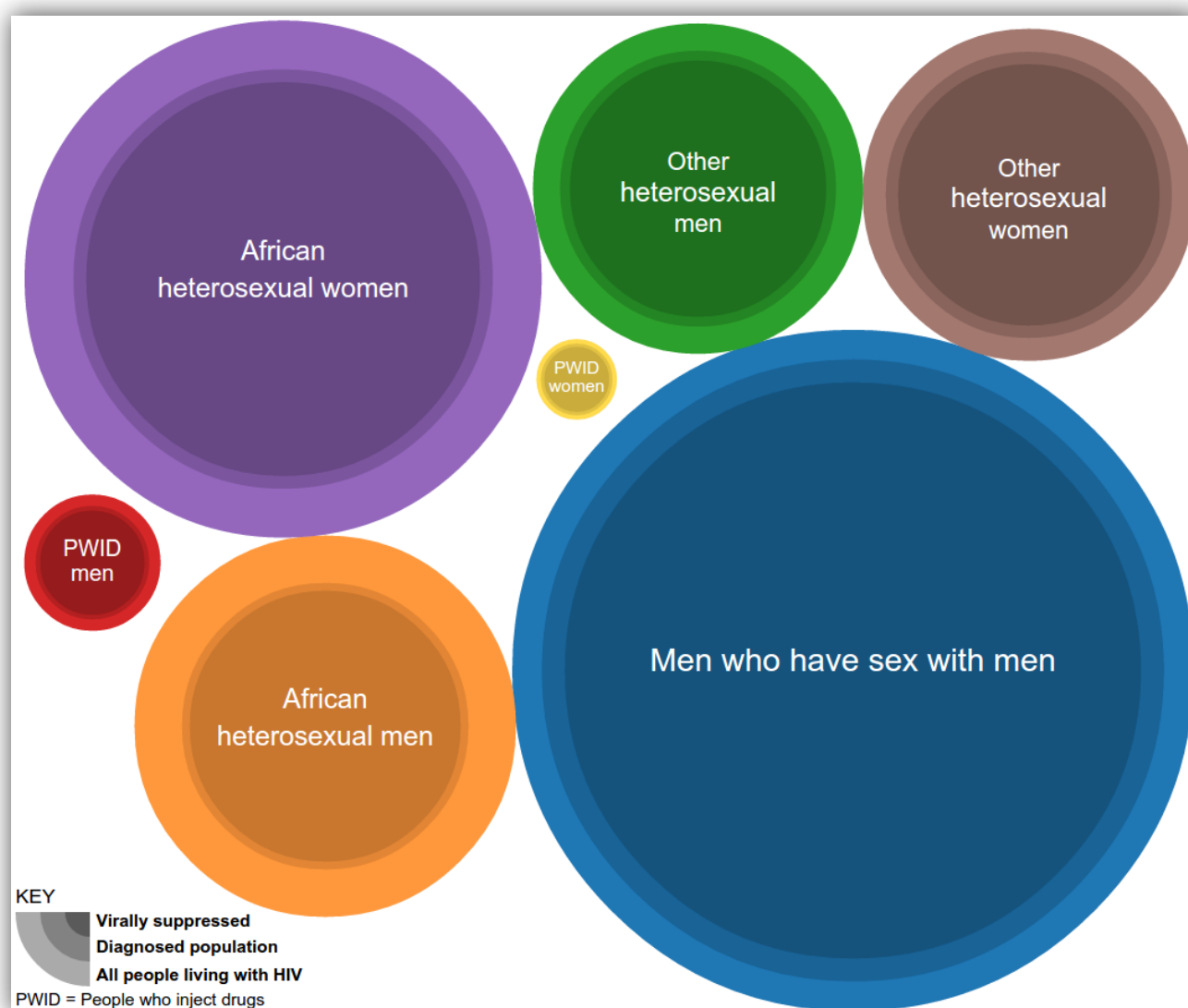




Public Health  
England

Protecting and improving the nation's health

# HIV in the United Kingdom: 2014 Report



Published November 2014: data to end December 2013

## About Public Health England

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

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**Front cover design:** by Tim Lee.

**Suggested citation:** Yin Z, Brown AE, Hughes G, Nardone A, Gill ON, Delpech VC & contributors. HIV in the United Kingdom 2014 Report: data to end 2013. November 2014. Public Health England, London.

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Published November 2014

PHE publications gateway number: 2014502



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## Key findings and prevention implications

An estimated 107,800 (95% credible interval 101,600-115,800) people were living with HIV in the UK in 2013. The overall prevalence was 2.8 per 1,000 population aged 15-59 years (1.9 per 1,000 women and 3.7 per 1,000 men). A quarter (24%, 26,100) of people estimated to be living with HIV were unaware of their infection and remain at risk of passing on their infection if having sex without condoms.

In 2013 in the UK, 6,000 people were diagnosed with HIV infection and 320 people were reported with AIDS. The proportion and number of people diagnosed late (with a CD4 count <350 cells/mm<sup>3</sup> within three months of their diagnosis) declined from 57% (4,290/7,350) in 2004 to 42% (2,500/5,960) in 2013. Levels remain high, however, and need to be further reduced through increased HIV testing.

People living with HIV can expect a near-normal life span if they are diagnosed promptly. People diagnosed with HIV late continue to have a ten-fold increased risk of death in the year following diagnosis compared to those diagnosed promptly. In 2013, 530 people with HIV infection were reported to have died, most of whom were diagnosed late.

A total of 81,510 people (55,200 men and 26,300 women) received HIV care in 2013, a 5% increase on the previous year (77,590) and almost double the number of people accessing care a decade ago (41,160).

One in four people living with a diagnosed HIV infection is now aged 50 years and over. This is due to improved survival and continued transmission and signals a need to develop services appropriate to an ageing population.

### **HIV testing**

Over one million HIV tests were performed in sexually transmitted infection (STI) clinics in 2013 and this is a 5% increase on the previous year. A higher proportion of MSM attendees (86%; 79,250/92,040) were tested compared to heterosexual men (77%; 386,080/503,070) and women (67%; 470,760/705,690).

The HIV testing coverage in STI clinics continued to improve; it increased from 69% (827,740/1,201,410) in 2009 to 71% (973,620/1,373,700) in 2013. The increase was particularly marked among MSM (from 78% to 86%).

Overall, 52 of 152 (34%) Upper Tier Local Authorities across England had a diagnosed HIV prevalence of  $\geq 2$  per 1,000 population aged 15-59 years, which is the threshold for offering HIV testing to people admitted to hospital for a general medical problem and women undergoing termination of pregnancy.

### **Gay, bisexual men and other men who have sex with men**

While the vast majority do not have HIV, gay, bisexual men and other men who have sex with men (MSM) continue to be the group most affected by HIV infection. In 2013, an estimated 43,500 (40,200-48,200) MSM were living with HIV in the UK; this is equivalent to 59 per 1,000 MSM aged 15-59 years. HIV prevalence was higher in London where one in eight were living with HIV, compared to one in 26 outside London. In total, an estimated 7,200 (16%) MSM living with HIV were undiagnosed.

The number of MSM diagnosed with HIV infection remained high, with 3,250 men reported in 2013. This reflects both on-going high levels of HIV transmission and an increase in HIV testing. There was a decline in the proportion of men diagnosed late (from 43% in 2004 to 31% in 2013) however, the absolute number of men diagnosed late remained high and stable at around 1,000.

Over the last decade, an estimated 2,600 MSM acquired HIV infection each year. In 2013, the number of men who had acquired HIV remained high at 2,800. This is despite very high levels of treatment among the diagnosed population. The high number of new infections relative to the estimated size of the undiagnosed population indicates that most of the undiagnosed HIV infections in MSM were acquired very recently.

Over 700 MSM were diagnosed with HIV at their first test at that STI clinic in 2013. These attendees could have been diagnosed earlier with increased coverage and frequency of HIV testing.

### **Heterosexual men and women**

An estimated 59,500 people living with HIV in 2013 in the UK had acquired their infection through heterosexual contact. There has been a decline in the number of new HIV diagnoses reported among heterosexual men and women in recent years (from 4,890 in 2004 to 2,490 in 2013) due to fewer diagnoses among people born in sub-Saharan Africa. This has also resulted in a decline in the number and proportion of people diagnosed late (from 3,100 (65%) in 2004 to 1,200 (58%) in 2013). However, the number of reports among people who probably acquired HIV in the UK remains high at around 1,500 per year.

The large majority of black-African people living in the UK do not have HIV. Nevertheless, in 2013, an estimated 38,700 black-Africans were HIV positive and this group constitutes two-thirds (65%, 38,700) of all heterosexual people living with HIV. The HIV prevalence rate among black-African heterosexuals is 56 per 1,000 population aged 15-59 years (41 per 1,000 men and 71 per 1,000 women). Almost two in five (38%) black-African men and one in three (31%) black-African women living with HIV remained unaware of their infection. Rates of undiagnosed infection were higher outside London at 50% and 41%, respectively.

### **Co-infection with other sexually transmitted infections**

In 2013, 25% of MSM newly diagnosed with HIV had concurrent acute STIs (chlamydia, gonorrhoea and/or syphilis), compared to 5.9% and 2.8% among newly diagnosed heterosexual men and women respectively.

### **Quality of HIV care**

Nearly all adults (98% of 5,970 people aged 15 or above) newly diagnosed in 2013 were linked to HIV care within three months of diagnosis. Integration into care was prompt across all groups regardless of age, gender, ethnicity, sexual orientation and residence. The annual retention rate and treatment coverage among all adults seen for HIV care remained high at 95%.

The number and proportion of adults receiving antiretroviral therapy (ART) increased over the past decade. In 2013, 90% (73,300/81,500) of adults seen for HIV care were prescribed ART compared with 69% (28,240/41,160) in 2004. Ninety percent of all adults receiving ART were virally suppressed.

## Implications for prevention

In 2014, there are a number of approaches to the prevention of HIV transmission. Correct and consistent condom use remains an extremely effective way to prevent HIV transmission. Investment in HIV prevention has resulted in moderately high rates of condom use in key populations; 55% of MSM used condoms the last time they had sex with a man. Continued funding in prevention activities remains critical in curbing the HIV epidemic.

Undiagnosed HIV infection and onward transmission can be reduced through further HIV testing. HIV testing is particularly important for MSM given over 7,000 have undiagnosed HIV infection, 2,600 acquire HIV infection each year and a large number have HIV infection diagnosed at their first test. It is also important to promote HIV testing within black-African communities which collectively contain the largest number of people with undiagnosed HIV infection (13,000) in the UK.

Reductions in undiagnosed infection can be achieved through increasing testing coverage in STI clinics, the introduction and consolidation of HIV testing in a variety of different medical services, in addition to further development of community testing, including self-sampling.

HIV testing coverage in STI clinics continued to improve in 2013; 83% (180/216) of STI clinics achieved a coverage of 80% or more among MSM attendees, in line with British Association for Sexual Health and HIV (BASHH) guidelines [1] (including 43 clinics with a coverage rate above 90%). HIV test coverage among heterosexual attendees was lower: overall 67% coverage in England with only 35 clinics achieving coverage of 80% or more. To further improve HIV testing rates and achieve optimal coverage, clinics could:

- review local policies and training protocols
- consider innovative approaches, which may include active recall and fast-track pathways to increase the frequency of HIV testing of MSM clinic attendees
- work with local authority commissioners to decide upon the need to implement innovative testing services such as HIV self-sampling

Local authority commissioners and service providers together could consider investing in innovative HIV testing activities delivered through clinical, community and outreach services. This could include the intensification of partner notification following the diagnosis of HIV infection. This is a highly effective way to detect undiagnosed HIV infections: in 2013, 7.3% of MSM sexual partners and 3.3% of heterosexual male partners of people diagnosed with HIV were also positive for HIV infection. STI clinics could review the performance of this service to see how improvements can be achieved.

Important new evidence for the role of pre-exposure prophylaxis (PrEP) in the prevention of HIV has emerged in 2014, leading to the decision to offer PrEP to the control group in the UK PROUD trial for MSM at risk of HIV infection. Research on the cost-effectiveness and affordability of PrEP for people most-at-risk needs to be accelerated to allow relevant policy decisions to be taken at the earliest opportunity.

National and international treatment guidelines recommend early treatment to prevent onward transmission. People living with HIV and their health care providers can discuss starting ART to reduce their risk of transmitting HIV to their sexual partners. In 2013, 3,710 people who started ART had a CD4 count above 500 cells/mm<sup>3</sup> compared to 3,330 in 2012. Reassuringly, adherence levels among those initiating ART early are high, improving and in 2013, in line with adherence among those initiating ART at <350 cells/mm<sup>3</sup>.

## **PHE's messages**

Early diagnosis of HIV infection enables better treatment outcomes and reduces the risk transmitting the infection to others. Have an HIV test if you think you may have been at risk.

**Men who have sex with men** are advised to have an HIV and STI screen at least annually, and every three months if having unprotected sex with new or casual partners.

**Black-African men and women** are advised to have an HIV test and a regular HIV and STI screen if having unprotected sex with new or casual partners.

Always use a condom correctly and consistently, and until all partners have had a sexual health screen.

Reduce the number of sexual partners and avoid overlapping sexual relationships.

Unprotected sex with partners believed to be of the same HIV status (serosorting) is unsafe. For the HIV positive person, there is a high risk of acquiring other STIs and hepatitis. For the HIV negative person, there is a high risk of acquiring HIV infection (over 7,000 of MSM and 13,000 black-African heterosexuals remain unaware of their HIV infection) as well as of acquiring STIs and hepatitis.

## **How to get an HIV test:**

Go to an open-access sexually transmitted infection (STI) clinic (some clinics in large cities are offering 'fast-track' HIV testing) or go to a community testing site (<http://www.aidsmap.com/hiv-test-finder>).

Ask your GP for an HIV test – nowadays there is no need for a lengthy discussion about the test, it just involves having blood taken, or even a finger prick.

Ask online for a self-sampling kit (<http://www.tht.org.uk/sexual-health/About-HIV/HIV-self-testing>).



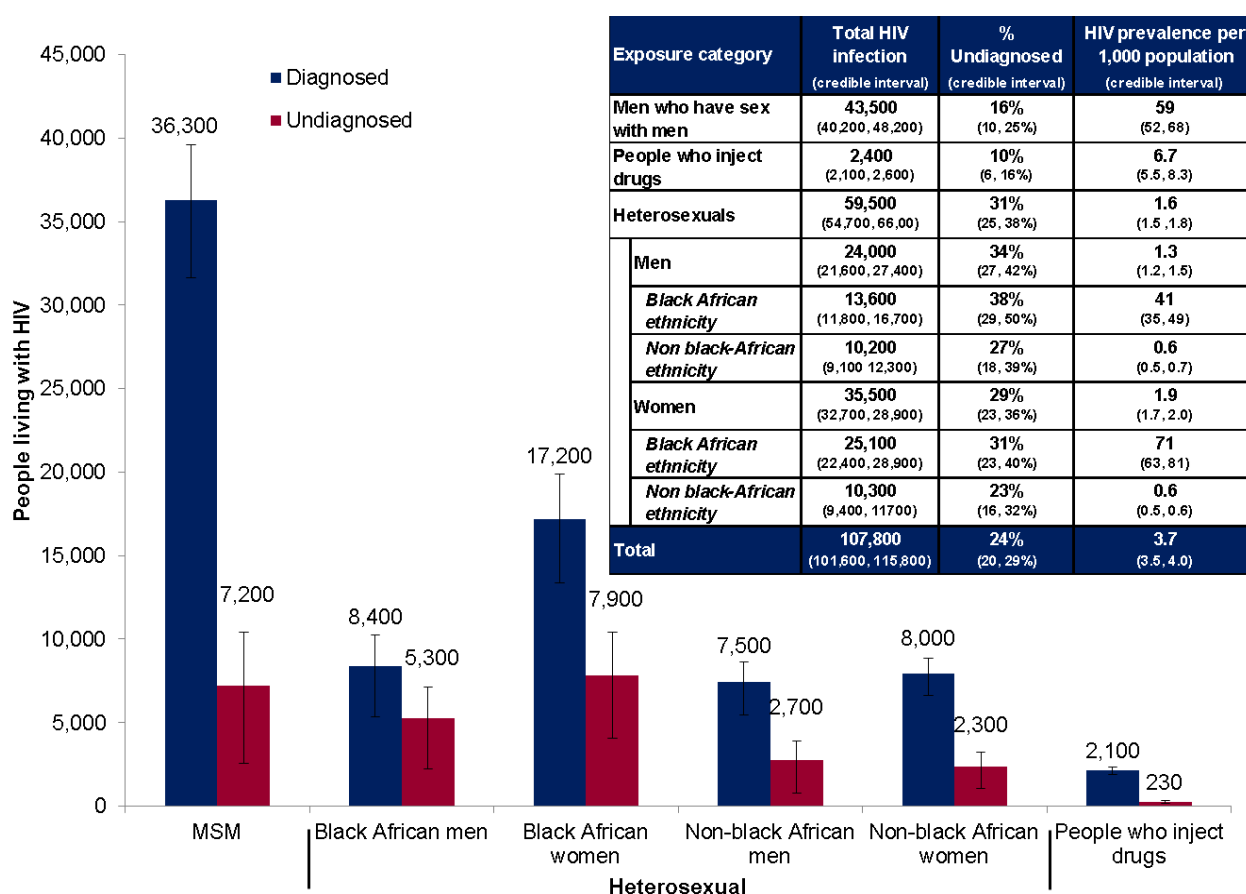
# Number of people living with HIV

In 2013, there were an estimated 107,800 people living with HIV infection (PLHIV). Approximately one in four (24%, 26,100) were unaware of their infection (95% credible intervals (95%CrI) presented in Figure 1 and Appendix 1). This compares to 102,600 in 2012, with an estimated 25% (25,200) having an undiagnosed infection<sup>1</sup>.

In 2013, HIV prevalence among those aged 15-59 years was estimated to be 2.8 per 1,000 population, 3.7 per 1,000 in men and 1.9 per 1,000 in women. In the UK, the HIV epidemic is largely concentrated among gay, bisexual men and other men who have sex with men (referred to “MSM”) and black-African heterosexual men and women.

An estimated 43,500 MSM were living with HIV in 2013, of whom 16% (7,200) were unaware of their infection. This compares to 41,000 in 2012, with 17% (6,900) undiagnosed. In 2013, the estimated HIV prevalence among MSM was one in 17 (59 per 1,000 aged 15-59 years). This was higher in London, with nearly one in eight (132 (95%CrI 97–186) per 1,000) living with HIV compared to one in 26 (39 (95%CrI 32–48) per 1,000) elsewhere in the UK.

**Figure 1: Estimated number<sup>1</sup> of people living with HIV (both diagnosed and undiagnosed): UK, 2013**



<sup>1</sup> Appendices show actual numbers. Numbers presented in text and figures are rounded.

<sup>1</sup> Estimates of people living with HIV for 2012 have been revised due to improved data sources and methodology. Further information and a comparison of the revised and previous 2012 results are presented in Appendices 1 and 2.



An estimated 59,500 heterosexual men and women were living with HIV in 2013, of whom around two-thirds (65%, 38,700 (13,600 men and 25,100 women)) were black-African. Whilst the large majority of black-African men and women living in the UK do not have HIV, in 2013, an estimated 56 per 1,000 population aged 15-59 years (41 and 71 per 1,000 men and women, respectively).

In 2013, a higher proportion of all heterosexual men (34%, 8,100) were undiagnosed compared to 29% (10,300) among heterosexual women. Among the black-African population, the proportion estimated to be undiagnosed was 38% (5,300) among men and 31% (7,900) among women. The lower rate of undiagnosed infection among heterosexual women is largely due to the effectiveness of the UK antenatal screening programme.

The proportion of people living with HIV infection who were undiagnosed in 2013 varied geographically. Outside London, among heterosexual black-African and non-black-African men, the proportions undiagnosed were estimated to be 49% (4,400) and 32% (2,200) respectively. Comparative proportions inside London were estimated to be 13% (500) and 9.4% (300). Similar patterns were observed among women outside London, where 41% (6,700) of HIV positive black-African and 29% (1,800) of non-black-African women were unaware of their infection. Equivalent figures for London were 10% (800) and 9% (300) respectively.

An estimated 2,400 people who inject drugs (PWID) were living with HIV in the UK, of whom 9.9% (230) were undiagnosed. The estimated prevalence of HIV among this population was 6.7 per 1,000 aged 15-59 in 2013.

## New HIV diagnoses, recent infections and incidence

There were 6,000 people (4,480 men and 1,520 women) newly diagnosed with HIV in the UK in 2013, a slight decrease on the 6,250 diagnoses in 2012. This equates to an estimated new HIV diagnosis rate of 1.0 per 10,000 population<sup>2</sup> (1.4 per 10,000 men and 0.46 per 10,000 women) (Appendices 3, 4 and 5). New diagnoses have been declining since they peaked in 2005 (at 7,890) (Figure 2), largely due to a decrease in the number of diagnoses reported among heterosexuals born in high HIV prevalence countries.

Data on country of birth was available for 83% of people newly diagnosed with HIV. The proportion of new HIV diagnoses reported among people born in Africa halved from 54% (3,460/6,420) in 2004 to 25% (1,240/4,980) in 2013. This has resulted in an increase in the proportion of new diagnoses reported among people born in the UK (from 32% (2,040/6,420) to 46% (2,220/4,980)) over the same period.

In 2013, 48% (2,750/5,720) of samples from patients newly diagnosed with HIV in England, Wales and Northern Ireland were tested for recent infection (defined as HIV acquired approximately within the previous six months). Where results were available<sup>3</sup>, the proportion of

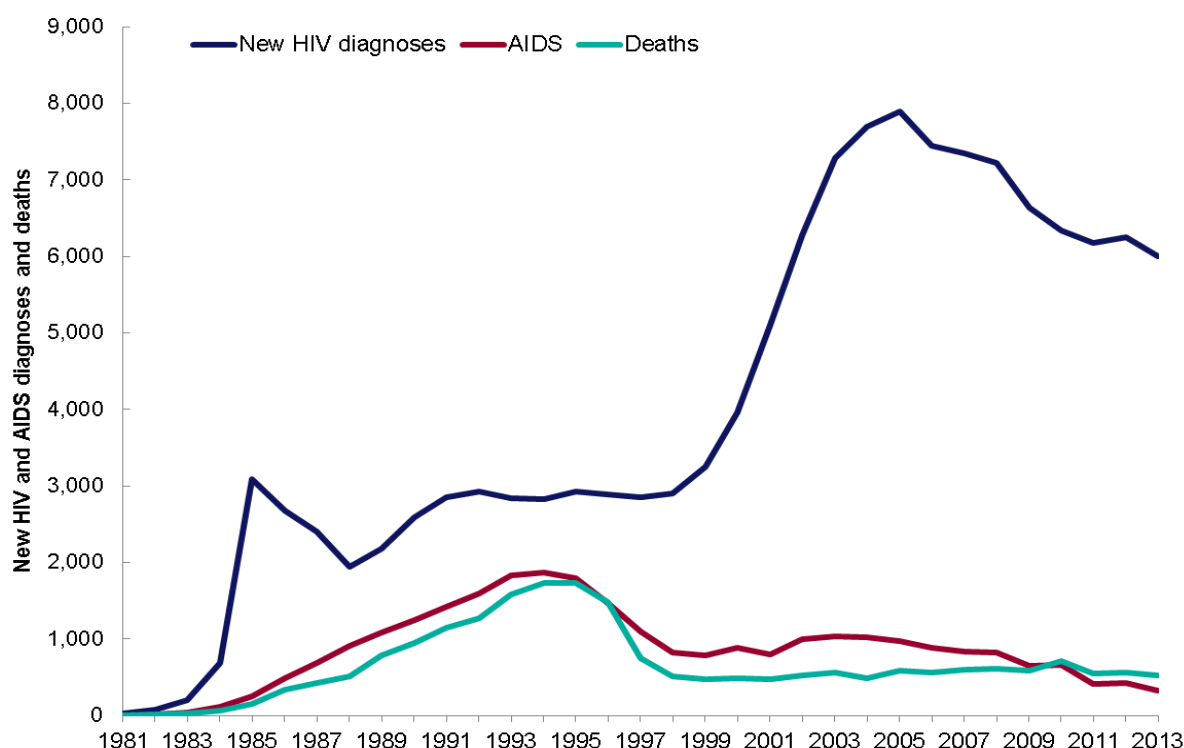
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<sup>2</sup> Calculated using 2013 mid-year population estimates from ONS.

<sup>3</sup> The Recent Infection Testing Algorithm (RITA) incorporates results from an HIV antibody assay modified for the determination of HIV avidity as well as clinical biomarkers to distinguish recently acquired from long-standing HIV infection.

patients recently infected at HIV diagnosis was 22% (430/1,910) overall (Appendix 6). This is higher than the figures reported in previous years (14% in 2009 and 2010, 16% in 2011 and 19% in 2012) and differed by exposure category.

**Figure 2: Annual new HIV and AIDS diagnoses and deaths: UK, 1981-2013**



### Gay, bisexual men and other men who have sex with men

Since the first reports of HIV in the early 1980s, MSM have remained the group most at risk of acquiring HIV in the UK. In 2013, after adjusting for missing exposure category, there were 3,250 new HIV diagnoses reported among MSM; this compares to 3,230 reported in 2012 and represents the highest number ever reported in the UK. New HIV diagnoses among MSM accounted for 54% of all diagnoses reported in 2013.

Both the proportion and number of new HIV diagnoses among MSM aged 15-24 years have increased over the past decade, from 8.7% (250/2,420) in 2004 to 16% (460/2,950) in 2013. One in ten MSM were diagnosed at the age of 50 years or above, with an overall median age at diagnosis of 33 years (Appendix 7).

After adjusting for missing information on region of diagnosis, London had the highest number of new diagnoses among MSM (1,470), followed by the North of England (470), South of England (410) and the Midlands and East of England (340). Scotland, Wales and Northern Ireland had 130, 80 and 50 diagnoses respectively, in 2013.

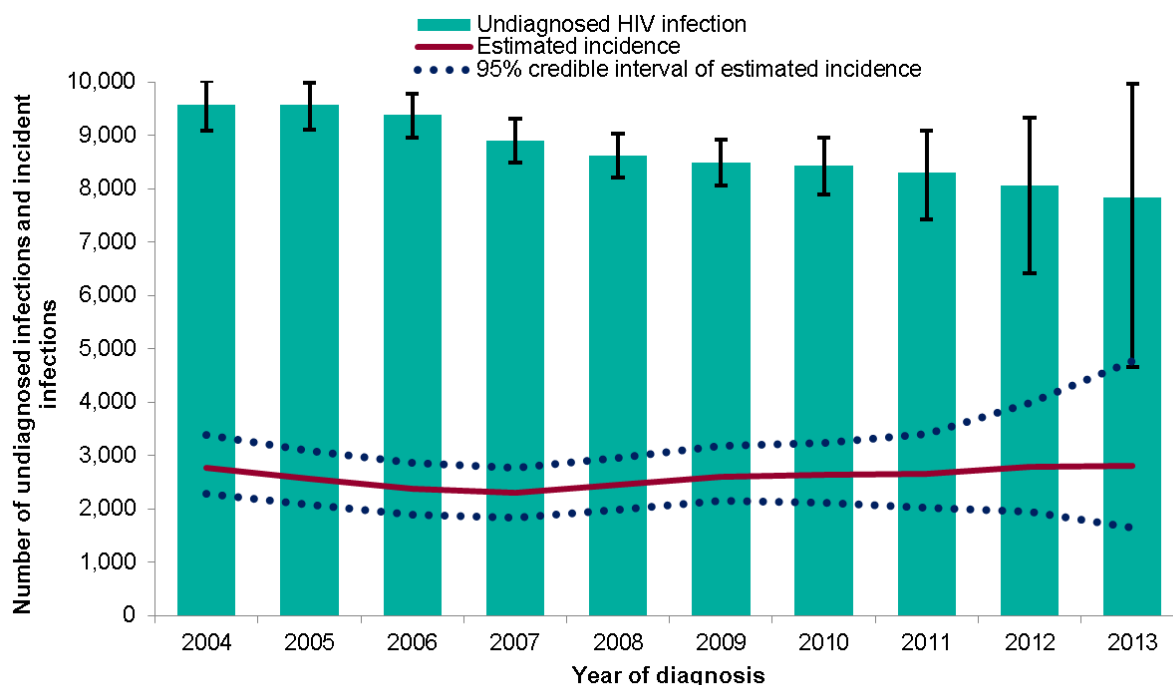
The proportion of new diagnoses that were probably recently acquired infections among MSM in England, Wales and Northern Ireland in 2013 was 30% (320/1,080) (Appendix 6). This is an increase from 27% (430/1,620) in 2012 and 23% (360/1,560) in 2011. The rise in new diagnoses and proportion of recent infections among MSM may be explained by increases in HIV testing as well as on-going transmission.

In the UK, the large majority of MSM undergo HIV testing in free and confidential STI clinics. The number of MSM that had an HIV test in STI services in England increased by 8.1% (from 70,580 in 2012 to 76,330 in 2013), while in London the increase was 5.1% (from 34,650 in 2012 to 36,420 in 2013). Overall, only 60 out of the 326 local authorities achieved HIV test uptake above 90% among MSM attending STI clinics.

While the rise in new HIV diagnoses among MSM can be partially explained by modest increases in HIV testing, estimates of HIV incidence using a back-calculation analysis based upon CD4 count at diagnosis indicate that HIV transmission among MSM remains high (Figure 3). This method estimated around 2,600 new infections were acquired each year over the last decade, with no sign of a decrease in 2013, when 2,820 (95% CrI 1,660-4,780) new infections were estimated to have been acquired.

The CD4 back-calculation method also provides an estimate of the number of men who remain undiagnosed with HIV infection: 7,840 (95% CrI 5,700-11,020) MSM in 2013. There has been no significant decline in the number of MSM with undiagnosed HIV infection over the past decade (Figure 3). These estimates are broadly comparable other derived estimates of undiagnosed infection (Figure 1 and Appendix 1). The high number of new HIV infections relative to the size of the undiagnosed population of MSM indicates that most MSM living with an undiagnosed infection probably acquired their infection within the past three years. This highlights the need not only to increase the proportion of all MSM who have an HIV test, but to increase the frequency of HIV testing among those who have previously tested negative.

**Figure 3: Back-calculation estimate of HIV incidence and prevalence of undiagnosed HIV infection<sup>1</sup> among MSM: UK, 2004-2013**

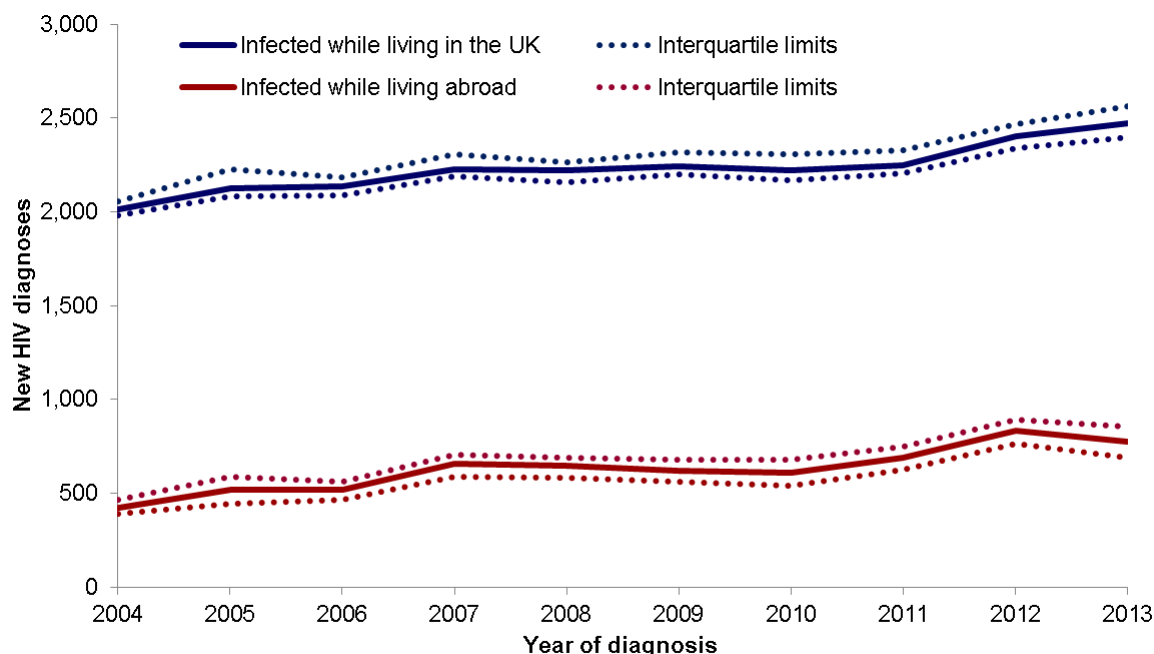


<sup>1</sup> Estimated through the CD4 back-calculation; numbers will vary compared to Table 1 and Appendix 1.

An estimated 76% (IQR: 72% - 79%) of HIV infections among MSM were probably acquired whilst living in the UK. While this proportion has slightly decreased since 2004 (82%; IQR 80% - 84%), the number of MSM estimated to have acquired their infection while living in the UK increased steadily from 2,010 in 2004, to 2,470 in 2013 (Figure 4). The proportion of MSM newly diagnosed with HIV who were born abroad increased from 28% in 2004 to 40% in 2013.

In 2013, of MSM born abroad, 47% (IQR: 38% - 55%) probably acquired their infection while living in the UK.

**Figure 4: New HIV diagnoses among MSM by probable country of infection: UK, 2004-2013<sup>1</sup>**



<sup>1</sup> Numbers have been adjusted for missing exposure category and region of birth.

## Heterosexual men and women

People who acquired their infection through heterosexual contact (hereafter referred to as “heterosexuals”) accounted for 2,490 (45%) of new HIV diagnoses in the UK in 2013 (after adjusting for missing risk information), a decline of 13% compared to 2,780 cases in 2012.

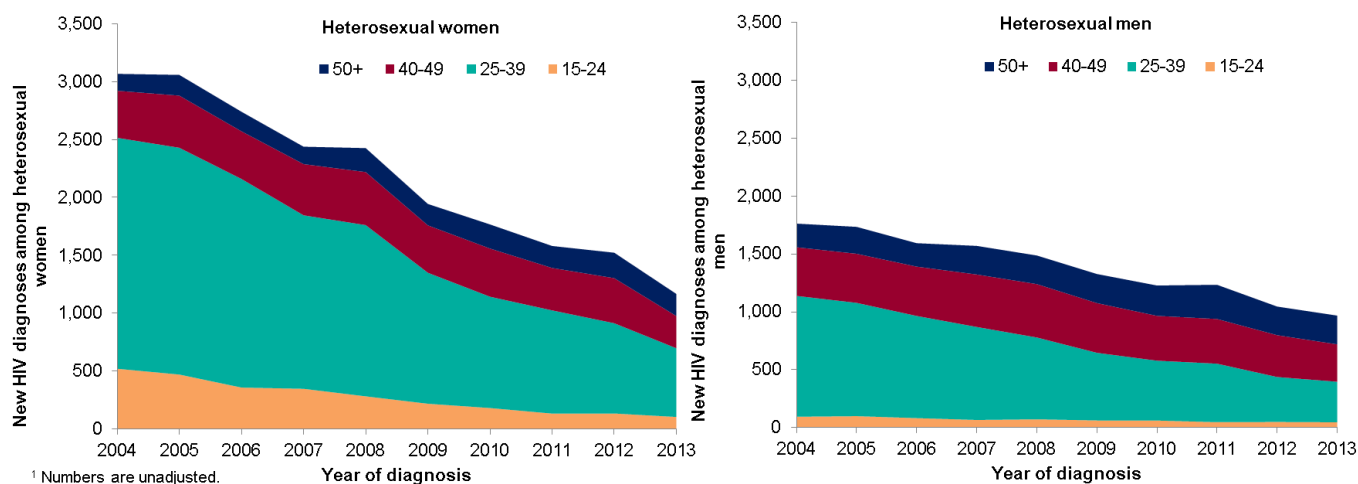
In 2013, 1,070 heterosexual men were newly diagnosed with HIV, 350 fewer than the number of new diagnoses reported among heterosexual women (1,420). However, the decline in heterosexual cases over the past decade was substantially steeper among women than men (3,100 to 1,420 and 1,780 to 1,070 respectively).

The age distribution of people newly diagnosed with HIV is changing, with diagnoses among older age-groups increasing both in number and proportion. One in five newly diagnosed heterosexual people was aged 50 years or above in 2013 compared to one in 14 in 2004. In 2012, a quarter (26% (250/970)) of heterosexual men diagnosed were aged 50 years or above compared to 16% (190/1,170) among heterosexual women (Figure 5 and Appendix 7).

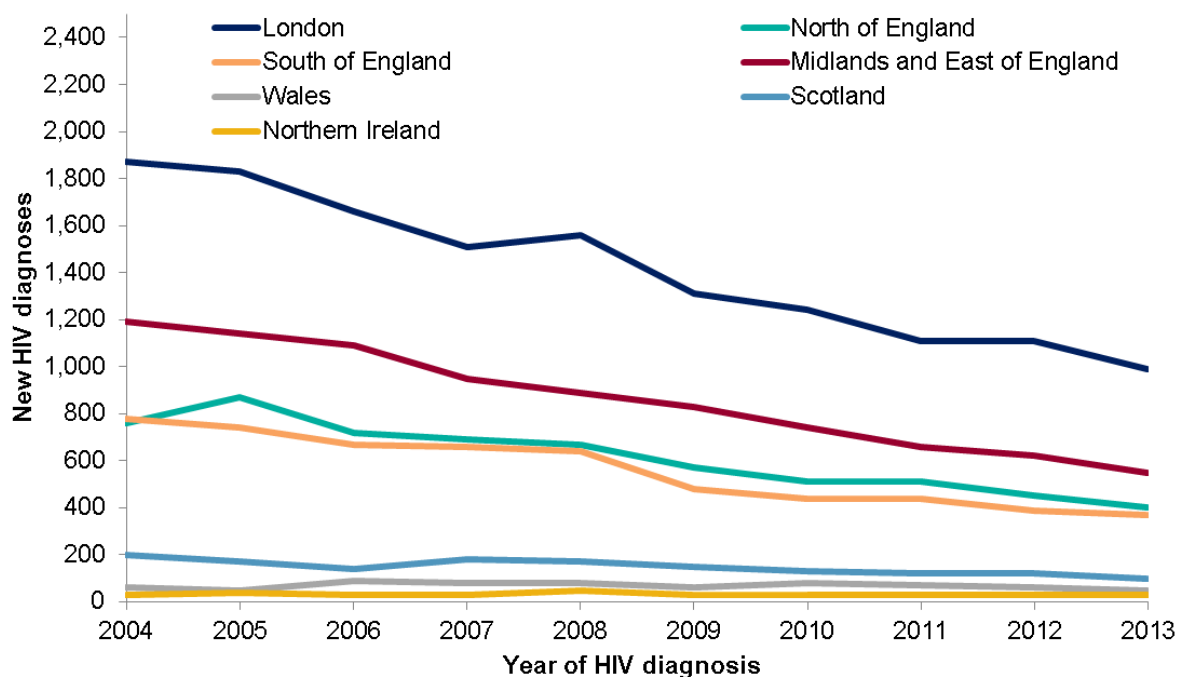
In 2013, after adjusting for missing information on region of diagnosis, the number of new diagnoses among heterosexual men and women remained highest in London (830; 39%) followed by the Midlands and the East of England (480), the North (350) and South of England (320). There were relatively few diagnoses among this group in Scotland, Wales and Northern Ireland, (90, 40 and 30, respectively) (Figure 6). The decline in new diagnoses among heterosexuals observed across the UK over the past decade has been particularly steep in London (Figure 6).

The proportion of new HIV diagnoses that were recently acquired was 13% (80/660) among heterosexual men and women, with similar rates for both groups (40/300 and 50/350 respectively).

**Figure 5: Age distribution<sup>1</sup> of new diagnoses among heterosexual men and women: UK, 2004-2013**



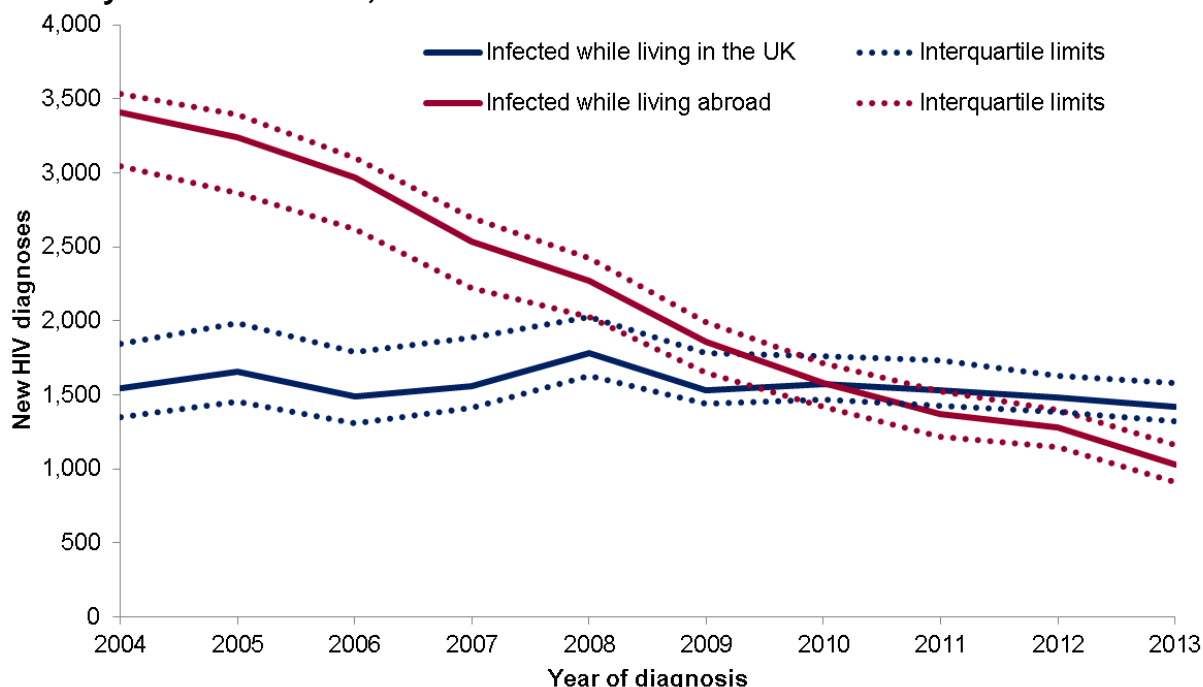
**Figure 6: New HIV diagnoses<sup>1</sup> among heterosexual men and women by geographical area: UK, 2004-2013**



An estimated 57% (IQR: 50% - 65%) of all infections among heterosexual men and women were probably acquired in the UK in 2013. While the proportion of UK-acquired infections has almost doubled over the last decade, up from 32% (IQR: 28% - 38%) in 2004, the absolute number has remained stable at 1,500 per year. Conversely, the number of infections acquired abroad has more than halved, with 1,030 in 2013 compared to 3,400 in 2004. This reduction

accounts for the overall decrease in the number of diagnoses among heterosexuals over the past decade (Figure 7).

**Figure 7: New HIV diagnoses<sup>1</sup> among heterosexual men and women by probable country of infection: UK, 2004-2013**

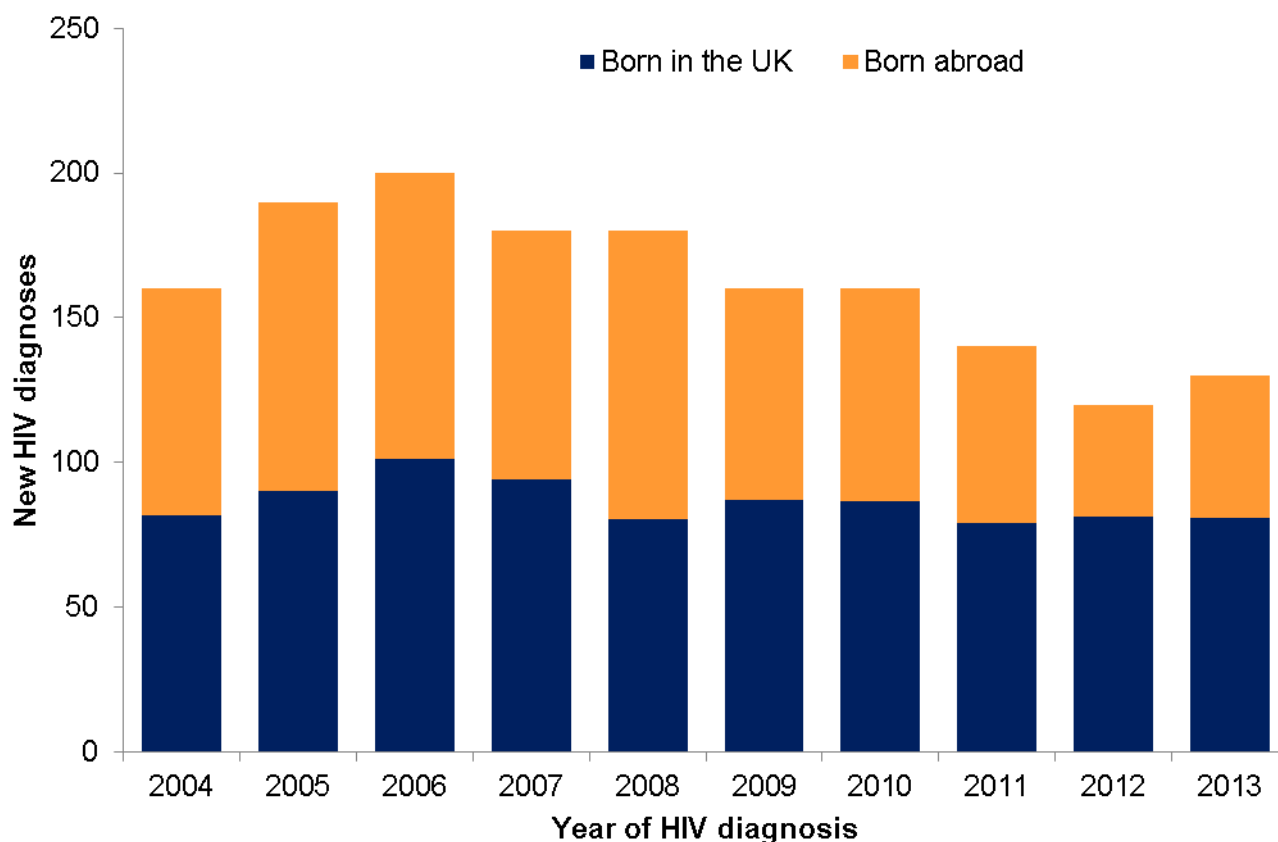


<sup>1</sup> Numbers have been adjusted for missing exposure category and region of birth.

### People who inject drugs and other groups

The number of infections acquired through injecting drug use and through other routes remains low. After adjusting for missing data, 130 new HIV diagnoses in 2013 were infections acquired through injecting drug use, of which nearly two-thirds (62%; 80/130) were among people born in the UK (Figure 8). In the past decade, the total number of new HIV diagnoses among PWID reduced from an all-time high in 2006 (200) and has remained stable over the past three years (140 in 2011 and 120 in 2012). Whilst the number and proportion of non-UK born PWID diagnosed in the UK has decreased over time, the number of UK-born PWID diagnosed in recent years has been relatively stable with 80 in the last three years. Among PWID, the median age at diagnosis has increased from 33 years in 2004 to 47 years in 2013 and the proportion of PWID aged 50 years old or above at diagnosis increased from 3% (5/160) in 2004 to 15% (20/130) in 2013.

In 2013, 90 new HIV diagnoses were acquired through mother-to-child transmission (63% were diagnosed as adults). The vast majority of them acquired HIV infection abroad. In 2013, 20 new diagnoses were reported to be through exposure to contaminated blood products abroad.

**Figure 8. New HIV diagnoses<sup>1</sup> among people who inject drugs by country of birth: UK, 2004-2013**

<sup>1</sup> Numbers have been adjusted for missing exposure category and country of birth.

## Late diagnoses, AIDS and deaths

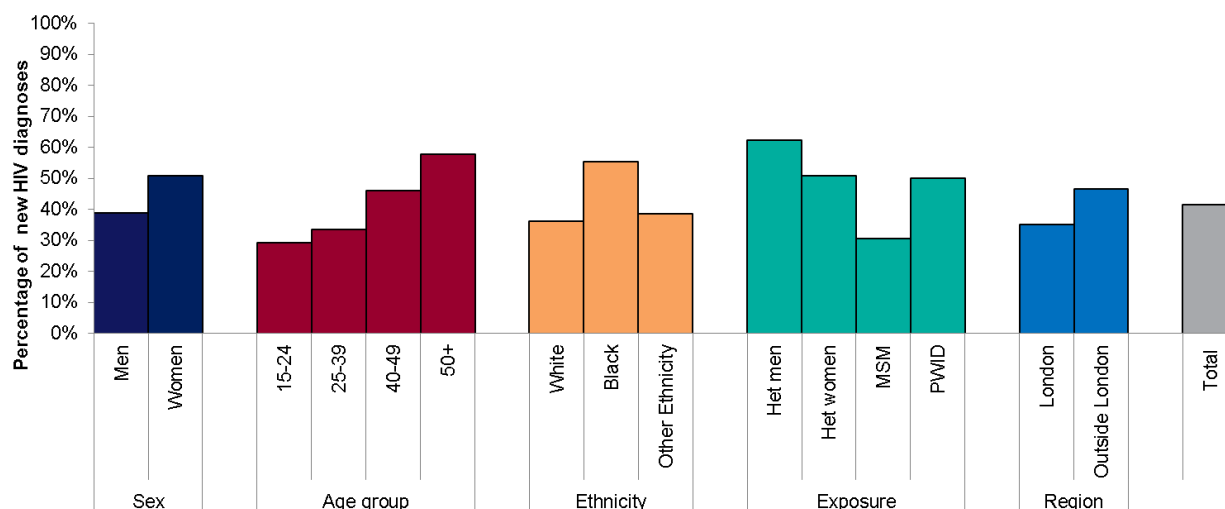
A late HIV diagnosis is defined as a CD4 count  $<350$  cells/mm<sup>3</sup> within three months of an HIV diagnosis; the threshold at which ART should begin. As one of the key indicators of the Public Health Outcome Framework, the measurement of late diagnosis is used to assess progress in HIV testing and reductions in undiagnosed infection. In 2013, CD4 counts at HIV diagnosis were available for 78% of new HIV diagnoses.

In 2013, after adjusting for missing CD4 cell count at diagnosis, 42% (2,500) of adults (aged 15 years or above) were diagnosed late (Appendix 8). One quarter (24%, 1,430) were severely immunocompromised at diagnosis having a CD4 count  $<200$  cells/mm<sup>3</sup>.

Late diagnoses were highest among heterosexual men and women, with almost two-thirds of men (62%; 600/970) and just over half of women (51%; 600/1,170) diagnosed late in 2013 (Figure 9 and Appendix 8). The smallest proportion of late diagnosis was among MSM, with 31% (910/2,950) diagnosed late. The number of MSM diagnosed late remained stable with an average of 1,000 late diagnoses in each of the last five years. This is a result of more frequent testing among MSM. People diagnosed aged 50 years or above were more likely to be diagnosed late compared to those diagnosed aged under 50 years (58% compared to 39%) (Figure 9).



**Figure 9: Late diagnoses<sup>1</sup>: proportion of adults diagnosed with a CD4 count <350 cells/mm<sup>3</sup>: UK, 2013**



<sup>1</sup> CD4<350 cells/mm<sup>3</sup> within three months of diagnosis.

The proportion of late diagnoses was particularly high among black-African (66%) and white (61%) followed by black-Caribbean (59%) heterosexual men. Among women, the proportion diagnosed late was highest among black-African (57%), followed by black-Caribbean (48%) and white (42%) women.

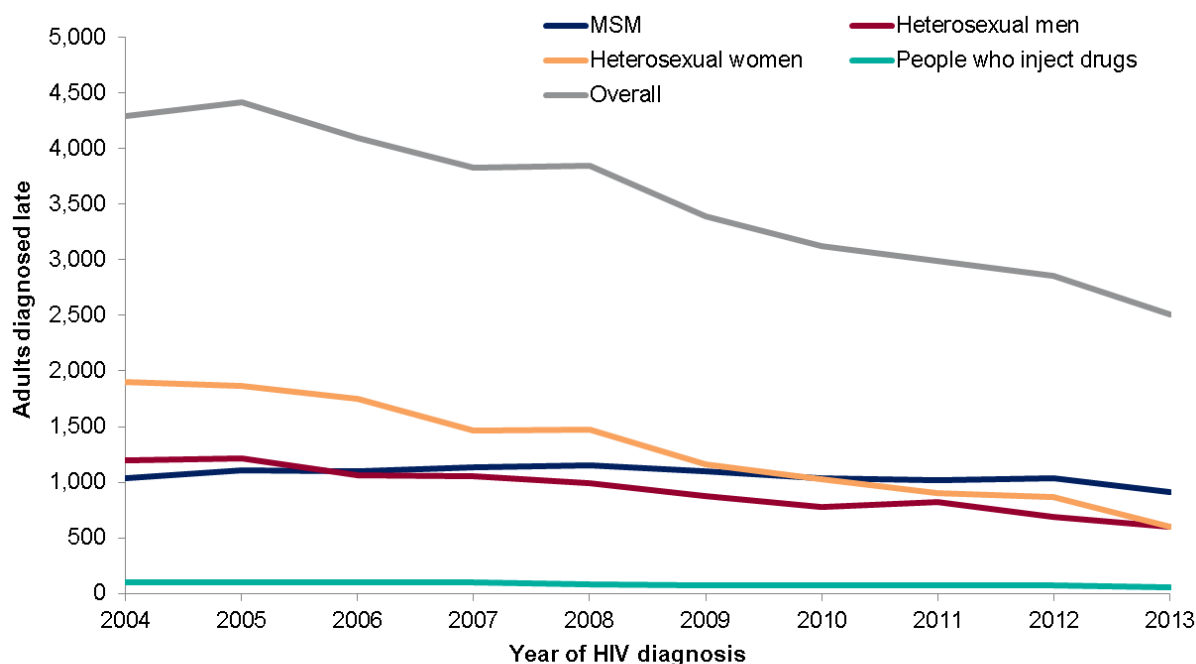
Over the last decade, the proportion and number of adults diagnosed late has declined significantly, from 57% (4,290/7,530) in 2004 to 42% (2,500/5,960) in 2013 ( $p<0.001$  for trend), and across all exposure categories. This decline was steeper among MSM, with 43% (880/2,030) in 2004 compared to 31% in 2013 (Figure 10). Among heterosexual men and women the proportion diagnosed late reduced from 64% to 56%, with the number more than halving from 2,490 to 970 over the decade. However, rates of late HIV diagnosis remain high and further intensification of HIV testing is needed.

Late diagnoses varied geographically, with highest rates observed within the Midlands and the East of England (52%) followed by the North of England (42%), the South of England (41%) and London (35%). MSM living in London had a lower rate of late HIV diagnosis compared to those living outside London (25% vs. 35%) and this geographical difference was also observed among heterosexual women (52% in London vs. 68% outside London). Late HIV diagnosis rates among heterosexual men in and outside London were the same (51%).

The number of deaths and AIDS diagnoses has steadily declined over the past decade, with the latter decreasing from 1,020 in 2004 to 320 in 2013 (Appendix 4). The vast majority of AIDS diagnoses were among people diagnosed late. The most common AIDS-defining illnesses among the 1,160 HIV diagnoses reported between 2011 and 2013 were: *Pneumocystis jirovecii pneumonia* (32%; 470/1,470<sup>4</sup>), *Mycobacterium tuberculosis* (TB) (14%; 200), *Kaposi's sarcoma* (9%; 130) and *oesophageal candidiasis* (9%; 130).

<sup>4</sup> A person diagnosed with AIDS may present more than one AIDS-defining illnesses.

**Figure 10: Number<sup>1</sup> of people diagnosed at a late stage of infection<sup>2</sup> by exposure category: UK, 2004-2013**



<sup>1</sup> Numbers have been adjusted for missing CD4 cell count at HIV diagnosis.

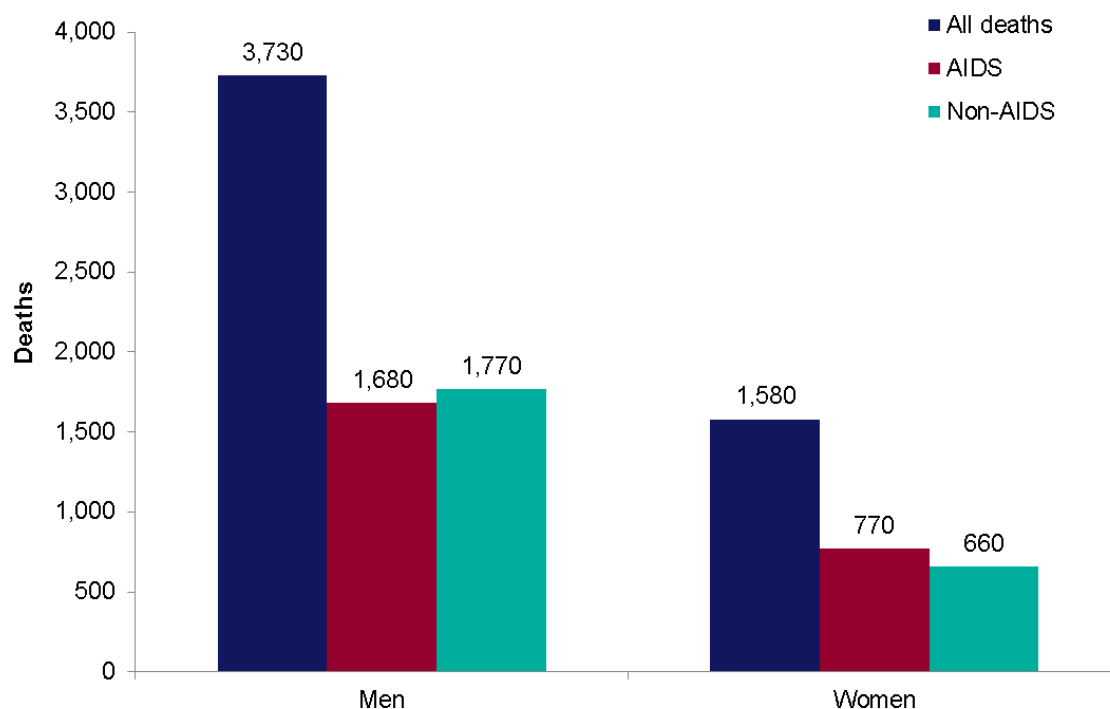
<sup>2</sup> CD4 <350 cells/mm<sup>3</sup> within three months of diagnosis.

In 2013, there were 530 deaths among people diagnosed with HIV (400 men and 130 women) and 210 (40%) died aged younger than 60 years. All-cause mortality among people living with diagnosed HIV aged 15-59 years in England and Wales declined from 11 per 1,000 in 2004 to 4.3 per 1,000 in 2013. This compares to a mortality rate of 1.8 per 1,000 in the general population in 2013. Mortality rates were higher among HIV diagnosed men (4.8 per 1,000) compared to women (3.5 per 1,000); in the general population, equivalent rates were 2.2 per 1,000 and 1.4 per 1,000, respectively.

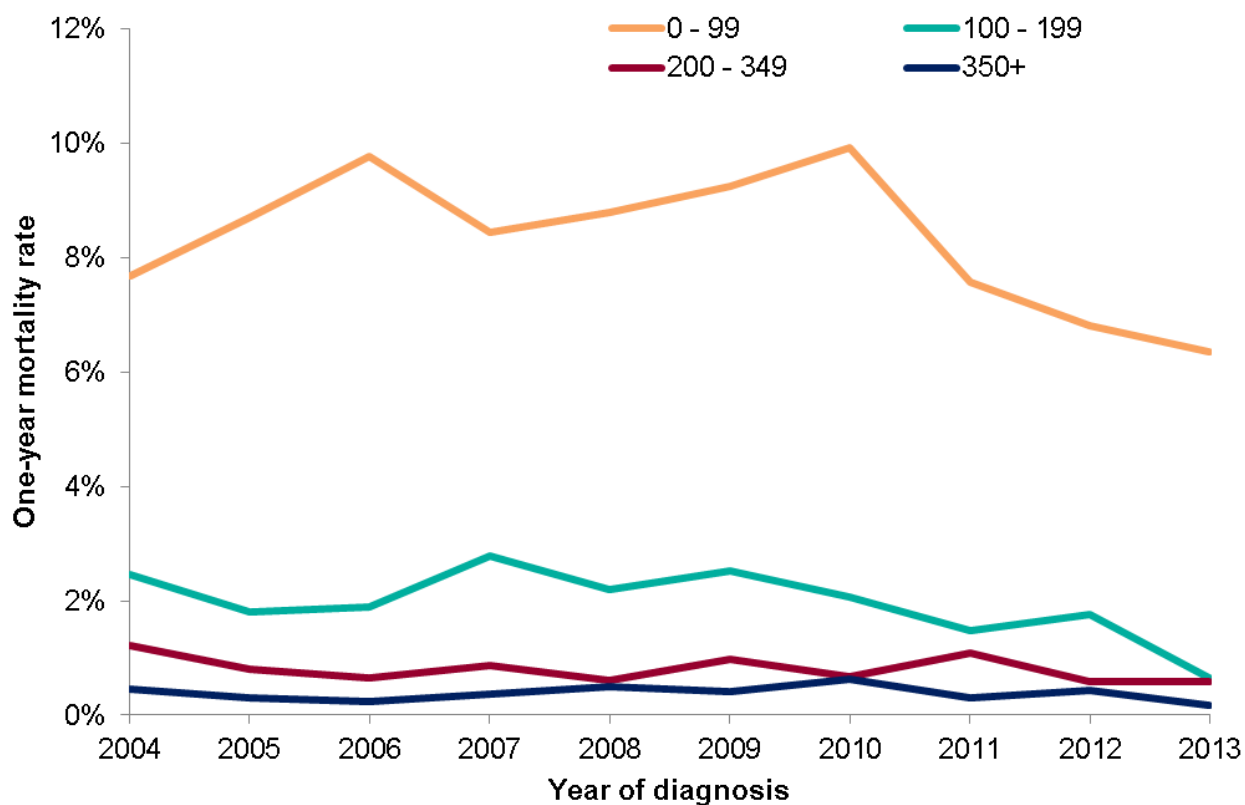
Of 5,310 deaths among adults diagnosed with HIV infection in England and Wales in the era of ART (between 1997 and 2012), 46% (2,450) were AIDS related (47% among men and 42% among women) (Figure 11) [2].

Death rate within one year of HIV diagnosis (one-year mortality rate) remained stable over the past decade regardless of CD4 count at diagnosis (Figure 12). People presenting late continued to have high rates of mortality despite effective treatment. This group had a ten-fold increase in the risk of death within a year of diagnosis compared to those diagnosed with a CD4 count >350 cells/mm<sup>3</sup> (25 vs. 2 per 1,000 population). One-year mortality is particularly marked for people aged 50 years and above at diagnosis, among whom more than 7 in 100 (95%CI: 5-10 in 100) diagnosed late died within a year (Figure 13).

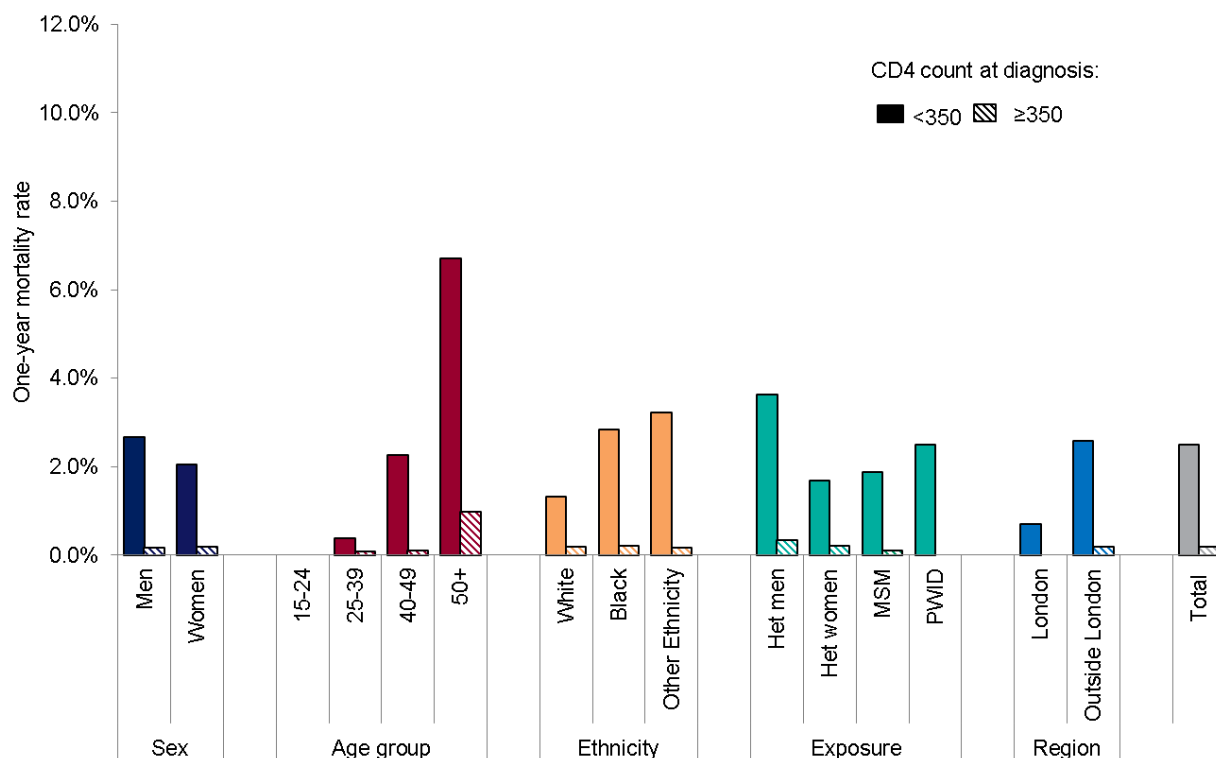
**Figure 11: Deaths among adults diagnosed with HIV in the era of ART: England and Wales, 1997-2012**



**Figure 12: One-year mortality trend among adults newly diagnosed with HIV by CD4 count strata at diagnosis: UK, 2004-2013**



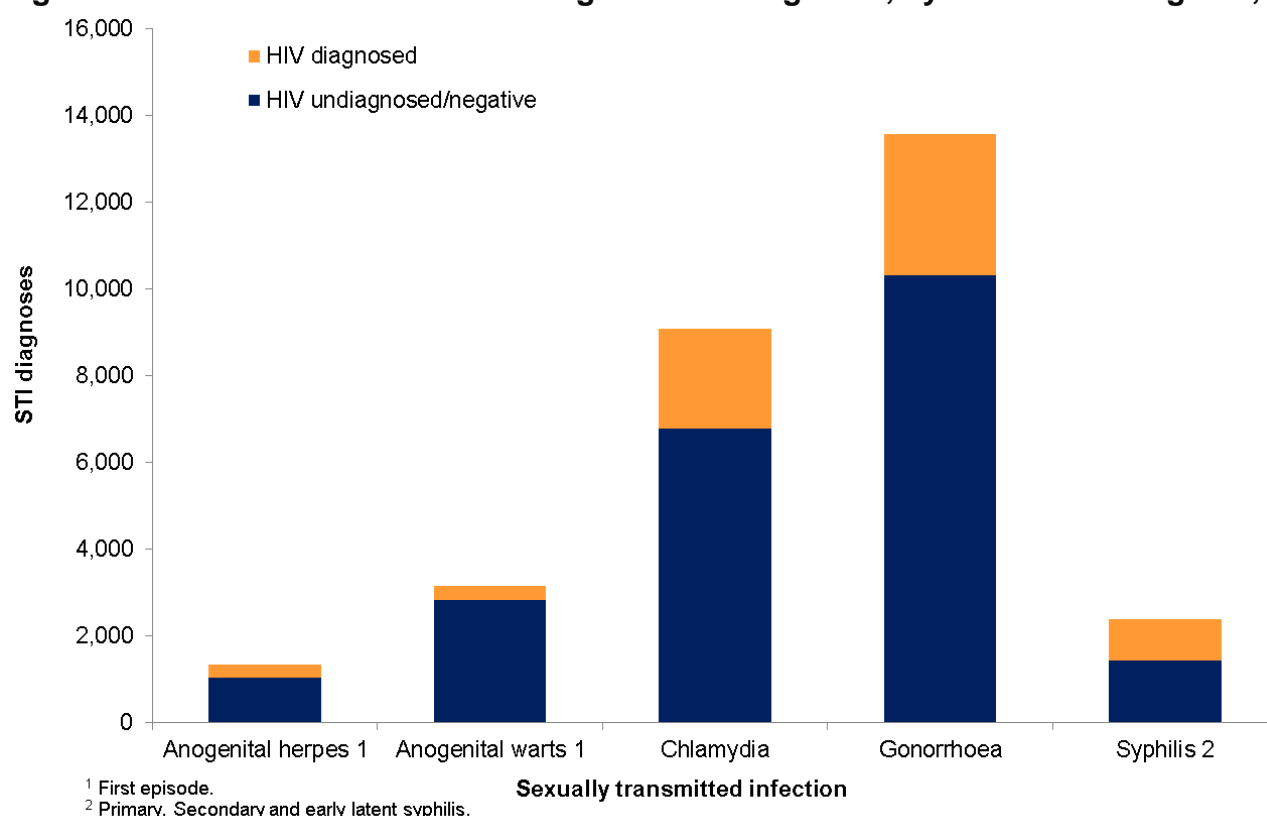
**Figure 13: One-year mortality rate among adults newly diagnosed with HIV by risk group and CD4 count strata at diagnosis: UK, 2013**



## HIV and STI co-infections

People with HIV who have an STI are more likely to transmit HIV through sex if a condom is not used. Among HIV negative people, those infected with an STI are more likely to acquire HIV [3]. Of the 4,060 people newly diagnosed with HIV in England in 2013, 15% (610) were diagnosed with at least one concurrent acute bacterial STI (chlamydia, gonorrhoea and/or syphilis). This was highest among MSM, with 25% (520/2,100) having a concurrent bacterial STI, compared to 5.9% (55/900) among heterosexual men and 2.8% (25/900) among heterosexual women.

In 2013, 25,040 bacterial STIs (chlamydia, gonorrhoea and syphilis) were diagnosed among all MSM attending STI services in England, and, of these, 6,500 (26%) were among MSM living with diagnosed HIV. MSM with diagnosed HIV infection accounted for 40% of syphilis diagnoses (Figure 14).

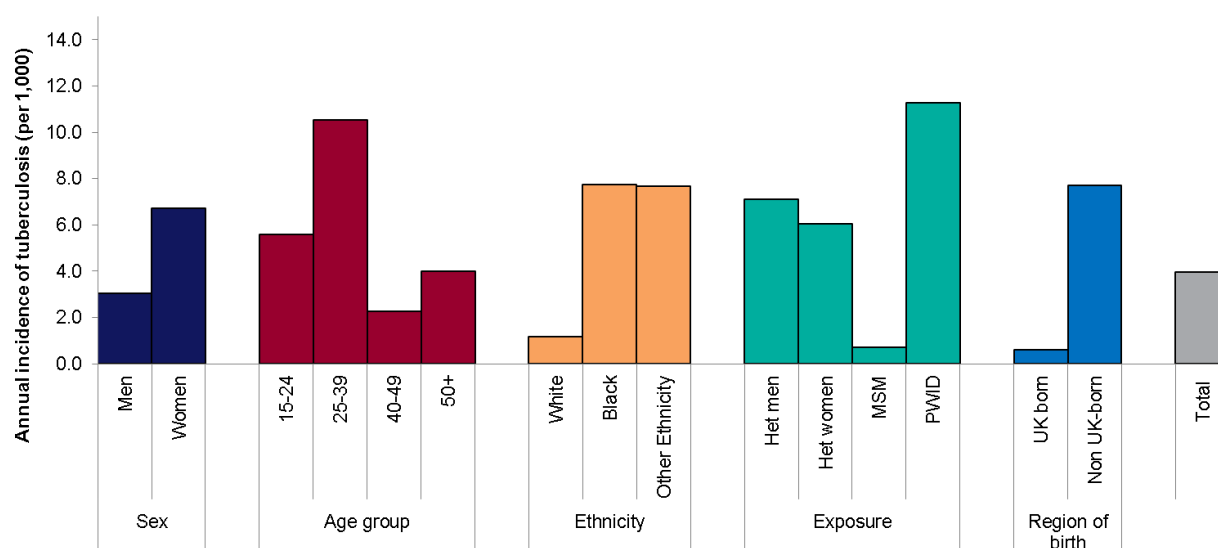
**Figure 14: Number of selected STI diagnoses among MSM, by HIV status: England, 2013**

## HIV and tuberculosis co-infection

The annual incidence rates of tuberculosis (TB) among adults living with diagnosed HIV in England and Wales declined from 17 per 1,000 (420/23,990) in 2008 to 4.3 per 1,000 (300/68,350) in 2011. This trend is largely due to a decline in new HIV diagnoses among men and women born in countries of sub-Saharan Africa where the prevalence of both HIV and TB is high [4] as well as an increase in total number of people living with HIV infection. TB incidence varied by demographic characteristics (Figure 15) with elevated rates among people born outside the UK (7.7 per 1,000 population in 2011), women (6.7), those aged 25–39 years (10.5) and people of black African ethnicity (7.7).

The majority (210/300) of people with a TB infection had their TB infection diagnosed at the same or near the time of their HIV diagnosis, and not surprisingly almost all had a CD4 count <350 cells/mm<sup>3</sup>.

**Figure 15: Annual incidence of tuberculosis among adults living with diagnosed HIV by risk group: England and Wales, 2011**



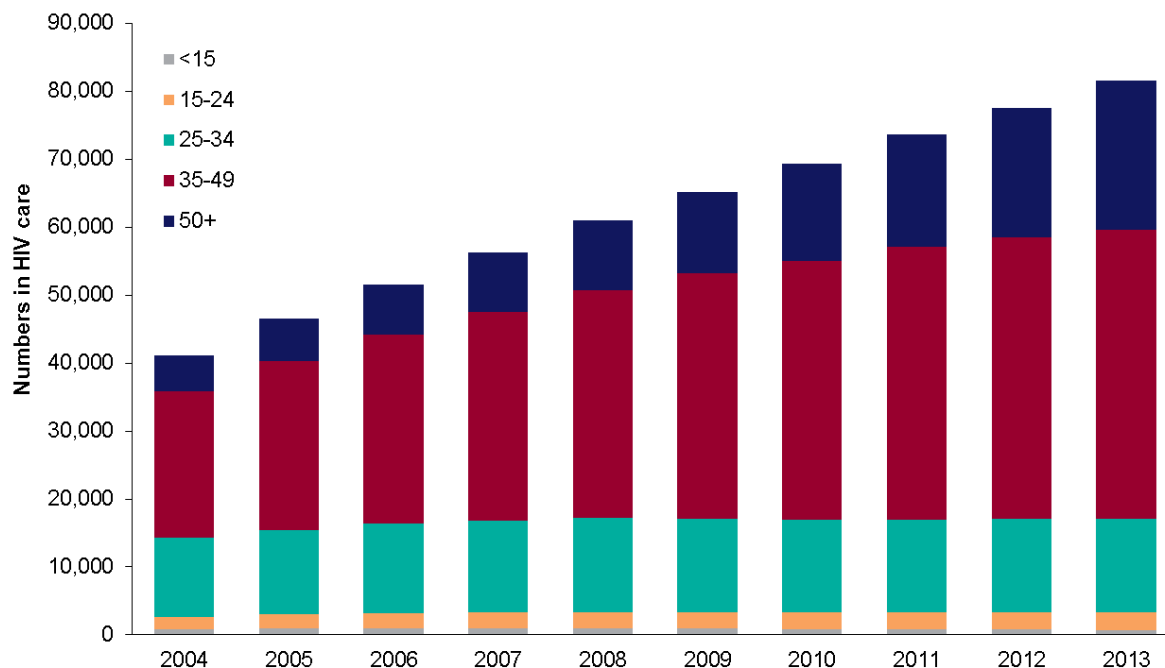
## Quality of HIV care

### Number of people seen for HIV care

In April 2013, the reconfiguration of the NHS in England led to changes in the commissioning of HIV services. HIV prevention and HIV treatment and care services are now commissioned separately, by local authorities and NHS England respectively. Clinical Reference Groups, which include a range of HIV specialists and experts, inform and specify treatment and care service needs.

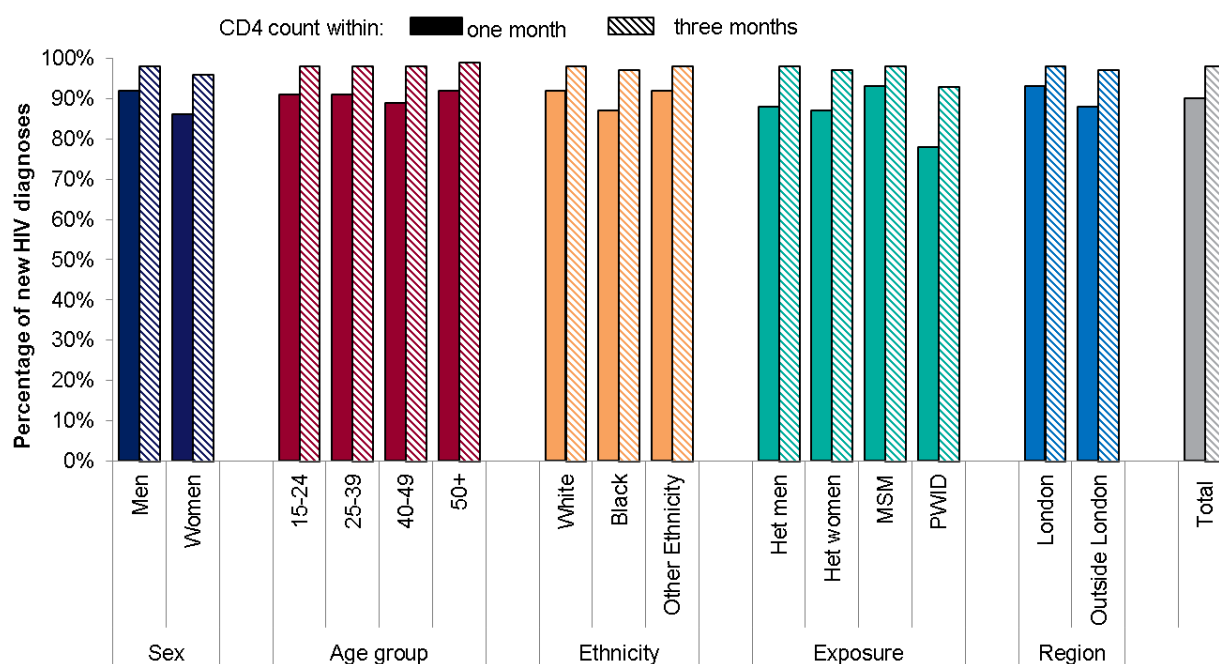
In 2013, there were 81,510 people living with diagnosed HIV infection in the UK (55,200 men and 26,310 women) (Appendix 9). This is a 5% increase from 77,590 people seen for HIV care in the previous year and almost double the number seen a decade ago (41,160) (Figure 16). MSM accounted for 44% (36,230) of all people living with diagnosed HIV.

Overall, 27% (21,910/81,510) of people living with diagnosed HIV were aged 50 years or above, double the proportion in 2004 (13%: 5,290/41,150) in 2004 (Figure 15, Appendix 10). Nearly one in three (30%, 10,730/25,380) MSM seen for HIV care were aged 50 years or above in 2013 compared to one in five (21%, 5,390/36,230) in 2008. Among heterosexual men and women, this proportion increased from one in seven (14%, 4,372/30,720) in 2008 to one in four (26%, 9,990/39,170) in 2013. The rise in the number and proportion of people aged 50 or above is due both to improved survival and new diagnoses at older ages. The changing demographic profile of the HIV population signals a need to ensure services remain appropriate for an ageing population.

**Figure 16: Number of people diagnosed with HIV seen for care by age group: UK, 2004–2013**

### Linkage to care within a year of diagnosis

The BHIVA Standard of Care guidelines indicate that all patients should be offered a full baseline assessment, including a CD4 count test within two weeks of diagnosis with HIV [5]. In 2013, 80%, 90% and 98% of adults newly diagnosed with HIV had a CD4 count performed within two weeks, one month and three months of diagnosis, respectively. Linkage into care was high and rapid across all age groups, ethnicities, exposure categories, gender and geographies (Figure 17).

**Figure 17: Link to care: proportion of newly diagnosed adults with a CD4 count within one and three months of diagnosis: UK, 2013<sup>1</sup>**

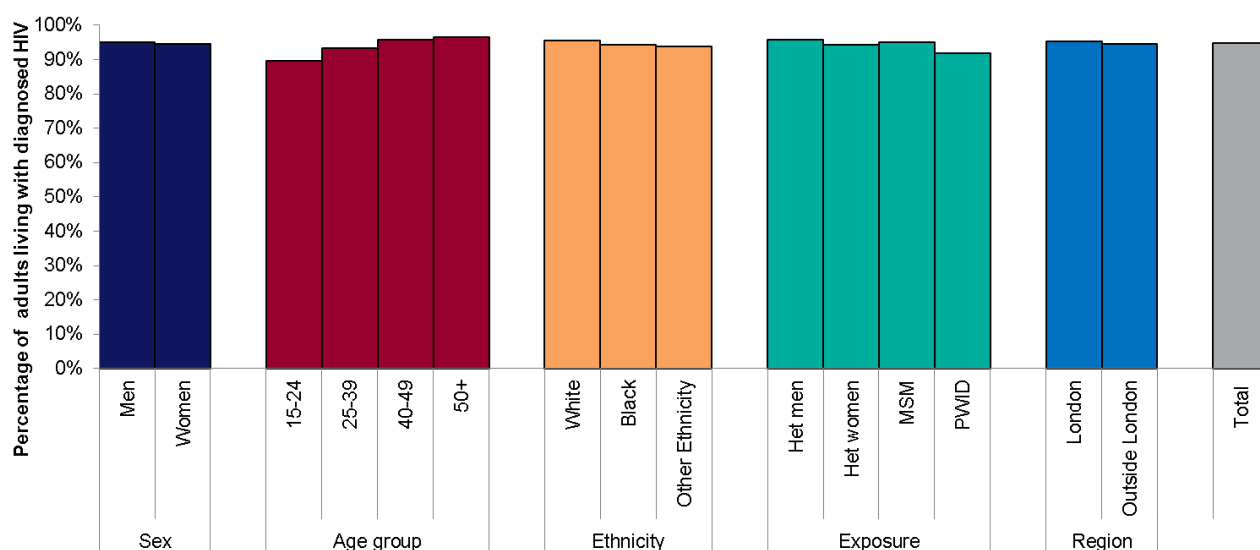
<sup>1</sup> Excludes 1,123 patients diagnosed in 2011, with CD4 counts not available within 12 months of HIV diagnosis.



## Retention in HIV care

The 12 month retention rate of all 76,820 adults seen for HIV care in 2012 was 95%. This proportion has remained stable over the past five years and does not vary greatly by age, gender, ethnicity, exposure category or region (Figure 18). In 2013, at least 5% of diagnosed adults were seen for care at more than one HIV clinic within the year.

**Figure 18: Retention in care: proportion of adults retained in care in the following year: UK, 2013**



## Treatment coverage

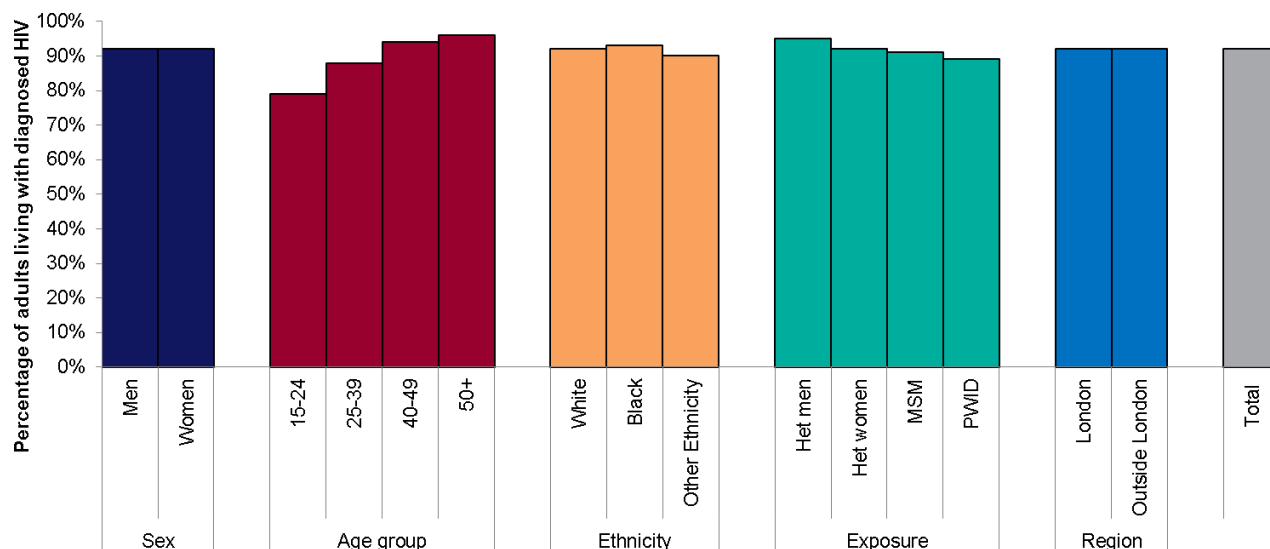
The number and proportion of people receiving ART has increased over the past decade. In 2013, 90% (73,290/81,510) of people seen for HIV care were prescribed ART compared with 69% (28,240/41,150) in 2004. The BHIVA treatment guidelines recommend that ART should start when a person with HIV has a CD4 count <350 cells/mm<sup>3</sup>[6]. In the past five years, improvements in treatment coverage have been observed, with an increase in the proportion of people with a CD4 cell count <350 cells/mm<sup>3</sup> on ART from 86% (14,357/16,680) in 2009 to 92% (13,280/14,410) in 2013 (Appendix 11).

In 2013, there was variation in treatment coverage by age, with higher coverage rates among older people: 79% among people aged 15-24 years compared to 96% among people aged 50 years or above (Figure 19).

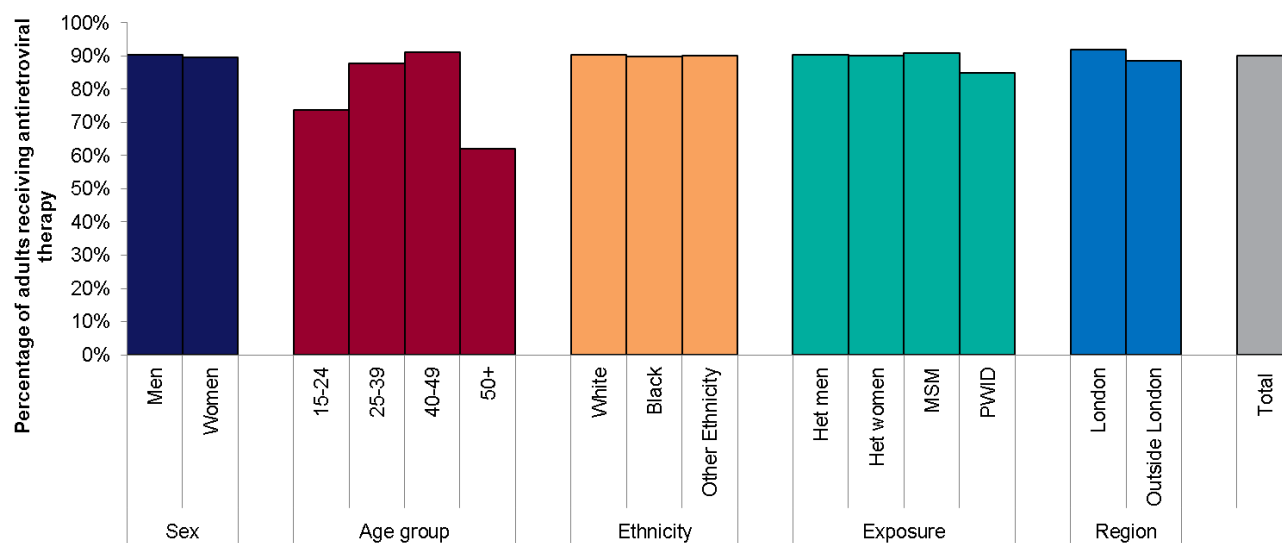
## Viral load suppression

Of 73,290 adults receiving ART in 2013, 90% had achieved a viral load (VL) suppression (VL <200 copies/ml) at their last attendance. This proportion was similar by gender, ethnicity and HIV exposure. However, differences by age group were observed with the youngest and oldest age groups least likely to be virally suppressed (Figure 20).

**Figure 19: Treatment guidelines: proportion of adults with CD4<350 cells/mm<sup>3</sup> receiving ART: UK, 2013**



**Figure 20: Effectiveness of treatment: proportion of adults achieving viral suppression<sup>1</sup>: UK, 2013**

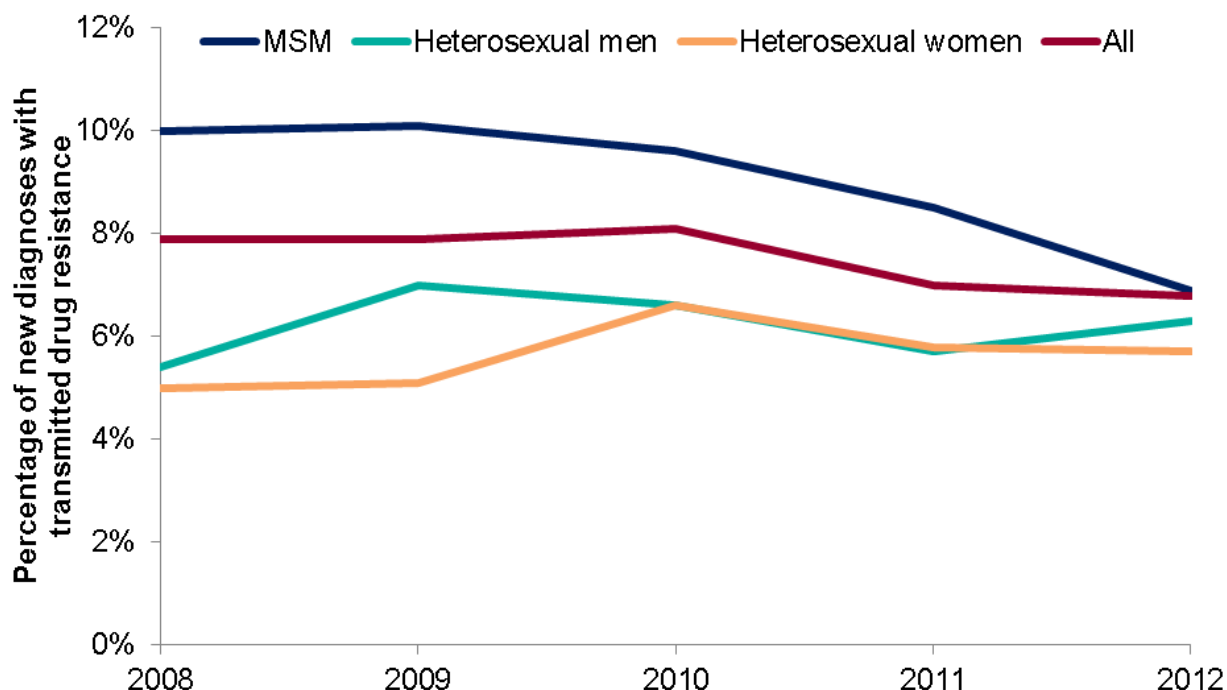


<sup>1</sup> Viral load <200 copies/ml

## Trends in drug resistance

In the UK, the prevalence of transmitted HIV drug resistance (evidence of one or more mutations from the WHO 2009 list of mutations) remained stable at 8% between 2008 and 2010 and declined slightly to 6.8% (230/3,450) in 2012 and this proportion was similar across exposure categories (Figure 21).

**Figure 21: Proportion of ART naïve people living with diagnosed HIV with evidence of transmitted drug resistance (any class) by exposure: UK, 2008-2012**



### Experiences of people living with HIV

Positive Voices, a national HIV patient survey was piloted across 30 HIV clinics between May-October 2014. Preliminary findings provide insights into service use and satisfaction with HIV care. Among 710 people living with HIV who completed an online questionnaire, 86% were men, 71% identified as gay/bisexual and 28% as heterosexual; respondents had a median age of 47 years old (full range 19-79).

Overall, people reported receiving very good HIV care and rated their HIV clinic highly: 98% felt they received enough information about their HIV; 96% felt supported to self-manage their HIV; and 93% felt involved with decision about their care. A lower proportion (74%) felt their HIV specialist and GP communicated well regarding their health. Three-quarters (76%) of respondents rated their health as “good” or “very good”. This is despite a high prevalence of co-morbidities, mental health issues, and experiences with stigma and discrimination among respondents.

Among those prescribed medication other than ART, the most prevalent reported co-morbidities were high cholesterol (26%), hypertension (16%), and hepatitis B or C (16%). Depression and anxiety were also common with 46% diagnosed with depression (ever), and one in six currently taking anti-depression medication. Of further concern, 63% worried that people who knew their HIV status would tell others, and 39% had had their HIV status disclosed to others without their permission. One in nine (11%) reported experiencing discrimination at work, by healthcare staff, or having changed accommodation as a result of being diagnosed with HIV in the previous year.

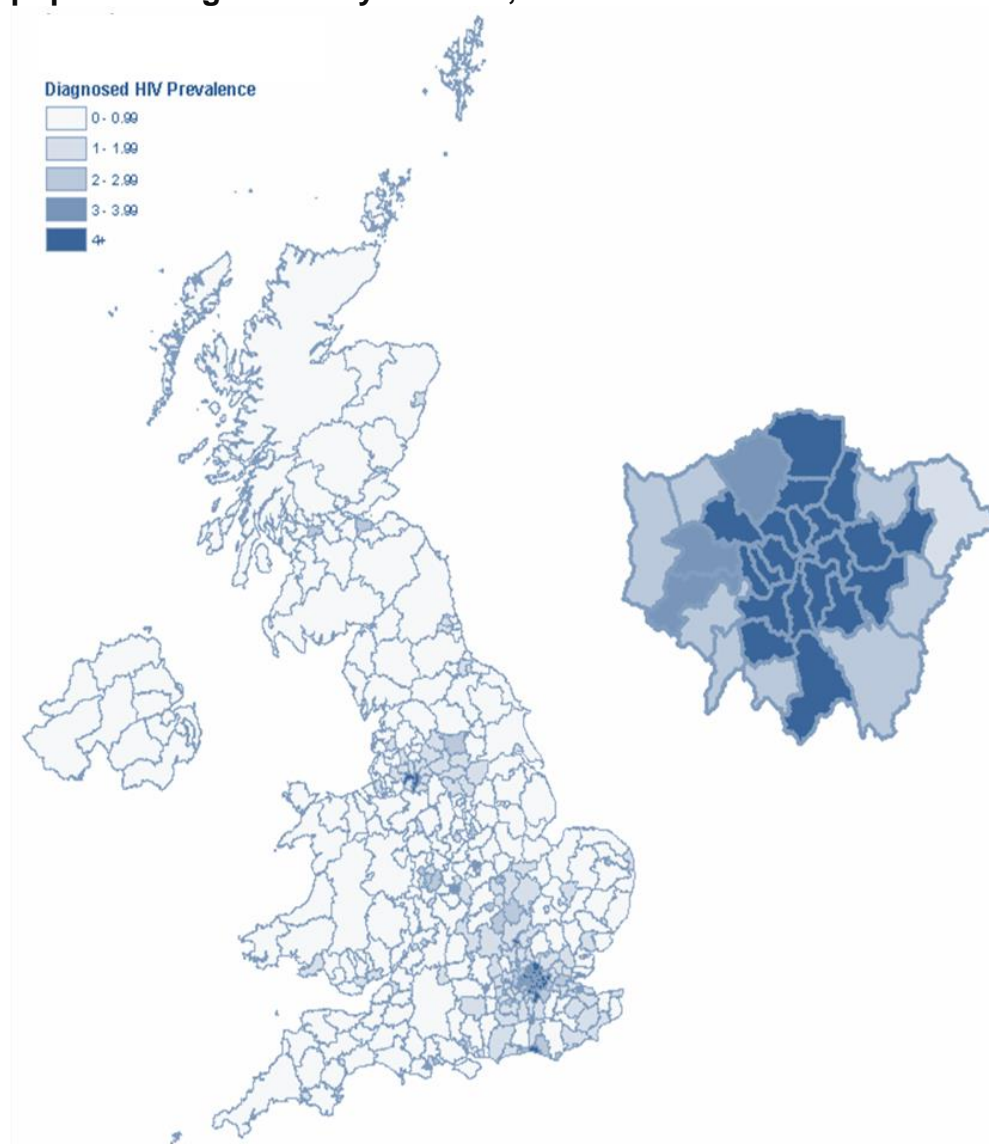
# HIV prevention

## HIV screening and testing

UK national guidelines recommend expanding HIV testing beyond specialised STI services to people admitted to a general hospital ward and new registrants to general practice in areas with a diagnosed HIV prevalence of  $\geq 2$  per 1,000 population aged 15-59 years [7]. In 2013, one in five (66/326) local authorities (LAs) had a diagnosed prevalence above this threshold (Figure 22). In London all but one of the 33 LAs had a prevalence above this threshold. Outside London, the five LAs with the highest prevalence, and above  $\geq 2$  per 1,000, were: Brighton and Hove, Manchester, Salford, Luton and Slough. Two-thirds of these LAs (44/66) had a late HIV diagnosis rate above the national average (42%).

In 2013, 34% (52/152) Upper Tier Local Authorities (UTLAs) had a diagnosed HIV prevalence of  $\geq 2$  per 1,000 population aged 15-59 years: 32 in London and 20 outside London (see Appendices 12A and 12B for full listing).

**Figure 22: Prevalence of diagnosed HIV infection by region of residence among population aged 15-59 years: UK, 2013**



### Antenatal screening

In 2013, nearly 700,000 pregnant women were screened for HIV in England, comprising an uptake rate of 98%. Of these, 2.5 per 1,000 (1,750/688,760) were HIV positive and the majority (five in six) had been diagnosed prior to pregnancy. Of all children born to HIV positive women in the UK between 2006 and 2012, fewer than 2% were diagnosed with HIV. The transmission rate in children born to women with HIV infection diagnosed prior to delivery was under 1% [8].

### HIV screening in STI services

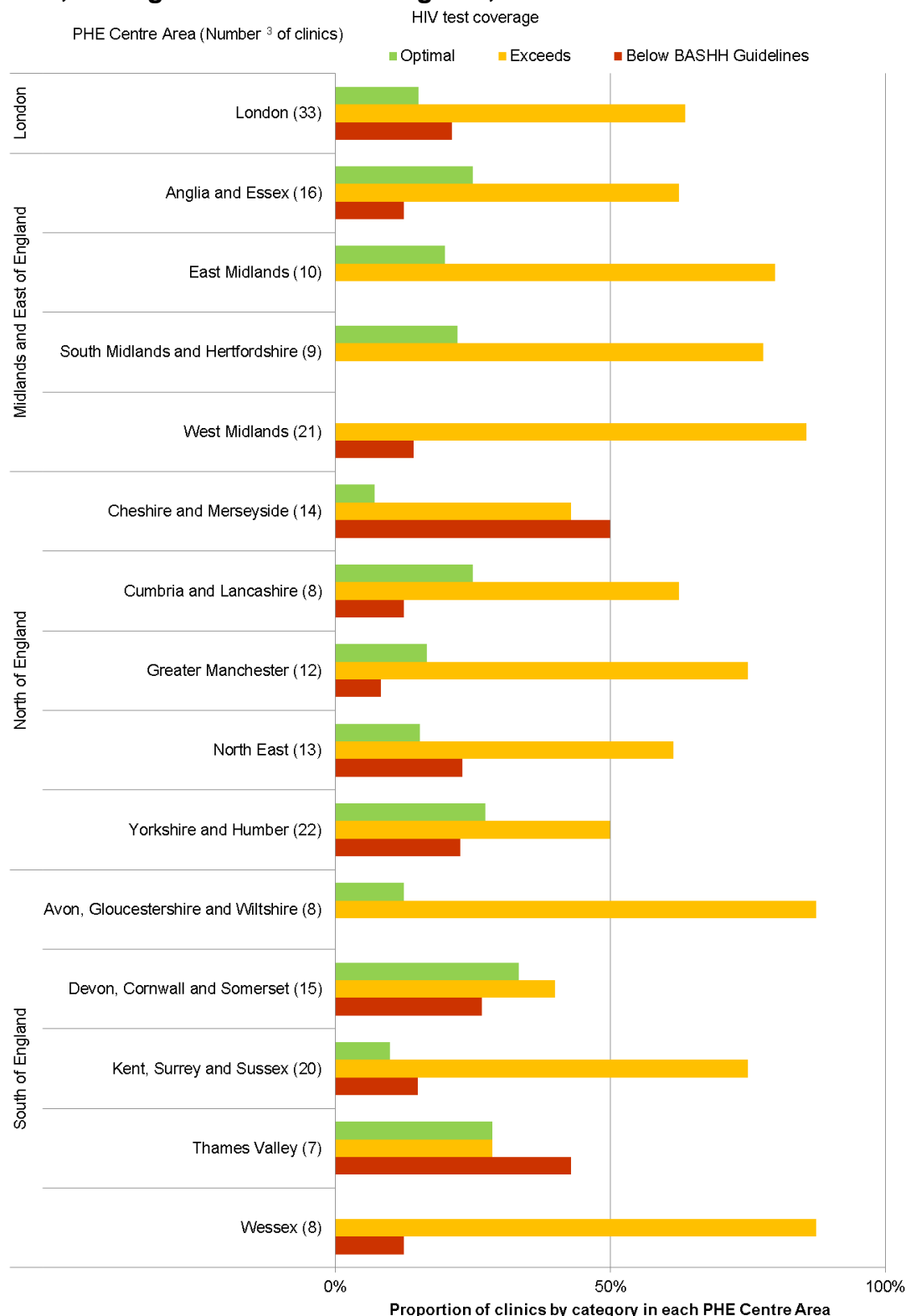
The number of people attending an STI clinic continues to rise with over 1.37 million attendees reported in England in 2013. The proportion of people tested for HIV infection (coverage) reached 71% (973,620/1,373,700) and was highest among MSM (86%; 79,250/92,040) followed by heterosexual men (77%; 386,080/503,070) and women (67%; 470,760/705,690). Coverage has increased from 69% (827,740/1,201,414) in 2009 (78% among MSM, 71% among heterosexual men and 67% among women). Information on HIV testing coverage and uptake can be found in Appendices 13 and 14.

Overall, more than four in five (180/216) STI clinics in England achieved an HIV testing coverage of 80% or over among MSM attendees (Figure 23). This is in line with BASHH guidelines (78%) [1]. Testing coverage was lower among heterosexual men and women with only 15% (35) of clinics attaining at least 80% coverage (Figure 24). There were substantial geographical variations (Figures 23 and 24).

In a follow-up analysis, 2% (50/2,490) of MSM who did not have an HIV test at their first STI clinic attendance in 2011, but who had a test at a subsequent attendance at that same clinic were diagnosed with HIV infection; this equates to a diagnosis rate of 20 per 1,000. A similar analysis for black-African heterosexual men and women showed the diagnosis rate at re-attendance to be around five per 1,000 (7/1,290) and for non-black-African heterosexuals it was 0.3 per 1,000 population. These findings highlight the importance of obtaining very high HIV test uptake rates at STI clinics. In particular, opt-out testing policies for MSM and black-African heterosexual men and women are likely to be cost-effective.

While every effort should be made to improve testing coverage in STI clinics, it is noted that efforts to improve access to HIV testing in other settings are also important. For instance, less than one in five of the black-African population attended an STI clinic in the previous five years.

**Figure 23 Variation in HIV test coverage<sup>1,2</sup> between STI clinics in England, by PHE Centre, among MSM attendees: England, 2013**

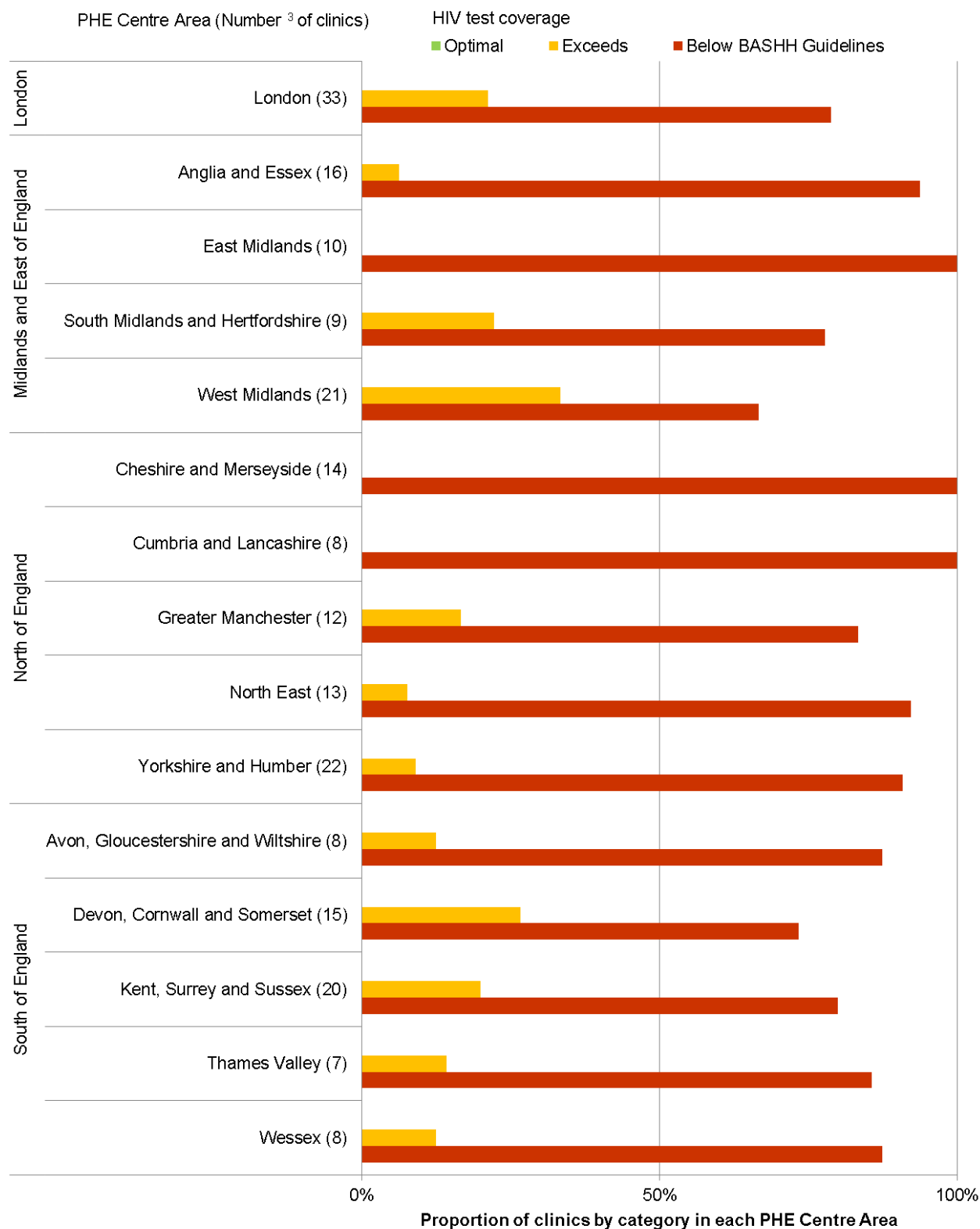


<sup>1</sup> HIV test coverage measures the percentage of eligible new STI clinic attendees who had an HIV test. Patients known to be HIV positive, or for whom an HIV test was not appropriate (for instance, those with a very recent HIV test) were excluded

<sup>2</sup> "Below BASHH guidelines" indicate a coverage less than 80% which is in line with the 78% national guidelines. "Exceeds" indicates a coverage between 80 - 89% and "Optimal" indicates 90% or above.

<sup>3</sup> Numbers of clinics in each PHE Centre Area add up to 100%.

**Figure 24 Variation in HIV test coverage<sup>1,2</sup> between STI clinics in England, by PHE Centre, among heterosexual attendees: England, 2013**



<sup>1</sup> HIV test coverage measures the percentage of eligible new STI clinic attendees who had an HIV test. Patients known to be HIV positive, or for whom an HIV test was not appropriate (for instance, those with a very recent HIV test) were excluded

<sup>2</sup> "Below BASHH guidelines" indicate a coverage less than 80% which is in line with the 78% national guidelines. "Exceeds" indicates a coverage between 80 - 89% and "Optimal" indicates 90% or above.

<sup>3</sup> Numbers of clinics in each PHE Centre Area add up to 100%.



### Partner notification

Partner notification (PN)– whereby partners of those newly diagnosed with HIV are contacted for testing - is an effective way of reaching people previously undiagnosed with HIV infection. The BASHH recommends that every individual diagnosed with HIV at an STI clinic is offered PN [9].

In England, 2,040 people attended a STI clinic service through partner notification for HIV in 2013 (Appendix 15). Assuming the 4,060 people newly diagnosed with HIV in STI clinics were all offered PN, this results in a PN ratio of 0.5. Of all the patients who attended through PN, an HIV test was reported for 1,680 (83%) and, of these, 100 (6.2%) were newly diagnosed with HIV. Positivity was higher among MSM (7.4%) compared to heterosexual men (3.3%). There was also variation by gender and age group: positivity was higher among men aged 20-24 years (10%) and among women aged 25-34 (9.2%) compared to other age groups.

### HIV testing through self-sampling

HIV self-sampling represents a novel way to expand HIV testing to individuals who would otherwise not come forward for testing. Self-sampling, as opposed to self-testing, involves an individual taking a sample (either an oral swab or a finger prick) which is posted directly to the laboratory and the results are returned to the individual by a healthcare provider.

During National HIV Testing Week 2013, two national HIV self-sampling services (Terrence Higgins Trust/HIV Prevention England and Dean Street At-Home), with the support of Public Health England, enabled people who believed themselves to be at risk of HIV infection to order on-line free self-sampling kits to be delivered to use at home. Between November 2013 and March 2014, the two services distributed 12,490 kits of which 53% were returned (n=6,590), with a reactivity rate of 14 per 1,000 tests (n=92). Among those who received a kit, 89% were MSM and 9% were black-African heterosexuals. Over a third of MSM using the service had never tested before.

### HIV screening in blood donors

Since 1985, all blood donors have been screened for HIV infection to prevent onward transmission. There has been no known case of HIV acquisition through blood transfusion in the UK since 2002. In 2013, 16 donors tested positive for HIV infection at screening, representing 0.7 detected infections per 100,000 donations. Where known, HIV infection was mostly acquired in the UK (10/12). Nine of the 16 donors were men and seven reported sex between men. Two were compliant with the 12 month MSM blood donor deferral policy and had not had sex with another man in the last year and had not been tested in any other setting during that time. Nine donors (five men, four women) were repeat donors, all acquiring HIV within the last three years. Seven of these had a previous negative donations and/or avidity results which suggested HIV infection within the last four-five months [10].

### Pre-exposure prophylaxis

Pre-exposure prophylaxis (PrEP) is the use of ART by people at risk of acquiring HIV infection to reduce their risk of becoming infected with HIV, and thereby potentially reducing the transmission of HIV at the population level.

In the UK, BHIVA and BASHH have called for UK-specific data to answer outstanding questions regarding the 'real-world' effectiveness of PrEP [11]. Evidence is being gathered through the PROUD study [12]. Interim analysis of the PROUD study has found PrEP to be highly protective against HIV infection for gay and other men who have sex with men [13].

Consequently, efforts to assess the cost-effectiveness and affordability of PrEP for those most-at-risk need to be accelerated so that relevant policy decisions may be taken at the earliest opportunity.

### Impact of treatment on HIV prevention in the UK

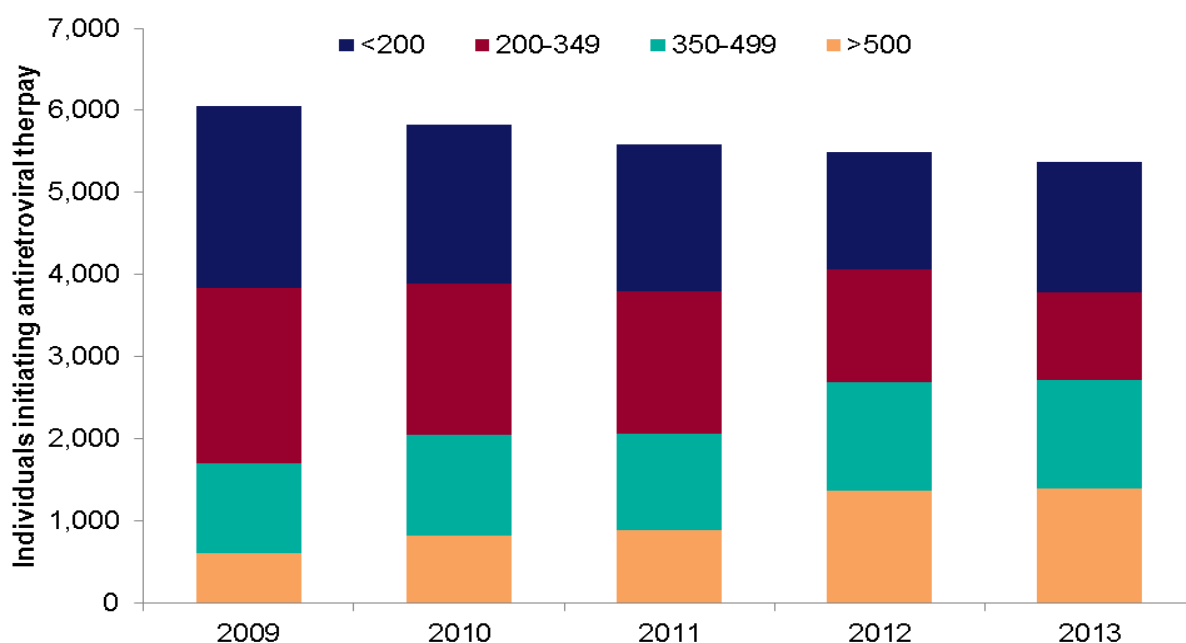
Patients treated successfully so that their viral load is undetectable can almost eliminate their risk of passing on infection through sexual contact [14].

In the UK, free and accessible HIV treatment and care has resulted in large-scale treatment coverage: in 2013, an estimated 66% of all people living with HIV (diagnosed and undiagnosed) were treated and 61% (65,980/107,800) had an undetectable viral load. While the overall number of people initiating ART has slightly decreased, the number and proportion initiating ART at CD4 counts >350 cells/mm<sup>3</sup> has increased (Figure 25).

In 2013, more than half (51% (2,720/5,370)) of people initiating ART did so with a CD4 count >350 cells. The proportion of patients initiating ART with a CD4 count between 350-499 cells rose from 18% in 2009 to 25% in 2013, and for those starting treatment with a CD4 count >500, from 10% in 2009 to 26% in 2013 (Figure 25). This rise is likely to be in response to the change in BHIVA treatment guidelines 2012 [15] which recommended health care providers discuss with their patients the option to start ART earlier to prevent onward transmission to sexual partners.

Adherence to treatment is high and improving. The proportion of people initiating ART with a CD4 count between 350-499, and over 500 cells, who achieved a viral load of <50 copies/mL within 12 months increased from 92% and 81% in 2009 to 95% and 92% in 2013 respectively. It is reassuring that adherence levels among those initiating ART with CD4 >350 are high, improving and in 2013, in line with adherence among those initiating ART at <350.

**Figure 25: Number<sup>1</sup> of patients starting ART by CD4 count at initiation<sup>2</sup>: UK, 2009-2013**



<sup>1</sup> Adjusted for CD4 count not reported.

<sup>2</sup> CD4 count available up to 9 months before ART initiation

## Behavioural surveys

Since 1990, nationally representative surveys of sexual attitudes and behaviours have observed large increases in the proportion of MSM reporting attending sexual health clinics and having an HIV test. In the last survey, conducted in 2010, 52% of MSM reported having had an HIV test in the last five years [16]. Similar increasing trends have been observed in community surveys over the same period with more stable figures in the most recent three years. In 2013, 60% (470/7810) of MSM tested in the last year, similar to that in 2011 (58%; 640/1,110) [17].

MSM report much higher condom use and HIV testing than the general population. For example, in a community survey in 2013 of MSM recruited from commercial venues in London, 50% always used a condom and 60% reported testing for HIV in past year. Another survey reported that in 2010, 55% of MSM used condoms at last anal sex with their male partners in the previous six months [18]. While these levels of self-reported protective behaviours have been attributed to curtailing the epidemic at current levels among MSM, they remain too low to reduce the number of new diagnoses [19].

In black-African communities high levels of HIV testing have been reported, 46% and 44% of black-African men and women respectively reported in 2010 having had an HIV test in the last five years [16]. A community survey of black-African populations has observed self-reported protective behaviours of HIV testing in the last year (39%) and regular condom use that also may be too low to reduce HIV transmission in this population [20].

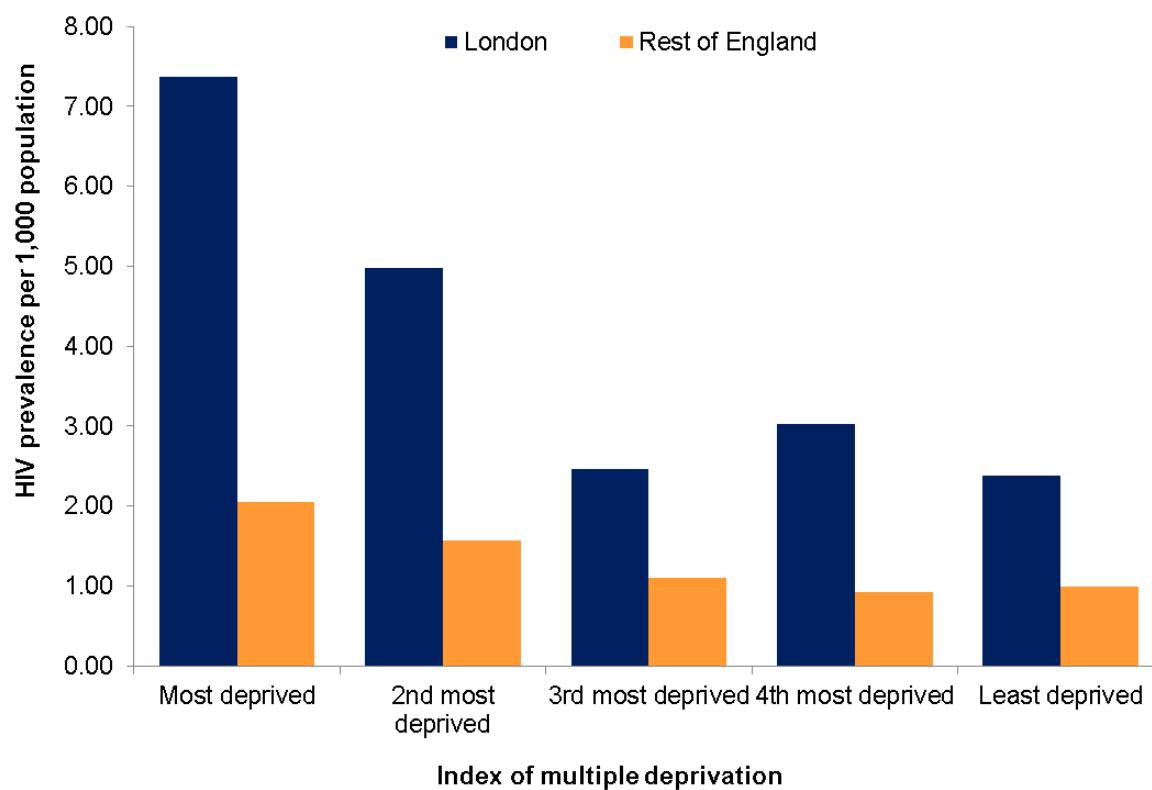
These data demonstrate the need for continuing investment in primary prevention activities to increase the frequency and coverage of HIV testing, and consistent condom use, among populations at greatest risk of HIV infection.

## HIV and health inequality

In 2013, the prevalence rate of HIV was approximately 30 times higher for MSM and black-African men and women compared to the general population in England. Individual, societal and structural factors such as sexual behaviours, infections acquired abroad [22], migration and HIV-related stigma and discrimination contribute to this disparity [23]. The wider social determinants of health must be addressed to tackle inequalities in the risk of HIV acquisition [24]. Furthermore, once diagnosed and treated, living with HIV can impact on an individual's ability to work and their employment opportunities, and lead to financial difficulties [25] and social challenges such as residential status [26].

HIV prevalence remained highest in the most deprived areas in England; this is particularly evident in London, where diagnosed HIV prevalence is as high as 7.4 per 1,000 in the most deprived areas and less than 2.4 per 1,000 in the least deprived areas (Figure 26). The proportions of attendances offered and accepting HIV tests in STI clinics were similar across different deprivation areas.

**Figure 26: Prevalence of diagnosed HIV infection among adults aged 15–59 years by deprivation residential area: England: 2013**



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# Appendices

## Appendix 1 Estimated number<sup>1</sup> of people living with HIV (both diagnosed and undiagnosed): United Kingdom, 2013

Exposure category		Number diagnosed (credible interval) <sup>2</sup>	Number undiagnosed (credible interval) <sup>2</sup>	Total (credible interval) <sup>2</sup>	% Undiagnosed (credible interval) <sup>2</sup>	HIV prevalence per 1,000 population (credible interval) <sup>2</sup>
Men who have sex with men		36,310 (35,610, 37,090)	7,179 (3,970, 11,849)	43,510 (40,210, 48,160)	16% (10, 25%)	59 (52, 68)
People who inject drugs		2,121 (1,929, 2,242)	231 (132, 394)	2,353 (2,131, 2,563)	10% (6, 16%)	6.7 (5.5, 8.3)
Heterosexuals		40,990 (41,940)	18,490 (13,840, 24,870)	59,490 (54,690, 66,040)	31% (25, 38%)	1.6 (1.5, 1.8)
	Men	15,850 (15,520, 16,190)	8,129 (5,790, 11,549)	23,980 (21,610, 27,410)	34% (27, 42%)	1.3 (1.2, 1.5)
	Black African ethnicity	8,386 (8,172, 8,614)	5,249 (3,382, 8,269)	13,640 (11,750, 16,680)	38% (29, 50%)	41 (35, 49)
	Non black-African ethnicity	7,460 (7,278, 7,653)	2,764 (1,620, 4,769)	10,230 (9,061, 12,250)	27% (18, 39%)	0.6 (0.5, 0.7)
	Women	25,150 (24,540, 25,820)	10,299 (7,650, 14,070)	35,450 (28,870, 32,660)	29% (23, 36%)	1.9 (1.7, 2.0)
	Black African ethnicity	17,200 (16,760, 17,690)	7,840 (5,270, 11,600)	25,060 (22,360, 28,870)	31% (23, 40%)	71 (63, 81)
	Non black-African ethnicity	7,947 (7,714, 8,196)	2,387 (1,524, 3,691)	10,340 (9,438, 11,670)	23% (16, 32%)	0.6 (0.5, 0.6)
Total <sup>3</sup>		81,700 (80,220, 83,350)	26,110 (20,260, 33,810)	107,800 (101,600, 115,800)	24% (20, 29%)	3.7 (3.5, 4.0)

<sup>1</sup> National estimates of the number of people living with HIV in the UK are obtained from a complex statistical model fitted to a range of surveillance and survey data. Compared to previous years, the method used for 2013 estimates in the 2014 HIV annual report has been improved in the following aspects: A) applying the estimated proportion of STI (sexually transmitted infections) and non-STI clinic attendees among MSM from NATSAL 3 (previous methods used NATSAL 2). B) stratifying the population by ethnicity instead of world region of birth; and C) improving linkages between key surveillance systems. Results from 2013 and 2012 using the revised method are presented in the Appendix 2 together with results from the methods published in previous reports for comparison.

<sup>2</sup> Lower bound, upper bound.

<sup>3</sup> Numbers may not add to total due to rounding and exclusion of data relating to HIV acquired through mother-to-child transmission and blood related products.



# Appendix 2 Comparison of estimated number of people living with HIV (both diagnosed and undiagnosed) using previously published and revised methods: United Kingdom, 2012 and 2013

		2013 estimates (revised method)		2012 estimates(revised method)		2012 estimates (previous method)	
Exposure category <sup>1</sup>		Total (credible interval) <sup>2</sup>	% Undiagnosed (credible interval) <sup>2</sup>	Total (credible interval) <sup>2</sup>	% Undiagnosed (credible interval) <sup>2</sup>	Total (credible interval) <sup>2</sup>	% Undiagnosed (credible interval) <sup>2</sup>
Men who have sex with men		43,510 (40,210, 48,160)	16% (10, 25%)	41,020 (37,640, 45,680)	17% (10, 25%)	41,000 (37,300, 46,000)	18% (10, 27%)
People who inject drugs		2,353 (2,131, 2,563)	10% (6, 16%)	2,200 (1,950, 2,510)	14% (8, 23%)	2,200 (2,000, 2,500)	14% (8, 24%)
Heterosexuals		59,490 (54,690, 66,040)	31% (25, 38%)	57,125 (52,060, 63,760)	31% (25, 38%)	53,000 (50,000, 56,400)	27% (23, 31%)
	Men	23,980 (21,610, 27,410)	34% (27, 42%)	22,740 (20,240, 26,380)	34% (26, 43%)	21,200 (19,500, 23,500)	30% (24,37%)
	Black African	13,640 (11,750, 16,680)	38% (29, 50%)	13,320 (11,369, 16,420)	39% (28, 50%)	11,100 (10,200, 12,400)	27% (20, 34%)
	Non black-African	10,230 (9,061, 12,250)	27% (18, 39%)	9,317 (8,170, 11,240)	27% (17, 40%)	10,000 (8,700, 12,000)	33% (23, 44%)
	Women	35,450 (32,660, 39,340)	29% (23, 36%)	34,330 (31,470, 38,000)	29.0% (23, 36%)	31,700 (30,100, 33,600)	24% (21-28%)
	Black African	25,060 (22,360, 28,870)	31% (23, 40%)	24,515 (21,870, 28,130)	31% (23, 40%)	20,700 (19,500, 22,200)	21% (16, 26%)
	Non black-African	10,340 (9,438, 11,670)	23% (16, 32%)	9,753 (8,820, 11,070)	24% (16, 33%)	11,000 (10,000, 12,300)	31% (24, 38%)
Total <sup>3</sup>		107,800 (101,600, 115,800)	24% (20, 29%)	102,600 (96,340, 110,700)	25% (20, 30%)	98,400 (93,500, 104,300)	22% (18, 27%)

<sup>1</sup>In the revised method, African people are defined by their reported ethnicity, the previous method defined through country of birth.

<sup>2</sup>Lower bound, upper bound.

<sup>3</sup>Numbers may not add to total due to rounding and exclusion of data relating to HIV acquired through mother-to-child transmission and blood related

### Appendix 3 Number of HIV diagnoses adjusted for exposure category: United Kingdom, 2004-2013

Exposure category <sup>1</sup>		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Sex between men</b>	Adjusted	2,450	2,670	2,650	2,890	2,850	2,880	2,850	2,950	3,230	3,250
	Observed	2,419	2,640	2,607	2,834	2,756	2,746	2,729	2,839	3,037	2,947
<b>Heterosexual contact</b>	Adjusted	4,890	4,850	4,410	4,110	4,050	3,430	3,180	2,950	2,780	2,490
	Observed	4,829	4,794	4,333	4,010	3,913	3,271	2,996	2,815	2,569	2,135
<b>Injecting drug use</b>	Adjusted	160	190	200	180	180	160	160	140	120	130
	Observed	155	187	193	176	178	155	148	131	113	112
<b>Other exposure categories</b>	Adjusted	210	180	190	170	140	160	150	130	110	130
	Observed	201	175	184	167	140	157	142	130	104	116
<b>Not Reported</b>	Observed	96	96	129	164	238	305	318	258	422	690
<b>Total</b>		7,700	7,892	7,446	7,351	7,225	6,634	6,333	6,173	6,245	6,000

<sup>1</sup> Numbers have been adjusted for missing exposure category.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

## Appendix 4 Annual new HIV and AIDS diagnoses and deaths: United Kingdom, 1980-2013

Report type and gender		1997 or earlier		1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Cumulative total <sup>1</sup>
<b>HIV diagnoses<sup>2</sup></b>	Men	30,322	2,128	2,237	2,518	3,107	3,612	4,039	4,440	4,664	4,493	4,701	4,594	4,457	4,310	4,397	4,504	4,477	93,000
	Women	5,646	772	1,009	1,436	1,993	2,669	3,241	3,259	3,228	2,953	2,650	2,631	2,177	2,023	1,774	1,740	1,522	40,723
<b>Total</b>		<b>36,003</b>	<b>2,901</b>	<b>3,248</b>	<b>3,954</b>	<b>5,101</b>	<b>6,281</b>	<b>7,280</b>	<b>7,700</b>	<b>7,892</b>	<b>7,446</b>	<b>7,351</b>	<b>7,225</b>	<b>6,634</b>	<b>6,333</b>	<b>6,173</b>	<b>6,245</b>	<b>6,000</b>	<b>133,767</b>
<b>First AIDS diagnoses</b>	Men	14,089	622	583	625	531	633	579	598	619	528	555	510	442	433	286	293	232	22,158
	Women	1,816	201	204	261	261	360	452	420	359	357	286	315	208	226	131	131	87	6,075
<b>Total</b>		<b>15,905</b>	<b>823</b>	<b>787</b>	<b>886</b>	<b>792</b>	<b>993</b>	<b>1,031</b>	<b>1,018</b>	<b>978</b>	<b>885</b>	<b>841</b>	<b>825</b>	<b>650</b>	<b>659</b>	<b>417</b>	<b>424</b>	<b>319</b>	<b>28,233</b>
<b>Deaths<sup>3</sup></b>	Men	11,641	415	390	386	357	417	399	337	440	413	425	455	426	533	409	422	399	18,264
	Women	1,285	97	79	97	119	106	162	149	148	149	170	153	165	174	136	134	128	3,451
<b>Total</b>		<b>12,929</b>	<b>512</b>	<b>469</b>	<b>483</b>	<b>476</b>	<b>523</b>	<b>561</b>	<b>486</b>	<b>588</b>	<b>562</b>	<b>595</b>	<b>608</b>	<b>591</b>	<b>707</b>	<b>545</b>	<b>556</b>	<b>527</b>	<b>21,718</b>

<sup>1</sup> Numbers will rise as further reports are received, particularly for recent years.<sup>2</sup> Includes 44 HIV diagnoses of individuals with sex not reported (the majority of which are in earlier years).<sup>3</sup> Includes all reported deaths (all cause) in HIV diagnosed individuals, includes three death reports of individuals with sex not reported and is presented by year of death.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

## Appendix 5 New HIV diagnoses by country and PHE region of diagnosis: United Kingdom, 1980-2013

Country and PHE region of diagnosis	1997 or earlier	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	Total <sup>1</sup>
<b>ENGLAND</b>																		
North of England	3,716	309	357	395	673	867	1,165	1,271	1,403	1,242	1,208	1,217	1,123	1,019	1,027	994	937	18,923
Midlands and East of England	2,783	289	321	485	752	1,240	1,415	1,538	1,502	1,510	1,410	1,303	1,223	1,197	1,092	1,091	984	20,135
London	21,592	1,765	1,997	2,345	2,746	2,943	3,187	3,246	3,245	3,100	3,014	3,026	2,813	2,708	2,588	2,780	2,719	65,814
South of England	4,063	324	357	502	658	896	1,086	1,126	1,211	1,074	1,121	1,116	945	885	931	866	853	18,014
<b>England Total</b>	<b>32,154</b>	<b>2,687</b>	<b>3,032</b>	<b>3,727</b>	<b>4,829</b>	<b>5,946</b>	<b>6,853</b>	<b>7,181</b>	<b>7,361</b>	<b>6,926</b>	<b>6,753</b>	<b>6,662</b>	<b>6,104</b>	<b>5,809</b>	<b>5,638</b>	<b>5,731</b>	<b>5,493</b>	<b>122,886</b>
<b>Wales</b>	<b>526</b>	<b>34</b>	<b>34</b>	<b>46</b>	<b>65</b>	<b>79</b>	<b>101</b>	<b>102</b>	<b>112</b>	<b>157</b>	<b>171</b>	<b>144</b>	<b>144</b>	<b>150</b>	<b>159</b>	<b>120</b>	<b>132</b>	<b>2,276</b>
<b>Northern Ireland</b>	<b>172</b>	<b>9</b>	<b>18</b>	<b>18</b>	<b>21</b>	<b>26</b>	<b>39</b>	<b>65</b>	<b>60</b>	<b>60</b>	<b>60</b>	<b>90</b>	<b>70</b>	<b>84</b>	<b>81</b>	<b>95</b>	<b>94</b>	<b>1,062</b>
<b>Scotland</b>	<b>2,810</b>	<b>163</b>	<b>162</b>	<b>162</b>	<b>171</b>	<b>219</b>	<b>274</b>	<b>345</b>	<b>354</b>	<b>290</b>	<b>357</b>	<b>324</b>	<b>310</b>	<b>285</b>	<b>286</b>	<b>287</b>	<b>271</b>	<b>7,070</b>
<b>Channel Islands and Isle of Man</b>	<b>52</b>	<b>7</b>	<b>0</b>	<b>1</b>	<b>5</b>	<b>8</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>9</b>	<b>7</b>	<b>5</b>	<b>4</b>	<b>4</b>	<b>8</b>	<b>7</b>	<b>6</b>	<b>135</b>
<b>UK Total<sup>2</sup></b>	<b>36,003</b>	<b>2,901</b>	<b>3,248</b>	<b>3,954</b>	<b>5,101</b>	<b>6,281</b>	<b>7,280</b>	<b>7,700</b>	<b>7,892</b>	<b>7,446</b>	<b>7,351</b>	<b>7,225</b>	<b>6,634</b>	<b>6,333</b>	<b>6,173</b>	<b>6,245</b>	<b>6,000</b>	<b>133,767</b>

<sup>1</sup> Numbers will rise as further reports are received, particularly for recent years.<sup>2</sup> Includes 338 cases where region is not known and majority were children.

Appendix 6 Number and proportion of recently acquired infections at diagnosis (ascertained through the Recent Infection Testing Algorithm) by exposure category and age group: England, Wales and Northern Ireland, 2013<sup>1, 2, 3</sup>

Exposure category		15-24	25-34	35-49	50+	Total
<b>Men who have sex with men</b>	Recent infections	70	142	91	20	323
	Number RITA tested	183	415	385	92	1,075
	%	38%	34%	24%	22%	30%
	(95% CI)	(31-46)	(30-39)	(20-28)	(14-32)	(27-33)
<b>Heterosexual men</b>	Recent infections	7	14	10	8	39
	Number RITA tested	18	61	142	82	303
	%	39%	23%	7%	10%	13%
	(95% CI)	(38-83)	(13-36)	(3.4-13)	(4.3-18)	(9.3-17)
<b>Heterosexual women</b>	Recent infections	4	16	20	5	45
	Number RITA tested	40	119	141	54	354
	%	10%	13%	14%	9%	13%
	(95% CI)	(2.8-2.4)	(7.9-21)	(8.8-22)	(3.1-20)	(5.7-10)
<b>All Heterosexuals</b>	Recent infections	11	30	30	13	84
	Number RITA tested	58	180	283	136	657
	%	19%	17%	11%	10%	13%
	(95% CI)	(9.9-31.4)	(12-23)	(7.3-15)	(5.2-16)	(10-16)
<b>Total</b>	Recent infections	85	180	127	36	428
	Number RITA tested	264	645	737	266	1,912
	%	32%	28%	17%	14%	22%
	(95% CI)	(27-38)	(25-32)	(15-21)	(9.7-18)	(21-24)

<sup>1</sup> Ascertained by the Recent Infection Testing Algorithm (RITA)

<sup>2</sup> Overall, nearly 50% of new HIV diagnoses had a test for recent infection and this was similar across exposure groups.

<sup>3</sup> Data to end August 2014. From September 1<sup>st</sup> 2013 a new assay to test for recent infection was introduced which uses a different algorithm to classify recent infection.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

# Appendix 7 Numbers<sup>1</sup> of new HIV diagnoses among adults by exposure category and age group: United Kingdom, 2004–2013

Exposure category	Age group	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Men who have sex with men	15-24	251	329	313	345	348	354	359	399	447	462
	25-39	1,398	1,483	1,463	1,595	1,459	1,378	1,384	1,485	1,494	1,552
	40-49	560	593	613	625	672	691	694	651	734	625
	50+	210	235	218	269	277	323	292	304	361	308
	<b>Subtotal</b>	<b>2,419</b>	<b>2,640</b>	<b>2,607</b>	<b>2,834</b>	<b>2,756</b>	<b>2,746</b>	<b>2,729</b>	<b>2,839</b>	<b>3,036</b>	<b>2,947</b>
	<b>% 50+</b>	<b>9%</b>	<b>9%</b>	<b>8%</b>	<b>9%</b>	<b>10%</b>	<b>12%</b>	<b>11%</b>	<b>11%</b>	<b>12%</b>	<b>10%</b>
All Heterosexuals	15-24	616	571	442	415	356	282	244	182	185	152
	25-39	3,037	2,936	2,683	2,301	2,184	1,715	1,478	1,396	1,167	943
	40-49	826	874	837	895	919	838	803	752	750	601
	50+	350	411	371	397	454	436	470	485	467	439
	<b>Subtotal</b>	<b>4,829</b>	<b>4,792</b>	<b>4,333</b>	<b>4,008</b>	<b>3,913</b>	<b>3,271</b>	<b>2,995</b>	<b>2,815</b>	<b>2,569</b>	<b>2,135</b>
	<b>% 50+</b>	<b>7%</b>	<b>9%</b>	<b>9%</b>	<b>10%</b>	<b>12%</b>	<b>13%</b>	<b>16%</b>	<b>17%</b>	<b>18%</b>	<b>21%</b>
Men	15-24	95	100	83	67	73	63	62	48	50	47
	25-39	1,043	978	882	803	706	584	517	505	388	350
	40-49	420	424	426	453	461	429	387	386	361	323
	50+	204	232	202	247	247	251	262	295	247	248
	<b>Subtotal</b>	<b>1,762</b>	<b>1,734</b>	<b>1,593</b>	<b>1,570</b>	<b>1,487</b>	<b>1,327</b>	<b>1,228</b>	<b>1,234</b>	<b>1,046</b>	<b>968</b>
	<b>% 50+</b>	<b>12%</b>	<b>13%</b>	<b>13%</b>	<b>16%</b>	<b>17%</b>	<b>19%</b>	<b>21%</b>	<b>24%</b>	<b>24%</b>	<b>26%</b>
Women	15-24	521	471	359	348	283	219	182	134	135	105
	25-39	1,994	1,958	1,801	1,498	1,478	1,131	961	891	779	593
	40-49	406	450	411	442	458	409	416	366	389	278
	50+	146	179	169	150	207	185	208	190	220	191
	<b>Subtotal</b>	<b>3,067</b>	<b>3,058</b>	<b>2,740</b>	<b>2,438</b>	<b>2,426</b>	<b>1,944</b>	<b>1,767</b>	<b>1,581</b>	<b>1,523</b>	<b>1,167</b>
	<b>% 50+</b>	<b>5%</b>	<b>6%</b>	<b>6%</b>	<b>6%</b>	<b>9%</b>	<b>10%</b>	<b>12%</b>	<b>12%</b>	<b>14%</b>	<b>16%</b>
People who inject drugs	15-24	15	18	18	15	14	10	5	9	2	4
	25-39	103	125	128	116	112	94	103	81	69	62
	40-49	33	38	36	38	42	34	31	30	35	29
	50+	4	6	11	7	10	17	9	11	7	17
	<b>Subtotal</b>	<b>155</b>	<b>187</b>	<b>193</b>	<b>176</b>	<b>178</b>	<b>155</b>	<b>148</b>	<b>131</b>	<b>113</b>	<b>112</b>
	<b>% 50+</b>	<b>3%</b>	<b>3%</b>	<b>6%</b>	<b>4%</b>	<b>6%</b>	<b>11%</b>	<b>6%</b>	<b>8%</b>	<b>6%</b>	<b>15%</b>
All adults	15-24	899	939	803	819	758	704	679	653	699	736
	25-39	4,599	4,592	4,360	4,102	3,877	3,337	3,115	3,083	2,905	2,834
	40-49	1,451	1,533	1,526	1,607	1,698	1,656	1,622	1,504	1,628	1,423
	50+	587	689	631	710	798	846	846	868	970	974
	<b>Total</b>	<b>7,536</b>	<b>7,753</b>	<b>7,320</b>	<b>7,238</b>	<b>7,131</b>	<b>6,543</b>	<b>6,262</b>	<b>6,108</b>	<b>6,202</b>	<b>5,967</b>
	<b>% 50+</b>	<b>8%</b>	<b>9%</b>	<b>9%</b>	<b>10%</b>	<b>11%</b>	<b>13%</b>	<b>14%</b>	<b>14%</b>	<b>16%</b>	<b>16%</b>

<sup>1</sup> Numbers are unadjusted.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

# Appendix 8 Proportion and number<sup>1,2</sup> of newly HIV diagnosed people with a CD4<350/mm<sup>3</sup> within three months of diagnosis (late HIV diagnosis) by exposure category: United Kingdom, 2004-2013

Exposure category		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Men who have sex with men	%<350	43%	42%	42%	40%	42%	40%	38%	36%	34%	31%
	Adjusted <350 <sup>1</sup>	1,039/2,417	1,108/2,639	1,095/2,606	1,133/2,833	1,156/2,752	1,096/2,739	1,034/2,720	1,022/2,838	1,032/3,036	913/2,946
	Observed <350 <sup>2</sup>	875/2,026	936/2,218	876/2,109	975/2,434	1,001/2,360	974/2,442	937/2,459	915/2,577	929/2,738	799/2,601
Heterosexuals	%<350	64%	65%	65%	63%	63%	62%	60%	61%	60%	56%
	Adjusted <350 <sup>1</sup>	3,099/4,827	3,077/4,790	2,819/4,330	2,513/4,005	2,471/3,905	2,040/3,267	1,797/2,992	1,726/2,812	1,558/2,568	1,195/2,135
	Observed <350 <sup>2</sup>	2,488/3,875	2,513/3,888	2,218/3,411	1,941/3,105	2,005/3,164	1,753/2,811	1,587/2,641	1,498/2,442	1,314/2,173	971/1,728
Men	%<350	68%	70%	67%	67%	67%	66%	63%	67%	66%	62%
	Adjusted <350 <sup>1</sup>	1,198/1,761	1,212/1,732	1,067/1,593	1,051/1,569	995/1,485	875/1,326	774/1,228	825/1,231	690/1,046	600/968
	Observed <350 <sup>2</sup>	945/1,387	979/1,393	838/1,259	818/1,218	805/1,203	745/1,125	688/1,085	719/1,081	589/898	496/796
Women	%<350	62%	61%	64%	60%	61%	60%	58%	57%	57%	51%
	Adjusted <350 <sup>1</sup>	1,901/3,066	1,865/3,058	1,752/2,737	1,462/2,436	1,476/2,420	1,165/1,941	1,023/1,764	901/1,581	868/1,522	595/1,167
	Observed <350 <sup>2</sup>	1,543/2,488	1,534/2,495	1,380/2,152	1,123/1,887	1,200/1,961	1,008/1,686	899/1,556	779/1,361	725/1,275	475/932
People who inject drugs	%<350	62%	55%	51%	57%	47%	50%	49%	53%	63%	50%
	Adjusted <350 <sup>1</sup>	96/155	103/187	98/193	100/175	84/178	78/155	73/148	69/131	71/113	56/112
	Observed <350 <sup>2</sup>	68/110	71/130	76/149	72/126	63/135	61/123	59/121	52/98	55/88	40/80
Total	%<350	57%	57%	56%	53%	54%	52%	50%	49%	46%	42%
	Adjusted <350 <sup>1</sup>	4,292/7,530	4,416/7,747	4,094/7,311	3,828/7,223	3,842/7,114	3,392/6,523	3,122/6,243	2,988/6,097	2,852/6,199	2,504/5,961
	Observed <350 <sup>2</sup>	3,459/6,053	3,557/6,292	3,226/5,754	3,056/5,763	3,165/5,810	2,896/5,566	2,679/5,377	2,555/5,267	2,401/5,177	1,956/4,704

<sup>1</sup> Numbers have been adjusted for missing exposure information and missing CD4 counts.

<sup>2</sup> New diagnoses are matched to the CD4 surveillance scheme and 78% had a CD4 cell count available within 14 days prior to and 91 days after diagnosis date.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

## Appendix 9 Number of people living with diagnosed HIV infection by gender and age group seen for care: United Kingdom, 2004-2013

Gender <sup>1</sup>	Age group <sup>1</sup>	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Men</b>	<15	418	468	455	470	470	442	406	374	364	310
	15-24	735	882	1,037	1,102	1,160	1,212	1,304	1,427	1,530	1,704
	25-34	6,305	6,543	6,808	7,085	7,354	7,520	7,684	7,914	8,314	8,763
	35-49	15,670	17,588	19,492	21,217	22,761	24,188	25,161	26,223	26,896	27,443
	>50	4,424	5,158	5,982	7,077	8,284	9,646	11,338	13,066	14,923	16,980
	<b>Total</b>	<b>27,552</b>	<b>30,639</b>	<b>33,774</b>	<b>36,951</b>	<b>40,029</b>	<b>43,008</b>	<b>45,893</b>	<b>49,004</b>	<b>52,027</b>	<b>55,200</b>
<b>Women</b>	<15	418	459	478	506	498	454	451	435	409	333
	15-24	1,083	1,210	1,235	1,198	1,192	1,150	1,117	1,052	985	995
	25-34	5,302	5,904	6,351	6,446	6,514	6,336	6,008	5,791	5,431	4,981
	35-49	5,936	7,219	8,350	9,512	10,793	11,851	12,892	13,869	14,544	15,073
	>50	862	1,088	1,342	1,602	1,991	2,399	2,916	3,476	4,193	4,930
	<b>Total</b>	<b>13,601</b>	<b>15,880</b>	<b>17,756</b>	<b>19,264</b>	<b>20,988</b>	<b>22,190</b>	<b>23,384</b>	<b>24,623</b>	<b>25,562</b>	<b>26,312</b>
<b>Total</b>		<b>41,153</b>	<b>46,519</b>	<b>51,530</b>	<b>56,215</b>	<b>61,017</b>	<b>65,198</b>	<b>69,277</b>	<b>73,627</b>	<b>77,589</b>	<b>81,512</b>

<sup>1</sup> Numbers are unadjusted.

Note: Appendices show actual numbers. Numbers presented in text are rounded.



# Appendix 10 Numbers<sup>1</sup> of adults living with diagnosed HIV by risk group and age group: UK, 2004–2013

Exposure category	Age group	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Men who have sex with men	15-24	450	575	670	739	731	736	799	880	958	1,013
	25-39	8,350	8,705	9,043	9,465	9,694	9,875	10,217	10,520	10,864	11,354
	40-49	6,156	7,170	8,216	9,137	10,015	10,890	11,539	12,183	12,837	13,134
	50+	2,973	3,431	3,956	4,656	5,390	6,212	7,281	8,360	9,490	10,730
	<b>Subtotal</b>	<b>17,929</b>	<b>19,881</b>	<b>21,885</b>	<b>23,997</b>	<b>25,830</b>	<b>27,713</b>	<b>29,836</b>	<b>31,943</b>	<b>34,149</b>	<b>36,231</b>
	<b>% 50+</b>	<b>17%</b>	<b>17%</b>	<b>18%</b>	<b>19%</b>	<b>21%</b>	<b>22%</b>	<b>24%</b>	<b>26%</b>	<b>28%</b>	<b>30%</b>
All Heterosexuals	15-24	1,151	1,241	1,242	1,150	1,080	965	880	760	643	584
	25-39	11,741	13,267	14,191	14,678	15,026	14,966	14,509	14,431	13,787	13,013
	40-49	5,062	6,182	7,521	8,782	10,242	11,508	12,831	13,933	14,902	15,579
	50+	2,055	2,517	3,012	3,610	4,372	5,201	6,266	7,351	8,636	9,993
	<b>Subtotal</b>	<b>20,009</b>	<b>23,207</b>	<b>25,966</b>	<b>28,220</b>	<b>30,720</b>	<b>32,640</b>	<b>34,486</b>	<b>36,475</b>	<b>37,968</b>	<b>39,169</b>
	<b>% 50+</b>	<b>10%</b>	<b>11%</b>	<b>12%</b>	<b>13%</b>	<b>14%</b>	<b>16%</b>	<b>18%</b>	<b>20%</b>	<b>23%</b>	<b>26%</b>
Men	15-24	175	168	180	162	160	153	152	139	132	147
	25-39	3,706	4,017	4,131	4,151	4,106	4,028	3,830	3,784	3,543	3,338
	40-49	2,391	2,863	3,462	3,964	4,497	4,964	5,321	5,689	5,955	6,099
	50+	1,238	1,480	1,738	2,086	2,495	2,930	3,505	4,056	4,654	5,321
	<b>Subtotal</b>	<b>7,510</b>	<b>8,528</b>	<b>9,511</b>	<b>10,363</b>	<b>11,258</b>	<b>12,075</b>	<b>12,808</b>	<b>13,668</b>	<b>14,284</b>	<b>14,905</b>
	<b>% 50+</b>	<b>16%</b>	<b>17%</b>	<b>18%</b>	<b>20%</b>	<b>22%</b>	<b>24%</b>	<b>27%</b>	<b>30%</b>	<b>33%</b>	<b>36%</b>
Women	15-24	175	168	180	162	160	153	152	139	132	147
	25-39	3,706	4,017	4,131	4,151	4,106	4,028	3,830	3,784	3,543	3,338
	40-49	2,391	2,863	3,462	3,964	4,497	4,964	5,321	5,689	5,955	6,099
	50+	1,238	1,480	1,738	2,086	2,495	2,930	3,505	4,056	4,654	5,321
	<b>Subtotal</b>	<b>7,510</b>	<b>8,528</b>	<b>9,511</b>	<b>10,363</b>	<b>11,258</b>	<b>12,075</b>	<b>12,808</b>	<b>13,668</b>	<b>14,284</b>	<b>14,905</b>
	<b>% 50+</b>	<b>16%</b>	<b>17%</b>	<b>18%</b>	<b>20%</b>	<b>22%</b>	<b>24%</b>	<b>27%</b>	<b>30%</b>	<b>33%</b>	<b>36%</b>
People who inject drugs	15-24	30	29	30	27	27	27	15	16	10	13
	25-39	584	567	531	521	521	551	535	535	509	483
	40-49	601	674	708	733	725	715	727	734	700	699
	50+	107	117	142	177	229	268	296	356	417	491
	<b>Subtotal</b>	<b>1,322</b>	<b>1,387</b>	<b>1,411</b>	<b>1,458</b>	<b>1,502</b>	<b>1,561</b>	<b>1,573</b>	<b>1,641</b>	<b>1,636</b>	<b>1,686</b>
	<b>% 50+</b>	<b>8%</b>	<b>8%</b>	<b>10%</b>	<b>12%</b>	<b>15%</b>	<b>17%</b>	<b>19%</b>	<b>22%</b>	<b>25%</b>	<b>29%</b>
All adults <sup>2</sup>	15-24	1,818	2,092	2,272	2,300	2,352	2,362	2,421	2,479	2,515	2,699
	25-39	21,129	22,955	24,230	25,221	25,950	26,184	26,023	26,262	25,997	25,941
	40-49	12,084	14,299	16,771	19,039	21,472	23,711	25,722	27,535	29,188	30,319
	50+	5,286	6,246	7,324	8,679	10,275	12,045	14,254	16,542	19,116	21,910
	<b>Total</b>	<b>40,317</b>	<b>45,592</b>	<b>50,597</b>	<b>55,239</b>	<b>60,049</b>	<b>64,302</b>	<b>68,420</b>	<b>72,818</b>	<b>76,816</b>	<b>80,869</b>
	<b>% 50+</b>	<b>13%</b>	<b>14%</b>	<b>14%</b>	<b>16%</b>	<b>17%</b>	<b>19%</b>	<b>21%</b>	<b>23%</b>	<b>25%</b>	<b>27%</b>

<sup>1</sup> Numbers are unadjusted.<sup>2</sup> Includes adults without exposure reported.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

# Appendix 11 Proportion and number<sup>1</sup> of people living with diagnosed HIV infection receiving antiretroviral therapy by CD4 count: United Kingdom, 2004-2013

		2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
<b>Proportion receiving antiretroviral therapy</b>		<b>69%</b>	<b>71%</b>	<b>74%</b>	<b>75%</b>	<b>79%</b>	<b>81%</b>	<b>84%</b>	<b>86%</b>	<b>88%</b>	<b>90%</b>
Adjusted <sup>1</sup>	Numerator	28,244	33,131	38,331	42,042	48,065	53,108	58,414	63,466	68,367	73,292
	Denominator	41,157	46,523	51,531	56,215	61,017	65,198	69,277	73,627	77,590	81,512
Observed	Numerator	27,799	32,712	37,302	41,593	47,904	52,633	57,919	63,334	68,148	73,111
	Denominator	40,508	45,934	50,148	55,614	60,812	64,615	68,690	73,474	77,341	81,311
<b>Proportion with CD4 &lt;350 receiving antiretroviral therapy</b>		<b>75%</b>	<b>76%</b>	<b>77%</b>	<b>79%</b>	<b>84%</b>	<b>86%</b>	<b>89%</b>	<b>90%</b>	<b>91%</b>	<b>92%</b>
Adjusted <sup>1</sup>	Numerator	12,410	13,776	14,082	14,512	14,732	14,357	13,912	14,362	13,449	13,281
	Denominator	16,621	18,144	18,336	18,462	17,612	16,680	15,668	15,968	14,750	14,410
Observed	Numerator	11,302	12,621	12,820	13,007	13,684	12,991	12,716	13,661	12,247	11,621
	Denominator	15,137	16,622	16,693	16,547	16,359	15,093	14,321	15,189	13,431	12,609

<sup>1</sup> Numbers have been adjusted for missing treatment and CD4 information.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

Appendix 12A Upper Tier Local Authorities with a prevalence of diagnosed HIV infection  $\geq 2$  per 1,000 population (aged 15-59 years) and breakdown of most-affected sub-population: London, 2013

Upper Tier Local Authority	Number living with diagnosed HIV infection (aged 15-59)	Estimated resident population in 1,000s <sup>1</sup> (aged 15-59)	Diagnosed HIV prevalence per 1,000 (aged 15-59)	Proportion of MSM among people living with diagnosed HIV infection (aged 15-59)	Proportion of black Africans among people living with diagnosed HIV infection (aged 15-59)
Lambeth	3,342	227	14.70	69%	19%
Southwark	2,692	213	12.63	58%	30%
City of London	57	5	10.86	91%	1.8%
Kensington and Chelsea	928	103	9.00	76%	12%
Westminster	1,382	157	8.80	73%	13%
Islington	1,328	157	8.47	71%	17%
Camden	1,303	158	8.26	72%	15%
Lewisham	1,578	193	8.18	39%	42%
Hackney	1,467	181	8.11	50%	32%
Hammersmith and Fulham	1,008	126	8.01	67%	18%
Haringey	1,241	180	6.88	44%	39%
Newham	1,432	218	6.57	25%	58%
Tower Hamlets	1,260	197	6.39	74%	15%
Barking and Dagenham	720	119	6.07	10.4%	72%
Greenwich	1,029	172	5.98	34%	54%
Croydon	1,175	232	5.07	25%	54%
Wandsworth	1,114	221	5.05	64%	23%
Waltham Forest	843	174	4.84	48%	34%
Enfield	844	198	4.26	17%	61%
Brent	886	208	4.25	34%	39%
Merton	557	132	4.23	35%	48%
Hounslow	632	171	3.70	40%	38%
Ealing	715	222	3.23	47%	31%
Barnet	686	229	3.00	32%	43%
Redbridge	498	179	2.78	23%	53%
Hillingdon	465	180	2.58	29%	46%
Bexley	355	140	2.53	22%	64%
Bromley	468	187	2.50	45%	35%
Sutton	297	120	2.48	22%	53%
Richmond upon Thames	279	117	2.38	64%	18%
Harrow	330	150	2.21	23%	47%
Kingston upon Thames	225	107	2.10	46%	37%

<sup>1</sup> 2013 mid-year population estimates from ONS

Appendix 12B Upper Tier Local Authorities with a prevalence of diagnosed HIV infection  $\geq 2$  per 1,000 population (aged 15-59 years) and breakdown of most-affected sub-population: outside London, 2013

Upper Tier Local Authority	Residents receiving HIV-related care (aged 15-59)	Estimated resident population in 1,000s <sup>1</sup> (aged 15-59)	Diagnosed HIV prevalence per 1,000 (aged 15-59)	Proportion of MSM among people living with diagnosed HIV infection (aged 15-59)	Proportion of black Africans among people living with diagnosed HIV infection (aged 15-59)
Brighton and Hove	1,487	187	7.96	84%	7.8%
Manchester	2,025	351	5.76	53%	38%
Salford	711	149	4.78	67%	25%
Luton	526	129	4.07	15%	67%
Slough	335	91	3.69	21%	59%
Leicester	752	213	3.53	14%	65%
Blackpool	279	81	3.44	82%	1.4%
Reading	340	104	3.26	24%	57%
Coventry	641	205	3.12	11%	67%
Southend-on-Sea	305	102	2.99	18%	66%
Bournemouth	341	117	2.91	65%	18%
Milton Keynes	453	157	2.89	14%	22%
Wolverhampton	393	150	2.63	19%	63%
Birmingham	1,698	669	2.54	37%	43%
Nottingham	502	208	2.41	23%	52%
Leeds	1,138	476	2.39	29%	55%
Sandwell	421	187	2.25	26%	50%
Bedford	207	95	2.17	19%	62%
Thurrock	205	98	2.10	18%	68%
Southampton	320	159	2.01	37%	44%

<sup>1</sup> 2013 mid-year population estimates from ONS

Appendix 13 HIV test coverage<sup>1</sup> by gender, male sexual orientation, and age group: England, 2013

			HIV test				
			STI clinic attendees <sup>2</sup>	Offered	Tested	Offered %	Coverage %
Gender		Age group					
Men (by sexual orientation)	Heterosexual	<15	809	604	394	75	49
		15-19	63,873	58,137	47,109	91	74
		20-24	139,942	128,672	109,136	92	78
		25-34	172,922	157,926	136,234	91	79
		35-44	70,632	62,925	53,497	89	76
		45-64	49,812	43,144	36,438	87	73
		65+	5,046	3,944	3,259	78	65
		Subtotal <sup>3</sup>	503,066	455,369	386,081	91	77
	Men who have sex with men	<15	63	53	50	84	79
		15-19	6,593	6,111	5,865	93	89
		20-24	18,169	16,774	16,213	92	89
		25-34	32,879	30,028	28,975	91	88
		35-44	18,651	16,495	15,679	88	84
		45-64	14,091	12,012	11,203	85	80
		65+	1,579	1,328	1,259	84	80
		Subtotal <sup>3</sup>	92,037	82,809	79,252	90	86
	All men	<15	951	678	461	71	48
		15-19	73,519	66,344	54,740	90	74
		20-24	164,672	150,457	129,778	91	79
		25-34	215,275	195,022	171,571	91	80
		35-44	93,735	82,493	71,875	88	77
		45-64	67,107	57,205	49,432	85	74
		65+	6,956	5,449	4,678	78	67
		Subtotal <sup>3</sup>	622,463	557,773	482,605	90	78
Women <sup>4</sup>		<15	6,686	4,970	3,122	74	47
		15-19	166,056	138,131	100,477	83	61
		20-24	214,973	183,301	147,180	85	68
		25-34	225,993	187,345	153,552	83	68
		35-44	86,333	69,421	55,248	80	64
		45-64	47,989	37,579	30,011	78	63
		65+	2,453	1,435	1,083	58	44
		Subtotal <sup>3</sup>	750,925	622,442	490,831	83	65
Total		<15	7,641	5,649	3,584	74	47
		15-19	239,626	204,510	155,248	85	65
		20-24	379,729	333,810	277,004	88	73
		25-34	441,370	382,437	325,186	87	74
		35-44	180,113	151,943	127,150	84	71
		45-64	115,120	94,798	79,454	82	69
		65+	9,409	6,884	5,761	73	61
		Total <sup>3</sup>	1,373,701	1,180,416	973,615	86	71

<sup>1</sup> HIV test coverage measures the percentage of eligible new GUM attendees in whom a HIV test was accepted. An eligible new GUM attendee is defined as a patient attending a GUM clinic at least once during a calendar year. People known to be HIV positive, or for whom a HIV test was not appropriate, are excluded. HIV test uptake (in Appendix 14) measures the number of eligible new GUM episodes where a HIV test was accepted as a percentage of those where a HIV test was offered. An eligible new GUM episode is defined as a visit to a GUM clinic including all subsequent GUM attendances in the following six weeks. Attendances by known HIV positive patients, or where a HIV test was not appropriate, are excluded.

<sup>2</sup> Defined as a visit to an STI clinic including all subsequent STI attendances during the following six weeks.

<sup>3</sup> Include individuals without age reported.

<sup>4</sup> Include heterosexual women and women who have sex with men. In text, the 67% (470,760/705,690) coverage was among heterosexual women.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

Appendix 14 HIV test uptake<sup>1</sup> by gender, male sexual orientation, and age group: England, 2013

			HIV test				
Gender		Age group	New STI episode <sup>2</sup>	Offered	Tested	Offered %	Uptake %
Men (by sexual orientation)	Heterosexual	<15	970	685	446	71	65
		15-19	78,580	67,459	52,993	86	79
		20-24	168,812	145,620	120,152	86	83
		25-34	204,695	175,297	147,929	86	84
		35-44	83,707	68,709	57,295	82	83
		45-64	60,280	46,775	38,828	78	83
		65+	6,560	4,270	3,481	65	82
		Subtotal <sup>3</sup>	603,643	508,835	421,141	84	83
	Men who have sex with men	<15	91	67	62	74	93
		15-19	9,751	8,021	7,620	82	95
		20-24	26,250	21,927	20,996	84	96
		25-34	47,968	39,921	38,177	83	96
		35-44	27,020	21,467	20,215	79	94
		45-64	20,398	15,110	13,951	74	92
		65+	2,285	1,631	1,521	71	93
		Subtotal <sup>3</sup>	133,778	108,155	102,553	81	95
	All men	<15	1,144	773	525	68	68
		15-19	91,738	77,749	62,497	85	80
		20-24	202,246	172,852	145,790	85	84
		25-34	263,063	222,650	192,733	85	87
		35-44	115,633	93,366	80,286	81	86
		45-64	84,312	64,031	54,632	76	85
		65+	9,237	6,090	5,167	66	85
		Subtotal <sup>3</sup>	767,680	637,659	541,707	83	85
Women <sup>4</sup> (including women how have sex with women)		<15	9,814	6,525	3,775	66	58
		15-19	223,879	169,686	116,792	76	69
		20-24	272,263	214,723	165,999	79	77
		25-34	278,490	213,708	169,782	77	79
		35-44	105,306	77,399	59,925	73	77
		45-64	58,810	41,036	32,113	70	78
		65+	3,279	1,529	1,130	47	74
		Subtotal <sup>3</sup>	952,413	724,916	549,695	76	76
Total		<15	10,962	7,299	4,301	67	59
		15-19	315,669	247,471	179,321	78	72
		20-24	474,596	387,628	311,835	82	80
		25-34	541,663	436,429	362,578	81	83
		35-44	220,988	170,796	140,239	77	82
		45-64	143,149	105,081	86,756	73	83
		65+	12,516	7,619	6,297	61	83
		Total <sup>3</sup>	1,720,426	1,362,781	1,091,583	79	80

<sup>1</sup> HIV test uptake measures the number of eligible new GUM episodes where a HIV test was accepted as a percentage of those where a HIV test was offered. An eligible new GUM episode is defined as a visit to a GUM clinic including all subsequent GUM attendances in the following six weeks. Attendances by known HIV positive patients, or where a HIV test was not appropriate, are excluded. HIV test coverage (in Appendix 13) measures the percentage of eligible new GUM attendees in whom a HIV test was accepted. An eligible new GUM attendee is defined as a patient attending a GUM clinic at least once during a calendar year. People known to be HIV positive, or for whom a HIV test was not appropriate, are excluded.

<sup>2</sup> Defined as a visit to an STI clinic including all subsequent STI attendances during the following six weeks.

<sup>3</sup> Include individuals without age reported.

<sup>4</sup> Include heterosexual women and women who have sex with women. In text, the 67% (470,760/705,690) coverage was among heterosexual women.

Note: Appendices show actual numbers. Numbers presented in text are rounded.

# Appendix 15 Number of contacts and HIV diagnoses made through partner notification at STI clinics by risk group: England, 2012 and 2013

Gender & sexual orientation	Number of PN contacts		Number of PN contacts tested (a)		Number of PN contacts diagnosed (b)		Percentage of PN contacts diagnosed (b/a) %	
	2012	2013	2012	2013	2012	2013	2012	2013
<b>Male (total)</b>	<b>1,340</b>	<b>1,592</b>	<b>1,114</b>	<b>1,296</b>	<b>106</b>	<b>79</b>	<b>9.5</b>	<b>6.1</b>
Heterosexual	441	540	387	461	25	15	6.5	3.3
Men who have sex with men	877	1,018	709	810	78	60	11.0	7.4
<b>Female (total)</b>	<b>373</b>	<b>443</b>	<b>271</b>	<b>385</b>	<b>27</b>	<b>25</b>	<b>10</b>	<b>6.5</b>
Heterosexual	362	421	266	365	27	23	10.2	6.3
Women who have sex with women	4	4	2	4	0	0	0.0	0.0
<b>Ethnicity</b>								
White	1,084	1,351	913	1,133	64	64	7.0	5.6
Black or Black British	296	351	215	281	28	17	13	6.0
Asian or Asian British	67	84	57	70	2	4	3.5	5.7
Mixed	75	83	64	69	3	5	4.7	7.2
Other ethnic groups	52	54	39	42	9	3	23	7.1
Unknown	139	112	97	86	27	11	28	13
<b>Total</b>	<b>1,713</b>	<b>2,035</b>	<b>1,385</b>	<b>1,681</b>	<b>133</b>	<b>104</b>	<b>9.6</b>	<b>6.2</b>

Note: Appendices show actual numbers. Numbers presented in text are rounded.