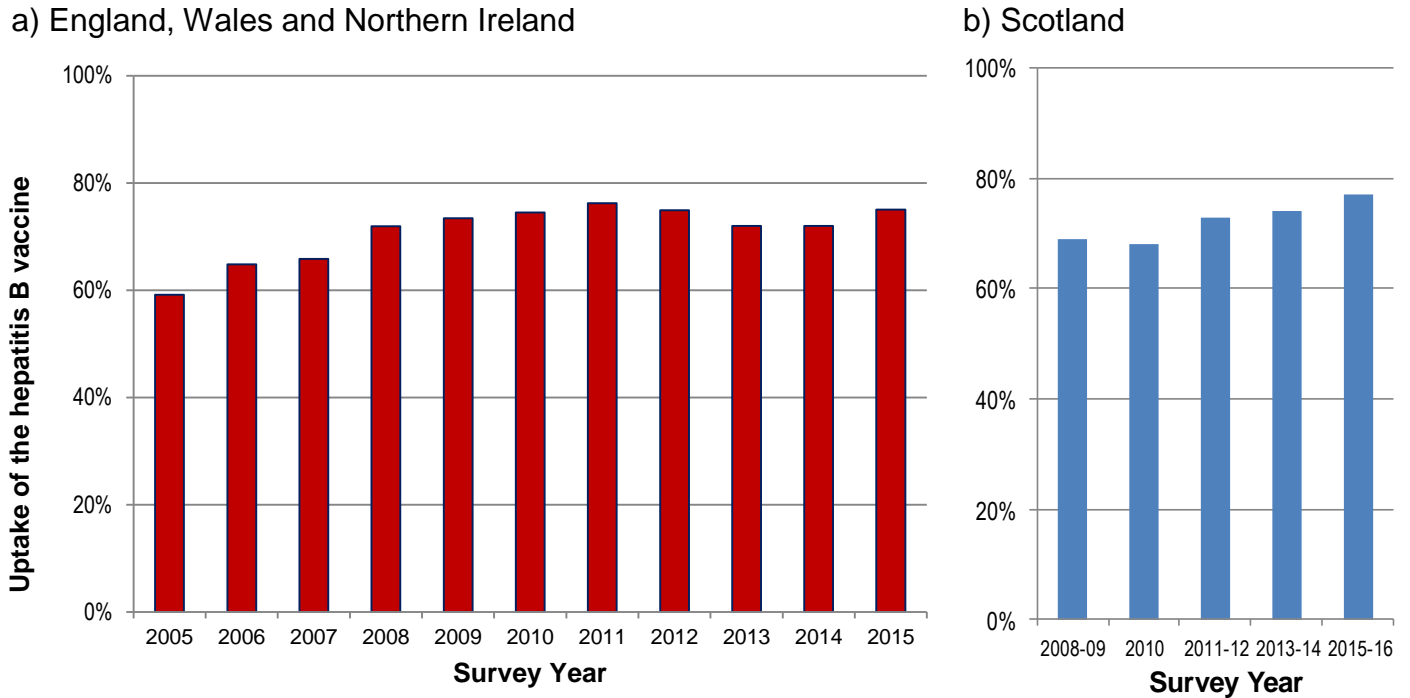
In England, Wales and Northern Ireland, reported uptake of the hepatitis B vaccine (ie receiving at least one dose) increased from 59% in 2005 to 75% in 2015. However, the level of uptake has changed little in recent years (figure 4)<sup>j</sup> (accompanying data, table 3b). In 2015, reported uptake in England was 75%, in Wales 74% and in Northern Ireland 84%.<sup>2</sup> Among those attending needle and syringe programmes in Scotland

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<sup>j</sup> Current infection is defined as testing positive for both antibodies to the hepatitis B core antigen (anti-HBc) and for hepatitis B surface antigen (HBsAg).

during 2015-16, 77% reported uptake of the hepatitis B vaccine (accompanying data, table 3a, figure 4).

**Figure 4. Uptake of the vaccine against hepatitis B among people who inject drugs: a) England, Wales and Northern Ireland, and b) Scotland**



Data source: Unlinked Anonymous Monitoring survey of people who inject drugs (England, Wales and Northern Ireland) and Needle Exchange Surveillance Initiative (Scotland).

Data from the NDTMS in England indicates that half (52%, 9,300/17,825) of those who have ever injected drugs at risk of hepatitis B were offered and accepted vaccination against hepatitis B when they presented for treatment for their drug use in 2014/15 (accompanying data, table 3b). However, the proportion of those offered vaccination who accepted the offer has decreased from 70% (15,478/22,142) in 2009/10 to 56% (9,300/16,731) in 2014/15.

Among people injecting image and performance-enhancing drugs in England and Wales, 2.5% of them had ever been infected with hepatitis B in 2014-15; this is similar to the 2.8% found in the previous survey of this group undertaken in 2012-2013.<sup>3</sup> This prevalence is lower than that among those injecting psychoactive drugs but probably higher than the level found in the general population.<sup>25</sup> Only 38% of those injecting image and performance-enhancing drugs reported uptake of the vaccine against hepatitis B, and this is similar to the level seen in the previous survey.<sup>3</sup>

Hepatitis B vaccination uptake in those injecting psychoactive drugs is no longer increasing. Even though hepatitis B infection among this group is now rare, it is



essential that these high vaccination levels are maintained. There are much lower levels of vaccine uptake among people who inject image and performance-enhancing drugs; this is a concern and appropriate interventions are needed for this group.

## Bacterial infections continue to be a problem

One in three (33%) of those injecting psychoactive drugs in England, Wales and Northern Ireland in 2015 reported that they had experienced an abscess, sore or open wound (all possible symptoms of an injecting site infection) during the past year (accompanying data, table 2). This compares with 35% in 2006. These symptoms are more commonly reported by women (38%) than men (31%).<sup>2</sup> Among those attending and surveyed during 2015-16 at needle and syringe programmes across Scotland, 20% reported that they had experienced an abscess, sore or open wound during the past year.

These infections are also an issue among people injecting image and performance-enhancing drugs with 14% of this group reporting that they have ever had an abscess, sore or open wound in 2014-15.<sup>3</sup> This level was similar to that seen in the previous survey period.

Illnesses, such as botulism, which are caused by the toxins produced by a number of spore-forming bacteria, continue to cause problems among people who inject drugs. The spores produced by these bacteria are found in the environment and may end up in drugs, such as heroin, through contamination. Between 2000 and 2014, there had been a total of 170 cases of botulism among people who inject drugs in the UK. There were 47 botulism cases among this group during 2015; all but five of these cases were part of the largest cluster of botulism so far seen among people who inject drugs in Europe. This cluster involved a total of 44 cases (two cases in 2014 and 42 in 2015) in Scotland, with the cluster focused on Glasgow. There were no cases of tetanus or anthrax among people who injected drugs in the UK during 2015 (accompanying data, table 2).

Severe illnesses among people who inject drugs due to hygiene related bacterial infections, including those caused by *Staphylococcus aureus* and Group A streptococci, continue to occur (accompanying data, table 2). Data from the mandatory enhanced surveillance of meticillin-sensitive *S. aureus* (MSSA) and meticillin-resistant *S. aureus* (MRSA) bacteraemias indicate that in 2015, of those with risk factor information, 11% (303/2856) of the MSSA bacteraemias were associated with injecting drug use, as were 9.6% (25/261) of the MRSA bacteraemias (accompanying data, table 2). During 2014-15 there was a large outbreak of soft tissue infections among people who injected psychoactive drugs in the Lothian NHS Board area of Scotland, with many of the cases

requiring prolonged hospital admissions and extensive surgical interventions. Though a number of different organisms were detected, Group A streptococci infections, and in particular one less commonly seen type of *S. pyogenes*, were often detected in the cases. Many had used one of the recently emerged psychoactive drugs, ethylphenidate, which has been associated with intensive short 'rushes' and frequent injecting episodes.<sup>26</sup>

This data indicates that bacterial infections remain common among people who inject drugs and that large outbreaks of infections due to bacteria continue to be a problem in this group. These infections can have a substantial impact on health services,<sup>27</sup> with studies indicating that about one in ten people who inject drugs are admitted to hospital each year because of a bacterial infection.<sup>28</sup> The impact of these infections is probably compounded by delays in seeking healthcare in response to the initial symptoms.<sup>28</sup> Many of these infections could be prevented by reducing risky injecting practices, such as the reuse of injecting equipment and the more serious consequences reduced by seeking prompt treatment.

## Changing patterns of psychoactive drug injection remain a concern

There have been changes in the types of psychoactive drugs being injected in the UK. In part, this reflects an ongoing decline in the injection of opiates and crack-cocaine in England.<sup>29</sup> However, the injection of other psychoactive drugs, such as amphetamines and amphetamine-type<sup>k</sup> drugs, has become more common in recent years.<sup>30</sup> The injection of amphetamines and amphetamine-type drugs has been associated with higher levels of risky behaviours and lower levels of intervention uptake.<sup>30</sup>

There are concerns about people injecting the recently emerged psychoactive drugs<sup>l</sup>, and in particular mephedrone which is an amphetamine-type drug.<sup>30</sup> The use of mephedrone was first noted in the UK in 2008<sup>31</sup> and it was controlled under the Misuse of Drugs Act in 2010. Mephedrone injecting is a more recent practice which occurs among people who have previously injected other drugs and among people who have switched from snorting mephedrone.<sup>32</sup> In England, Wales and Northern Ireland, 8.2% (154/1,883) of those surveyed in 2015 reported that they had injected mephedrone at some point during the preceding year. Those who had injected mephedrone during the

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<sup>k</sup> Amphetamine-type drugs include a number of substances with similar properties to amphetamines such as ecstasy and the synthetic cathinones including mephedrone.

<sup>l</sup> Recently emerged psychoactive drugs are those drugs which have become available recently and are not controlled by international treaties, such as mephedrone and ethylphenidate. This term includes a wide range of substances, some of which can be injected. Those injected are typically stimulants.

preceding year were twice as likely to report having injected drugs with a needle or syringe that had previously been used by someone else.<sup>m</sup>

In Scotland, among people who had injected drugs during the past six months, heroin was the most commonly injected drug, reported by over 90% of those surveyed at services providing injecting equipment between 2008 and 2016. The proportion reporting powder cocaine as their main drug of injection remains low, but has increased in recent years, up from 2.5% in 2010 to 4.1% in 2015-16. Reports of the use of the recently emerged psychoactive drugs are rare but increasing, with 3% (67/2,211) of respondents reporting recent injection of these drugs in 2015-16, up from 0.6% in 2013-14. Prevalence of recent injection of these drugs in 2015-16 was highest in the Lothian NHS Board area (11%, 47/428).

Data from both England and Wales indicates that there have been changes in the types of drugs being injected among those presenting to services that provide treatment for drug use, and in particular an increase in presentations reporting the injection of amphetamines or amphetamine-type drugs and of the recently emerged psychoactive drugs.<sup>30,33</sup> The vast majority of those presenting to treatment services are injecting heroin. Data from Wales also indicates a similar pattern among those accessing needle and syringe programmes, with the proportion of individuals reporting injection of amphetamine and amphetamine-type drugs as their main drug increasing from 7% in 2011-12 to 10% in 2015-16.<sup>34</sup>

Overall, these findings indicate that injection of amphetamines and amphetamine-type drugs, particularly mephedrone, remains a problem in the UK. The numbers injecting these drugs is currently small when compared with the numbers injecting opiates, crack-cocaine and image and performance-enhancing drugs. However, the injection of amphetamines and amphetamine-type drugs is a concern because of the higher levels of risk behaviours that have been associated with their injection.<sup>30</sup>

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<sup>m</sup> Among those participating in the Unlinked Anonymous Monitoring Survey<sup>2</sup> and who had injected during the preceding year 32% (48/150) of those injecting mephedrone during that time reported that they had injected with a needle or syringe previously used by someone else during the preceding year, only 18% (273/1,557) of those who had not injected mephedrone reported this ( $p < 0.001$ ).

## Provision of effective interventions needs to be maintained

Infections remain common among people who inject drugs. This reflects ongoing injecting risk particularly the reuse and sharing of injecting equipment. People who inject drugs are also at risk of infections through their sexual behaviours. Interventions that can prevent infections among this group, such as needle and syringe programmes and opioid substitution treatment, need to be sustained. The impact of these interventions is dependent on their coverage,<sup>35</sup> so it is important that the level of their provision is regularly reviewed to ensure that it is sufficient to prevent infections. Good intervention coverage among those who have very recently started to inject is particularly important, as the extent of hepatitis C infection in this group indicates that many people are becoming infected soon after they start injecting.

Those who commission services to reduce the harm associated with injecting drug use should give appropriate priority to preventing the spread of infections. National drug strategies acknowledge that tackling drug-related harm and reducing infections are important components of a recovery-focused response to drug use.<sup>36,37,38,39</sup> Services commissioned in line with these strategies, relevant action plans,<sup>40,41,42,43</sup> related guidance,<sup>44,45,46,47,48,49</sup> and local needs assessments<sup>50</sup> should include appropriate provision of:

- needle and syringe programmes
- opioid substitution treatment
- other drug treatments

These services, and primary care and sexual health services, should provide information and advice on safer injecting practices, preventing infections and the safe disposal of used equipment. Services should also provide access to a range of other interventions to reduce injection-related harm.

In the UK, **HIV levels remain low, but risks continue** among people who inject drugs and HIV outbreaks still occur. The new patterns of injecting drug use among some groups of MSM are also a concern. To ensure HIV levels remain low, it is important that diagnostic testing for HIV is offered regularly to all those at risk, that care pathways for those infected are maintained and that services adapt to changing patterns of HIV risk.

Easy access to diagnostic testing for hepatitis C is particularly important because **many hepatitis C infections remain undiagnosed** among people who inject drugs. Ways to improve the offer and uptake of hepatitis C testing should be explored. Well-designed,

supportive care pathways for those infected are needed and those diagnosed with hepatitis C and who continue to inject should have access to effective treatment and care in line with current guidelines.<sup>46,51,52</sup>

**Hepatitis B remains rare, but vaccine uptake needs to be sustained** among people who inject drugs. The provision of vaccination for this population should be maintained in line with guidance<sup>53</sup> and ways of further improving uptake among people who inject drugs explored. The use of innovative approaches to reduce the number of missed opportunities for vaccination, such as contingency management, including the use of incentives,<sup>54</sup> should be considered.

Information and advice on safer injecting practices and avoiding injection site infections are important as **bacterial infections continue to be a problem**. This should include the provision of health checks, tetanus vaccination when appropriate<sup>53</sup> and treatment for injection site infections.

The **changing patterns of psychoactive drug injection remain a concern** due to the higher levels of risk associated with amphetamines and amphetamine-type drugs. Services that are provided to reduce the risk of infections should reflect the increasing range of drugs that are now being injected. These services should also be appropriate to the needs of particular groups of people who may inject drugs, such as some MSM.

People continue to be at risk of infection through injecting behaviours. A range of easily accessible needle and syringe programmes for all people who inject drugs, including those injecting image and performance-enhancing drugs or using drug treatment services need to be provided in line with guidance.<sup>45,49</sup> These programmes should also offer interventions that support entry into treatment and other interventions to decrease or stop injecting (including providing foil for the purpose of smoking drugs, in order to reduce the harms caused by injecting<sup>55,56</sup>). They should aim to distribute appropriate and sufficient injecting-related equipment to prevent sharing and to support hygienic injecting practices.

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