Prevalence of HIV and hepatitis infections in the United Kingdom

Annual report of the Unlinked Anonymous Prevalence Monitoring Programme

Report from the Unlinked Anonymous Surveys Steering Group
Department of Health
November 2000
Prevalence of HIV and hepatitis infections in the United Kingdom 1999

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Programme conducted by:

The Public Health Laboratory Service
Communicable Disease Surveillance Centre
Central Public Health Laboratory
Statistics Unit
The Institute of Child Health, University of London
The Scottish Centre for Infection and Environmental Health

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Scottish Executive
Department of Health and Social Services (Belfast)

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*Members of the Steering Group are listed in Appendix One
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Prevalence of HIV and hepatitis infections in the United Kingdom
Key Points

HIV transmission and unsafe sexual behaviour are continuing among homosexual and bisexual men of all ages. From 1992 to 1999 there was no decrease in the prevalence of undiagnosed HIV infection in those attending genitourinary medicine clinics in London, and 1 in 40 of those aged under 25 was HIV infected in 1999. A novel laboratory technique has suggested that the rate of new HIV infections in homosexual and bisexual men in England and Wales was 2% per year in 1998.

Increased antenatal HIV testing is the key factor contributing to a decrease in mother to infant HIV infections in recent years. In 1999, an estimated 380 births to HIV-infected women in the UK would have resulted in about 55 HIV-infected infants. If all maternal HIV infections had been diagnosed and interventions offered to all HIV-infected mothers, fewer than 10 infant HIV infections would have occurred. Continued increases in antenatal HIV testing should enable the National Objective – an 80% reduction in the number of children acquiring HIV infection from their mothers by December 2002 – to be met.

Transmission of hepatitis C and hepatitis B infection through injecting drug use is a major problem. There has been an increase in sharing of injecting equipment, although prevalence of HIV infection remains low. One-third of injecting drug users attending specialist agencies in England and Wales had antibodies to hepatitis C as had 1 in 11 of those who began injecting in the past three years. Nearly 25% of those who began injecting drugs after 1996 in Glasgow were hepatitis C antibody positive when tested in 1999. Since 1992 reports of acute hepatitis B in England and Wales have risen four-fold among injecting drug users, while in 1999 only 29% reported having been vaccinated against hepatitis B.

A substantial number of HIV infections in genitourinary medicine clinic attendees remained undiagnosed in 1999. This means that many of those who are infected are not benefiting from recent therapeutic advances. The proportion of HIV-infected homosexual and bisexual men who were aware of their infection remained unchanged at 63%. The proportion of HIV infections in heterosexual men in London that had been diagnosed clinically fell from 61% in 1998 to 48% in 1999. In heterosexual women in London this proportion has risen gradually such that, in 1999, 58% of those who were HIV infected had been diagnosed clinically.
Prevalence of HIV and hepatitis infections in the United Kingdom

1. To monitor the prevalence of, and associated risks for, HIV infection in accessible groups of those adults whose risk behaviour makes them vulnerable to infection, such as attenders at genitourinary medicine clinics and injecting drug users.

2. To measure, through serosurveillance of accessible groups, the impact of HIV infection on those who are less vulnerable behaviourally and are more broadly representative of the adult population.

3. To monitor closely the prevalence of HIV infection in London and to recognise emerging problems elsewhere.

4. To measure the effectiveness of voluntary confidential testing strategies for clinical diagnosis of HIV infections.

5. In combination with other data, to provide estimates of the total numbers of HIV-infected persons and to assist in projecting future numbers of persons with severe HIV disease who will require care.

6. To use specimens gathered by the programme to measure the prevalence of, and associated risk factors for, other important infections.

7. To make available programme data in a timely and accessible form so as to inform the targeting of health promotion, the assessment of the effectiveness of preventive measures, and the planning of medical and social services for those affected by HIV.

**Introduction**

1. The Unlinked Anonymous Prevalence Monitoring Programme which began in 1990 aims to measure the distribution of infection, in particular HIV*, in accessible groups of the adult population. The programme has a number of objectives (Box 1), including assessing the effectiveness of voluntary confidential testing for clinical diagnosis of HIV infection. The data obtained are used to target and evaluate health promotion, to inform estimates of the numbers requiring treatment and care in the future, and to plan services for those affected by HIV and AIDS [1]. This report summarises programme data to the end of 1999. More comprehensive tables of data (see index in Appendix Three) are available at http://www.phls.co.uk/facts/HIV/hiv.htm

2. The programme provides estimates of the prevalence of infection among groups in whom a substantial proportion of infections are undiagnosed and therefore not ascertained by other surveillance systems. Essential public health information on the prevalence of HIV infection in these groups cannot be obtained in any other way.

3. The programme monitors HIV infection levels in two population sub-groups (Box 2):

   The first includes those whose behaviour puts them at increased risk of HIV infection, e.g. homosexual and bisexual men and heterosexual men and women attending genitourinary medicine clinics, and injecting drug users in contact with specialist treatment and support agencies or genitourinary medicine clinics.

   The second includes those at lower or general risk of infection, e.g. pregnant women or women having a termination of pregnancy.

   A total of 633,358 specimens were tested in 1999 (Table 1).

**Methodology**

4. The surveys use leftover blood from samples taken for routine clinical tests, with the exception of the survey of injecting drug users, which uses saliva samples that are collected voluntarily (Box 2, Figure 1).

*Throughout this report, the term HIV is used to refer to HIV subtype 1 only. Very few HIV-2 infections have been identified in the UK either through the unlinked anonymous programme or diagnostic testing.*
5. All specimens have patient identifying details permanently removed before testing. Individual test results cannot be linked in any way to the source patient. The programme surveys populations of specimens, not individual patients.

6. Patients are informed about the surveys by leaflets and posters, which are displayed at centres where specimens are collected for clinical purposes. Specimens from patients who spontaneously express an objection to their leftover specimen being used in the programme are not tested.

7. To assist interpretation of the results, data from other surveillance systems are given, such as clinical reports of diagnosed AIDS cases, HIV infections, and hepatitis B infections, as well as reports on sexually transmitted infections seen in genitourinary medicine clinics.

Box 2: Unlinked Anonymous Prevalence Monitoring Programme: populations under surveillance

<table>
<thead>
<tr>
<th>Population under surveillance</th>
<th>Survey</th>
<th>Reasons for specimen collection</th>
<th>Location</th>
</tr>
</thead>
<tbody>
<tr>
<td>Behaviourally vulnerable</td>
<td>Genitourinary medicine clinic attendees</td>
<td>Syphilis serology</td>
<td>UK</td>
</tr>
<tr>
<td>Homosexual and bisexual men</td>
<td>Genitourinary medicine clinic attendees</td>
<td>Syphilis serology</td>
<td>UK</td>
</tr>
<tr>
<td>Heterosexual men and women with greater than average sexual partner change</td>
<td>Treatment and support agencies for injecting drug users*</td>
<td>Voluntary collection of saliva. This survey also measures current and prior infection with hepatitis B and hepatitis C viruses</td>
<td>England &amp; Wales</td>
</tr>
<tr>
<td>Injecting drug users</td>
<td>Treatment and support agencies for injecting drug users*</td>
<td>Voluntary collection of saliva. This survey also measures current and prior infection with hepatitis B and hepatitis C viruses</td>
<td>England &amp; Wales</td>
</tr>
<tr>
<td>Representing the general population</td>
<td>Infant dried blood spot</td>
<td>Guthrie cards for metabolic screening</td>
<td>England &amp; Scotland</td>
</tr>
<tr>
<td>Pregnant women</td>
<td>Antenatal</td>
<td>Rubella serology</td>
<td>London and Northern &amp; Yorkshire</td>
</tr>
<tr>
<td></td>
<td>Termination of pregnancy</td>
<td>Blood grouping</td>
<td>London</td>
</tr>
</tbody>
</table>

*The genitourinary medicine clinic survey also provides some prevalence data for injecting drug users
HIV

General findings

8. HIV infection was widely disseminated among those at greatest behavioural risk (Table 2) and was found in every region surveyed. Prevalence remained much greater in those at increased behavioural risk than in pregnant women.

9. Prevalence was highest in homosexual and bisexual men attending genitourinary medicine clinics and in injecting drug users attending specialist agencies. Prevalence overall, and within each risk group, was much higher in London than elsewhere.

10. The big increase in antenatal testing for HIV infection was the key factor contributing to a decrease in mother to infant HIV infections from an estimated 100 annually to 55. If all maternal HIV infections were diagnosed and appropriate interventions offered to all HIV-infected pregnant women, then the number of mother to infant HIV infections annually could be reduced to fewer than 10.

<table>
<thead>
<tr>
<th>Survey and specimen</th>
<th>Centres or districts</th>
<th>Specimen numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>London</td>
<td>Scotland</td>
</tr>
<tr>
<td>Genitourinary medicine clinics — syphilis serology</td>
<td>7</td>
<td>12</td>
</tr>
<tr>
<td>Injecting drug users — saliva (voluntary survey)</td>
<td>14</td>
<td>–</td>
</tr>
<tr>
<td>Pregnant women:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>infant dried blood spot survey</td>
<td>29</td>
<td>15</td>
</tr>
<tr>
<td>antenatal-rubella serology</td>
<td>15</td>
<td>–</td>
</tr>
<tr>
<td>pregnancy terminations — blood grouping</td>
<td>8</td>
<td>–</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
<td>27</td>
</tr>
</tbody>
</table>
Figure 1: Unlinked Anonymous Prevalence Monitoring Programmes in the United Kingdom: centres and areas involved 1999

- Injecting drug users survey sites
- Genitourinary medicine clinics
- Terminations survey (London)
- Antenatal clinics (London and Scotland)
- Districts in infant dried blood spot survey (antenatal survey in Yorkshire)
- London

Surveys of populations in London at higher risk, 1999

Surveys of populations in London at lower or general risk, 1999

Prevalence of HIV and hepatitis infections in the United Kingdom
## Table 2: Prevalence of HIV infection in the survey groups: 1999

<table>
<thead>
<tr>
<th>Area</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Genitourinary medicine clinic attendees</td>
<td>Injecting drug users§</td>
</tr>
<tr>
<td>Homosexual/bisexual</td>
<td>Heterosexual</td>
<td>Heterosexual</td>
</tr>
<tr>
<td>London</td>
<td>Number tested 3,930</td>
<td>10,678</td>
</tr>
<tr>
<td></td>
<td>Number HIV infected 283</td>
<td>85</td>
</tr>
<tr>
<td></td>
<td>% HIV infected 7.2</td>
<td>0.80</td>
</tr>
<tr>
<td></td>
<td>Prevalence range (%)⁺ 3.9–13.9</td>
<td>0.31–2.3</td>
</tr>
<tr>
<td>Scotland</td>
<td>Number tested 1,133</td>
<td>6,643</td>
</tr>
<tr>
<td></td>
<td>Number HIV infected 36</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>% HIV infected 3.2</td>
<td>0.30</td>
</tr>
<tr>
<td></td>
<td>Prevalence range (%)⁺ 2.3–5.8</td>
<td>0.17–0.34</td>
</tr>
<tr>
<td>Elsewhere in the UK#</td>
<td>Number tested 1,562</td>
<td>15,526</td>
</tr>
<tr>
<td></td>
<td>Number HIV infected 36</td>
<td>20</td>
</tr>
<tr>
<td></td>
<td>% HIV infected 2.3</td>
<td>0.13</td>
</tr>
<tr>
<td></td>
<td>Prevalence range (%)⁺ 0–3.2</td>
<td>0–0.25</td>
</tr>
<tr>
<td></td>
<td>Prevalence ratio¶: London vs elsewhere 2.7</td>
<td>4.4</td>
</tr>
</tbody>
</table>

⁺ The range within a category is the lowest and highest prevalence recorded in individual clinics (genitourinary medicine survey), regions (injecting drug users survey), districts (infant dried blood spot survey) or hospitals (termination of pregnancy, antenatal and hospital surveys)

¶ The ratio by which the prevalence of infection in London is greater than the prevalence elsewhere in the UK

§ Attending specialist centres for injecting drug users

# In Northern and Yorkshire region, data for pregnant women come from the antenatal survey

Data to the end of 1999
Those at increased risk of HIV infection

*Homosexual men attending genitourinary medicine clinics*

11. In 1999 prevalence was higher among homosexual and bisexual men than in any other group (Table 2). Among those attending genitourinary medicine clinics prevalence was 1 in 14 in London, 1 in 31 in Scotland and 1 in 43 elsewhere in the UK. Between 1993 and 1999, HIV prevalence fell in London from 19.4% to 7.2%, and outside London from 4.6% to 2.3%.

12. One in 33 young (i.e. aged under 25 years) homosexual and bisexual men in London was infected with HIV. These infections would have been acquired after prevention activities began. From 1992 to 1999, there was no decrease in the prevalence of HIV infections that were undiagnosed clinically in this subgroup (Figure 2), a clear indication of continuing transmission.

13. The proportion of HIV-infected homosexual and bisexual men in whom HIV infection was recognised clinically remained unchanged at 63% in 1999; in London this proportion was 61%. Although the advantages of early

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**Figure 2: Prevalence of HIV infection and of undiagnosed HIV infection in male homosexual and bisexual genitourinary medicine clinic attendees: London 1992–1999**

- Overall HIV prevalence
- Total undiagnosed
- Undiagnosed infection in men <25
The diagnosis of HIV infection have attracted considerable publicity, there was no decline in the proportion of undiagnosed infections between 1996 and 1999.

14. Of the 170 HIV-infected men in London whose HIV infection was undiagnosed prior to the clinic attendance, only 35% had their infection diagnosed at that clinic attendance and this proportion has not changed since 1996.

15. The prevalence of undiagnosed HIV infection in homosexual and bisexual men presenting with an acute sexually transmitted infection has not fallen significantly since 1993, which suggests a high level of continuing transmission of HIV (Figure 3) [2]. One half of HIV-infected men attending a clinic who also had an acute sexually transmitted infection remained unaware of their HIV infection.

16. Techniques for monitoring the incidence of HIV infection are of critical importance and are being actively developed [3]. Using a novel laboratory testing technique, the rate of new HIV infections in homosexual and bisexual men in 1998 in England and Wales was found to be 2% per year [4].

**Figure 3: Prevalence of undiagnosed HIV infection among homosexual and bisexual males with or without acute sexually transmitted infection (STI) attending genitourinary medicine clinics: 1993–1999**

- London: acute STI
- London: non-acute STI
- Outside London: acute STI
- Outside London: non-acute STI

Data to the end of 1999
Table 3: Prevention indicators for HIV and hepatitis transmission in homosexual/bisexual men

<table>
<thead>
<tr>
<th>Area</th>
<th>Sub-category</th>
<th>Prevalence markers</th>
<th>Incidence markers</th>
<th>Markers of risk</th>
<th>Markers of health care delivery</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Prevalence markers</strong></td>
<td></td>
<td>New diagnoses of HIV infections</td>
<td>Median age at diagnosis of HIV infection</td>
<td>Homosexually acquired gonorrhoea</td>
<td>Attending genitourinary medicine clinic in the past year*</td>
</tr>
<tr>
<td></td>
<td></td>
<td>UK</td>
<td>UK</td>
<td>England &amp; Wales</td>
<td>London</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≤24</td>
<td>≤24</td>
<td>Known HIV positive</td>
<td>Proportion Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>≥25</td>
<td>≥25</td>
<td>Not known HIV positive</td>
<td>Number with STI Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Total</td>
<td>Known HIV positive</td>
<td>Proportion Number</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Prevalent diagnosed HIV infections receiving</td>
<td>Median CD4 counts at year of HIV infection diagnosis</td>
<td>Scotland</td>
<td>Number with STI Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>care</td>
<td></td>
<td></td>
<td>Proportion with STI Total</td>
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<tr>
<td></td>
<td></td>
<td>England &amp; Wales</td>
<td>≤24</td>
<td>Known HIV positive</td>
<td>Proportion with STI Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>All</td>
<td>≥25</td>
<td>Not known HIV positive</td>
<td>Number with STI Total</td>
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<td></td>
<td></td>
<td>Scotland</td>
<td>All</td>
<td>Known HIV positive</td>
<td>Proportion with STI Total</td>
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<tr>
<td></td>
<td></td>
<td>Prevalence among those having voluntary</td>
<td>Laboratory reports of acute hepatitis B acquired</td>
<td>Scotland</td>
<td>Number with STI Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>confidential HIV tests</td>
<td>through sex between men</td>
<td></td>
<td>Proportion with STI Total</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Scotland</td>
<td>England &amp; Wales</td>
<td></td>
<td>Proportion with STI Total</td>
</tr>
<tr>
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<td>All</td>
<td>All</td>
<td></td>
<td>Proportion with STI Total</td>
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<td>Prevalence of undiagnosed HIV infection in</td>
<td>Incidence markers</td>
<td>Markers of risk</td>
<td>Markers of health care delivery</td>
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<tr>
<td></td>
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<td>genitourinary medicine clinic attendees</td>
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<td>Attending genitourinary medicine</td>
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<tr>
<td></td>
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<td>London</td>
<td></td>
<td></td>
<td>clinic in the past year*</td>
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<td>Having an HIV test in the last</td>
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<td></td>
<td></td>
<td>England &amp; Wales</td>
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<td></td>
<td>year*</td>
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<td></td>
<td></td>
<td>≤24</td>
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<td></td>
<td>London</td>
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<td>Prevalence among those having voluntary</td>
<td>Laboratory reports of acute hepatitis B acquired</td>
<td>Scotland</td>
<td>Proportion Number</td>
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<td>through sex between men</td>
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<td>Number</td>
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<td>England &amp; Wales</td>
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<td>All</td>
<td>All</td>
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*Provisional, further reports are likely to be received*

<table>
<thead>
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<td>Data to the end of 1999</td>
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<td>1990</td>
<td>242</td>
<td>247</td>
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<td>167</td>
<td>127</td>
<td>153</td>
<td>151</td>
<td>126</td>
<td>118</td>
<td>104*</td>
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<td>1991</td>
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<td>1406</td>
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<td>2275</td>
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<tr>
<td>1996</td>
<td>14.0%</td>
<td>9.3%</td>
<td>8.3%</td>
<td>8.1%</td>
<td>7.3%</td>
<td>7.3%</td>
<td>6.6%</td>
<td>7.4%</td>
<td>6.0%</td>
<td>5.9%</td>
</tr>
<tr>
<td>1997</td>
<td>4.7%</td>
<td>3.7%</td>
<td>4.3%</td>
<td>5.3%</td>
<td>5.2%</td>
<td>3.8%</td>
<td>4.2%</td>
<td>4.0%</td>
<td>4.9%</td>
<td>3.5%</td>
</tr>
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<td>1998</td>
<td>8.4%</td>
<td>6.4%</td>
<td>4.0%</td>
<td>2.7%</td>
<td>3.1%</td>
<td>2.5%</td>
<td>2.8%</td>
<td>2.7%</td>
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<td>4.3%</td>
<td>2.1%</td>
<td>0.6%</td>
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17. Between 1995 and 1999, the incidence of gonorrhoea due to homosexual exposure in men attending genitourinary medicine clinics in England and Wales rose by 36% [5], and the proportion of homosexual men in London reporting unprotected anal sex in the previous year increased from 32% in 1996 to 41% in 1999 (Table 3). This strongly suggests that the risk of HIV transmission between homosexual and bisexual men has been increasing in recent years.

Injecting drug users

18. *England and Wales*: The prevalence of HIV infection among the injecting drug users attending specialist agencies in London during 1999 was 1 in 35 for men and 1 in 31 for women, and 1 in 330 for men and 1 in 640 for women elsewhere (Table 2). Since 1995, prevalence of HIV infection among injecting drug users has not fallen either within London or elsewhere. Of those who began injecting in the past three years, 1 in 850 was HIV infected, an indication of a continuing low rate of HIV transmission through injecting drug use.

19. Although a few of the male HIV-infected drug users had not had their HIV infection diagnosed clinically, all the HIV-infected female drug users surveyed in 1999 were aware of their infection. These and other data suggest that the proportion of the HIV-infected injecting drug users who are aware of their infection is higher than in other groups at increased infection risk.

20. In 1999, direct sharing of needles and syringes was reported by 32% of drug users who had injected in the previous month. The level of direct sharing had not changed between 1992 and 1997, but had increased between 1997 and 1998 both in London and elsewhere. While the proportion sharing did not rise further outside London in 1999, there was a further increase in London from 35% in 1998 to 41% in 1999 (Figure 4, Table 4). The recent increase in direct sharing was seen in all age groups, and in both male and female injecting drug users.

21. Self-reported sharing of any injecting equipment in the past month increased to 69% in London during 1999, and 62% elsewhere (Table 4). These rates have been increasing over the past three years. Female and young drug users reported significantly higher rates of indirect sharing.

22. *Scotland*: In Scotland, prevalence of HIV infection among genitourinary medicine clinic attendees who reported
ever injecting drugs was 1 in 100 in men and 1 in 110 in women. This low prevalence was in keeping with the 1 in 150 injecting drug users who were found to be HIV infected in 1999 after they had a voluntary HIV test. This compares with prevalences of between 1 in 25 and 1 in 50 that were observed during the period 1989 to 1993 (Table 4). HIV infection among injecting drug users is now a relatively rare event in Scotland, where epidemic spread occurred among this population in the early to mid-1980s.

23. There are indications that the potential for HIV transmission among injecting drug users has increased recently (Table 4). According to Scotland’s Drug Misuse Database, 32% of injecting drug users in 1998/1999 reported sharing a needle and syringe in the previous month compared with 28% in 1996/1997.

*Heterosexual men and women attending genitourinary medicine clinics*

24. Risk of acquiring another sexually transmitted infection, as measured indirectly by attendance at a

![Figure 4: Sharing of needles and syringes*, and reports of acute hepatitis B# among injecting drug users in England and Wales](image)

*Participants in the unlinked anonymous survey who had injected in previous four weeks

#Laboratory reports of acute hepatitis B to CDSC, 1999 data provisional

Data to the end of 1999
### Table 4: Prevention indicators for HIV and hepatitis transmission in injecting drug users

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<th>Area</th>
<th>Sub-category</th>
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<td><strong>Prevalence markers</strong></td>
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<td>Reports of new diagnoses of HIV infection through injecting drug use</td>
<td>London All reports*</td>
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<td>Scotland All reports*</td>
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<td>Rest of UK All reports*</td>
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<td>UK Male*</td>
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<td>Reports of HIV infections acquired through heterosexual contact with those infected through injecting drug use</td>
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<td>Prevalent diagnosed HIV infections receiving care</td>
<td>England &amp; Wales Male*</td>
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<td>Prevalence among those having voluntary confidential HIV tests</td>
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<td><strong>Incidence markers</strong></td>
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<td>Median age at HIV diagnosis</td>
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<td>Proportion HIV antibody positive</td>
<td>England &amp; Wales First injected during the last 3 years</td>
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<td>Proportion hepatitis B antibody positive</td>
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<td>England &amp; Wales Infections attributed to injecting drug use</td>
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<td><strong>Markers of risk</strong></td>
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<td>Passing on or receiving used needles or syringes in the last month — self reports</td>
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<td>England &amp; Wales outside London Current injectors</td>
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<td>Sharing of needles and syringes in past month — agency reports (Scottish drug misuse database)</td>
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<td>Sharing of any injecting equipment† in past month — self reports</td>
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<td><strong>Markers of health care delivery</strong></td>
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<td>Hepatitis B vaccine coverage — self reported</td>
<td>England &amp; Wales First injected during the last 3 years Current and former injectors</td>
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*Includes 336 also exposed to HIV infection through sex between men
†Denotes past or current infection (for hepatitis B the proportion with antibodies to hepatitis B core antigen)
*Provisional, further reports are likely to be received
†Sharing of injecting paraphernalia including needles and syringes in the last 4 weeks
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Data to the end of 1999
genitourinary medicine clinic, continued to be a powerful predictor of risk for HIV infection in heterosexuals, particularly in those born in the UK. In 1999, HIV prevalence among heterosexual attendees at genitourinary medicine clinics in London was 1 in 130 among men and 1 in 140 among women (Table 2). Outside London, prevalence was 1 in 780 among men and 1 in 920 among women. In Scotland, HIV prevalence was 1 in 430 for men and 1 in 670 for women. HIV prevalence overall in this group has remained constant since 1990.

25. In those born abroad, the observed prevalence rate has been much higher than in those born in the UK. Among London clinic attendees during 1998/1999, 1 in 29 men and 1 in 20 women born in sub-Saharan Africa was HIV infected, compared with 1 in 240 men, and 1 in 570 women who were born in the UK.

26. The proportion of HIV infections in heterosexual men in London that had been diagnosed clinically fell from 61% in 1998 to 48% in 1999. In heterosexual women in London this proportion has risen gradually such that, in 1999, 58% of those who were HIV infected had been diagnosed clinically.

<table>
<thead>
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<th>Table 5: Prevention indicators for HIV and hepatitis transmission in heterosexual men and women</th>
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<td><strong>Prevalence markers</strong></td>
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<td><strong>Reports of new diagnoses of heterosexually acquired HIV infection</strong></td>
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<tr>
<td><strong>Prevalent diagnosed HIV infections receiving care</strong></td>
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<td><strong>First HIV tests at six sentinel labs</strong></td>
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<tr>
<td><strong>Prevalence of undiagnosed HIV infection in genitourinary medicine clinic attendees</strong></td>
</tr>
<tr>
<td><strong>Incidence markers</strong></td>
</tr>
<tr>
<td><strong>Median age at HIV diagnosis</strong></td>
</tr>
<tr>
<td><strong>Median CD4 counts at year of diagnosis</strong></td>
</tr>
<tr>
<td><strong>Scotland</strong></td>
</tr>
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<td><strong>Markers of risk</strong></td>
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<tr>
<td><strong>Heterosexually acquired gonorrhoea</strong></td>
</tr>
<tr>
<td><strong>Known HIV-infected genitourinary medicine clinic attendees with an acute sexually transmitted infection (STI)</strong></td>
</tr>
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*Provisional, further reports are likely to be received*
<table>
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<tr>
<th></th>
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<tbody>
<tr>
<td>Probably acquired in the UK</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>52</td>
<td>59</td>
<td>89</td>
<td>85</td>
<td>76</td>
<td>103</td>
<td>77</td>
<td>118</td>
<td>107</td>
<td>87*</td>
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<tr>
<td>Male</td>
<td>17</td>
<td>30</td>
<td>23</td>
<td>37</td>
<td>43</td>
<td>35</td>
<td>38</td>
<td>59</td>
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<td>59*</td>
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<td>Total</td>
<td>69</td>
<td>89</td>
<td>112</td>
<td>122</td>
<td>119</td>
<td>138</td>
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<tr>
<td>Female</td>
<td>205</td>
<td>252</td>
<td>316</td>
<td>300</td>
<td>335</td>
<td>341</td>
<td>369</td>
<td>415</td>
<td>492</td>
<td>622*</td>
</tr>
<tr>
<td>Male</td>
<td>222</td>
<td>262</td>
<td>307</td>
<td>298</td>
<td>290</td>
<td>324</td>
<td>302</td>
<td>363</td>
<td>422</td>
<td>442*</td>
</tr>
<tr>
<td>Total</td>
<td>427</td>
<td>514</td>
<td>623</td>
<td>598</td>
<td>625</td>
<td>665</td>
<td>671</td>
<td>778</td>
<td>914</td>
<td>1064*</td>
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<td>–</td>
<td>–</td>
<td>–</td>
<td>1555</td>
<td>1655</td>
<td>2056</td>
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<tr>
<td>Male</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>1126</td>
<td>1292</td>
<td>1470</td>
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<td>All</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>177</td>
<td>180</td>
<td>243</td>
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<tr>
<td>Number</td>
<td>7700</td>
<td>13,230</td>
<td>12,836</td>
<td>13,089</td>
<td>12,234</td>
<td>14,364</td>
<td>13,685</td>
<td>14,233</td>
<td>16,449</td>
<td>15,537</td>
</tr>
<tr>
<td>Proportion positive</td>
<td>0.010%</td>
<td>0.006%</td>
<td>0.007%</td>
<td>0.006%</td>
<td>0.006%</td>
<td>0.007%</td>
<td>0.007%</td>
<td>0.007%</td>
<td>0.009%</td>
<td>0.012%</td>
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<tr>
<td>Born in UK</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>0.12%</td>
<td>0.08%</td>
<td>0.07%</td>
</tr>
<tr>
<td>Born in Africa</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>2.7%</td>
<td>2.1%</td>
<td>1.7%</td>
</tr>
<tr>
<td>Born elsewhere</td>
<td>–</td>
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<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>0.30%</td>
<td>0.20%</td>
<td>0.14%</td>
</tr>
<tr>
<td>Born in UK</td>
<td>–</td>
<td>0.14%</td>
<td>0.11%</td>
<td>0.13%</td>
<td>0.14%</td>
<td>0.19%</td>
<td>0.13%</td>
<td>0.10%</td>
<td>0.10%</td>
<td>0.09%</td>
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<tr>
<td>Born in Africa</td>
<td>–</td>
<td>6.1%</td>
<td>8.3%</td>
<td>4.0%</td>
<td>4.6%</td>
<td>8.9%</td>
<td>4.4%</td>
<td>5.9%</td>
<td>2.4%</td>
<td>4.7%</td>
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<td>Born elsewhere</td>
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<td>0%</td>
<td>0.54%</td>
<td>0.19%</td>
<td>0.23%</td>
<td>0%</td>
<td>0.23%</td>
<td>0.18%</td>
<td>0%</td>
<td>0%</td>
</tr>
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</table>

| Female | 26.6 | 28.4 | 28.4 | 29.2 | 29.6 | 30.2 | 30.7 | 31.6 | 31.3 | 31.9* |
| Male | 33.3 | 32.5 | 32.9 | 33.7 | 34.1 | 35.1 | 36.3 | 36.2 | 36.2 | 36.7* |
| ≤24 | 350 | 365 | 365 | 240 | 367 | 330 | 380 | 316 | 304 | 370 |
| ≥25 | 190 | 248 | 230 | 182 | 250 | 220 | 200 | 190 | 191 | 202 |
| All | – | – | 301 | 320 | 220 | 315 | 311 | 340 | 243 | 417 |

| Female | – | – | – | – | – | 3330 | 4004 | 4010 | 4090 | 4921 |
| Male | – | – | – | – | – | 5281 | 6238 | 6672 | 6729 | 8820 |
| Number | – | – | – | 65 | 87 | 116 | 144 | 109 | 93 | 72 |
| Number with acute STIs | – | – | – | 5 | 6 | 13 | 7 | 13 | 11 | 13 |
Much of this increase has been due to an improvement in the proportion having voluntary confidential HIV tests at genitourinary medicine clinics from 29% (28 of 98) of previously undiagnosed HIV infections in 1996 to 51% (46 of 90) in 1999. Elsewhere in England, Wales and Northern Ireland the proportion of HIV infections that had been diagnosed clinically in 1999 was 30% in men and 56% in women. Of the HIV-infected heterosexual clinic attendees in Scotland, 45% of the men and 62% of the women had been diagnosed clinically.

27. The number of new cases of acute sexually transmitted infections in heterosexuals diagnosed in genitourinary medicine clinics in England continued to rise in 1999 [6]. New cases of gonorrhoea rose by 25% between 1998 and 1999, the largest annual increase seen in the past 5 years (Table 5). The rise was greatest in teenagers, up by 39% in males and 25% in females.

28. For many HIV-infected heterosexual men and women, their HIV infection remained undiagnosed after their

Figure 5: Trends in prevalence of HIV infection among pregnant women* by area of residence: 1989–1999

*Newborn infant dried blood spots taken for metabolic screening
genitourinary medicine clinic attendance. A number of these HIV-infected heterosexuals (most commonly in London) also had evidence of an acute sexually transmitted infection (Table 5). The benefit may be considerable if clinicians routinely recommended an HIV test to all heterosexuals known or suspected to have another sexually transmitted infection.

**Those at lower or general risk of HIV infection**

*Pregnant women*

29. Prevalence of HIV infection amongst pregnant women in London in 1999 was 1 in 400, the highest level recorded so far, and a six-fold rise since the survey began in 1988 (Figure 5). Prevalence varied substantially according to maternal district of residence within London in 1999, ranging from none to 1 in 120.

30. Elsewhere in the UK, the prevalence of HIV infection has remained low (approximately 1 in 4,500). The distribution of births to HIV-infected mothers outside of London, however, varied substantially from year to year, making it difficult to identify higher prevalence areas [7].

31. The prevalence of HIV infection among pregnant women largely reflects migration of black African ethnic minority women who were probably infected in sub-Saharan Africa. Low levels of HIV infection have been reported in pregnant women who were born in the UK and South Asia [8]. Unlinked anonymous surveys remain important for monitoring the impact within the UK of the continuing pandemic.

32. One in 120 women undergoing pregnancy termination in London was HIV infected. This rate was double that seen in women who continued their pregnancy.

*Mother to infant transmission*

33. In 1998, an estimated 330 births to HIV-infected women in the UK would have resulted in about 60 infected infants. An estimated 380 births would have resulted in 55 infected infants in 1999. If all maternal HIV infections had been diagnosed in 1999 and interventions offered to all HIV-infected mothers, fewer than 10 infant HIV infections would have occurred (Table 6).

34. Substantial efforts have been made recently to improve antenatal HIV diagnosis. National targets and objectives were set
that involve the offer and recommendation of an HIV test to all pregnant women throughout England. Increased antenatal HIV testing is the key factor contributing to a decrease in mother to infant HIV infections. It is anticipated that antenatal HIV testing should lead to an 80% reduction in the number of children acquiring HIV infection from their mothers by December 2002 [9,10].

35. Within Inner London the rate of maternal HIV diagnosis has improved (Figure 6). Some London hospitals have made considerable progress towards implementation of routine HIV testing [11]. In 1999, 76% of pregnant women in Inner London had had their infection diagnosed before delivery, compared with 50% in 1998.

36. Within Inner London the antenatal diagnosis rate for HIV-infected women undiagnosed at the start of antenatal care was 60% in 1999, compared with 33% in 1998.

37. There was little improvement in 1999 in the rate of diagnosis of HIV infections in pregnant women in England and Wales outside London (Figure 6). Reports indicate, however, that progress with the implementation of routine antenatal testing is being made in these regions during 2000.

Table 6: Estimated number of infant HIV infections avoided in 1999

<table>
<thead>
<tr>
<th>Area of residence</th>
<th>Births to HIV-infected women</th>
<th>Estimated number of infants who would have acquired HIV infection from their mothers in the absence of maternal diagnosis (95% CI)¶</th>
<th>Estimated number of infants acquiring HIV infection from their mothers in 1999 (95% CI)§</th>
<th>Estimated number of infants who would acquire HIV infection if all maternal infections had been diagnosed before delivery#</th>
</tr>
</thead>
<tbody>
<tr>
<td>London</td>
<td>260</td>
<td>70 (55–85)</td>
<td>30 (20–45)</td>
<td>5</td>
</tr>
<tr>
<td>Rest of UK</td>
<td>120</td>
<td>30 (25–35)</td>
<td>25 (15–30)</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>380</td>
<td>100 (80–120)</td>
<td>55 (35–75)</td>
<td>7</td>
</tr>
</tbody>
</table>

*Data obtained from the unlinked anonymous dried blood spot survey, adjusting for areas not covered in the programme

An estimate of the number of infected infants in the absence of maternal diagnosis and applying a vertical transmission rate (VTR) of 26.5% for all infected women

An estimate of the current number of infected infants based on observed surveillance data in 1999, applying a VTR of 2.2% for women diagnosed before delivery and a VTR of 26.5% for women remaining undiagnosed

An estimate of the number of infected infants assuming all maternal infections are diagnosed before delivery and applying a VTR of 2.2% for all infected women
Increasing numbers of HIV-infected persons requiring care

38. It has been estimated that, at the end of 1998, there were nearly 30,000 HIV-infected adults living in the UK, about one third of whom were apparently unaware of their infection [12]. In 2001, new data on the sizes of the populations at increased risk of HIV infection will become available from the second National Survey of Sexual Attitudes and Lifestyles. These data will be combined with the 1999 data from the Unlinked Anonymous Prevalence Monitoring Programme to provide revised estimates of the number of infected individuals at the end of 1999 who were unaware of their HIV infection.

39. In the past three years there has been a substantial increase in the number of people diagnosed with HIV infection requiring HIV-related care (Figure 7). At the end of 1999 there were an estimated 22,000 requiring this care, an increase of over 40% from the 15,000 to 16,000 in 1995 and 1996. This increase in

---

**Figure 6: Proportion of HIV infections diagnosed before birth amongst pregnant women**

*Alignment of dried blood spot survey data with confidential reports through the Royal College of Obstetricians and Gynaecologists — confidential reports subject to reporting delay, particularly for recent years
Note: numbers at base of columns refer to total number of positive specimens

Data to the end of 1999
HIV-infected people requiring clinical monitoring, treatment and care is due both to the large fall in mortality following the introduction of highly active antiretroviral treatment (HAART) and the continuing high number of HIV infections diagnosed each year (Figure 7). If these trends continue unchanged, there will be a further large rise in the number of HIV-infected people requiring care in the coming three years.

Continuing impact of the pandemic

40. In the UK a large proportion of the HIV infections attributed to heterosexual transmission is associated with having lived in or visited countries in sub-Saharan Africa. Further global changes in heterosexually transmitted HIV, particularly in Africa and South Asia, are likely to be reflected in the UK. Any increase in HIV prevalence in the UK associated with increases in other countries may be detected initially through the unlinked anonymous surveys.

Hepatitis

Hepatitis B

41. Homosexual men: Although the reported incidence of acute hepatitis B infection in homosexual men is less than it was in the early 1990s, transmission of the virus is continuing in this group, with 50 to 60 reports occurring in each of the past four years (Table 3).

42. Injecting drug users: A quarter of the injecting drug users attending specialist agencies in London in 1999 had had hepatitis B, as had 1 in 6 of those attending agencies in the rest of England and Wales. Hepatitis B continues to be transmitted among injecting drug users even though there is an effective vaccine. In 1999, of the injecting drug users who began injecting in the past three years, 1 in 18 had been infected with hepatitis B. Reports of acute hepatitis B among injecting drug users in England and Wales have risen four-fold since 1992 (Figure 4). Only 29% of injectors reported being vaccinated against hepatitis B in 1999, a slight increase from 25% in 1998 (Table 4).

43. In Scotland, there has also been an increase in reports of acute hepatitis B infection among injectors, from 14 in 1995 to 115 in 1999 (Table 4). This increase has been focused in the North East of Scotland.

Hepatitis C

44. Injecting drug users: One-third of injecting drug users attending specialist agencies in England and Wales had
antibodies to hepatitis C (Table 7) [13]. One in 11 of injecting drug users who began injecting in the past three years had hepatitis C infection, indicating ongoing transmission (Table 4). The prevalence of hepatitis C among injecting drug users varied by region, being highest in London and the North West (Figure 8).

45. In Scotland, 62% of 1905 specimens from injectors who originally underwent HIV antibody testing in 1995/1996 were hepatitis C antibody positive; prevalences among Glasgow, Edinburgh, Dundee and Aberdeen injectors were 74%, 47%, 64% and 37%, respectively.

46. There is evidence that the prevalence, and thus the incidence, of hepatitis C among injecting drug users in Scotland declined during the 1990s, the era of harm-reduction interventions. A community-wide survey in Glasgow in 1999, however, revealed that nearly 25% of those who began injecting drugs after

**Figure 7: New HIV diagnoses, HIV deaths and adults with diagnosed HIV infection at year end: United Kingdom 1995–1999**

<table>
<thead>
<tr>
<th>Year</th>
<th>New diagnoses of HIV infections and deaths in HIV-infected people</th>
<th>Prevalent diagnosed HIV infections in adults*</th>
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<tr>
<td></td>
<td>number of deaths</td>
<td>number of new diagnoses</td>
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<tr>
<td>1995</td>
<td>1,669</td>
<td>2,616</td>
</tr>
<tr>
<td>1996</td>
<td>1,387</td>
<td>2,660</td>
</tr>
<tr>
<td>1997</td>
<td>651</td>
<td>2,680</td>
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<td>1998</td>
<td>479</td>
<td>2,757</td>
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<tr>
<td>1999</td>
<td>419</td>
<td>2,909</td>
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</table>

*Data from the Survey of Prevalent HIV Infections Diagnosed (SOPHID) (England, Wales and Northern Ireland) and CD4 monitoring (Scotland)
1996 were hepatitis C antibody positive. Thus, hepatitis C remains highly incident among this population.

47. *Pregnant women*: A total of over 40,000 specimens from antenatal clinics collected during 1996 were tested for antibody to hepatitis C virus. After taking into account the differential sampling of the serum archive, the adjusted overall prevalence of antibodies to hepatitis C was 0.43% in London and 0.21% in the Northern and Yorkshire region (Table 7) [14]. Among women over 30 years of age, hepatitis C prevalence was significantly higher in London than in Northern and Yorkshire region. The prevalence of 0.43% in London is consistent with a more recent London-based study in which hepatitis C antibody prevalence rates of 0.38% and 0.20% were seen in Inner and Outer London districts, respectively [15]. This more recent study also found a particularly high prevalence (1.6%) of antibodies to hepatitis C in women from Southern Europe compared with women born elsewhere.

48. These prevalence estimates are somewhat lower than the 0.8% reported recently from pregnant women attending an Inner London obstetric department [16]. That study found that hepatitis C positive women were significantly more likely to have a history of drug misuse, although most had no identified risk factors for hepatitis C infection.

49. The importance of injecting drug use as the main route of transmission of the hepatitis C virus was shown by the study of antenatal specimens from the 1996 serum archive. The distribution of hepatitis C genotypes that was found showed a high frequency of type 3 infections [14]. Injecting drug use is the main source of genotype 3 infections seen in the UK. This is consistent with

<table>
<thead>
<tr>
<th>Survey group</th>
<th>Year</th>
<th>Area</th>
<th>Hepatitis C prevalence</th>
</tr>
</thead>
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<tr>
<td>Injecting drug users†</td>
<td>1998–1999</td>
<td>England &amp; Wales</td>
<td>34%</td>
</tr>
<tr>
<td>Antenatal clinic attenders‡</td>
<td>1996</td>
<td>London</td>
<td>0.43%</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Northern &amp; Yorkshire</td>
<td>0.21%</td>
</tr>
</tbody>
</table>

*Oral fluid (saliva) samples: oral fluid hepatitis C test has a sensitivity of 80%

*Using samples from the antenatal survey serum archive, results adjusted for differential sampling*
injecting drug use being the principal hepatitis C exposure category in pregnant women.

50. **Hepatitis C incidence**: Promising initial results have been obtained in a pilot study of a technique for measuring hepatitis C incidence in unlinked anonymous serum specimens collected from injecting drug users in 1995 and 1996. A qualitative polymerase chain reaction is used to detect the presence of hepatitis C RNA in serum during the period shortly after infection and before the appearance of hepatitis C antibody (the ‘window’ period). Sera that were hepatitis C-antibody negative were tested for the presence of hepatitis C RNA in pools of 10. Data analysis is under way and the technique will be applied to sera from later years.

### Conclusions

51. The Unlinked Anonymous Prevalence Monitoring Programme is vital for effective and efficient measurement of HIV transmission in the UK. The surveys are based upon sound ethical and legal principles and are used to provide information for which there is a justifiable public health need.

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**Figure 8: Prevalence of antibodies to hepatitis C in injecting drug users by NHS Executive region: 1998–1999**

![Figure 8: Prevalence of antibodies to hepatitis C in injecting drug users by NHS Executive region: 1998–1999](image-url)
52. The 1999 data from the programme show that HIV transmission and unsafe sexual behaviour are continuing among homosexual and bisexual men of all ages. Prevalence of HIV infection in injecting drug users remains low, but there has been an increase in sharing of injecting equipment. Transmission of HIV between non-drug injecting heterosexuals in this country is continuing to occur at low levels, with little change in 1999. The prevalence of HIV infection among genitourinary medicine clinic attendees born in the UK is greater than in the population overall; however, the risk of HIV transmission between heterosexuals within the UK may be increasing as indicated by recent rises in the incidence of gonorrhoea in heterosexuals.

53. A substantial number of HIV infections remain undiagnosed, so that many of those who are infected are not benefiting from recent therapeutic advances.

<table>
<thead>
<tr>
<th>Priorities for Commissioners</th>
</tr>
</thead>
<tbody>
<tr>
<td>In purchasing services, appropriate priority should be given to:</td>
</tr>
</tbody>
</table>

  Prevention activity and local needs assessment for
  
  • homosexual and bisexual men;
  • people from sub-Saharan African countries with high HIV prevalence;
  • heterosexuals at behavioural risk of acquiring sexually transmitted infections;
  • needle exchange and other harm minimisation services for injecting drug users (and users likely to progress to injecting);
  • people who are HIV positive.

Developing services for African men and women and African families affected by HIV infection.

Increasing the uptake of HIV testing by all pregnant women to meet national targets.

Treatment and care of other sexually transmitted infections and the promotion of voluntary confidential HIV testing.
References


Data to the end of 1999
Appendix One

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*As of January 2000
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Bracken P
Brazil C
Breuer J
Brierley P
Briggs G
Brown J
Budd N
Burden P
Burns S
Butcher D
Byrne C
Cadwallader J
Cairns J
Campbell L
Campbell S
Cameron S
Capelo G
Carne C
Carey P
Carrol J
Chamberlain R
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Chapple J
Chard C
Chattopayday B
Chester T
Chisnal C
Claydon E
Clewley J
Cohen H
Collacott I
Collins M
Cook G
Cottee H
Coyle P V
Craske J
Crawford D
Crilly P
Crosby S
Cummins A
Davidson F
Davis B
Davis W
Dayton R
Dean S
e O n nellas D
Dodds J
Dodds R
Downie A
Duckworth J
Dunn H
Dutt T P
Earley S
Edgley B
Edmonds D K
Eglin R
Eldridge P
Ellis F
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Fawburn T
Feeney F
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Flowers M
Ford J
Frampton J
Frogham D
Futter C
Garvey P
Gay E
Gellettie R
George R
Ghaly A
Ghoneim A T M
Gogarty M
Golden G
Green A
Greenwood R
Gridwood A
Gutteridge A M
Gutteridge C
H aji T C
Hambley H
Hamilton G
Harrison J
Harrison M
Hatton P
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Hawkey M
Haynes J
Herod C
Hewitt L
Higginson D
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Holford-Smith D
Honeycombe J
Hounswey G
Hrwe L
Hubbard J
Hutchinson A
Isherwood D
Jacob J
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Data to the end of 1999
Prevalence of HIV and hepatitis infections in the United Kingdom

Other individuals who have made particular contributions in the development of the programme or are closely involved in the implementation and direction of individual surveys.

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Appendix Three

Supplementary data:

The following tables of data and figures are available at http://www.phls.co.uk/facts/HIV/hiv.htm

**Overall Tables**

- **Centres and Districts Contributing Specimens Each Year: 1990–1999**
- **Total Number of Specimens: 1990–1999**
- **Number of HIV-1 Positive Specimens: 1990–1999**
- **Number of HIV-2 Positive Specimens: 1990–1999**

**Survey of Genitourinary Medicine Clinic Attendees**

- **HIV Prevalence by Year: Male Homosexuals by Age Group**
- **HIV Prevalence by Year: Male & Female Heterosexuals by Age Group: London**
- **HIV Prevalence by Year: Male & Female Heterosexuals by Age Group: England & Wales Outside London**
- **HIV Prevalence by Year: Male & Female Heterosexuals by Age Group: Scotland**
- **HIV Prevalence by Year: Injecting Drug Users attending Genitourinary Medicine Clinics**
- **Prevalence by Nationality: Scotland: 1998–99 combined**
- **HIV Prevalence by Acute Sexually Transmitted Infection status: 1993–1999**
- **HIV Prevalence in Heterosexuals by World Region of Birth & Sexually Transmitted Infection status: 1998 &1999**
- **Clinically Diagnosed HIV Infections by Year**
- **Proportion of HIV-Infected Genitourinary Medicine Clinic Attendees with Evidence of Probable Recent High-Risk Sexual Behaviour**
- **Undiagnosed HIV Prevalence by Year: Homosexual and Bisexual Men Aged Under 25: England & Wales**
- **Undiagnosed HIV Prevalence by Year: Homosexual and Bisexual Men Aged Under 25: Scotland**
- **Undiagnosed HIV Prevalence by Year: Heterosexual Men and Women: England & Wales**
- **Undiagnosed HIV Prevalence by Year: Heterosexual Men and Women: Scotland**

**Survey of Injecting Drug Users**

- **HIV Prevalence in Injecting Drug Users by Year: with subdivisions by gender and age**
- **Hepatitis B (anti-HBc) Prevalence in Injecting Drug Users by Year: with subdivisions by gender and age**
Hepatitis C Prevalence in Injecting Drug Users by Year: with subdivisions by gender and age
Prevalence of Direct Sharing by Year for Current Injectors: with subdivisions by gender and age
HIV Prevalence in Injecting Drug Users by NHS Executive Region
Hepatitis B (anti-HBc) Prevalence in Injecting Drug Users by NHS Executive Region
Hepatitis C Prevalence in Injecting Drug Users by NHS Executive Region
Prevalence of Direct Sharing in Current Injectors by NHS Executive Region
Direct and Indirect Sharing of Injecting Equipment by Current Injecting Drug Users: 1998–99 combined
HIV, Hepatitis B (anti-HBc) and Hepatitis C Prevalences, and the Sharing of Injecting Equipment in those who began Injecting in the Last Three Years in England & Wales
Hepatitis B Vaccine Coverage in Injecting Drug Users by Year: with subdivisions by gender and age
Hepatitis B (anti-HBc) and Hepatitis C Prevalences by Injecting Duration: 1999
Self-Reported Hepatitis B Vaccination Status in Injecting Drug Users by NHS Executive Region: 1999

Surveys of Pregnant Women
HIV Prevalence in Pregnant Women Giving Birth in the UK by Health Authority: 1996–1999
Prevalence Map of HIV Infection among Pregnant Women in the UK by District of Residence: 1999
Number of Positive Specimens from Pregnant Women Receiving Antenatal Care and Number of HIV-Infected Women Diagnosed Before or During Pregnancy for Centres in London: 1999
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www.doh.gov.uk/hivhepatitis99.htm
and www.phls.co.uk/publications