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# Unlinked anonymous HIV and viral hepatitis monitoring among PWID: 2017 report

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# Unlinked anonymous HIV and viral hepatitis monitoring among PWID: 2017 report

New data from the ongoing Unlinked Anonymous Monitoring Survey of HIV and Viral Hepatitis among People Who Inject Drugs (PWID) have been published on the PHE website; the updated sets of tables present data for the period 2006 to 2016 inclusive [1]. Data from 1990 to 2005 inclusive can be found in previous years' data tables [2]. In addition to data for the whole of England, Wales and Northern Ireland (the areas covered by this survey), the tables include data for each country and the regions of England.

This article presents an overview of the trends between 2006 and 2016 for HIV, hepatitis B, hepatitis C and risk behaviours from the main Unlinked Anonymous Monitoring Survey, which is targeted at people who inject psychoactive drugs, such as heroin, crack cocaine and amphetamines. Further data from this survey related to hepatitis C will be reported in the *Hepatitis C in the UK: 2017 report* [3], also published this month.

## HIV among people injecting psychoactive drugs

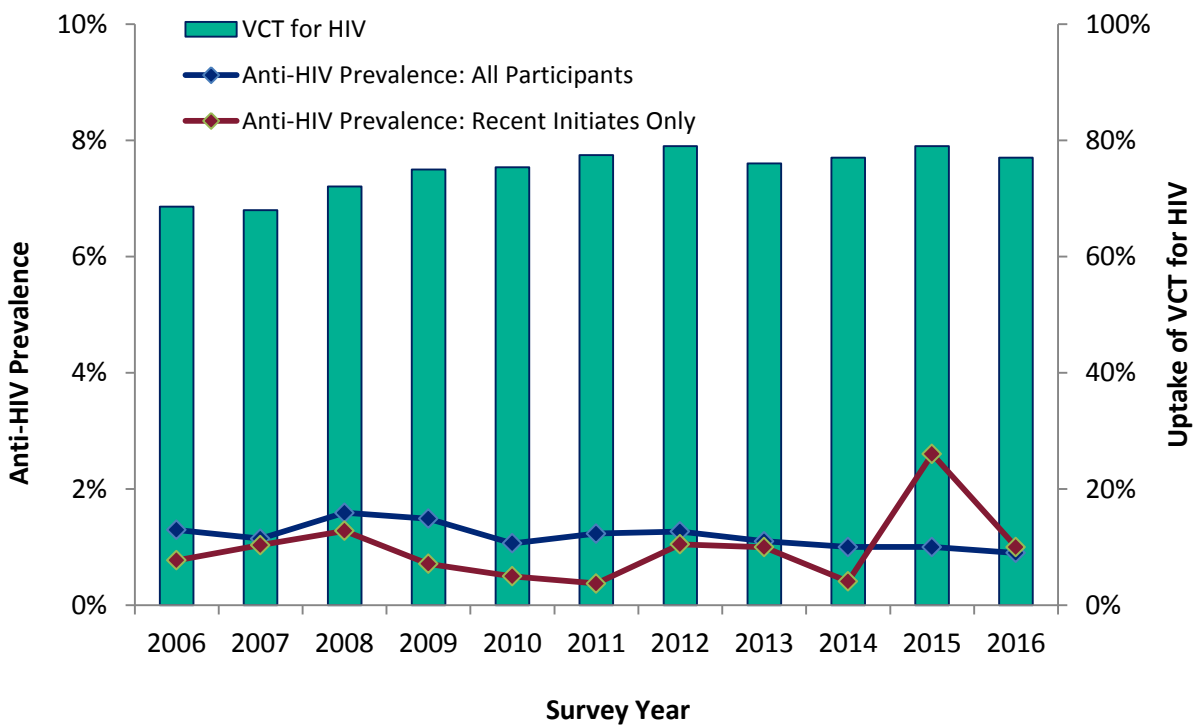
The prevalence of HIV among the 2,812 PWID who took part in the main Unlinked Anonymous Monitoring Survey across England, Wales and Northern Ireland in 2016 was 0.85% (95% CI, 0.55%-1.3%). Between 2006 and 2016, prevalence varied between 1.6% and 0.85% (see figure 1; and table 1 of the dataset). The HIV prevalence in Wales was 1.4% (95% CI, 0.29%-4.0%) and in Northern Ireland 0% (95% CI, 0%-2.9%) in 2016. In England, the HIV prevalence was 0.85% (95% CI, 0.53%-1.3%) in 2016; this was not significantly different from that found in 2006 when the prevalence was 1.3% (95% CI, 0.96%-1.8%); see table 11 of the data set; and statistical note a).

The HIV prevalence among "recent initiates" to injecting drug use (those who first injected during the preceding three years) is an indicator of recent transmission. The prevalence of HIV among the recent initiates taking part in the survey across England, Wales and Northern Ireland ranged from 0.50% to 2.6% over the time period between 2006 and 2016. In 2016, the

prevalence in this group was similar to previous years at 1.0% (95% CI, 0.13%-3.7%; see figure 1; table 26 of the dataset; and statistical note b).

The self-reported uptake of voluntary confidential testing (VCT) for HIV among the survey participants across England, Wales and Northern Ireland has increased significantly since 2006; rising from 69% (95% CI, 67%-70%) in 2006 to 77% (95% CI, 76%-79%) in 2016 (see figure 1; table 7 of the dataset; and statistical note c). The proportion of the participants with antibodies to HIV, who reported that they were aware of their HIV infection was 95% (95% CI, 77%-100%) in 2016, which is an increase from 64% (95%CI, 47%-79%) in 2006 (see table 7 of the dataset, and statistical note d).

**Figure 1. Prevalence of anti-HIV and uptake of voluntary confidential testing (VCT) for HIV among participants in the Unlinked Anonymous Monitoring Survey of PWID: England, Wales and Northern Ireland: 2006-2016**



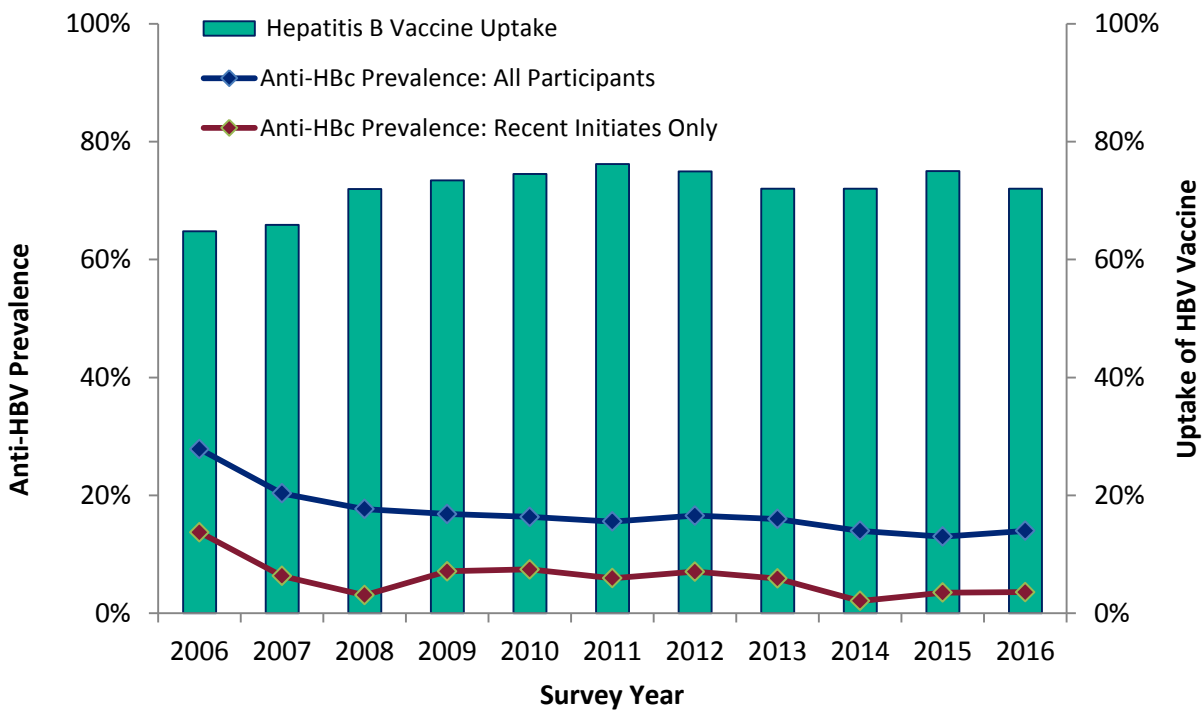
Note: A recent initiate is someone who first injected during the preceding three years.

## Hepatitis B among people injecting psychoactive drugs

The prevalence of antibodies to the hepatitis B core antigen (anti-HBc, a marker of past or current infection with hepatitis B) among the survey participants across England, Wales and Northern Ireland was lower in 2016 (14%, 95% CI, 13%-15%) than in 2006 (28%, 95%CI 26%-30%) (figure 2; table 2 of the dataset; and statistical note e). By country, anti-HBc prevalence in 2016 was as follows: Northern Ireland, 6.4% (95% CI, 2.8%-12%, table 25); Wales, 13% (95% CI, 8.7%-18%; table 24 of the dataset); and England, 15% (95% CI, 13%-16%; table 11 of the dataset).

The prevalence of anti-HBc among the recent initiates to injecting drug use taking part in the survey across England, Wales and Northern Ireland was 3.6% (95% CI, 1.5%-7.3%) in 2016. Prevalence in this group had fluctuated between 14% and 2.1% between 2006 and 2016, with the prevalence in 2016 significantly lower than that in 2006 (14%, 95% CI, 10%-18%; see figure 2; table 26 of the dataset; and statistical note f).

**Figure 2. Prevalence of anti-HBc and uptake of the vaccine against hepatitis B among participants in the Unlinked Anonymous Monitoring Survey of PWID: England, Wales and Northern Ireland: 2006-2016**



Note: A recent initiate is someone who first injected during the preceding three years.

The samples that had anti-HBc detected were also tested for hepatitis B surface antigen (HBsAg), a marker of current infection. In 2016, 3.0% (12/395, 95% CI, 1.6%-5.3%) of samples with anti-HBc had HBsAg detected. This represents 0.43% (12/2793, 95% CI, 0.22%-0.75%) of all the PWID tested in England, Wales and Northern Ireland in 2016.

The survey also monitors, through self-reports, the uptake of hepatitis B vaccine (table 6 of the dataset; and statistical note g). Vaccine uptake among the survey participants, although increased from 65% (95%CI 63%-66%) in 2006, has plateaued around 72% between 2008 and 2016 (2016: 95%CI 70%-73%). In 2016, hepatitis B vaccine uptake was particularly low in the under-25 age group at 54% (95%CI 41%-66%), which is a drop from 76% in 2011 (95%CI 70%-81%), and among those who began injecting in the last three years: 54% (95%CI 46%-61%), which is a drop from 67% in 2011 (95%CI 61%-72%). Vaccine uptake also decreased in the 25-34 years age group from 79% (95%CI 77%-82%) in 2011 to 70% (95%CI 66%-73%) in 2016. There was no difference in hepatitis B vaccine uptake between male (72%, 95%CI 70%-74%) and female participants (71%, 95%CI 68%-74%) in 2016.

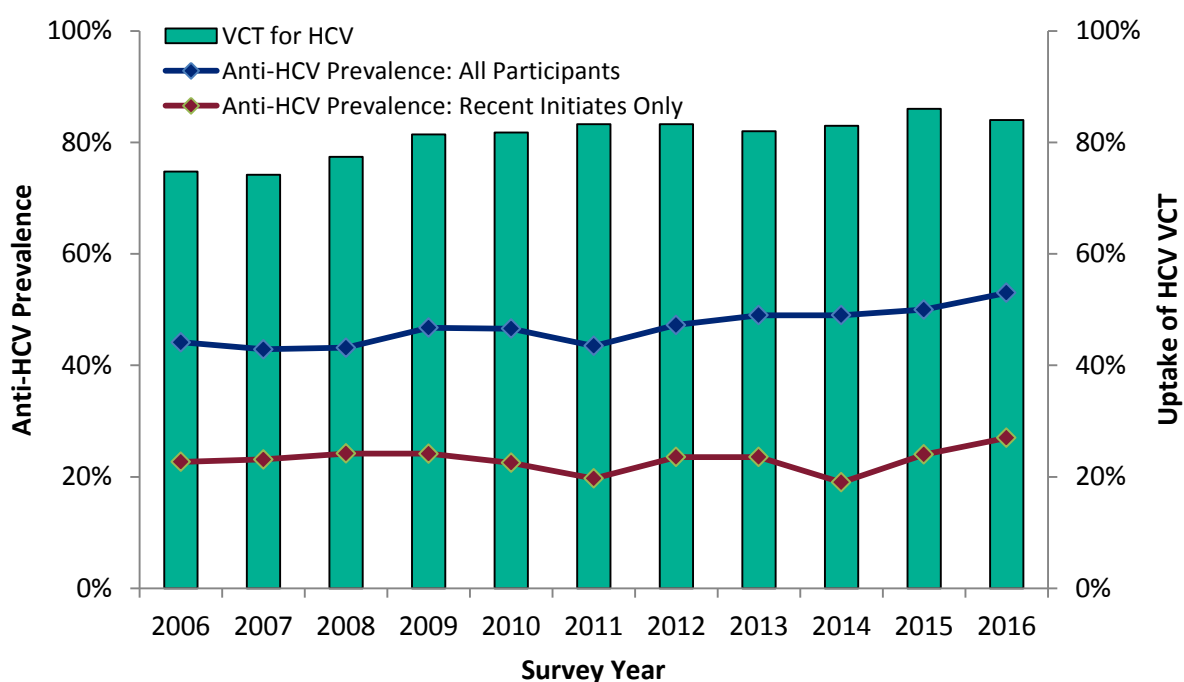
### **Hepatitis C among people injecting psychoactive drugs**

The prevalence of antibodies to the hepatitis C virus (anti-HCV) among the survey participants across England, Wales and Northern Ireland was 53% (95% CI, 51%-55%) in 2016. This is significantly higher than the anti-HCV prevalence of 44% (95% CI, 42%-46%) seen in 2006, (see figure 3; table 3 of the dataset; and statistical note h). However, the level seen during the last decade, though a little higher than at the end of the 1990s, is much lower than that found in the early 1990s when prevalence was over 60% [4]. By country, anti-HCV prevalence in 2016 was as follows: Northern Ireland, 22% (95% CI, 15%-31%; see table 25 of the dataset); Wales, 52% (95% CI, 45%-59%; see table 24 of the dataset); and England, 54% (95% CI, 52%-56%; see table 11 of the dataset). The anti-HCV prevalence in England and Wales has increased significantly over the last decade (see table 11 and 24 of the dataset; and statistical notes i and j). In Northern Ireland, anti-HCV prevalence decreased over the last decade from 32% (95%CI 24%-40%) in 2006 (see table 25 of the dataset; and statistical notes k).

The prevalence of anti-HCV among the recent initiates taking part in the survey across England, Wales and Northern Ireland was 27% (95% CI, 21%-34%) in 2016. This is a similar level to that seen in 2006 of 23% (95% CI, 18%-27%) (see figure 3; table 26 of the dataset; and statistical note l).

There has been a significant increase over the past decade in the self-reported uptake of VCT for hepatitis C among the survey participants, with the proportion of survey participants ever tested rising from 75% (95% CI, 73%-76%) in 2006 to 84% (95% CI, 83%-86%) in 2016 (see figure 3; table 8 of the dataset; and statistical note m). Among recent initiates to injecting, 65% (95%CI, 58%-72%) reported uptake of VCT for hepatitis C, which is an increase from 54% (95%CI, 46%-56%) in 2006. The proportion of the participants with anti-HCV, who answered the questions on the uptake of VCT for hepatitis C and reported that they were aware of their hepatitis C infection was 52% (95% CI, 49%-55%) in 2016 (see table 8 of the dataset). This indicates that around half of the hepatitis C infections in this population remain undiagnosed. Among recent initiates, the proportion of participants with anti-HCV who reported they were aware of their hepatitis C infection was lower at 22% (95% CI, 11%-37%), indicating that in this sub-group four-fifths remain undiagnosed (see table 26 and statistical note n).

**Figure 3. Prevalence of anti-HCV and uptake of voluntary confidential testing (VCT) for hepatitis C among participants in the Unlinked Anonymous Monitoring Survey of PWID: England, Wales and Northern Ireland: 2006-2016**



Note: A recent initiates is someone who first injected during the preceding three years.

## **Symptoms of an infection at an injection site among people injecting psychoactive drugs**

Symptoms of a possible injection site infection are common among PWID across England, Wales and Northern Ireland. In 2016, 36% (95% CI, 34%-38%) of PWID who had injected during the preceding year reported that they had experienced an abscess, sore or open wound at an injection site – all possible symptoms of an injection site infection - during the preceding year (see table 9 of the dataset). This is a similar level to 35% (95% CI, 33%-37%) in 2006, but an increase from 28%-29% reported in 2011-2013 (see statistical note o). The levels of possible injection site infection were particularly high among the under-25 year age group at 43% (95%CI, 30%-58%), which is higher than the 27% reported in 2006 (95%CI, 22%-32%). Among recent initiates, 33% (95%CI, 25%-42%) of PWID who had injected during the preceding year reported symptoms of an injection site infection; this is not significantly different from 29% (95%CI, 23%-35%) in 2006, but levels had been lower during 2013-2014 at 24%-25%, although only weak evidence was found for this on multivariable analysis (see statistical note o).

## **Behavioural factors among people injecting psychoactive drugs**

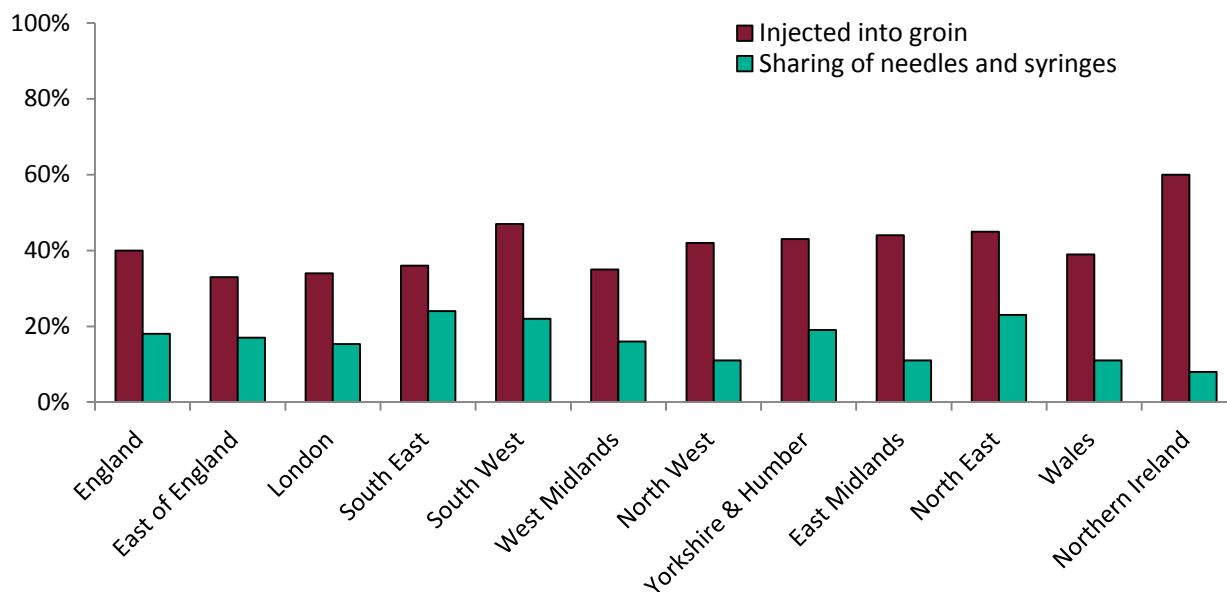
The level of needle and syringe (direct) sharing reported by participants in the survey from across England, Wales and Northern Ireland who had injected during the preceding four weeks has declined, with sharing falling from 23% (95% CI, 21%-25%) in 2006 to 17% (95% CI, 15%-19%) in 2016 (see table 4 of the dataset; and statistical note p). Direct sharing was reported by 18% (95%CI 12%-27%) of recent initiates, which is similar to the levels reported in 2006 (21%, 95%CI, 17%-27%). Throughout the period 2006 to 2016 direct sharing levels were consistently higher among female than male participants; in 2016, 23% (95% CI, 19%-27%) of females reported direct sharing compared 15% (95% CI, 13%-17%) of males. Levels of direct sharing in the 25-34 years age-group increased in recent years: from 14% (95%CI 12%-17%) in 2012 to 22% (95% CI 18%-26%) in 2016.

Injecting into the groin has been associated with a number of health problems, including damage to the femoral vein and artery, infections and circulatory problems [4-5]. The proportion of current PWID who reported injecting into their groin during the preceding four weeks varied across England, Wales and Northern Ireland (figure 4; and see tables 11 to 25 of the dataset). By country, the proportion injecting into the groin in 2016 was as follows: England 40% (95%

CI, 38%-43%); Wales, 39% (95% CI, 31%-48%); and Northern Ireland 60% (95% CI, 39%-79%). Across England, there are differences in the proportion reporting injecting into their groin, ranging from 47% (95% CI, 40%-54%) in the South West to 33% in the East of England (95% CI, 25%-42%).

In 2016, 64% (95% CI, 62%-66%) of the participants reported having anal or vaginal sex during the preceding year, which is a decrease from 74% (95%CI 73%-76%) in 2006 (see table 10 of the dataset and statistical note q). Of those who had sex in the preceding year, 37% (95% CI, 35%-40%) reported having had two or more sexual partners during that time and, of these, only 23% (95% CI, 19%-26%) reported always using condoms for anal or vaginal sex (see table 10 of the dataset).

**Figure 4. Levels of needle and syringe sharing and injection into the groin among the participants in the Unlinked Anonymous Monitoring Survey of PWID who had injected during the preceding four weeks: England, Wales and Northern Ireland: 2016**





## Types of stimulant drugs used

Injection of crack increased in recent years, with 53% (95% CI, 50%-55%) of those who had injected in the preceding four weeks reporting crack injection as compared to 35% (95%CI, 33%-37%) in 2006 (see table 27 of the dataset and statistical note r). A significant increase was observed in Wales and in multiple regions in England (East of England, London, South East, South West and East Midlands) (see tables 11-24 of the dataset). No crack injection was reported in Northern Ireland (see table 25 of the dataset). Crack injection also increased among the recent initiates, with 50% (95%CI, 40%-59%) of those who had injected in the preceding four weeks reporting crack injection in 2016, vs. 28% (95%CI, 22%-33%) in 2006.

There was no significant change in the injection of cocaine (10%, 95%CI 9%-12% in 2016 vs 12%, 95%CI, 10%-13% in 2006) or amphetamine (17%,95%CI 15%-19% in 2016 vs 16%, 95%CI, 14%-18% in 2006) among those who had injected in the preceding four weeks.

## Conclusion

In conclusion, data from the main Unlinked Anonymous Monitoring Survey of PWID, which is targeted at people who inject psychoactive drugs, indicate that the proportion ever infected with hepatitis B has declined and that the prevalence of HIV remains stable and low. Hepatitis C remains the commonest infection among this group and overall prevalence is currently stable. Overall, reported needle and syringe sharing has declined over the last decade, however, direct sharing has increased in recent years among the 25 to 34 year age group. Whilst the vast majority of those with HIV were aware of their status, half of PWID with antibodies to hepatitis C remain unaware of their infection, even though four-fifths reported having been tested for hepatitis C infection. After increasing during the previous decade, the uptake of testing for hepatitis C infection has changed little over the last few years. Services should aim to have testing for blood-borne viruses available for patients at first assessment [6]. Repeat testing of people who inject drugs is recommended, and when risk is assessed as high, testing may be carried out up to once or twice a year [6-7]. Also uptake of the hepatitis B vaccine has changed little over the last few years. Hepatitis B vaccine uptake has plateaued at 72% since 2008, and was particularly low in the under-25 age group and among recent initiates, with only approximately half reporting vaccination. Reports of injection site infections have increased in recent years, particularly in younger participants. Over one-third of those who injected during the preceding year reported a swelling containing pus (abscess), sore or open wound at an

injection site. Injection of crack has increased during the past decade in Wales and in multiple regions in England.

Recent initiates to injecting remain at risk of HIV and hepatitis. The level of hepatitis C infection among the recent initiates to injecting participating in this survey suggest that the extent of their transmission has probably changed little in recent years. However, recent initiates had lower levels of awareness of their HCV infection than those who had been injecting for longer. Recent and those who had been injecting for longer had similar levels of sharing and of injection site infections. Vaccination for hepatitis B has declined in this group with only approximately half reporting vaccination in 2016.

Together, these findings indicate that unsafe injecting continues to be a problem and that there is a need to maintain and strengthen public health interventions that aim to reduce injection related risk behaviours. The impact of public health interventions which aim to prevent HIV and hepatitis C infection through injecting drug use by reducing these risks, such as needle and syringe programmes [8] and [opioid](#) substitution therapy [6], have been shown to be dependent on their coverage [9-12]. The provision of interventions that aim to reduce infections among PWID, including testing and vaccination programmes, should be regularly reviewed to ensure that the coverage of these is appropriate to local need.

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## Statistical notes

*All analyses were adjusted for age, gender and region of recruitment (English NUTS Regions, Wales, Northern Ireland) in a multi-variable analysis, unless specified otherwise. For analyses on HIV prevalence, region of recruitment was specified as London vs. elsewhere to account for the small number of positive samples. Non-aggregated regional data were used in all other analyses.*

**a) HIV prevalence in England:** The adjusted odds ratio for 2016 vs. 2006 was 0.78 [95% CI, 0.46-1.4]; indicating no significant change in the HIV prevalence in England between these two years.

**b) HIV prevalence, recent initiates (those who began injecting in the last three years):** HIV prevalence among the recent initiates fluctuated between 2006 and 2016, with an adjusted odds ratio of 1.03 [95% CI, 0.17-6.4] for 2016 vs. 2006; indicating no significant change in prevalence between these two years.

**c) Voluntary confidential testing (VCT) for HIV:** The adjusted odds ratio for 2016 vs. 2006 was 1.6 [95% CI, 1.4-1.8]; indicating a significant increase in the reported uptake of VCT for HIV when comparing 2016 to 2006.

**d) Awareness of HIV infection:** The adjusted odds ratio for 2016 vs. 2006 was 15.6 [95% CI, 1.8-133]; indicating a significant increase in awareness of HIV when comparing 2016 to 2006.

**e) Hepatitis B core antigen antibody (anti-HBc) prevalence:** The adjusted odds ratio for 2016 vs. 2006 was 0.41 [95% CI, 0.35-0.47]; indicating a significant decrease in 2016 as compared to 2006. Prevalence was significantly lower than in 2006 from 2007 onwards.

**f) Hepatitis B core antigen antibody (anti-HBc) prevalence, recent initiates (those who began injecting in the last three years):** Anti-HBc prevalence among recent initiates has varied over time. The adjusted odds ratio for 2016 vs. 2006 was 0.22 [95% CI, 0.09-0.54], indicating a significant decrease in 2016 as compared to 2006. Prevalence was significantly lower than in 2006 from 2007 onwards.

**g) Hepatitis B vaccine uptake:** The adjusted odds ratio for 2016 vs. 2006 was 1.4 [95% CI, 1.3-1.6]; indicating a significant increase in the reported hepatitis B vaccine uptake between these two years. The adjusted odds ratio for 2016 vs. 2008 was 1.0 [95% CI, 0.9-1.1]; indicating no significant change in hepatitis B vaccine uptake when comparing 2016 to 2008. The adjusted odds ratios for 2016 vs. 2011 amongst the under-25 age group, 25-34 age group, and among recent initiates were 0.37 [95%CI 0.21-0.66], 0.60 [95%CI 0.48-0.75], and 0.59 [95%CI 0.40-0.88] respectively, indicating significant decreases in reported vaccine uptake when comparing 2016 to 2011.

**h) Hepatitis C antibody prevalence:** The adjusted odds ratio for 2016 vs. 2006 was 1.4 [95% CI, 1.2-1.5]; indicating a significant increase in hepatitis C prevalence between these two years.

**i) Hepatitis C antibody prevalence (England):** The adjusted odds ratio for 2016 vs.2006 was 1.3 [95% CI, 1.2-1.5]; indicating a significant change in hepatitis C prevalence in England between these two years.

**j) Hepatitis C antibody prevalence (Wales):** The adjusted odds ratio for 2016 vs. 2006 was 3.1 [95% CI, 1.8-5.1]; indicating a significant change in hepatitis C prevalence in Wales over time. The prevalence in 2013, 2014 and 2015 was also significantly higher than in 2006.

**k) Hepatitis C antibody prevalence (Northern Ireland):** The adjusted odds ratio for 2016 vs. 2006 was 0.42 [95% CI, 0.23-0.77]; indicating a significant decrease in hepatitis C prevalence in Northern Ireland when comparing 2016 to 2006.

**l) Hepatitis C antibody prevalence, recent initiates (those who began injecting in the last three years):** The adjusted odds ratio for 2016 vs. 2006 was 1.2 [95% CI, 0.77-1.9]; indicating no change in the hepatitis C prevalence among the recent initiates between these years.

**m) Voluntary confidential testing (VCT) for hepatitis C:** The adjusted odds ratio for 2016 vs. 2006 was 1.8 [95% CI, 1.6-2.1], indicating a significant increase in the reported uptake of VCT for hepatitis C. Among recent initiates, the adjusted odds ratio for 2016 vs. 2006 was 1.7 [95% CI, 1.2-2.4], indicating a significant increase in uptake of VCT for hepatitis C.

**n) Awareness of hepatitis C infection:** The adjusted odds ratio for those who started injecting <3 vs 3+ years ago was 0.29 [95%CI 0.14-0.61], indicating that in 2016 recent initiates had a lower awareness of their HCV infections.

**o) Reported symptoms of an injection site infection:** The adjusted odds ratio for 2016 vs. 2006 was 1.03 [95% CI, 0.90-1.2] and 2016 vs. 2011 was 1.4 [95%CI 1.2-1.6], indicating that levels were not significantly different when comparing 2016 and 2006, but were higher in 2016 when compared to 2011. In the under-25 age group, the adjusted odds ratio for 2016 vs. 2006 was 1.9 [95%CI 1.0-3.5], indicating that levels were higher in 2016 as compared to 2006 in this age group. Among those who started injecting <3 years ago, the adjusted odds ratio for 2016 vs. 2006 was 1.2 [95%CI 0.78-2.0], indicating no difference between those years. The adjusted odds ratio for 2016 vs. 2013 was 1.5 [95%CI 0.9-2.4], which can be interpreted as weak evidence for an increase in 2016 as compared to 2013.

**p) Direct sharing (sharing of needles and syringes):** The adjusted odds ratio for 2016 vs. 2006 was 0.72 [95% CI, 0.60-0.86], indicating a significant decrease in reported direct sharing in 2016 as compared to 2006. Among recent initiates, the adjusted odds ratio for 2016 vs. 2006 was 1.08 [95% CI, 0.61-1.9], indicating no change in direct sharing in 2016 as compared to 2006. The adjusted odds ratio for females vs. males in 2016 was 1.7 [95%CI 1.3-2.4], indicating significant higher levels of direct sharing in females as compared to males. Among the 25-34 years age group, the adjusted odds ratio for 2016 vs. 2012 was 1.7 (95%CI 1.2-2.4), indicating that direct sharing among this age group was significantly higher in 2016 than in 2012.

**q) Reported sexual activity:** The adjusted odds ratio for 2016 vs 2006 was 0.64 (95%CI 0.57-0.72), indicating that the level of having anal or vaginal sex during the preceding year was significantly lower in 2016 than in 2006.

**r) Stimulant drugs injected during preceding month: Crack:** The adjusted odds ratio for crack injection for 2016 vs. 2006 was 2.5 (95%CI 2.2-2.9), indicating that crack injection was higher in 2016 than in 2006. The adjusted odds ratio was 3.4 (95%CI 2.1-5.6) for recent initiates when comparing 2016 to 2006, indicating crack injection was significantly higher in 2016 than in 2006. Adjusted odds ratios and 95%CIs for crack injection in 2016 vs. 2006 by region and country: East of England: 3.9 (95%CI 2.0-7.7), London: 2.2 (1.4-3.6), South East: 3.3 (2.2-5.1), South West 13.9 (8.7-22.0), West Midlands: 1.09 (0.64-1.9), North West: 1.02 (0.72-1.5), Yorkshire & Humber: 1.05 (0.54-2.1), East Midlands: 2.4 (1.4-4.1), North East: 1.3 (0.6-2.9), Wales: 11.6 (4.4-30.6), indicating significant increases in East of England, London, South East, South West and East Midlands and Wales. (Northern Ireland results not applicable: no crack injection reported in 2016). **Cocaine:** the adjusted odds ratio for cocaine injection for 2016 vs. 2006 was 0.97 (95%CI 0.78-1.2), indicating no significant change. **Amphetamine:** the adjusted odds ratio for cocaine injection for 2016 vs. 2006 was 1.01 (95%CI 0.83-1.2), indicating no significant change.

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