

Shooting Up: Infections among people who inject drugs in the UK 2012

An update November 2013







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Prepared by: Public Health England, Health Protection Scotland, Public Health Wales, and Public Health Agency Northern Ireland.

Key Messages

- People who inject image and performance enhancing drugs, such as anabolic steroids and melanotan, are at greater risk of HIV, hepatitis B and hepatitis C infection than previously thought. In England and Wales, the level of HIV infection among this group is similar to that among people who inject psychoactive drugs, such as, heroin and crack-cocaine. The proportion that had ever been infected with hepatitis B is lower than that among people who inject psychoactive drugs, although recent survey findings suggest the level of infection has increased over time.
- 2 Infections remain common among people who inject psychoactive drugs. Overall around half of this group have been infected with hepatitis C; around one in every 100 has HIV; and almost one-third report having a recent symptom of an injecting site bacterial infection. Hepatitis B infection among people who inject psychoactive drugs has declined, probably reflecting the marked increase in the uptake of the hepatitis B vaccine.
- 3 Needle and syringe sharing is lower than a decade ago, although around one in seven of people who inject psychoactive drugs continue to share needles and syringes.
- 4 There has been a recent increase in the injection of amphetamines and amphetamine-type drugs, such as, mephedrone. Though these psychoactive drugs are much less commonly injected than opiates, crack-cocaine, or image and performance enhancing drugs, there is evidence that their injection is associated with higher levels of infection risk.
- 5 To minimise the harm from injecting drug use, changes in the patterns of use that increase infection risk need to be detected and responded to promptly. The continued public health monitoring of injecting drug use is therefore important. Services to prevent infections among people who inject either psychoactive or image and performance enhancing drugs need to be maintained and be responsive to any changes in drug use.

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People who inject drugs (PWID) are vulnerable to a wide range of viral and bacterial infections. These infections can result in high levels of illness and in death. Public health surveillance of infectious diseases and the associated risk and protective behaviours among this group provides information that is essential to understanding the burden of these infections, the risk factors for their acquisition, and for monitoring the effectiveness of prevention measures. This report describes the extent of infections among PWID in the United Kingdom (UK) to the end of 2012^a. This year's report focuses on those who inject image and performance enhancing drugs, as well as the changes in the types of psychoactive drugs being injected in the UK.

Changing patterns of injecting drug use

The most commonly injected psychoactive drug in the UK, either alone or in combination with crack-cocaine, is heroin. Historically, the injection of other psychoactive drugs (such as amphetamine and ketamine) was much less common¹. However, recent evidence suggests the types of psychoactive drugs being injected in the UK may be changing with the injection of amphetamine type drugs becoming more common.^{2,3,4} In addition, the injection of image and performance enhancing drugs (IPEDs), such as anabolic steroids, also appears to have become more common over the last decade⁵.

Injection of image and performance enhancing drugs

The number of IPED injectors using Needle and Syringe Programmes (NSPs) has grown substantially, and in some areas IPED injectors are now the largest group of NSP users⁵. Whilst the injection of these drugs is not new, a study in the 1990s indicated that injection risks associated with IPED use were much lower than those for psychoactive drug injection and found infections were rare (no HIV was found and 2.7% had ever been infected with hepatitis B).6 This possibly reflects that IPEDs, when compared to psychoactive drugs, are injected less frequently, injected subcutaneously or intramuscularly, and are generally easier to prepare for injection.

During 2010-11, a voluntary unlinked anonymous survey of male IPED injectors recruited 395 participants through NSPs in England and Wales.⁷ The most frequently injected IPEDs were reported to be anabolic steroids (86%) and growth hormone (32%), though the participants reported injecting a range of other drugs including melanotan (8.6%) and insulin (5.6%). The men surveyed also reported recent use of psychoactive drugs, with the non-injecting use of cocaine reported by 46% and amphetamine by 12%. One in 20 (5%) had ever injected a psychoactive drug. Almost one in 10 (9%) reported ever sharing injecting equipment (needle/syringe or vial of drugs). The majority of men sampled (86%) reported sex during the preceding year, with one in five (20%) reporting multiple female partners, and 3% a male partner.

Overall, only 23% of the male IPED injectors participating in the 2010-11 unlinked anonymous survey reported receiving one or more doses of vaccine against hepatitis B, 31% had ever had a voluntary confidential

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

test for HIV and 22% for hepatitis C. Testing of the oral fluid sample collected in the survey indicated that overall 1.5% had HIV, 9% had ever been infected with hepatitis B, and 5% had antibodies to hepatitis C (Figure 1).⁷ After excluding those who reported a male sexual partner or who had ever injected psychoactive drugs, 0.8% had HIV, 8% had ever been infected with hepatitis B, and 5% had antibodies to hepatitis C (Figure 1)⁷. The prevalence of blood-borne virus infections among IPED injectors in Scotland and Northern Ireland is currently not known.

These findings suggest that infection levels among IPED injectors in England and Wales are higher than 15 years ago. Compared to people who inject psychoactive drugs the levels of hepatitis infection are lower among IPED injectors. There is no difference in the HIV prevalence between these two groups of injectors (Figure 1).

Changing patterns of psychoactive drug injection

The types of psychoactive drugs being injected in the UK appear to be changing. In part, this reflects a decline in opiate and crack-cocaine injection in England¹. However, the injection of other psychoactive drugs, in particular amphetamines and amphetamine-type^b drugs, has become more common in recent years.

The Unlinked Anonymous Monitoring (UAM) Survey of PWID, which recruits people who have injected psychoactive drugs from across England, Wales and Northern Ireland^c,

has detected an increase in the injection of amphetamines and amphetamine-type drugs. Among the survey participants who were currently injecting, the proportion reporting injecting amphetamines and amphetamine-type drugs as their main drug rose from 4.5% (81/1,796) in 2002 to 12% (173/1,438) in 2012, though opiates remained the most common main drug (Figure 2). In 2012, those reporting amphetamines and amphetamine-type drugs as their main drug injected more frequently than those who reported other drugs as their main one (such as heroin or crack-cocaine)d. Those reporting injecting amphetamines and amphetamine-type drugs as their main drug were also more likely to report the sharing of injecting equipment, and were less likely to have ever had a voluntary confidential test for HIV or hepatitis C than those who reported other main drugs^e (Figure 3).

In Scotland, among PWID who had injected during the last six months surveyed at services providing injecting equipment, heroin was the most commonly injected drug for over 93% between 2008 and 2012^f. The proportion reporting amphetamines as their main drug of injection in the last six months was very low: 0.5% (10/2,071), 0.9% (21/2,398) and 1.3% (23/1,800) in 2008-09, 2010, and 2011-12, respectively. Reports of any other amphetamine-type drugs were also rare with less than 1% of respondents reporting any injection of these drugs in each survey year⁸.

b Amphetamine-type drugs include a number of substances with similar properties to amphetamines such as *ecstasy* and the synthetic cathinones including mephedrone.

c Further details of the UAM Survey can be found on this webpage: www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1202115519183. Unless otherwise indicated, data are from the survey data tables which are available from the above webpage.

d Those who reported injecting amphetamines and amphetaminetype drugs alone as their main drug (n=160) reported an average of 4.6 injections on the last full day that they injected compared with 2.9 injections for those reporting other main drugs (n=1,204; p<0.001); however, they injected on a similar number of days during the last 28 days, 14.7 vs. 14.1 (p=0.44).

e Among those who reported injecting amphetamines and amphetamine-type drugs alone as their main drug:- 40% (68/170) reported sharing needles, syringes, spoons or filters during the last 28 days compared with 32% of those reporting other main drugs (398/1,248; p=0.035); 71% (114/160) had ever had a voluntary confidential test for HIV compared with 79% of those reporting other main drugs (963/1,215: p=0.021); and 79% (127/161) had ever had a voluntary confidential test for HCV compared with 85% of those reporting other main drugs (1,011/1,187; p=0.039).

f Surveys were undertaken in 2008-09, 2010 and 2011-12. Over 93% of the respondents reported heroin as their main drug of injection during the last six months in each of the three surveys.

Although presentations at drug treatment services in England by people using ecstasy (MDMA) have declined, the numbers using mephedrone, methamphetamine, ketamine, and GHB have increased in recent years9. All of these drugs can be injected, though most users do not inject them. Among those presenting for treatment who reported only using one or more of mephedrone, methamphetamine, ketamine, GHB and ecstasy, the proportion currently injecting these drugs doubled between 2011-12 and 2012-13,9 increasing from 5% to 10%h. The highest level of injecting was found among the methamphetamine users (51% in 2012-13). This may in part reflect an increase in injection of methamphetamine among men who have sex with men (see Box 1).

In Scotland, among individuals attending drug treatment services, presentations by people using amphetamines, ecstasy or

mephedrone are small in number. There is currently no evidence for an increase in presentations associated with the use of these drugs in Scotland.¹¹

The *Druglink Street Drug Trends Survey* 2012⁴ surveyed police forces, drug action teams, frontline drug services and user groups in 20 towns and cities across the UK, in addition to undertaking a national online survey of drug service staff. It found that in a number of areas across the UK, mostly outside of the main cities, people had started to inject mephedrone. It also found that many of those injecting mephedrone had previously injected other drugs, whilst others had switched from snorting mephedrone to injecting.⁴

Together these findings indicate an increase in the number of people injecting amphetamines and amphetamine-type drugs in the UK. The numbers injecting these drugs is currently small when compared to the numbers injecting opiates and IPEDs. However, their use is a concern because of the higher levels of infection risk

Box 1: Drug use and injection among men who have sex with men (MSM)

There have been recent concerns that the injection of methamphetamine and mephedrone may be increasing among some sub-groups of MSM, many of whom are HIV positive³. These drugs are typically being used during sex, with injecting equipment often shared and condoms not used³. Whilst the scale of this remains unclear, specialist Lesbian, Gay, Bisexual and Transgender drug services are seeing an increase in the number of MSM who report injecting these drugs.² The use and injection of these drugs has also been reported to be a factor in a recent sexually transmitted infection outbreak.¹⁰ There is a need for a better understanding of the extent of current injecting drug use among MSM, and for targeted responses.

g Ecstasy (MDMA), mephedrone, and methamphetamine are amphetamine-type stimulants. Ketamine and GHB are hallucinogens.

h The number of presentations for one or more of these five drugs increased from 531 in 2011-12 to 795 in 2012-13.

Box 2: HIV outbreaks among people who inject drugs in Europe

There have been several recent outbreaks of HIV among PWID in Europe. ¹² In the Romanian outbreak, a switch from injecting opiates to injecting amphetamine-type stimulants, mostly synthetic cathinones, was identified as a factor for increased HIV transmission, alongside low levels of intervention provision. Prior to the outbreak, the HIV prevalence among PWID in Romania was similar to the low level seen in the UK. This recent outbreak highlights the importance of being alert to the impact of changing patterns of drug use, which could lead to changes in high risk injecting practices.

associated with injecting amphetamines and amphetamine-type drugs and the role played by synthetic cathinones, like mephedrone, in a recent European HIV outbreak (see Box 2).

Update on infections and behaviours

Information on the extent of infections and key behaviours among those who have injected drugs can be found in the set of data tables that accompany this report. Key points are summarised here.

Hepatitis C: PWID are the group most affected by hepatitis C in the UK. In 2012, 13,477 hepatitis C infections were diagnosed in the UK. Around 90% of these infections will have been acquired through injecting drug use (Accompanying Data Table 1). UK-wide data indicate that around half of those who inject psychoactive drugs are hepatitis C antibody positive: with 53% of those surveyed having antibodies to hepatitis C in Scotland, 49% in England, 34% in Northern Ireland and 33% in Wales¹³ (Accompanying Data Table 1).

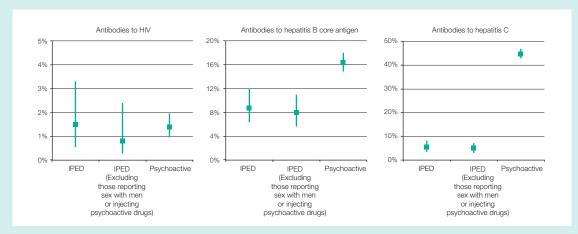
Uptake of voluntary confidential testing for hepatitis C has increased among current or previous injectors of psychoactive drugs (Accompanying Data Table 3), with the proportion reporting having ever been tested in England, Wales and Northern Ireland rising from 58% in 2002 to 83% in 2012 (83% in England, 84% in Wales, and 87% in Northern Ireland in 2012). 13,14 Among those attending NSP in Scotland during 2011-12, 83% reported having ever been tested (Accompanying Data Table 3).

Hepatitis B: The transmission of hepatitis B continues among PWID, but appears to have declined in recent years as the proportion of participants in the UAM Survey who had ever been infected has fallen from 29% in 2002 to 17% in 2012 (Accompanying Data Table 1), with 0.94% currently infected in

In Scotland, the incidence of hepatitis C infection among this group is estimated to have declined from 13.3 per 100 person years during 2008-09 to 6.1 per 100 person years during 2011-12. ¹³ However, elsewhere in the UK the level of hepatitis C transmission appears to have changed little recently, with 24% of recent initiates participating in the 2012 UAM Survey infected (Accompanying Data Table 1).

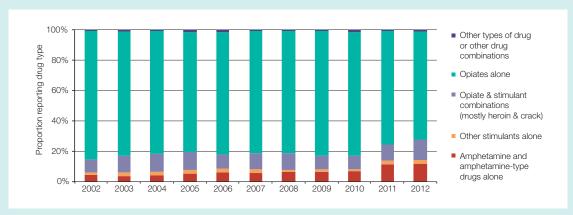
i The data tables can be found on this webpage: www.hpa.org.uk/Publications/InfectiousDiseases/BloodBorneInfections/ShootingUp/

Figure 1: Prevalence of HIV and current or past infection with hepatitis B and C among men injecting either image and performance enhancing drugs (IPEDs) or psychoactive drugs; England & Wales: 2010-11



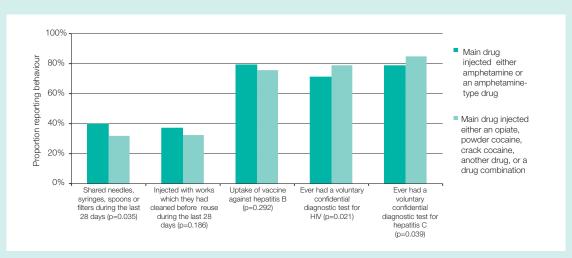
Data Sources: Image and performance enhancing drugs: the 2010-11 Unlinked Anonymous Survey of image and performance enhancing drug injectors. Sample oral fluids, hepatitis C and hepatitis B results adjusted for test sensitivity of 92% and 75% respectively. Psychoactive drugs: the 2011 Unlinked Anonymous Monitoring Survey of People Who Inject Drugs in contact with drug agencies. Sample dried blood spots.

Figure 2: Main drug type injected*; England, Wales & Northern Ireland: 2002 to 2012



^{*} Among those who had injected during the preceding 28 days. **Data Source:** Unlinked Anonymous Monitoring Survey of People Who Inject Drugs in contact with drug agencies. Self-reports.

Figure 3: Behaviours by main type of psychoactive drug injected: those who report an amphetamine or amphetamine-type drug compared with those who report other drug types*; England, Wales & Northern Ireland: 2012



^{*} Among those who had injected during the preceding 28 days. **Data Source:** Unlinked Anonymous Monitoring Survey of People Who Inject Drugs in contact with drug agencies. Self-reports.

2012.¹⁵ In England, Wales and Northern Ireland, reported uptake of the hepatitis B vaccine (i.e. accepting at least one dose) among participants in the UAM Survey has increased from 43% in 2002 to 75% in 2012^{14,15} (Accompanying Data Table 3: 75% in England, 77% in Wales, and 68% in Northern Ireland in 2012). Among those attending NSP in Scotland during 2011-12, 73% reported uptake of the hepatitis B vaccine (Accompanying Data Table 3).

HIV: There were 111 new HIV diagnoses associated with injecting drug use in 2012 (Accompanying Data Table 1). HIV prevalence among those who have injected psychoactive drugs appears to be stable (Accompanying Data Table 1). In England, Wales and Northern Ireland, 1.3% of the participants in the UAM Survey in 2012 were infected. The HIV prevalence among PWID in the UK is low compared to many other European countries. 16 The number of HIV-infected people seen for HIV treatment and care in the UK who had acquired their infection through injecting has increased over the past decade, with 1,617 seen in 2012 (Accompanying Data Table 1). In 2012, 458 people who acquired their HIV-infection through injecting, and who were seen for care, had CD4 counts of 350 cells/mm³ or less; the recommended

level to start anti-retroviral therapy.¹⁷ Among those seen for HIV treatment and care with CD4 counts of 350 or less in 2012, 88% of those who had acquired their infection through injecting were on anti-retroviral therapy (Accompanying Data Table 1).

Bacterial Infections: Symptoms of a possible injecting-site infection remain common among PWID. In 2012, 29% of participants in the UAM Survey from across England, Wales and Northern Ireland reported that they had experienced an abscess, sore or open wound, all possible symptoms of an injecting-site infection, during the last year (Accompanying Data Table 2). This compares to 35% in 2006. Staphylococcus aureus and Group A streptococcal infections continue to cause severe illnesses among PWID (Accompanying Data Table 2). Mandatory enhanced surveillance of meticillinsensitive S. aureus (MSSA) bacteraemia cases in England started in 2011, and among the MSSA bacteraemia with risk factor information, 8.6% (234/2,720) were associated with injecting drug use in 2012 (Accompanying Data Table 2). There were two wound botulism cases among PWID in the UK during 2012, and anthrax cases among PWID re-emerged (Box 3).

Box 3: Anthrax among heroin users in Europe during 2012-13

Between June 2012 and the end of March 2013, 15 cases of anthrax were reported among PWID in Europe: five in England, four in Germany, two in Scotland, two in Denmark, one in France, and one in Wales¹⁸. The cases are thought to be linked through exposure to heroin contaminated with anthrax spores. These are the first cases of anthrax among drug users in Europe since the outbreak during 2009-10. This indicates that PWID in the UK, and elsewhere in Europe, remain at risk of severe illnesses, such as anthrax, caused by spore forming bacteria.

Risk Behaviours: The level of needle/syringe sharing (either borrowing or lending a used needle/syringe) reported by participants in the UAM Survey in England, Wales and Northern Ireland has declined from 34% in 2002 to 14% in 2012 (Accompanying Data Table 3; 14% in England, 10% in Wales, and 19% in Northern Ireland in 2012). 14,15 In Scotland, among individuals attending drug treatment services who had injected in the previous month, there was a decline in needle/syringe sharing in the previous month from 22% during 2006-07 to 17% during 2011-12 (Accompanying Data Table 3). The proportion who reported only borrowing used needles/syringes in the past month was 12% in 2011-12. These declines have occurred during a period when NSP in the UK have been expanding, however further expansion is needed. 13,19

Conclusions and Recommendations

The prevalence of HIV among IPED injectors and the evidence of an increase in the proportion of this group ever infected with hepatitis B are both a cause for concern. Though both of these findings need further investigation, they indicate a need for targeted NSP provision and for other health services to be alert to the use and injection of IPEDs and their consequences.

The emerging patterns of psychoactive drug injection, particularly the indications of increased injection of amphetamines and amphetamine-type drugs, are a concern as there is evidence of higher levels of risk among people injecting these drugs. The continued public health monitoring of the patterns of drug use and injection are important, as changes in injecting drug use that increase infection risk need to be detected in a timely fashion so that intervention strategies can be introduced promptly in order to minimise harm.

HIV and hepatitis C infections continue to occur among people who inject psychoactive drugs in the UK. Combined data from across the UK suggests that almost half have been infected with hepatitis C and that around one in 100 has HIV. Hepatitis B infection is now uncommon, reflecting the fact that almost four-fifths of people who inject psychoactive drugs now report uptake of the vaccine. Bacterial infections remain a problem among PWID.

Although the reported level of injecting-related equipment sharing has declined, large numbers of PWID still continue to report injecting practices that put them at risk of acquiring infections. Risk behaviours remain particularly common among younger PWID. Interventions that aim to prevent infections among PWID therefore need to be sustained, and the levels of provision reviewed to ensure adequate coverage.²⁰

Those commissioning community-based services to reduce the harm associated with injecting drug use should give appropriate priority to preventing the spread of infections among PWID and reducing the harm that these infections cause. National drug strategies acknowledge that tackling drug-related harm is vital to reducing infections as a component of recovery. ^{21,22,23,24} Services commissioned in line with these strategies, relevant action plans, ^{25,26,27,28,29} related guidance, ^{30;31,32,33,34,35,36,37} and local needs assessments ³⁸ should include the provision of:

- 1. Drug treatment services, primary care services, sexual health services and NSP that collectively ensure that PWID have easy access to the following:
 - a) Information and advice on safer injecting practices, avoiding injecting site infections, preventing blood-borne virus transmission and the safe disposal of used equipment.
 - b) Hepatitis B and tetanus vaccination and, where indicated, hepatitis A vaccination³⁹.
 - c) Diagnostic testing for HIV and hepatitis C, and as appropriate for hepatitis B, and care pathways for those infected. These should ensure that those who continue to inject after being diagnosed with hepatitis infection have access to antiviral treatments in line with Clinical Guidelines.^{33,40}
 - d) Health checks and treatment for injection site infections.
 - e) Interventions to decrease or stop injecting (including providing foil⁴¹) and to support safer injecting practice where it continues. The provision of these services should reflect the range of drugs, including IPED, that are being injected and the needs of particular groups of PWID, such as MSM.
- 2. A range of easily accessible NSP for all injectors, including those injecting IPED, or using drug treatment services in line with NICE and national guidance.^{32,37} These programmes should distribute sufficient injecting-related equipment to prevent sharing and to support hygienic injecting practice. They should also offer interventions that support entry into structured, recovery-focused treatment.
- 3. Drug treatment services that encourage drug users to reduce and cease injecting, reduce or stop their drug use, and support them in achieving recovery.

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