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HIV-STIs

Unlinked anonymous HIV and viral hepatitis monitoring among PWID: 2016 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 2005 to 2015 inclusive [1]. Data from 1990 to 2004 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 year, data tables for the second wave of the biennial (two-yearly) sub-survey of people who inject image and performance enhancing drugs are also being published.

This article presents an overview of the trends between 2005 and 2015 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: 2015 report [3] later this month. The findings from the second routine sub-survey of people who inject image and performance enhancing drugs are also summarised.

HIV among people injecting psychoactive drugs

The prevalence of HIV among the 2,721 PWID who took part in the main Unlinked Anonymous Monitoring Survey across England, Wales and Northern Ireland in 2015 was 1.0% (95% CI, 0.66%-1.4%). Between 2004 and 2014, prevalence varied between 1.1% and 1.6% (see figure 1; and table 1 of the dataset). The HIV prevalence in Wales was 0.77% (95% CI, 0.03%-2.9%) and in Northern Ireland 0.65% (95% CI, 0.01%-4.0%) during 2015. In England, the HIV prevalence was 1.0% (95% CI, 0.66%-1.5%) in 2015 and this was not significantly different from that found in 2005 when the prevalence was 1.6% (95% CI, 1.2%-2.1%; 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 varied over time and ranged from 0.37% to 2.6% between 2005 and 2015. In 2015, the prevalence in this group was higher, but not significantly, than in previous years at 2.6% (95% CI, 1.1%-5.7%; see figure 1; table 26 of the dataset; and statistical note b). In 2015, those with HIV in this group were men who reported having sex with men during the preceding year. The elevated prevalence of HIV in this group during 2015 therefore most probably reflects the increase in injecting drug use that has recently been seen among some groups of men who have sex with men many of whom are HIV positive [4,5]. This probably does not reflect an increase in the level of HIV transmission among PWID overall, where injecting drug use was the underlying route of transmission.

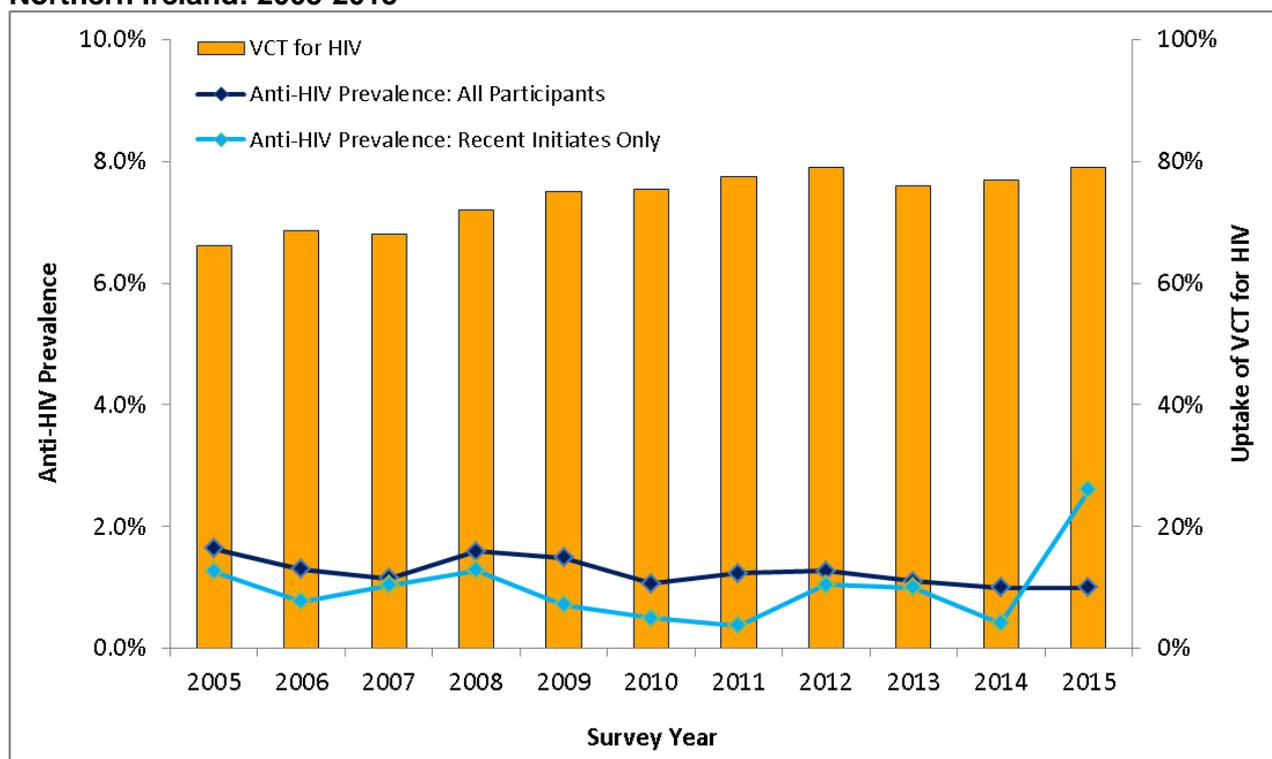
The self-reported uptake of voluntary confidential testing (VCT) for HIV among the survey participants across England, Wales and Northern Ireland has increased significantly since 2005; rising from 66% (95% CI, 64%-68%) in 2005 to 79% (95% CI, 77%-80%) in 2015 (see figure 1; table 7 of the dataset; and statistical note c). The proportion of the participants with antibodies to HIV, who answered the questions on the uptake of VCT for HIV, reporting that they were aware of their HIV infection was 84% (95% CI, 65%-94%) in 2015 (see table 7 of the dataset).

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 has declined since 2006. During the period 2005 to 2006 the anti-HBc prevalence fluctuated between 26% and 28%, before significantly declining to 13% (95% CI, 12%-14%) in 2015 (figure 2; table 2 of the dataset; and statistical note d). By country, anti-HBc prevalence in 2015 was as follows: Northern Ireland, 6.5% (95% CI, 3.5%-12%, table 25); Wales, 11% (95% CI, 7.5%-15%; table 24 of the dataset); and England, 14% (95% CI, 12%-15%; table 11 of the dataset).

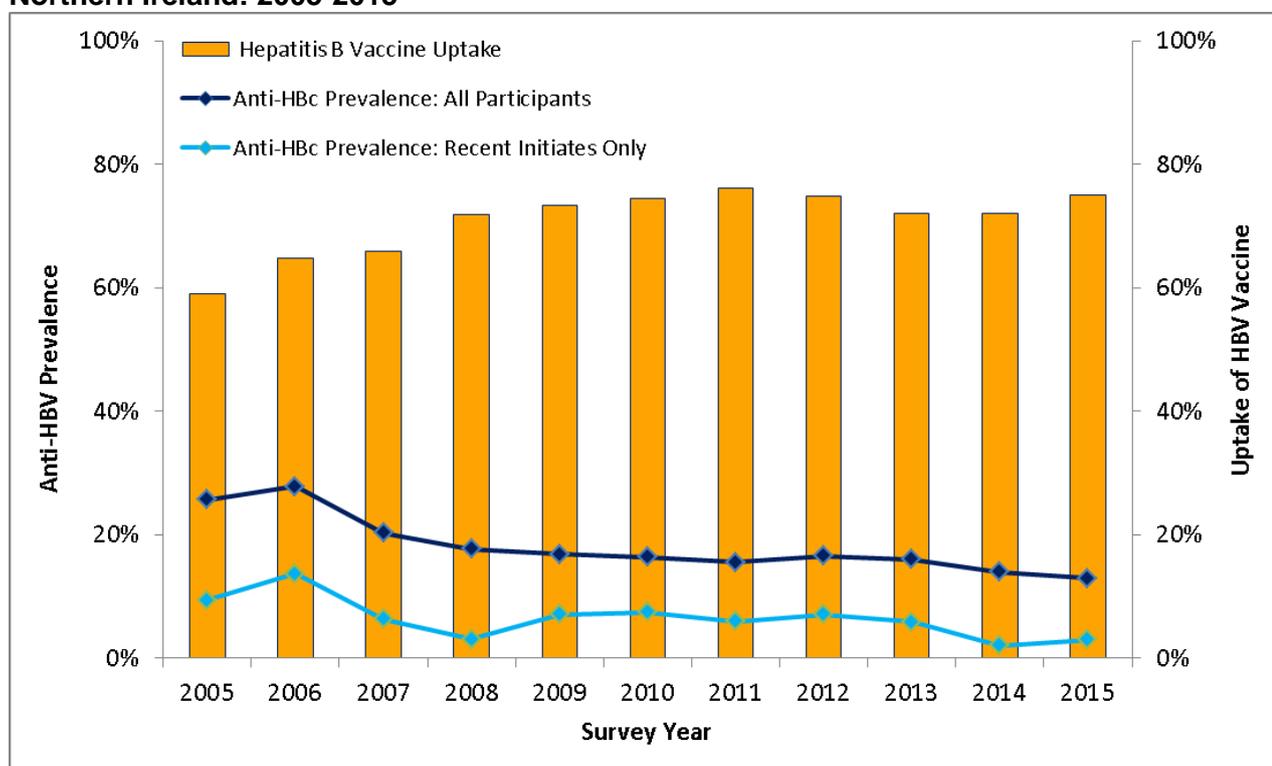
The prevalence of anti-HBc among the recent initiates to injecting drug use taking part in the survey across England, Wales and Northern Ireland was 3.5% (95% CI, 1.7%-6.9%) in 2015. Prevalence in this group had fluctuated between 2.1% and 14% between 2005 and 2015, with the prevalence in 2015 significantly lower than that in 2005 (9.4%, 95% CI, 4.9%-10%; see figure 2; table 26 of the dataset; and statistical note e).

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: 2005-2015



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

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: 2005-2015



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 2015, 3.1% (11/350, 95% CI, 1.7%-5.6%) of samples with anti-HBc had HBsAg detected. This represents 0.41% (11/2,714, 95% CI, 0.22%-0.73%) of all the PWID surveyed in England, Wales and Northern Ireland in 2015.

The survey also monitors, through self-reports, the uptake of hepatitis B vaccine. Vaccine uptake among the survey participants has fluctuated between 59% and 76% during the period from 2005 to 2015. It was 75% (95% CI, 74%-77%) in 2015, and similar to the 72% in the previous two years (2014: 95% CI, 71%-74%) (table 6 of the dataset; and statistical note f).

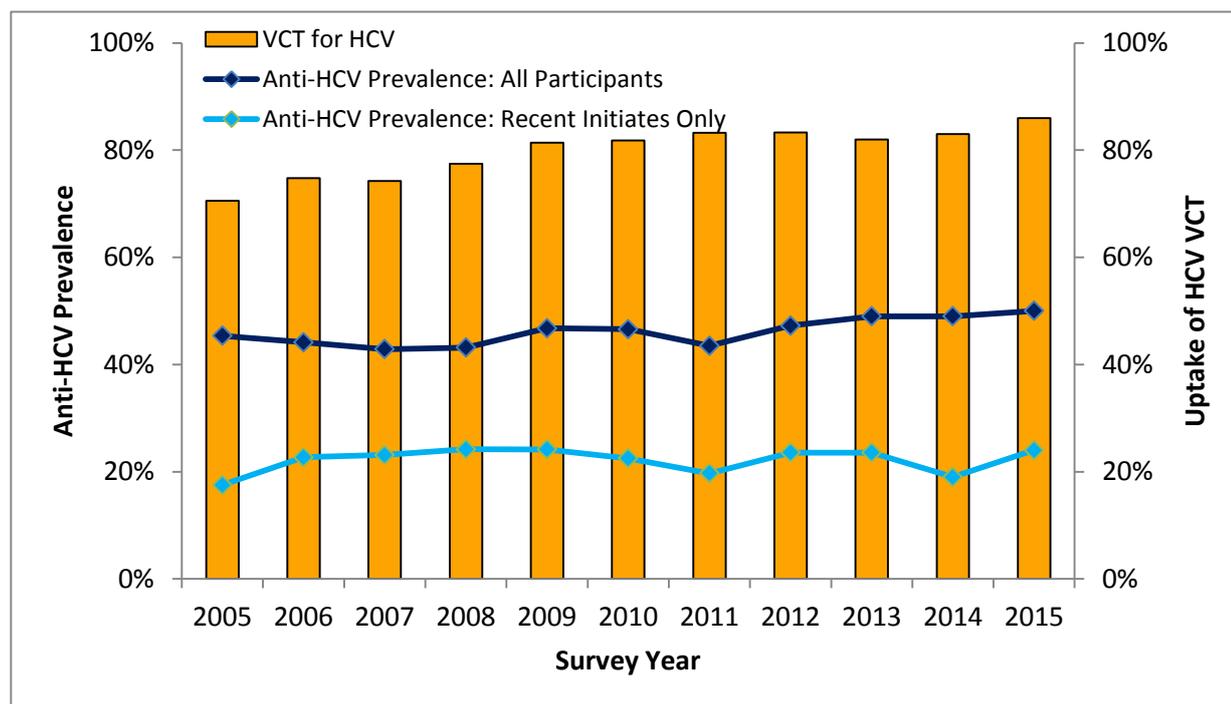
Hepatitis C among people injecting psychoactive drugs

The prevalence of antibodies to the hepatitis C virus (anti-HCV) among the survey participants across England, Wales and Northern Ireland was 50% (95% CI, 49%-52%) in 2015. This is significantly higher than the anti-HCV prevalence of 45% (95% CI, 44%-47%) seen in 2005, but similar to the prevalence in 2013 and 2014 (see figure 3; table 3 of the dataset; and statistical note g). However, the level seen during the last decade, though a little higher than at the end of the 1990s, is much lower than those found in the early 1990s when prevalence was over 60% [4]. By country, anti-HCV prevalence in 2015 was as follows: Northern Ireland, 27% (95% CI, 21%-35%; see table 25 of the dataset); Wales, 53% (95% CI, 47%-59%; see table 24 of the dataset); and England, 52% (95% CI, 50%-54%; see table 11 of the dataset). The anti-HCV prevalence in England and Northern Ireland has not changed significantly over the last decade (see tables 11 and 25 of the dataset; and statistical notes h and i). In Wales, although the anti-HCV prevalence in 2015 was significantly higher than it was a decade ago, it had not changed greatly in recent years (see table 24 of the dataset; and statistical note j).

The prevalence of anti-HCV among the recent initiates taking part in the survey across England, Wales and Northern Ireland was 24% (95% CI, 19%-30%) in 2015. This is a similar level to that seen in this group in recent years, but higher than the prevalence in 2005 of 18% (95% CI, 14%-22%) (see figure 3; table 26 of the dataset; and statistical note k).

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 71% (95% CI, 69%-72%) in 2005 to 86% (95% CI, 84%-87%) in 2015 (see figure 3; table 8 of the dataset; and statistical note l). The proportion of the participants with anti-HCV, who answered the questions on the uptake of VCT for hepatitis C, reporting that they were aware of their hepatitis C infection was 52% (95% CI, 49%-55%) in 2015 (see table 8 of the dataset). This indicates that around half of the hepatitis C infections in this population remain undiagnosed.

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: 2005-2015



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 injecting-site infection are common among PWID across England, Wales and Northern Ireland. In 2015, 33% (95% CI, 30%-35%) 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 injecting-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, the first year this question was included in the survey.

Behavioural factors among people injecting psychoactive drugs

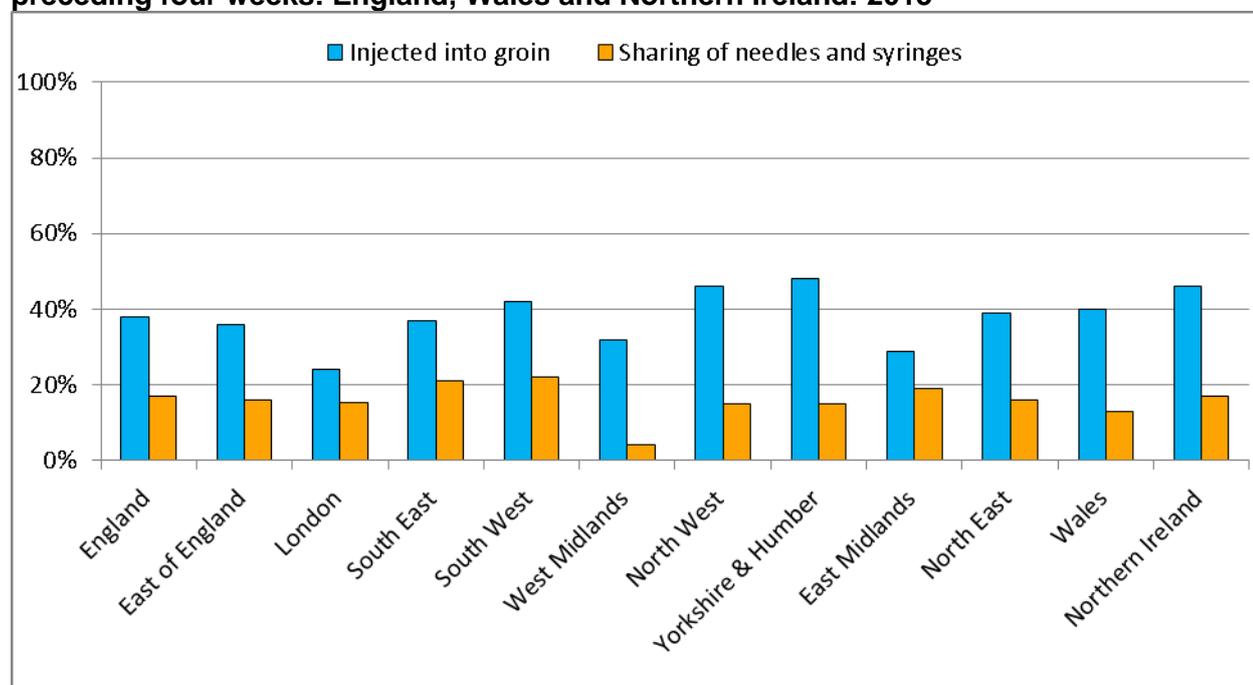
The level of needle and syringe (direct) sharing reported by participants in the survey from across England, Wales and Northern Ireland who had injected during the preceding four weeks has declined, with sharing falling from 28% (95% CI, 26%-30%) in 2005 to 16% (95% CI, 14%-18%) in 2015 (see table 4 of the dataset; and statistical note m). Direct sharing was found to vary across England, Wales and Northern Ireland, ranging in 2015 from 4.0% (95% CI, 0.90%-12%) in the West Midlands to 22% (95% CI, 16%-30%) in the South West (figure 4; and see tables 11 to 25 of the dataset). Throughout the period 2005 to 2015 direct sharing levels were consistently higher among those aged under 25 years than among older participants; in 2015, 25% (95% CI, 16%-36%) of those aged under 25 years reported direct sharing compared with

21% (95% CI, 18%-25%) of those aged 25 to 34 years and 13% (95% CI, 11%-15%) of those aged 35 years and over (see table 4 of the dataset). During this period direct sharing levels were consistently higher among female than male participants; in 2015, 23% (95% CI, 19%-28%) of females reported direct sharing compared with 14% (95% CI, 12%-16%) of males.

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 2015 was as follows: England 38% (95% CI, 35%-40%); Wales, 40% (95% CI, 33%-47%); and Northern Ireland 46% (95% CI, 31%-62%). Across England, there are differences in the proportion reporting injecting into their groin, ranging from 24% (95% CI, 18%-33%) in London to 48% in Yorkshire & Humber (95% CI, 39%-57%).

In 2015, two-thirds (66%, 95% CI, 65%-68%) of the participants reported having anal or vaginal sex during the preceding year, and this level has changed little over time (see table 10 of the dataset). Of those who had sex in the preceding year, 40% (95% CI, 38%-43%) reported in 2015 having had two or more sexual partners during that time and, of these, only 22% (95% CI, 18%-25%) 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: 2015



Infections and risks among people who inject image and performance enhancing drugs

In 2012, following a pilot study during 2010-11 [6], a biennial sub-survey of people who inject image and performance enhancing drugs was established. This sub-survey has an 18 month recruitment period and uses a modified questionnaire focused on the use and injection of image and performance enhancing drugs, the questionnaire used in the main Unlinked Anonymous Monitoring Survey of PWID is focused on psychoactive drug use. The new data published is from the second sampling wave of this sub-survey which occurred during 2014-2015.

There were 354 participations in the sub-survey during 2014-15 from across England and Wales, of these, 0.56% (95% CI, 0.02%-2.2%) had HIV, 2.5% (95% CI, 1.3%-4.8%) anti-HBc and 5.1% (95% CI, 3.2%-7.9%) anti-HCV (see tables IPED-1, IPED-2, & IPED-3 of the dataset). These prevalences are not significantly different from those found in the 2012-13 sampling wave (statistical note n). Though the prevalence of antibodies to both hepatitis B and C were lower than among those found among the participants in the main survey targeted at people who inject psychoactive drugs, the prevalence of HIV is similar in both of the surveys.

Among the participants in the 2014-15 sub-survey of people who inject image and performance enhancing drugs, 38% (95% CI, 33%-43%) reported uptake of the hepatitis B vaccine, 47% (95% CI, 42%-52%) reported ever having a VCT for HIV, and only 41% (95% CI, 36%-47%) reported a VCT for hepatitis C (see tables IPED-5, IPED-6, & IPED-7 of the dataset). Whilst the uptake of VCT for hepatitis C has increased since the 2012-2013 survey wave, there has been no significant change in the uptake of VCT for HIV or of hepatitis B vaccination (statistical note o). The levels of the uptake of these three interventions reported by people who inject image and performance enhancing drugs surveyed are much lower than those reported among the participants in the main survey of people who inject psychoactive drugs.

The reported sharing of injecting equipment has remained low, with only 13% (95% CI, 9.9%-17%) reporting that they had *ever* shared a needle, syringe or vial in 2014-2015 (see table IPED-4 of the dataset). This population is sexually active, with over nine-tenths (92%, 95% CI, 89%-95%) of the participants reported having had anal or vaginal sex during the preceding year. Of those who had sex during the preceding year, 51% (95% CI, 46%-57%) reported having had two or more sexual partners during that time and, of these, only 17% (95% CI, 12%-25%) reported always using condoms for anal or vaginal sex (see table IPED-9 of the dataset).

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 both HIV and hepatitis C among this group is currently stable. 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. Overall, reported needle and syringe sharing has declined over the last decade, however, sharing remains high among younger PWID, with a quarter of those aged under 25 years reporting sharing in 2015. Three-quarters of the survey participants reported uptake of the hepatitis B vaccine, and the vast majority of those with HIV were aware of their status. However, 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 and of the hepatitis B vaccine have both changed little over the last few years.

Data from the sub-survey of people who inject image and performance enhancing drugs indicate that while hepatitis B and C are less common in this group, the HIV prevalence is similar to that among those participating in the main Unlinked Anonymous Monitoring Survey of people who inject psychoactive drugs. The uptake of interventions, such as hepatitis B vaccination and HIV testing, among people who inject image and performance enhancing drugs remains poor.

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 [7] and opiate substitution therapy [8], have been shown to be dependent on their coverage [9-12]. The provision of interventions that aim to reduce infections among PWID should be regularly reviewed to ensure that the coverage of these is appropriate to local need.

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Statistical notes

- a) After adjusting for age, gender and region of recruitment (London vs. elsewhere) in a multi-variable analysis, the odds ratio for 2015 was 0.71 [95% CI, 0.42-1.2] compared to 1.0 in 2005; indicating no significant change in the HIV prevalence in England over time.
- b) After adjusting for age, gender, and region of recruitment (London vs. elsewhere) in a multi-variable analysis, the HIV prevalence among the recent initiates fluctuated between 2005 and

2015, with an odds ratio of 1.7 [95% CI, 0.51-5.9] in 2015 compared to 1.0 in 2005; indicating no significant change in prevalence overtime.

c) After adjusting for age, gender and region of recruitment in a multi-variable analysis, the odds ratio for 2015 was 1.9 [95% CI, 1.6-2.1] compared to 1.0 in 2005; indicating a significant increase in the uptake of VCT for HIV over time.

d) After adjusting for age, gender, and region of recruitment in a multi-variable analysis the anti-HBc prevalence in 2015 was significantly different from that in 2005; the odds ratio in 2015 was 0.41 [95% CI, 0.35-0.48] compared to 1.0 in 2005; indicating a significant decrease. Prevalence was significantly lower than in 2005 from 2007 onwards.

e) After adjusting for age, gender and region of recruitment in a multi-variable analysis, the anti-HBc prevalence among recent initiates has varied over time. The odds ratio for 2015 was 0.38 [95% CI, 0.16-0.89] lower than odds ratio of 1.0 in 2005. Prevalence was also significantly lower in 2008 and 2014.

f) After adjusting for age, gender and region of recruitment in a multi-variable analysis, the odds ratio for 2015 was 2.4 [95% CI, 2.1-2.7] compared to 1.0 in 2005; indicating a significant increase in hepatitis B vaccine uptake over time.

g) After adjusting for age, gender and region of recruitment in a multi-variable analysis, the odds ratio in 2015 of 1.2 [95% CI, 1.05-1.3] was significantly different from the odds ratio of 1.0 in 2005; indicating a significant change in hepatitis C prevalence between these two years. Prevalence was also significantly higher than 2005 in 2009, 2013 and 2014.

h) After adjusting for age, gender and region of recruitment in England in a multi-variable analysis, the odds ratio in 2015 of 1.1 [95% CI, 0.96-1.2] was not significantly different from the odds ratio of 1.0 in 2005; indicating no significant difference in the hepatitis C prevalence in England between these years. The prevalence in 2009 and 2013 was significantly higher than in 2005, and that in 2008 was significantly lower.

i). After adjusting for age, gender and area of recruitment in Northern Ireland in a multi-variable analysis, the odds ratio in 2015 of 0.73 [95% CI, 0.39-1.4] was not significantly different from the odds ratio of 1.0 in 2005; indicating no significant change in hepatitis C prevalence in Northern Ireland.

j) After adjusting for age, gender and area of recruitment in Wales in a multi-variable analysis, the odds ratio in 2015 of 3.6 [95% CI, 2.3-5.7] was significantly different from the odds ratio of 1.0 in 2003-2005; indicating a significant change in hepatitis C prevalence in Wales over time. The prevalence in 2008, 2011, 2013 and 2014 was significantly higher than in 2005.

k) After adjusting for age, gender, and region of recruitment in a multi-variable analysis the odds ratio for 2015 was 1.6 [95% CI, 1.01-2.4] which was significantly different from the odds ratio of 1.0 in 2005; indicating an increase in the hepatitis C prevalence among the recent initiates between these years. The prevalence in the group was also significantly higher than 2005 in all years other than 2010, 2011, and 2014.

l) After adjusting for age, gender and region of recruitment in a multi-variable analysis, the odds ratio for 2015 was 2.4 [95% CI, 2.1-2.7] compared to 1.0 in 2005 indicating a significant increase in uptake of VCT for hepatitis C over time.

m) After adjusting for age, gender, and region of recruitment in a multi-variable analysis the level of direct sharing in 2015 was significantly different from 2005; the odds ratio in 2015 was 0.62 [95% CI, 0.52-0.75] compared to 1.0 in 2005 indicating a significant decrease over time.

n) Comparing data from 2012-13 survey wave with that for 2014-15 using the chi-squared test (Fischer exact): for HIV $p=0.131$, for anti-HBc $p=1.000$, and for anti-HCV $p=0.430$.

o) Comparing data from 2012-13 survey wave with that for 2014-15 using the chi-squared test (Fischer exact): VCT for HIV $p=0.155$, VCT for HCV $p=0.016$, and hepatitis B vaccine uptake $p=0.669$.