



Public Health
England

Protecting and improving the nation's health

Shooting up Infections among people who inject drugs in the United Kingdom 2013

An update November 2014



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Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. It does this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. PHE is an operationally autonomous executive agency of the Department of Health.

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Contents

About Public Health England	2
Contents	3
Executive summary	4
Introduction	5
Hepatitis C levels are still high	5
Hepatitis B is now rare and vaccine uptake has improved	7
HIV levels remain low and the uptake of care is good	8
Bacterial infections remain a major problem	9
Injecting risk behaviours have declined but remain a problem	10
Changing patterns of psychoactive drug injection are a cause for concern	11
Provision of effective interventions need to be maintained	13

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Executive summary

Hepatitis C levels are still high.

Among people who inject psychoactive drugs, such as heroin and mephedrone, around two in five are living with hepatitis C; half of these infections are undiagnosed. About one in 30 of those who inject image and performance enhancing drugs, such as anabolic steroids, are living with hepatitis C.

Hepatitis B is now rare and vaccine uptake has improved.

Hepatitis B infection among people who inject psychoactive drugs has declined in recent years, probably reflecting the marked increase in the uptake of the hepatitis B vaccine. However, vaccine uptake levels have been stable in recent years, even though they could be increased further. Vaccine uptake is much lower among people who inject image and performance enhancing drugs.

HIV levels remain low and the uptake of care is good.

Around one in every 100 people who inject drugs is living with HIV. The level of HIV infection among those injecting image and performance enhancing drugs is similar to that among those injecting psychoactive drugs, and the uptake of HIV related care, including anti-retroviral therapy, is high.

Bacterial infections remain a major problem.

A quarter of people who inject psychoactive drugs report a recent symptom of an injecting site bacterial infection. One in six of those injecting image and performance enhancing drugs report having had a symptom of an injecting site bacterial infection.

Injecting risk behaviours have declined but remain a problem.

Reported needle and syringe sharing has halved over the last 10 years, but around one in seven people injecting psychoactive drugs share needles and syringes and almost one in three had injected with a used needle that they had attempted to clean.

Changing patterns of psychoactive drug injection are a cause for concern.

There has been a recent increase in the injection of amphetamines and amphetamine-type drugs, such as mephedrone. The injection of these drugs has been associated with higher levels of infection risk. Although the injection of these drugs is much less common than the injection of opiates, crack-cocaine, or image and performance enhancing drugs, this increase is a concern.

Provision of effective interventions needs to be maintained.

The provision of effective interventions, such as needle and syringe programmes, opioid substitution treatment and other drug treatment, which act to reduce risk and prevent infections, needs to be maintained. These interventions need to be responsive to any changes in patterns of drug use. Vaccinations and diagnostic tests for infections should continue to be routinely offered to people who inject drugs and treatment made 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 information is essential to understanding the burden 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 injected drugs in the United Kingdom (UK) to the end of 2013.^a Further information can be found in the set of data tables that accompany this report.^b

Hepatitis C levels are still high

People who inject drugs are the group most affected by hepatitis C in the UK. Around 90% of the hepatitis C infections diagnosed in the UK will have been acquired through injecting drug use. Across the UK, 13,758 hepatitis C infections were diagnosed during 2013. (Accompanying Data Table 1a).

UK-wide data indicate that around half of those who inject psychoactive drugs have been infected with hepatitis C, with 58% of those surveyed in 2013-14 in Scotland having antibodies to hepatitis C, 50% in England, 47% in Wales and 32% in Northern Ireland¹ (Accompanying Data Table 1a).¹ As around a quarter of those infected with hepatitis C clear their infection, these data suggest that about two in five of those who inject psychoactive drugs are currently living with hepatitis C infection in the UK.

The level of hepatitis C transmission among people who inject psychoactive drugs in the UK appears to have shown little change in recent years. In England, Wales and Northern Ireland, 24% of the recent initiates to injecting had been infected – this is similar to the level found a decade ago (Accompanying Data Table 1a)^c. Incidence is currently estimated at six to 18 infections per 100 person years of exposure.¹ In Scotland, the incidence of hepatitis C infections among people who inject drugs has

^a 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.

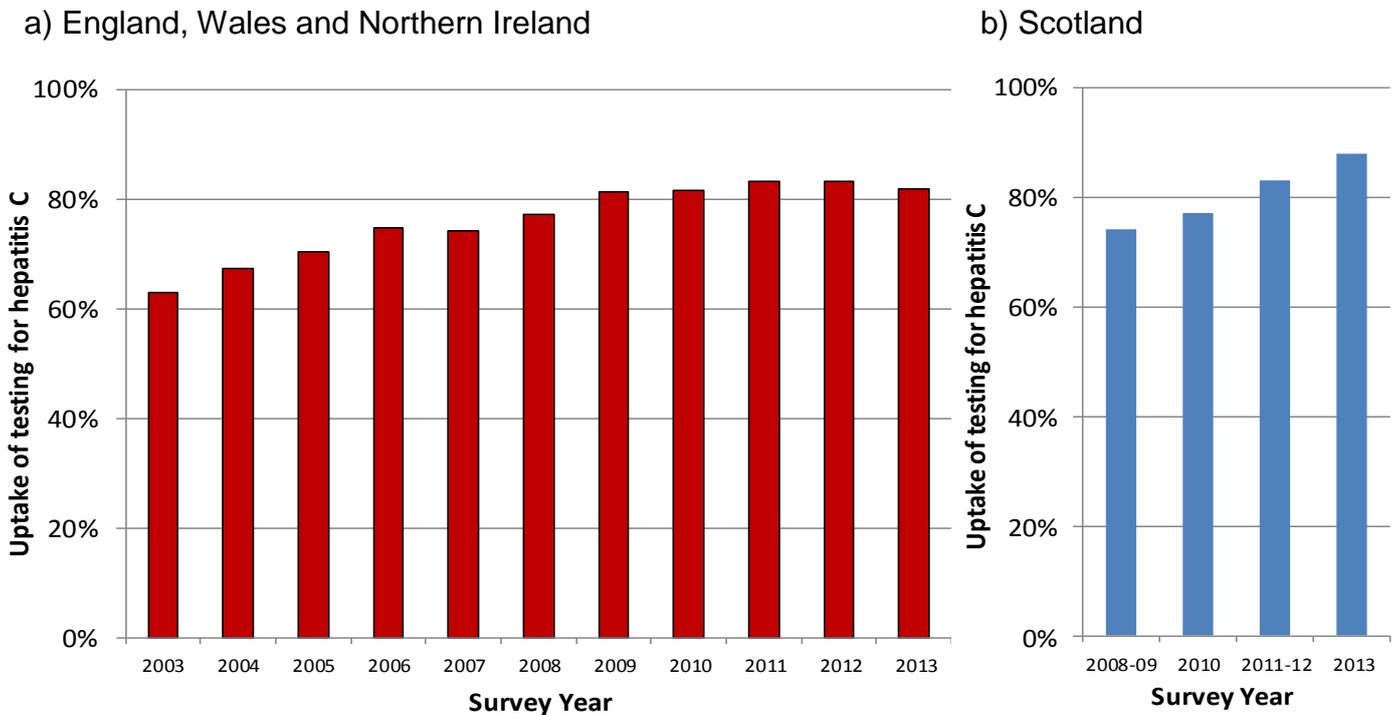
^b The data tables can be found on this webpage: <https://www.gov.uk/government/publications/shooting-up-infections-among-people-who-inject-drugs-in-the-uk>

^c A recent initiate is someone who had first injected drugs during the preceding three years.

been monitored since 2008, and it was estimated to be 10 infections per 100 person years of exposure during 2013-14; this compares with an incidence of 13 infections per 100 person years found during 2008-09.¹

The uptake of voluntary confidential testing for hepatitis C among people injecting psychoactive drugs in England, Wales and Northern Ireland increased between 2003 (63%) and 2010 (82%) (Figure 1a; Accompanying Data Table 3). However, since then the level of uptake has not changed. In 2013, it was 82% in England, 84% in Wales and 91% in Northern Ireland.^{1,2} Among those attending needle and syringe programmes in Scotland during 2013-14, 88% reported having ever been tested (Accompanying Data Table 3); this is higher than the 74% reported by those surveyed in 2008-09 (Figure 1b).

Figure 1. Uptake of the voluntary confidential testing for hepatitis C among people who inject drugs: a) England, Wales and Northern Ireland, and b) Scotland



In England and Wales, among those who inject image and performance enhancing drugs, such as anabolic steroids, peptides and melanotan, 3.6% had antibodies to hepatitis C in 2012-13.³ This is lower than the prevalence among those who inject psychoactive drugs, but higher than the level in the general population (which is around 0.4% in England¹). Only 32% of those injecting image and performance enhancing drugs reported ever being tested for hepatitis C.³

These data show that hepatitis C remains a major problem among people who inject drugs in the UK, with significant levels of on-going transmission. Although the uptake of testing is high, about half of the hepatitis C infections among people who inject drugs

remain undiagnosed (either because they have never had a test or have become infected since their last test).¹ Interventions to reduce transmission and to diagnose and treat those infected need to be continued and expanded.¹

Hepatitis B is now rare and vaccine uptake has improved

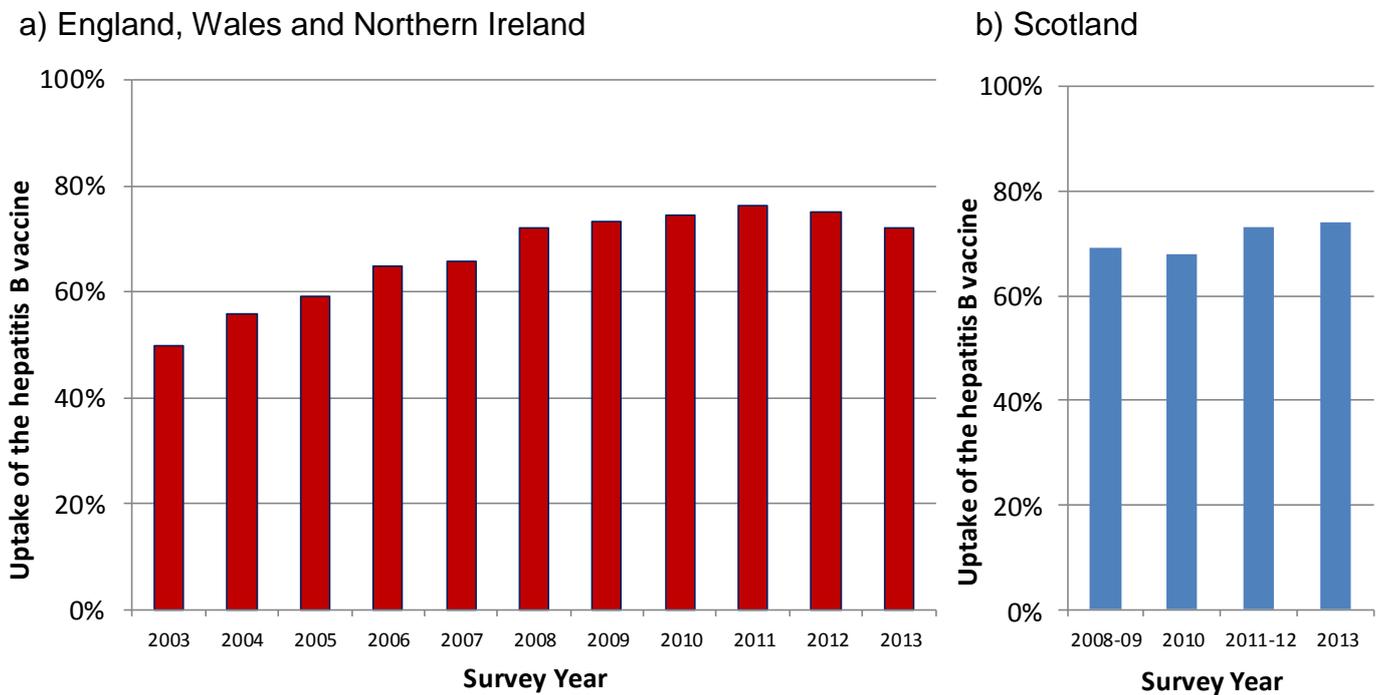
The transmission of hepatitis B continues among people who inject drugs, but it has declined in recent years. The proportion of people who inject psychoactive drugs ever infected with hepatitis B in England, Wales and Northern Ireland has halved over the last 10 years, falling from 30% in 2003 to 16% in 2013 (Accompanying Data Table 1b). In 2013, only 0.57% of this group had a current hepatitis B infection. This suggests that around one in 200 people who have injected psychoactive drugs are living with hepatitis B infection.⁴

In England, Wales and Northern Ireland, reported uptake of the hepatitis B vaccine (ie receiving at least one dose) has increased among people who inject psychoactive drugs from around half in 2003 to almost three-quarters in recent years. However, the level of uptake has not changed much over the last few years (figure 2a); uptake was 76% in 2011 and 72% in 2013.^{2,4} (Accompanying Data Table 3). In 2013, reported uptake in England was 71%, in Wales 74%, and in Northern Ireland 75%. Among those attending needle and syringe programmes in Scotland during 2013-14, 74% reported uptake of the hepatitis B vaccine (Accompanying Data Table 3, figure 2b).

Among those injecting image and performance enhancing drugs in England and Wales in 2012-13, 2.8% had ever been infected with hepatitis B.³ This is lower than among those injecting psychoactive drugs, but probably higher than the level found in the general population.⁵ Only 40% of those injecting image and performance enhancing drugs reported uptake of the vaccine against hepatitis B.³

These findings indicate that current hepatitis B infection is now rare among those who inject psychoactive drugs. However, the high levels of vaccination uptake in this group will need to be sustained in order to maintain these low levels. 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.

Figure 2. Uptake of the vaccine against hepatitis B among people who inject drugs: a) England, Wales and Northern Ireland, and b) Scotland



HIV levels remain low and the uptake of care is good

There were 112 new HIV diagnoses associated with injecting drug use in 2013 (Accompanying Data Table 1c). HIV prevalence among those who have ever injected psychoactive drugs appears to be stable (Accompanying Data Table 1c). In England, Wales and Northern Ireland, 1.1% of those surveyed in 2013 were infected. Among those attending needle and syringe programmes in Scotland during 2011-12, 0.3% were HIV antibody positive. The HIV prevalence among people who inject drugs in the UK is low compared to many other European countries.⁶ Most psychoactive drug injectors report ever being tested for HIV (76% in 2013 in England, Wales and Northern Ireland, and 78% in Scotland) and the majority of those with HIV are aware of their infection.⁷

The prevalence of HIV infection among those who inject image and performance enhancing drugs was 2.0% in 2012-13; this is similar to the prevalence among people who inject psychoactive drugs (after excluding men who report sex with other men – who are at particular risk of HIV through sexual transmission – prevalence was 0.9%).³ Only 41% of those injecting image and performance enhancing drugs reported ever being tested for HIV in 2012-13.³

Owing to improved survival, 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 1,829 seen in 2013 (Accompanying Data Table 1c). In 2013, 622 people who acquired their HIV infection through injecting and who were seen for care had CD4 counts of 350 cells/mm³ (the recommended level to start anti-retroviral therapy) or less.⁸ Among those seen for HIV treatment and care with CD4 counts of 350 or less in 2013, 80% of those who had acquired their infection through injecting were on anti-retroviral therapy (Accompanying Data Table 1c).

Although HIV infections continue to occur among people who inject drugs, these findings indicate that the overall HIV prevalence in this group remains 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.

Bacterial infections remain a major problem

A quarter (28%) of those injecting psychoactive drugs in England, Wales and Northern Ireland in 2013 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. Among those attending needle and syringe programmes in Scotland during 2013-14, 28% reported that they had experienced an abscess, sore or open wound, during the last year. These infections are also an issue among people injecting image and performance enhancing drugs, with 16% of this group reporting that they have ever had an abscess, sore or open wound in 2012-13.³

Severe illnesses among people who inject drugs due to 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 2013, of those with risk factor information, 8.0% (217/2,700) of the MSSA bacteraemias were associated with injecting drug use, as were 4.8% (15/313) of the MRSA bacteraemias (Accompanying Data Table 2). There were two wound botulism, two tetanus and two anthrax cases among people who inject drugs in the UK during 2013.

These data indicate that bacterial infections remain common among people who inject drugs. These infections place a significant burden on health services,⁹ with studies indicating that around one in 10 people who inject drugs are admitted to hospital each year due to a bacterial infection.¹⁰ This burden is probably compounded by delays in seeking healthcare in response to the initial symptoms of these infections.¹⁰ Many of

these infections could be prevented by reducing risky injecting practices, such as the reuse of injecting equipment.

Injecting risk behaviours have declined but remain a problem

The level of needle and syringe sharing (either borrowing or lending a used needle or syringe) among those currently injecting psychoactive drugs in England, Wales and Northern Ireland has almost halved from 29% in 2003 to 16% in 2013 (Accompanying Data Table 3). In 2013, 16% of those surveyed in England reported needle/syringe sharing: 21% in Wales, and 31% in Northern Ireland.^{2,15} The sharing of needles, syringes, mixing containers and/or filters was more common, with nearly two in five (39%) of those currently injecting surveyed across England, Wales and Northern Ireland reporting this in 2013 (Accompanying Data Table 3). When asked about their injecting practice during the preceding year, one in six (17%, 332/1,899) people who had injected psychoactive drugs reported that they had injected with a needle or syringe that had previously been used by someone else.

In Scotland, there was a decline in needle and syringe sharing among individuals attending drug treatment services who had injected in the previous month, from 22% during 2006-07 to 16% during 2012-13 (Accompanying Data Table 3). In 2012-13, 11% reported only borrowing used needles or syringes in the past month.¹

Cleaning and reusing injecting equipment is also common. In 2013, 29% of those currently injecting psychoactive drugs in England, Wales and Northern Ireland reported injecting with a needle that had previously been used and which they had then attempted to clean.¹

Sharing injecting equipment is less commonly reported among people injecting image and performance enhancing drugs; 13% of those surveyed in 2012-13 reported ever sharing a needle, syringe or vial of drugs.³ People in this group are often injected by someone else, so sharing may not always be recognised.¹¹

This decline in the reported level of injecting equipment sharing occurred during a period when needle and syringe programmes in the UK were expanding, however further expansion of a mixture of services is still needed.^{1,12} Available data indicate that current coverage of needle and syringe programmes is probably insufficient to provide at least one clean needle and syringe per injection.¹ These data suggest that due to problems with accessing new sterile injecting equipment, the sharing and reuse of equipment remains common.

Changing patterns of psychoactive drug injection are a cause for concern

The types of psychoactive drugs being injected in the UK are changing. In part, this reflects an ongoing decline in the injection of opiates and crack-cocaine in England.¹³ However, the injection of other psychoactive drugs, such as amphetamines and amphetamine-type^d drugs, has become more common in recent years. In particular, there are concerns about people injecting mephedrone. The use of mephedrone was first noted in the UK in 2008¹⁴ and it was controlled under the Misuse of Drugs Act in 2010. Mephedrone injecting is a recent practice which occurs among people who have previously injected other drugs, and among people who have switched from snorting mephedrone.¹⁵

The proportion of people in England, Wales and Northern Ireland reporting injecting amphetamines and amphetamine-type drugs as their main drug rose from 3.5% (56/1,603) in 2003 to 11% (150/1,395) in 2013, though opiates remained the most common main drug.¹⁶ The injection of amphetamines and amphetamine-type drugs has been associated with higher levels of risk behaviours and lower levels of intervention uptake.¹⁶

In England, Wales and Northern Ireland, 8% (164/2,077) of those surveyed in 2013 reported that they had injected mephedrone at some point during the preceding year. Those who had injected mephedrone during the preceding year were twice as likely to report having injected drugs with a needle or syringe that had previously been used by someone else.^e

In Scotland between 2008 and 2012, among people who injected drugs during the last six months surveyed at services providing injecting equipment, heroin was the most commonly injected drug for over 93%.^f The proportion reporting amphetamines as their main drug of injection in the last six months was very low and was 1.3% (23/1,800) in 2011-12. Reports of any other amphetamine-type drugs were also rare, with less than 1% of respondents reporting injection of these drugs in each survey year.¹⁷

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

^e Among those participating in the Unlinked Anonymous Monitoring Survey and who had injected during the preceding year 32% (48/152) 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 16% (277/1718) of those who had not injected mephedrone reported this ($p < 0.001$).

^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.

The number of people presenting to drug treatment services in England who use mephedrone, methamphetamine, ketamine and GHB, has increased in recent years, though the use of ecstasy has declined.⁹ Among those who reported only using one or more of these five drugs, the proportion currently injecting doubled to 10% between 2011-12 and 2012-13.^{16,18} The highest level of injecting was found among methamphetamine users (51% in 2012-13),¹⁶ and this may in part reflect an increase in the injection of this drug among men who have sex with men (see Box 1). In Wales, drug treatment presentations for amphetamine and amphetamine-type drugs, including mephedrone, increased three-fold between 2011-12 and 2012-13, and represented 12% of new referrals in 2012-13 and 10% in 2013-14. For those in contact with needle and syringe programmes, the proportion of individuals reporting injection of amphetamine and amphetamine-type drugs as their main drug increased from 7% in 2011-12 to 10% in 2013-14.¹⁹ In Scotland, among individuals attending drug treatment services, presentations by people using amphetamines, *ecstasy* or mephedrone are small in number with no evidence of an increase in presentations.

Overall, these findings indicate an increase in the number of people injecting amphetamines and amphetamine-type drugs in the UK. The numbers injecting these drugs currently remain small when compared to the numbers injecting opiates, crack-cocaine, and image and performance enhancing drugs. This increase in the injection of amphetamines and amphetamine-type drugs, particularly mephedrone, is a concern because higher levels of risk behaviours have been associated with their injection.¹⁶

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

There are ongoing concerns about the injection of methamphetamine and mephedrone among some sub-groups of MSM, many of whom are HIV positive.^{20,21} These drugs are typically being used by these men during sex, with injecting equipment often shared while condoms are not being used.^{20,21} Although the scale of this behaviour remains unclear, specialist Lesbian, Gay, Bisexual and Transgender drug services are continuing to see 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 the epidemics of sexually transmitted infections.²² There is a need for better understanding of the nature and extent of current injecting drug use among MSM, and for effective, targeted responses.

⁹ *Ecstasy* (MDMA), mephedrone, and methamphetamine are amphetamine-type stimulants. Ketamine and GHB are hallucinogens. These drugs can be injected, but this is not common.

Provision of effective interventions needs to be maintained

Injecting risk behaviours and infections remain common among people who inject drugs. The provision of interventions that aim to prevent infections among this group, such as needle and syringe programmes and opioid substitution treatment, need to be sustained. As the impact of these interventions is dependent on their coverage,²³ it is important that the level of their provision is regularly reviewed to ensure that it is adequate to prevent infections. Ensuring 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.^{24,25,26,27} Services commissioned in line with these strategies, relevant action plans,^{28,29,30,31,32} related guidance,^{33;34,35,36,37,38,39,40} and local needs assessments⁴¹ should include locally appropriate provision of:

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

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

As **hepatitis C levels are still high** among people who inject drugs, diagnostic testing for hepatitis C and care pathways for those infected are particularly important. These should ensure that those who continue to inject after being diagnosed with hepatitis C infection have access to antiviral treatments in line with clinical guidelines.^{36,42}

Although **hepatitis B is now rare and vaccine uptake has improved**, provision of vaccination should be maintained in line with guidance⁴³ and ways of further improving uptake among people who inject drugs should be explored.

It is important that access to diagnostic testing for HIV and care pathways for those infected are maintained to ensure **HIV levels remain low and the uptake of care is good**.

As ***bacterial infections remain a major problem***, information and advice on safer injecting practices and avoiding injection site infections are important, as are the provision of health checks, treatment for injection site infections and tetanus vaccination.⁴³

Injecting risk behaviours have declined but remain a problem. 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.^{35,40} These programmes should aim to distribute appropriate and sufficient injecting-related equipment to prevent sharing and to support hygienic injecting practices. They should also offer interventions that support entry into treatment and other interventions to decrease or stop injecting (including providing foil to support the use of drugs by routes other than injecting⁴⁴).

The ***changing patterns of psychoactive drug injection are a cause for concern***, in particular the increased injection of amphetamines and amphetamine-type drugs. The provision of services to prevent infections and reduce risk should reflect the range of drugs that are being injected and the needs of particular groups of people who inject drugs such as men who have sex with men.

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