
Dr Vivian Hope, Katelyn Cullen, Jacquelyn Njoroge, Prof John Parry & Dr Fortune Ncube

In Europe people who inject drugs (PWID) are one of the groups most affected by HIV.

In the UK, injecting drug use was the primary risk factor given for 5,964 (4.3%) of the HIV diagnoses reported to end of 2014.

Overall HIV incidence among PWID is thought to be low, though outbreaks still occur – with a recent HIV outbreak among PWID in Glasgow.

In the UK, it is estimated that of the HIV infections acquired through injecting drug use 10% to 20% have not been diagnosed.

Factors associated with undiagnosed HIV infection among PWID are explored to inform case finding.
The Unlinked Anonymous Monitoring (UAM) Survey of PWID

This survey started in England & Wales in 1990 as a response to the HIV epidemic (+ Northern Ireland since 2002). It uses the Voluntary Unlinked & Anonymous method. Annual surveys recruit PWID through specialist services (such as needle & syringe programmes and addiction treatment) in around 60 sentinel areas.

Participants provide a biological sample (currently a dried blood spot) and self-complete a brief questionnaire. Survey aims to measure the prevalence of HIV and viral hepatitis, and to monitor changes in related behaviours. First participations from 2005-2014 were included in the analyses.

All analyses were undertaken in SPSS. Results of the multivariable analysis are presented.
During the 2005-14 period, there were 25,743 first participations in the UAM Survey of PWID:-

- their mean age was 35 years (at time of participation);
- one quarter (26%) were women;
- around one in 15 (7%) had been born outside of the UK;
- 15% were recruited in London;
- two-thirds (67%) reported that they had ever been imprisoned; and
- just over a quarter (28%) reported that they had never had a diagnostic test for HIV.
HIV prevalence and extent of undiagnosed infection.

Of the first participations, 318 had HIV (overall prevalence 1.2%; 4% in London, 0.7% elsewhere). Those with HIV were:

- older, median age 37 years vs. 34 ($p<0.001$);
- less likely to be women, 19% women vs. 26% ($p=0.007$).

Of those with HIV, **29% (86/298)** were probably undiagnosed (for 20 this could not be assessed; excluded from analyses).
Factors associated with undiagnosed HIV in the multivariable analysis.

1.) Comparing those with undiagnosed HIV with those with diagnosed HIV.
Factors associated with undiagnosed infection among those with HIV: 1

Those with undiagnosed HIV infection were younger, median 32 years vs. 38.5 (AOR=0.92 95%CI 0.88-0.96)

Were more often recruited outside London: Fewer had been tested for Hepatitis C (HCV):
Factors associated with undiagnosed infection among those with HIV: 2

Undiagnosed infections were associated with gender & sexual activity*:

- MSM (n=28) Heterosexual men (n=109) Sexually active women (n=40) Men no sex (n=103) Women no sex (n=18)

<table>
<thead>
<tr>
<th>Group</th>
<th>Proportion NOT diagnosed</th>
<th>AOR</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSM (n=28)</td>
<td></td>
<td>0.17</td>
<td>0.034-0.82</td>
</tr>
<tr>
<td>Heterosexual men (n=109)</td>
<td></td>
<td>1.2</td>
<td>0.62-2.4</td>
</tr>
<tr>
<td>Sexually active women (n=40)</td>
<td></td>
<td>1.3</td>
<td>0.54-3.1</td>
</tr>
<tr>
<td>Men no sex (n=103)</td>
<td></td>
<td>4.5</td>
<td>1.5-14</td>
</tr>
<tr>
<td>Women no sex (n=18)</td>
<td></td>
<td>1.2</td>
<td>0.62-2.4</td>
</tr>
</tbody>
</table>

Notes: * during the preceding year.

There was no association with: being UK born; imprisonment; the uptake of drug services, or hepatitis B vaccination.
Factors associated with undiagnosed HIV in multivariable analysis.

2.) Comparing those with undiagnosed HIV with those HIV negative.
Comparing those with undiagnosed HIV to those HIV negative

Those with undiagnosed infection were younger than those HIV negative, median 32 years vs. 34 (AOR=0.96 95%CI 0.94-0.99).

There was no association with: gender/sexual practice; imprisonment; or the uptake of drug services, hepatitis B vaccination, or hepatitis C testing.
Conclusions

A quarter of PWID recruited reported never being tested for HIV. Three in 10 HIV infections among PWID in contact with drug services were undiagnosed.

Younger PWID with HIV, and those recruited outside London were less likely to be diagnosed. As the HIV prevalence is much higher among PWID in London than overall, 34% of the undiagnosed infections were recruited in London.

Limitations:

- In the overall survey data (i.e. using the annual survey data, not just the first participation) the proportion undiagnosed has decreased from 53% in 2005 to 15% in 2014.
- The proportion undiagnosed among those PWID not in contact with services for people using drugs may be different.

Targeted interventions (such as point-of-care testing in drug services) are needed to improve the uptake of HIV testing, particularly among younger PWID.
Thank you for your attention

We are grateful to all of the people who took part in the survey and to the various services that assisted with their recruitment. In addition, we would like to thank those who provided administrative support for the surveys and those who undertook the laboratory work.

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There are no conflicts of interest.