

## HIV in Westminster

### Introduction

This paper provides a description of the epidemiology of HIV in Westminster, with aim of informing future commissioning decisions. The paper uses information from national surveillance systems, to provide a picture of the current situation.

### Key Points

- HIV is a major national challenge, and particularly one for Westminster. Westminster has the third highest number of people diagnosed and accessing care out of all the London Boroughs.
- North West London (NWL) has a significant proportion of the annual new diagnosis in England in 2007 (13%, 950 diagnoses). The number of new diagnoses may be showing signs of stabilising, but there is not a decline. The majority of new diagnoses were to men who have sex with men (MSM) in NWL, which was different to London and England as a whole.
- In 2006 it was estimated that Westminster had the lowest proportion of people who were diagnosed with HIV late (19%) in London. This may be due to the greater proportion of those diagnosed being within the MSM group where there are lower rates of late diagnosis. However, other PCTs with a similar level of MSM diagnoses have significantly higher proportions of later diagnosis. This could suggest that in Westminster residents are seeking testing regularly or when they have been at particular risk.
- In 2007, 1,248 people in Westminster were diagnosed with and accessing care for HIV. Over the last five years there has been a 30% increase in the numbers of people diagnosed and accessing care who live in Westminster, this increase is proportionally less than in London and England as a whole.
- In 2007, 70% of people diagnosed and accessing care had their route of transmission identified as MSM, and 21% through heterosexual sex. This is different to the proportions in London (47% MSM, 46% heterosexual) and England (42% MSM, 50% heterosexual). This reflects the population of Westminster particularly the LGBT population. This has implications for prevention and service provision strategies.
- The people in Westminster who are diagnosed and accessing care for HIV are resident in areas across Westminster in varying concentrations. The Middle Layer Super Output Area that covers Soho and Fitzrovia has the greatest number of people at 155. This could inform local service provision, especially when considering the shift in care from the acute to community sector.
- It is likely that the pool of people diagnosed and accessing care in Westminster will grow, even as the number of new diagnoses stabilises.

### Overview of HIV in the UK

Since the beginning of the HIV/AIDS epidemic in the early 1980's, approximately 86,577 people have been diagnosed with the disease in the UK. In 2006 a total of 73,000 people were living with HIV in the UK, with around a third of them unaware of their infection.

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Key prevention groups have been identified who have a greater risk of contracting HIV. The two groups which represent the majority of people with HIV are men who have sex with men (MSM), estimated to represent 41% of those living with HIV, and heterosexuals who were born in Sub-Saharan Africa representing 35% of those living with HIV. Other key prevention groups are injecting drug users (IDU), and people who received blood or blood products.

In the UK there has been year on year increase in the numbers of people newly diagnosed (182% increase from 1997-2006) and living with HIV (a 224% increase from 1997-2006). This increase is attributed to advances in treatment allowing people to live longer with the disease, sustained levels of newly acquired infections in MSM, further diagnoses among heterosexuals who acquired their infection in Africa and cases being picked up earlier through increased awareness and access to testing (HPA, 2006).

HIV remains a major challenge in the UK as a result of its serious morbidity, high costs of treatment and care, significant mortality and high number of potential years of life lost. Despite the number of new diagnosis being thought to stabilise there is no indication that measures to reduce the transmission of the infection have succeeded. This has a significant impact for funding of services as the pool of people requiring care will continue to increase.

## **New Diagnosis**

### *Overview*

Information about the numbers of new diagnoses of HIV is useful as it indicates trends in transmission and also how many people will require care. The number of new diagnoses does not tell us the total number of people who become HIV positive in a year or incidence<sup>1</sup> as it will include those who have an existing infection (which may have been symptom free) as well as those who are newly diagnosed.

Information regarding the number of new diagnoses is recorded across the UK to produce estimations. This brief analysis will consider the numbers newly diagnosed within North West London as a whole, as PCT of residence is not collected for new diagnoses and will therefore not be completely representative. As will be explained later in the paper, the distribution of routes of transmission in Westminster are different to London as a whole, and are therefore likely to be different to the north west sector. The main difference is the greater representation of MSM in the HIV positive population in Westminster compared to other areas.

### *Numbers newly diagnosed*

In 2007, 7,109 persons were estimated to be newly diagnosed with HIV in England, of which just under half (3,175) were in London and 950 were in North West London (NWL), 13% of all new diagnoses in England. The figure for NWL is 7% higher than it was in 2003 (882 diagnosis) and 42% higher than in 1997 (536 diagnosis). Nationally, the number of new diagnoses for HIV is thought to have stabilised (HPA, 2007), and this

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<sup>1</sup> incidence is a measure of the number of new cases of a disease that develops in a population of persons at risk during a specified time period.

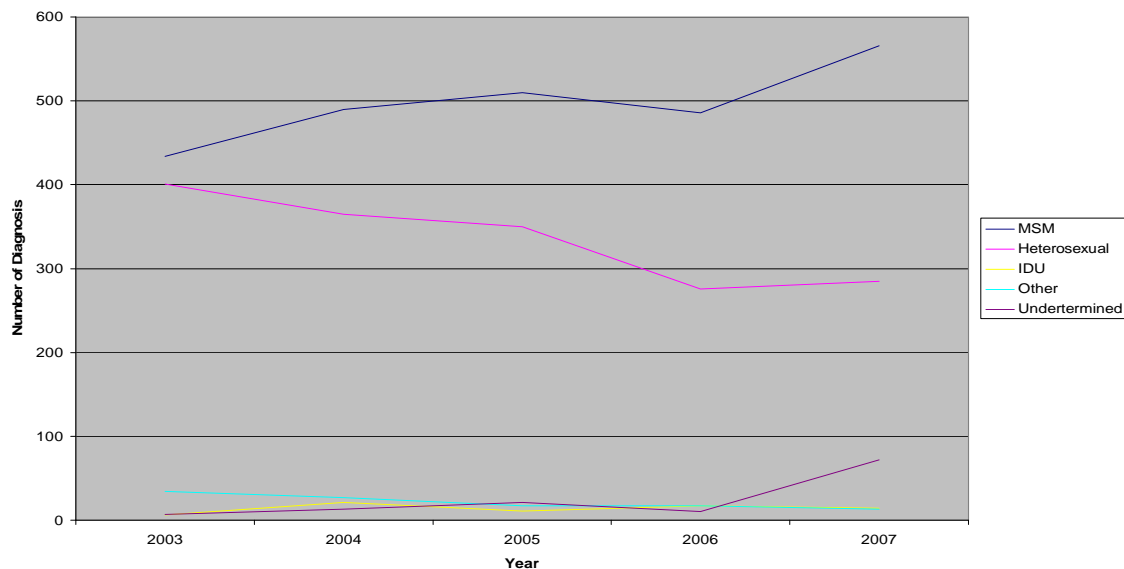
is possibly the case in North West London as well as trends over time have some similarities (see diagram 1).

*Probable routes of transmission and world region of infection*

Of the estimated new diagnosis in NWL in 2007 60% were to MSM (34% in England, 38% in London), of which 41% were thought to been infected in the UK, 41% of the place of infection were unknown and 18% abroad. In the UK over 80% of men with a new diagnosis with a probable route of transmission of MSM are thought to have acquired their infection in the UK. Of the 30% of new diagnosis that were thought to have been transmitted through heterosexual contact (47% in England, and 40% in London) the pattern of region of infection was different with 44% attributed to Africa, 21% to the UK and 11% to other areas.

The graph below presents the trends in NW London for new diagnosis. This shows that there has not been a clear trend over the last five years. There has been an overall increase in MSM new diagnosis, and a decrease attributed to heterosexual contact. The decrease in heterosexual attributed contact is attributable to a reduction in the number of people who gained the infection in Africa.

**Diagram 1 – Newly Diagnosed HIV by Route of Transmission in North West London 2003-2007**



**Late Diagnosis**

A number of sources of information are brought together to estimate the numbers of people who are diagnosed late. Late diagnosis is defined as a CD4 count less than 200 cells per mm<sup>3</sup>, which indicates an average of about 8 years of infection prior to therapy. Earlier diagnosis of HIV is preferable because it can reduce the risk of AIDS and death, allow those diagnosed to change behaviors and if antivirals are taken at an earlier stage, reduce infectivity.

In Westminster 19% of those newly diagnosed with HIV in 2005-2006 had a CD4 count of less than 200. This is the lowest of all London boroughs, the proportion is estimated to be 29% for North West London and 33% for London as a whole. This may reflect a number of factors, including the differences patterns or routes of transmission. In Westminster there is a greater proportion of those with HIV who are diagnosed and accessing care (and likely to be newly diagnosed) who are MSM, compared to the wider geographical areas. MSM groups have been found to have a lower percentage of diagnoses which are categorised as late (20% in UK in 2006). In the wider areas there are a greater proportion of people who contract the infection through heterosexual contact, which is known to have a greater proportion of people who are diagnosed late (36% in women and 43% men in UK in 2006). This is likely to be a result of the number of people who acquired their infection abroad and several years before they were diagnosed in the UK (HPA, 2007) However, other PCTs with a similar level of MSM diagnosis have significantly higher proportions of later diagnosis.

### **Diagnosed and Accessing Care**

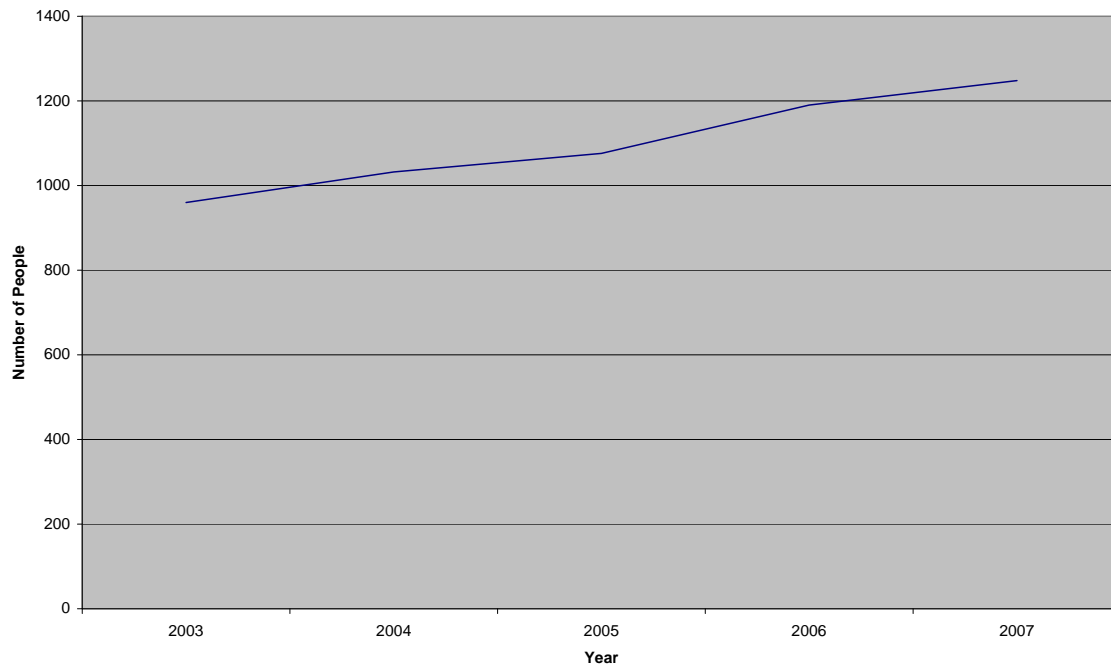
The Survey of Prevalent HIV Infections Diagnosed (SOPHID), collects information regarding the number of persons accessing HIV-related treatment or care. This data is available by PCT of residence. This does not provide information regarding the total number of people who are HIV positive in Westminster, as not all people living with HIV will have a diagnosis.

In 2007, 1,248 people in Westminster were diagnosed with and accessing care for HIV. This gives a rate of 608 people diagnosed per 100,000 population aged 15 and over. This rate is higher than London at 406 and England at 213. Rates in Westminster are slightly lower than their neighbouring boroughs, for example Kensington and Chelsea (660), Hammersmith and Fulham (663), Camden (624) and Islington (724). However, the actual number of people with a diagnosis is higher in Westminster than the other boroughs.

Over the last five years there has been a 30% increase in the numbers of people diagnosed and accessing care who live in Westminster (see diagram 2). The rates of increase in Westminster have a similar trajectory. This increase has been mirrored across England (55% increase) and London (33% increase). This suggests that the concentration of people accessing care in Westminster might be becoming less apparent as areas elsewhere in the country have had greater proportional increases.

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**Diagram 2 –Numbers of people with diagnosed and care for with HIV by 2003-2007**



*Route of probable infection*

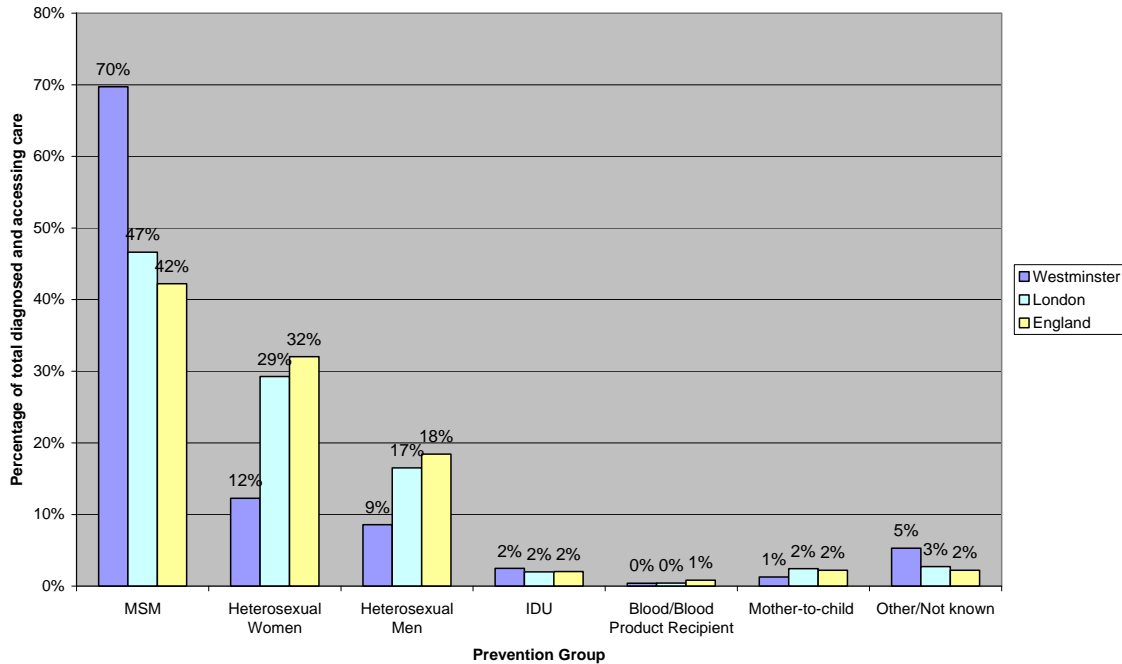
In Westminster 70% of people diagnosed and receiving care are where the probable route of infection was attributed to MSM, a total of 21% of transmissions of the infection were thought to have been through heterosexual sex (12% heterosexual women 9% heterosexual men). The other routes of infection accounted for less than 3% each. This distribution of probable routes of infection in Westminster differs from London and England as a whole. In Westminster the proportion of infections attributed to MSM transmission is much higher at 70%, than in London at 47% and 42% in England as a whole. In contrast, the infections attributed to heterosexual sex represent 46% in London and 50% in England as a whole, compared to 21% in Westminster. It is also worth noting that in Westminster the proportion of women and men whose probable source of transmission is identified as heterosexual sex is similar (12% vs 9%), whereas across London and England the difference is greater (29%vs 17% in London and 32% vs 18% in England). The other routes represent a similar burden of the total diagnosed and cared for population.

This pattern reflects the demographics in Westminster, although the exact population size of the gay community in Westminster is not known they are a key part of the borough's population are likely to represent a bigger part of our population than other parts of the country. Also, the Sub-Saharan population in Westminster is not known to be particularly large compared to other places in the country. Thus the balance of routes of transmission in Westminster is focussed on MSM. However, as the actual numbers in Westminster are higher than other areas, this means there are still significant numbers of people who contracted the infection through heterosexual contact and this should still be taken into consideration.

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This has implications for models of service provision and health promotion in the Borough. It may also have an impact in the future, if changes in the rates of transmission occur in particular groups.

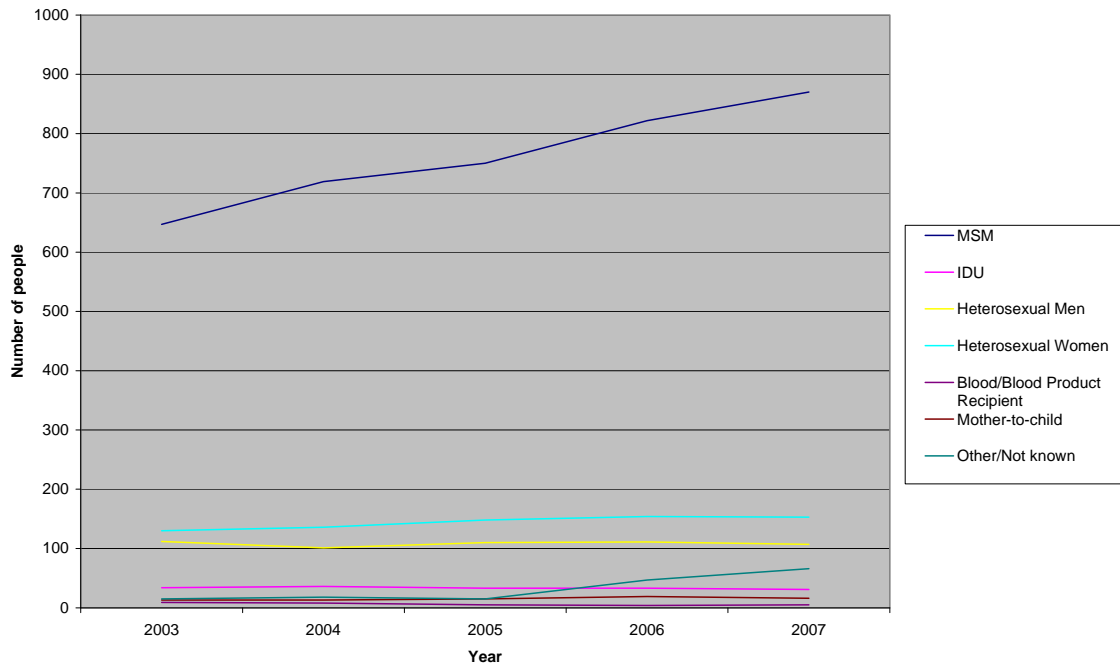
**Diagram 3 –Proportions of total diagnosed and accessing care by route of transmission 2007**



The graph below presents the trends in the numbers of people who have diagnosed HIV by routes of transmission. As noted earlier there has been a 30% increase overall since 2003. The categories of MSM, heterosexual women, mother to child and other/not known have experienced a proportional increase in the number of people accessing care. The greatest increase was an over a 3 fold increase for the other/not known category. However, there are relatively small numbers falling under this category, the increase of 34% in the MSM category is more significant.

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**Diagram 4 –Total number of people diagnosed and accessing care by routes of transmission 2003-2007**



The table below presents a comparison between Westminster, London and England regarding the percentage increase in numbers of people diagnosed and being cared for. This shows that Westminster has had a similar level of increase as London, but a much lower increase than England as a whole. The patterns across the different routes of transmission groups are also different. Westminster has a slightly higher proportional increase in the numbers diagnosed and accessing care in the MSM category but lower than England. Westminster is also different in that it has seen a much lower proportional increase in diagnosis where the infection was transmitted through sex between men and women. This may be as a result of the different populations, potentially because Westminster has a proportionally small population that was born in Sub-Saharan Africa. Also Westminster's population has a younger overall population structure than other areas; this may reduce the cumulative effect of diagnoses making this population proportionally smaller. Westminster has also seen a different pattern of change in IDU, blood product recipient and mother to child, although the smaller numbers may make these differences less significant. All areas have seen a sizable increase in the numbers where the route of transmission is classed as other or not known.

This suggests in the future that for those being diagnosed and care for in Westminster, the main driver for increase in numbers will continue to be as a result of MSM transmission.

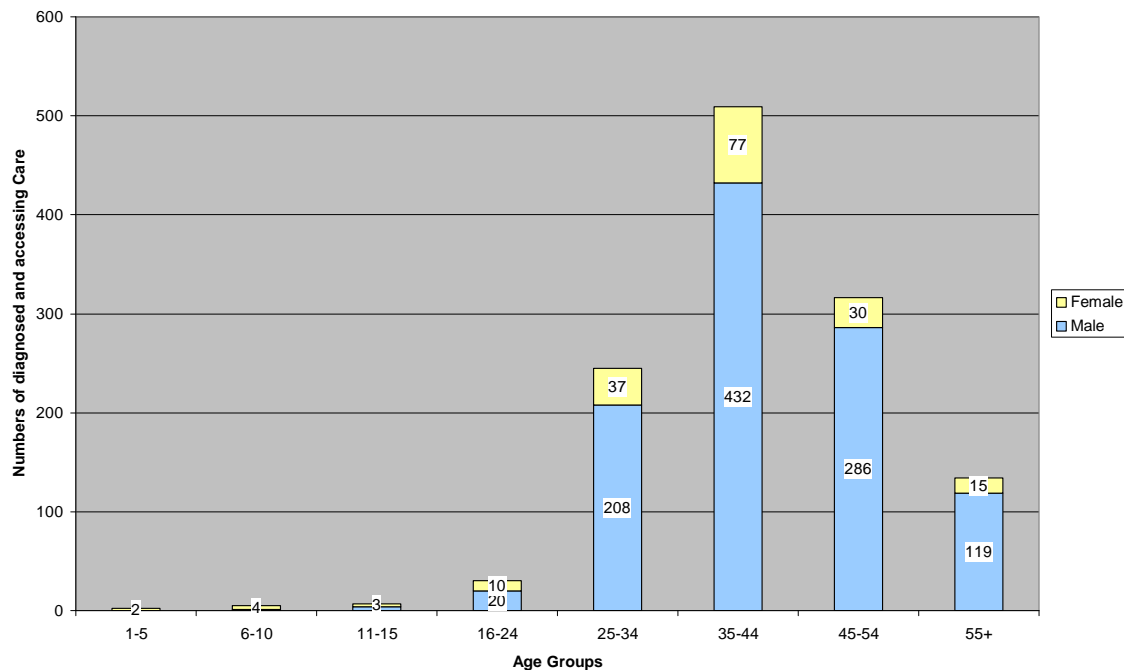
**Table 1- Proportional change in numbers diagnosed and accessing care 2003-2007**

	MSM	Sex men and Women	IDU	Blood/Blood Product Recipient	Mother-to-child	Other/Not known	Total
<b>Westminster</b>	34%	7%	-9%	-44%	23%	340%	30%
<b>London</b>	29%	35%	5%	-12%	26%	212%	33%
<b>England</b>	44%	64%	18%	2%	48%	258%	55%

*Age and Gender*

The majority of people diagnosed and accessing care in Westminster are men (86%), reflecting general pattern in Westminster. For both sexes the age group with the greatest number of people with a diagnosis and accessing is the 35-44 year old age groups; 41% of all diagnoses are in this group. This increase in numbers between the 16-24 year old age group suggests that people do contract the illness earlier on in adult life, and that these are key times for preventative action.

**Diagram 5 –Number of people diagnosed and accessing care by sex and age 2007.**



*Ethnicity*

In 2007, 67% of all those diagnosed and cared for were white, 64% of the total diagnoses were for white men alone. The second most prevalent ethnicity was Black-African, which represented 13% of all those diagnosed, with 16% attributed to the Other ethnicity. This pattern would be expected as ethnicity and probable route of infection are closely related, with those whose probable route of infection thought to be MSM being more likely to be white, and those heterosexually Black African. The comparatively high

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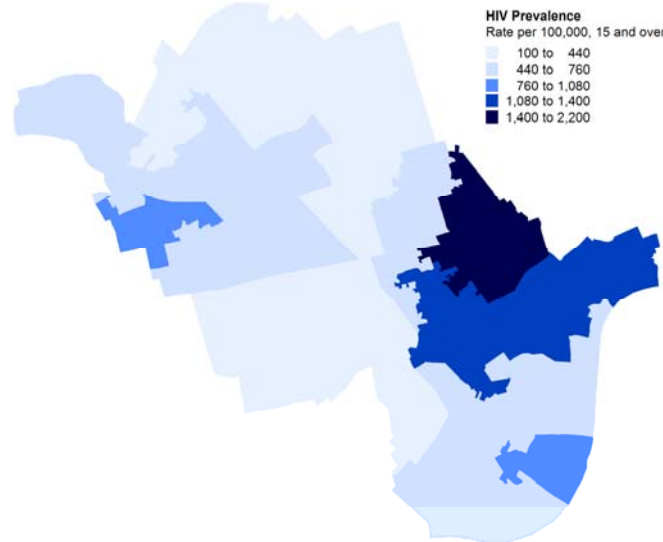
proportion of the other category also reflects the population in Westminster, where there is a greater proportion of the population who would class themselves as other. This could include people amongst others from the Middle East and South America.

**Table 2- Ethnicity of people diagnosed and accessing care 2007**

	White	Black-Caribbean	Black-African	Indian/Pakistani/Bangladeshi	Other	Not known
<b>Westminster</b>	67%	2%	13%	1%	16%	1%
<b>London</b>	47%	5%	36%	2%	10%	1%
<b>England</b>	50%	3%	38%	1%	7%	1%

*Area of residence*

In Westminster there is a clear variation in the rates of people diagnosed and accessing care by area of residence. The SOPHID data is available by middle layer super output area (MSOA)<sup>2</sup>. The Soho and Fitzrovia MSOA has the highest number of residents with HIV; 155 people living there have been diagnosed with HIV and are accessing care. This gives a rate of 2,053 per 100,000 people aged 15 and over. This is over 20 times higher than the rate in the MSOA with the lowest rate at 115 per 100,000 people with 12 people diagnosed and accessing care in the Knightsbridge and Belgravia MSOA. The Mayfair and Strand MSO also had a notable high rate of people diagnosed and accessing care, at 1,341 per 100,000 people. The median number of residents with a diagnosis and HIV accessing care is 47.



<sup>2</sup> MSOAs are broadly equivalent to electoral wards in size, with populations of around 9,500, the majority in the range 8500 to 10000.

This has implications for the location of services, training for General Practice, health promotion and testing. This may be particularly applicable as services start to shift from acute to community settings.

#### *Place of Care*

The people who live in Westminster with HIV are cared for by a number of hospitals. The key providers are St Mary's hospital (36%), Chelsea and Westminster hospital (20%), Mortimer Market Centre (15%), the Victoria Clinic (9%) and the Royal Free Hospital (8%).

### **Prevalence of HIV in Key Populations**

The Unlinked Anonymous Prevalence Monitoring Programme (UAPMP) is designed to monitor the prevalence<sup>3</sup> of HIV in a number of key population groups. These groups are GUM clinic attendees, pregnant women and injecting drug users (IDUs). In London, eight GUM clinics, 13 centres for IDUs and 29 new infant dried spot centres participated in this survey for 2006. There is only NWL specific data for IDUs and pregnant women. The programme has been running since 1990 and includes information about those people who have been diagnosed and are undiagnosed.

#### *GUM Attendees in London*

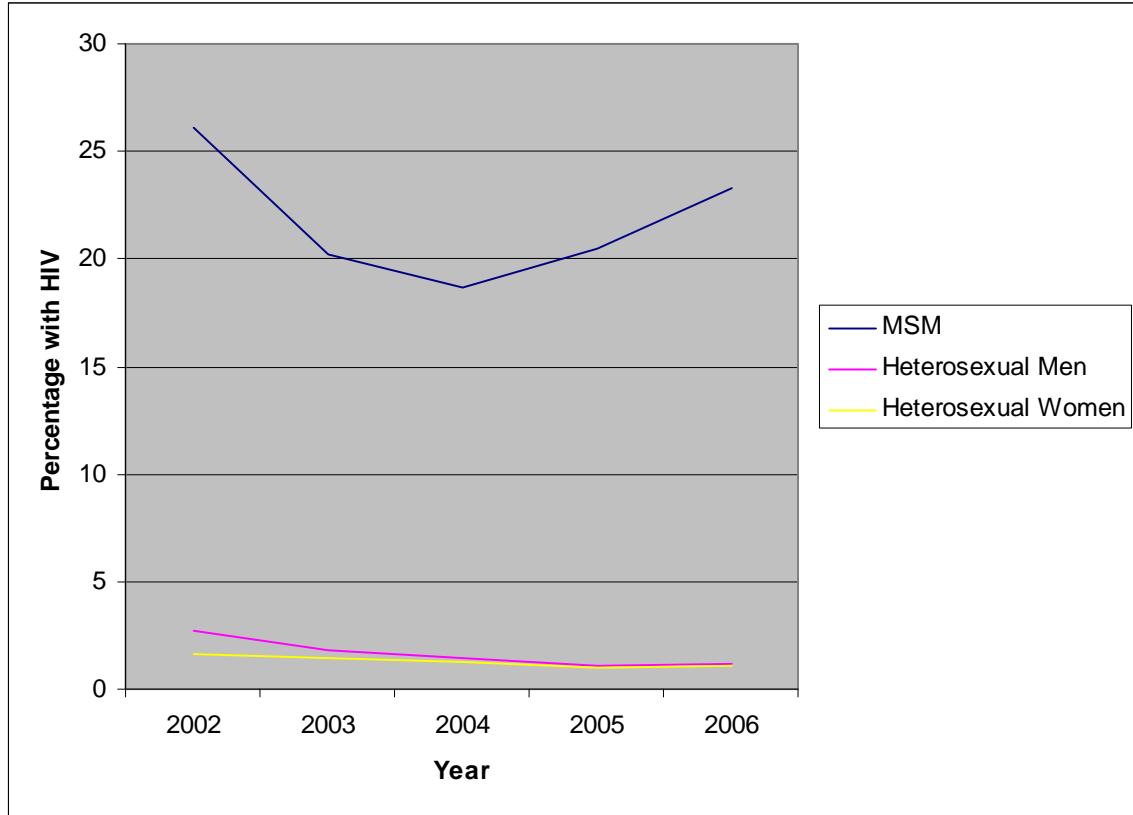
In 2006, the overall prevalence for HIV for heterosexual men was 1.17% and 1.11% for women. Almost half were undiagnosed, 0.57% of male attendees were undiagnosed and 0.56% of women. These proportions were higher than those seen outside of London (0.15% males, 0.26% females). For MSM, the prevalence of HIV was 23.3%, 4.4 % of the total attendees were undiagnosed. This was greater than outside of London where the proportion undiagnosed was 3%. The graph below presents the trend in prevalence of people with HIV attending GUM clinics in London. There has been an increase in the percentage of MSM with HIV since 2004 following a previous decline. The prevalence for heterosexual men and women has recently decreased, however there was a slight increase in prevalence from 2005-2006.

The Gay Men's sexual health survey 2006 surveys men in central London GUM clinics and other community venues (e.g. saunas, bars, clubs) (Wilkinson et al, 2008). They found a prevalence among clinic attendees of 27.4% with 29.1% of these undiagnosed (8% of total attendees). These figures are higher than those found the HPA survey, and may reflect the central London locations of the clinic. This survey has seen a rise in prevalence in clinics over recent years similar to the HPA survey.

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<sup>3</sup> Prevalence measures the proportion of individuals in a population that has a disease during a specified period of time.

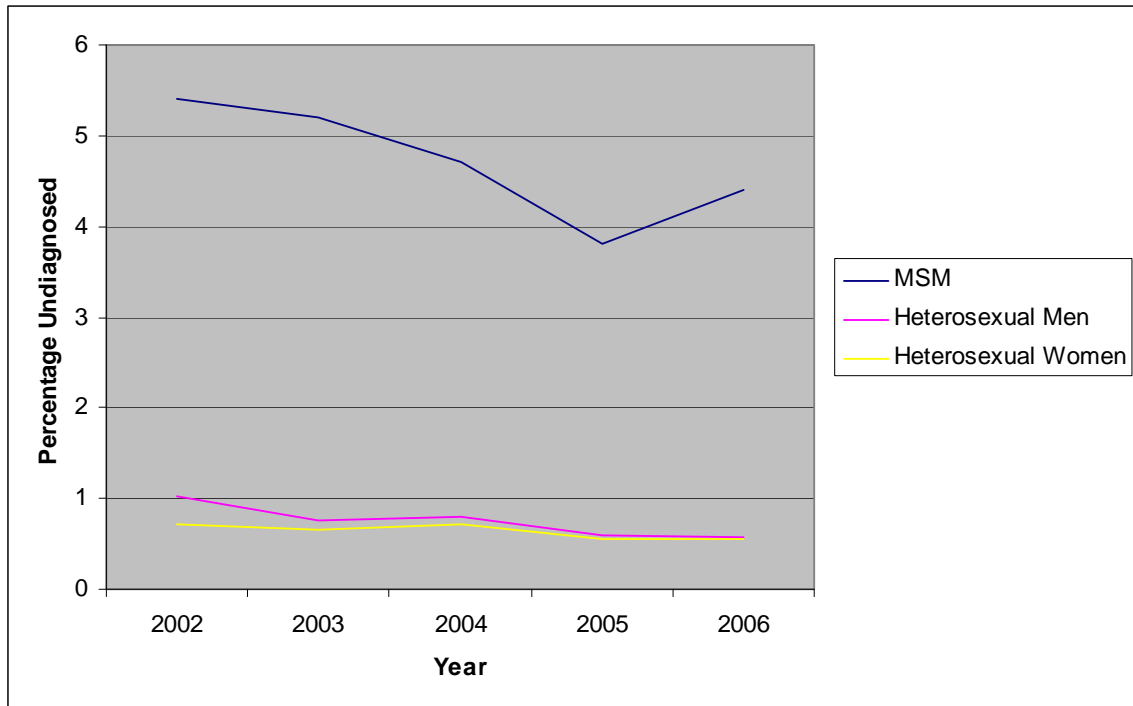
**Diagram 6 – Percentage of GUM attendees with HIV**



The graph below presents that in GUM attendees there has been a decrease in prevalence in undiagnosed HIV from 2002 to 2005 (previously to 2002 there had been a year on year increase), however in 2006 this had increased again. There has been a less smooth trend for heterosexual attendees; there has been an overall decrease in the last 5 years. The HPA has used this data along with estimates regarding incidence of HIV in MSM to conclude that there is no change in the ongoing rate of transmission among MSM (HPA, [http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb\\_C/1202115501114?p=1201094588821](http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1202115501114?p=1201094588821)). Overall there has been a decrease in the numbers of people who attend GUM clinics who are undiagnosed. This could suggest that there is greater awareness, and people are getting tested earlier or regularly.

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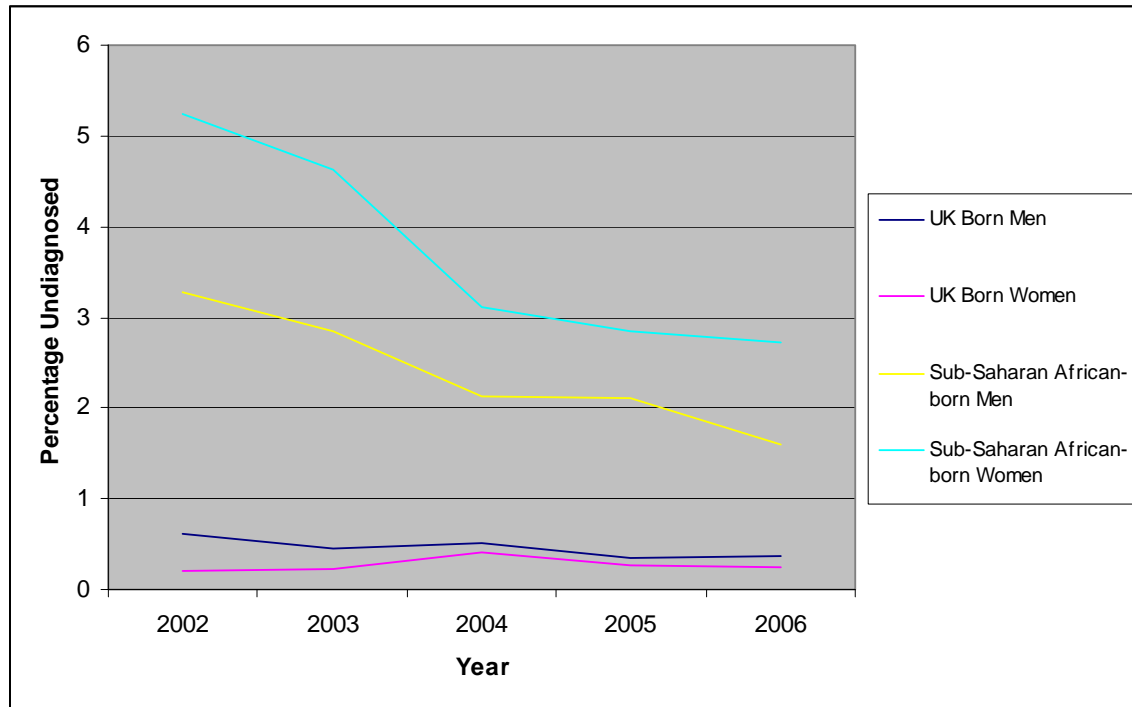
**Diagram 7 –Percentage of GUM Attendees with undiagnosed HIV by route of transmission 2007**



The below graph provides greater detail regarding the percentage of undiagnosed heterosexuals according to their place of birth. In 2006 the proportion of attendees who were from Sub-Saharan Africa had a greater proportion of undiagnosed HIV than those born in the UK, with Sub-Saharan African women having the greatest prevalence. This is lower than the proportion seen outside London where the undiagnosed prevalence for Sub-Saharan men is 1.78% and for women 6.35%

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**Diagram 8 –Percentage of heterosexual GUM Attendees with undiagnosed HIV by place of birth**



The survey also collects information regarding the number of people who remain undiagnosed following their visit to the clinic. In London 53% of MSM who tested positive for HIV at the clinic visit remained undiagnosed, this figure was 22% for heterosexual men and 31% for heterosexual women. There has been a decrease in the number of heterosexual men and women undiagnosed following the clinic visit, the proportion for MSM has fluctuated. The proportions are lower outside of London for all groups.

*IDU*

In 2006 4% of injecting drug users were HIV positive, there has been no clear trend over the last 5 years, however there has been an increase in the last 10 years. The prevalence is higher in men (4.7%) than women (2.6). The prevalence is higher in London than outside of London (0.7% overall).

*Pregnant Women*

In 2006 the rate of HIV in pregnant women was 42 per 100,000 women. This rate has stayed reasonably constant over the last 5 years (40 per 100,000 women in 2002). Nationally the highest prevalence is among women who were born in sub-Saharan Africa at 2.4%, the UK born population is 0.05%. Rate of detection of HIV before delivery is high, in 2006 91%.

## **Sexual Behaviours**

The Gay Men's Sexual Health Survey (Wilkinson et al, 2008) found that there are high levels of high risk sexual behaviour in London, with HIV positive men reporting more high risk behaviour than HIV negative men. The survey found that 46% of HIV negative men had had unprotected anal intercourse with one or more partners in the last year, this figure was 61% for men who were HIV positive. For unprotected anal intercourse with casual partners, the figures were 21% of HIV negative men and 47% of HIV positive men. This information goes some way to explain the large MSM population who are HIV positive and the ongoing transmission of the disease in this group.

## **Conclusion**

This brief paper has shown that HIV is a significant issue in Westminster, with only two other London boroughs having greater numbers of people diagnosed and accessing care. The characteristics of the people in Westminster are different to England and London as a whole, with a greater proportion of those diagnosed being men who have sex with men. This is likely to reflect the large gay population in the area. The population from sub-saharan Africa who are HIV positive are also a significant group in Westminster, as the total numbers of people in Westminster diagnosed with HIV and receiving care are proportionally higher than other parts of the country. This should inform service and prevention planning. The survey evidence surrounding sexual behaviour of gay men, may in some way explain the prevalence in London and the increasing transmission of the disease.

It is likely that the pool of people with HIV in Westminster will increase in the future, as although the rates of new diagnosis may be stabilising there is no sign of a decrease.

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