HIV and AIDS statistics

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This note summarises recent statistics on Human Immunodeficiency Virus (HIV) and Acquired Immune Deficiency Syndrome (AIDS). Section 1 describes how the numbers of those diagnosed with and those dying from HIV/AIDS in the UK have changed over time.
HIV is much more common in certain types of people; the characteristics that put people most at risk of HIV are considered in both Sections 2 and 4. The manner and place in which individuals with HIV acquire their infection in examined in Section 3. HIV is often asymptomatic for a number of years after being first contracted, meaning some individuals will be unaware of their infection: the general prevalence of HIV, and levels of awareness of infection, are examined in Section 4. International statistics on HIV and AIDS are briefly considered in Section 5, while Section 6 looks at public knowledge and attitudes to the disease.

Further UK data are available on the Health Protection Agency website at:
http://www.hpa.org.uk/web/HPAweb&HPAwebStandard/HPAweb_C/1203496957984

International data can be found on the UNAIDS website at:
http://www.unaids.org/

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1 Diagnoses of HIV and AIDS in the UK

1.1 Trends, 1992-2009

The table below summarises trends in HIV infection, AIDS diagnoses and AIDS deaths. Up to the end of 2009, 109,293 people in the UK had been diagnosed with HIV, 26,063 had been diagnosed with AIDS and 19,210 HIV-diagnosed individuals had died[1].

Table 1: HIV and AIDS diagnoses, and HIV-related deaths, UK 1994-2009

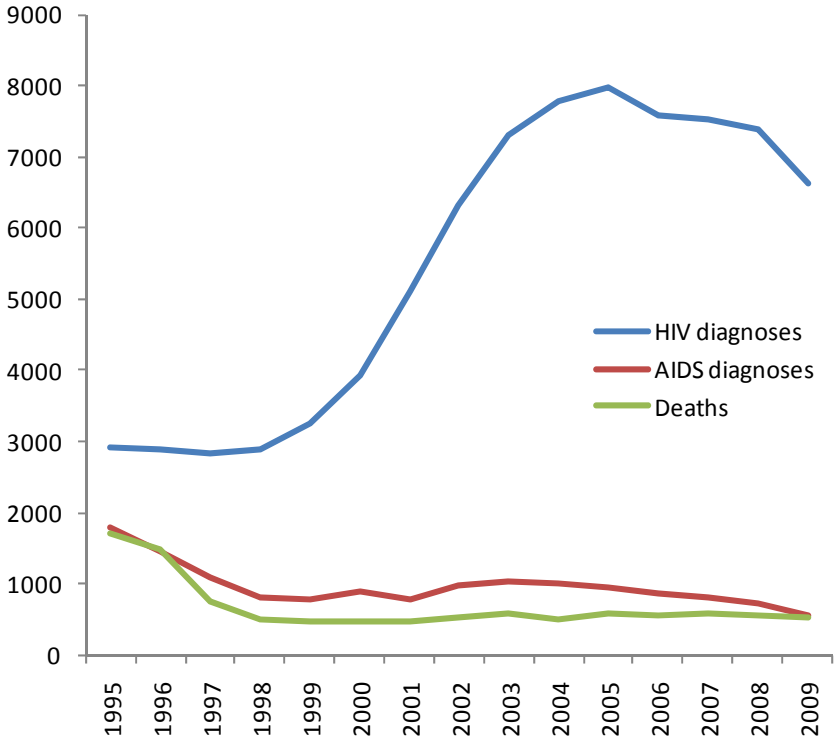
Year	HIV	AIDS	Deaths[1]
1994 or earlier	26,939	11,516	8,901
1995	2,906	1,792	1,723
1996	2,903	1,468	1,481
1997	2,838	1,103	746
1998	2,897	821	515
1999	3,253	788	472
2000	3,933	891	487
2001	5,114	793	476
2002	6,304	988	528
2003	7,310	1,025	573
2004	7,784	995	493
2005	7,982	939	595
2006	7,592	866	559
2007	7,520	802	574
2008	7,388	729	571
2009	6,630	547	516
Total	109,293	26,063	19,210

[1] Includes all deaths of HIV diagnosed individuals
Source: HPA New *HIV Diagnoses in the United Kingdom*

The chart overleaf shows trends in annual HIV and AIDS diagnoses since 1995. 2009 saw the lowest number of AIDS diagnoses ever recorded. HIV diagnoses have also fallen recently, but remain twice as high as those seen at the end of the 1990s.

[1] **All UK data in sections 1-4 is sourced from the Health Protection Agency (HPA)**

Chart 1: HIV and AIDS diagnoses and deaths, 1994-2009



Annual numbers of HIV diagnoses in the UK doubled between 2000 and 2005 and had remained above 7,000 in each year until 2009. AIDS diagnoses halved between 1996 and 1998, and have fallen year-on-year since 2003 and HIV-related deaths have followed a similar pattern. These trends are largely due to the effectiveness of highly active anti retroviral therapies[2] (HAARTs) in delaying the progression of HIV to AIDS, and reducing HIV-associated morbidity and mortality.

1.2 A warning on the interpretation of diagnosis data

Due to the clinical course of infection, HIV diagnosis data cannot be used to measure either prevalence (number of cases in the population) or incidence (number of new cases in a given time period) of HIV. Prevalence estimates are produced by the HPA from survey data, and are analysed in Section 3.

In addition, the HPA offers the following advice on interpreting data on HIV diagnoses:

"Apparent trends over time in these reports must be interpreted with care, as each data source is subject to reporting delay which varies over time. We used statistical methods to adjust for these delays for data received from 2004-2008. … Furthermore, the diagnosis of infection in an asymptomatic person depends upon risk recognition, willingness to have an HIV test and test accessibility."
Source: HPA New Diagnoses report, p.7

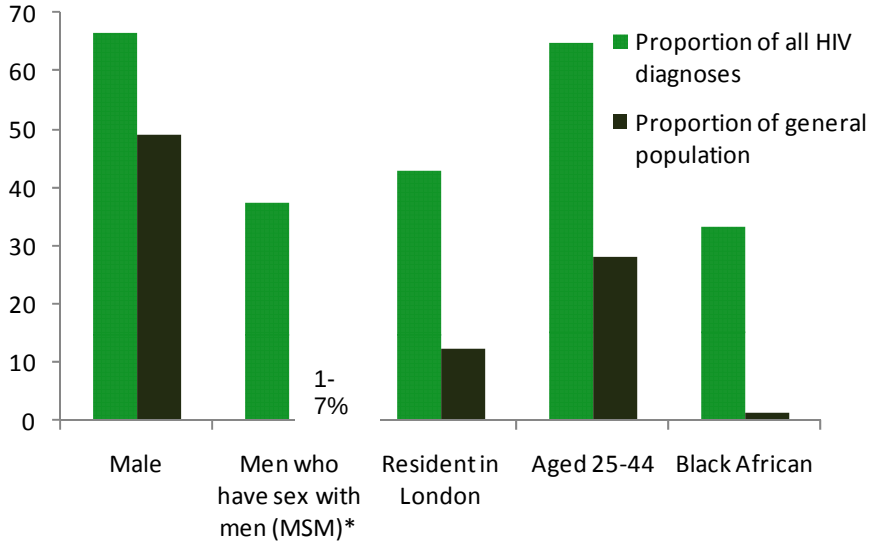
In effect, because HIV typically has a prolonged asymptomatic 'silent' period after an individual is first infected, changes in numbers of new diagnoses may be a reflection of changes in availability or attitudes towards HIV testing, rather than degree of prevalence or incidence.

[2] A regime whereby several antiretroviral drugs are taken in combination. It was first introduced in 1996.

2 Characteristics of those diagnosed

2.1 Overview

Chart 2 below illustrates data for characteristics positively correlated with HIV infection.



Note: The prevalence of homosexuality/bisexuality is a matter of debate, and its estimation is subject to definitional and methodological difficulties. The range of 1% to 7% presented in the chart is simply a halving of the numbers in a 2% to 14% range from a review of major studies into prevalence in Western societies (the range is halved because it is prevalence of male homosexuality/bisexuality under consideration)

In general, the characteristic imbalances have become less pronounced over time. For instance, prior to 1992:

- 88% of HIV diagnoses were in males
- 64% were acquired through sex between men (MSM)
- 60% were residents of London
- 72% were aged 20-39

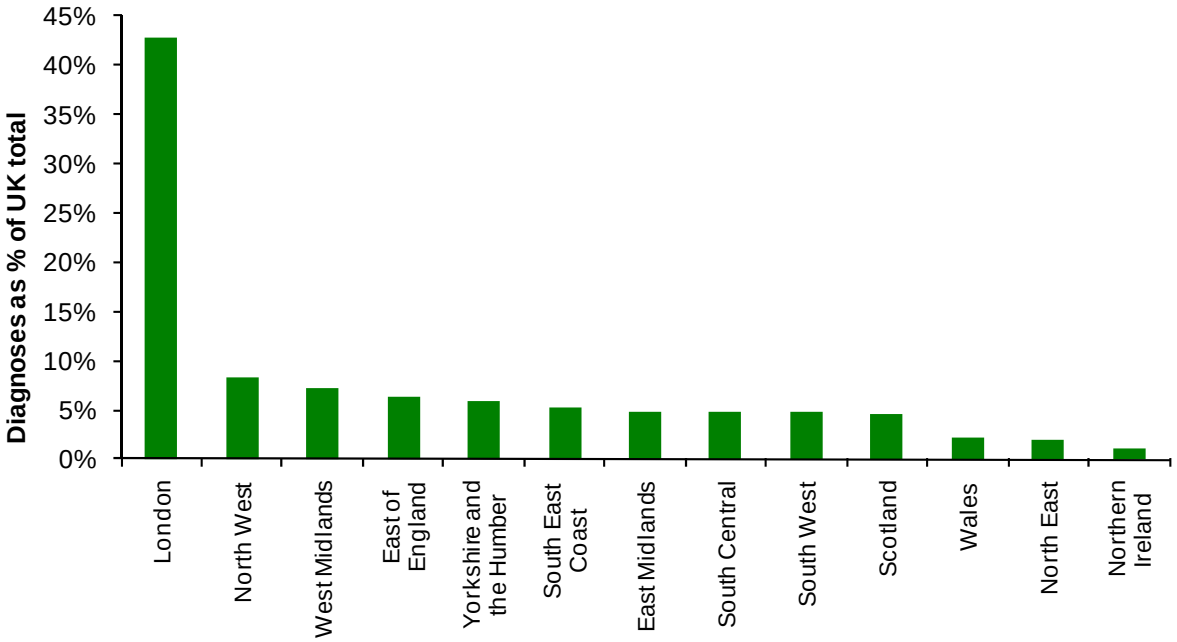
17% of those diagnosed with HIV in 1995 (the first year that ethnicity was recorded in the data) were black African. The figure peaked at 54% in 2003 and has since declined to 33%.

It is also worth noting that the characteristics may not interact in a predictable manner. For instance, among black Africans, females are almost twice as likely to be HIV positive as males, even though males *in general* are more likely to be HIV-positive.

2.2 Location

Chart 3 shows the distribution of HIV diagnoses by English region, and in the other UK countries. By a considerable margin, London accounts for the largest proportion of HIV diagnoses.

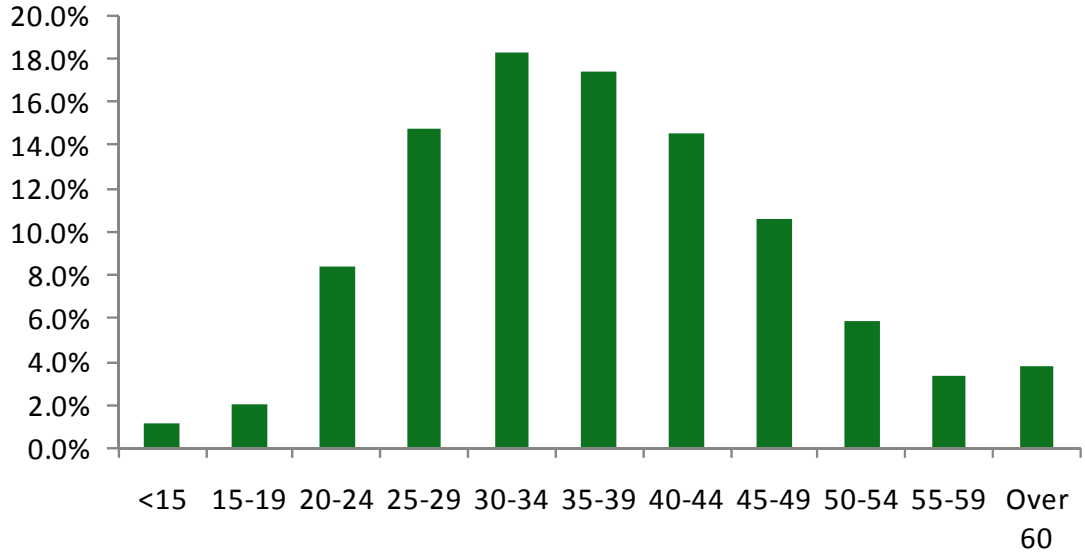
Chart 3: Regional distribution of HIV diagnoses, UK 2009



2.3 Age

Chart 4 shows the distribution of HIV diagnoses by age.

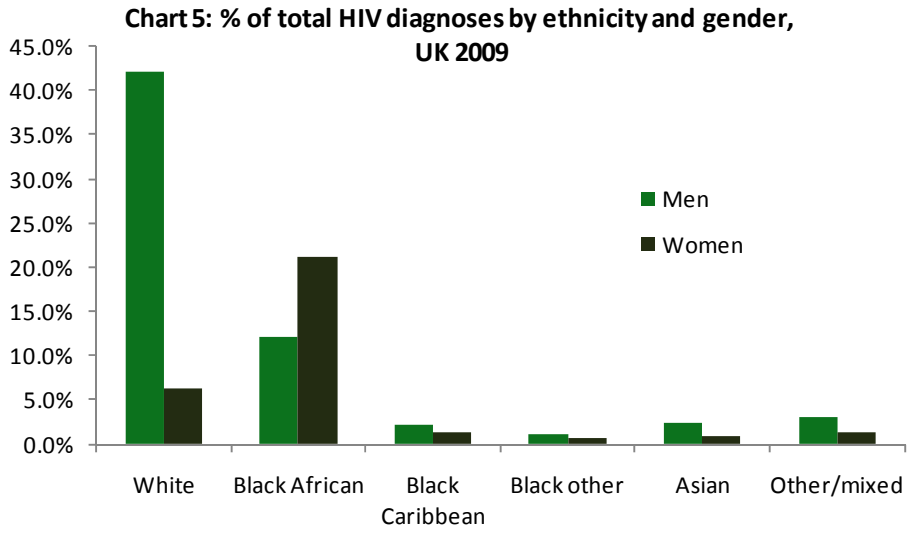
Chart 4: % of total HIV diagnoses by age, UK 2009



Those aged between 30 and 34 are most commonly diagnosed with HIV. More than half of all HIV diagnoses are accounted for by those aged between 25 and 44.

2.4 Ethnicity

Chart 5 shows the distribution of HIV diagnoses by ethnicity.

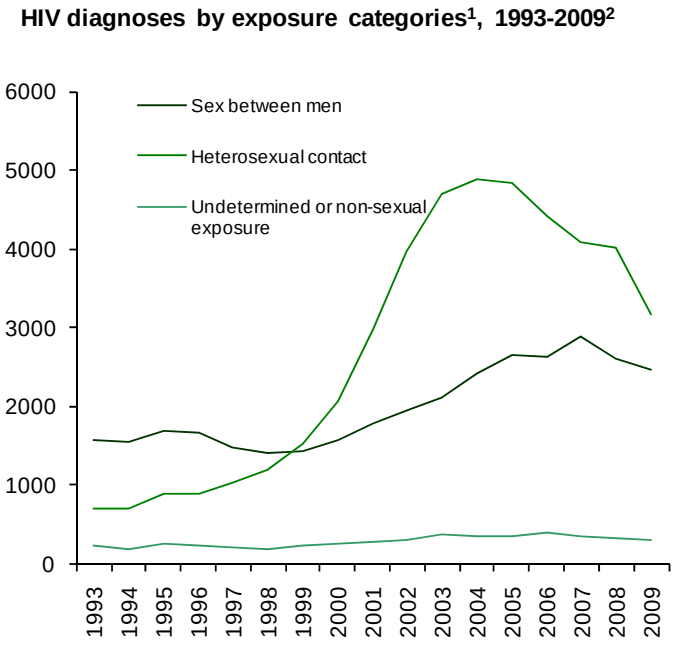


6.2% of HIV diagnoses in 2009 were in white women, whilst 21% were in black African women, despite the fact that there are over 100 times more white than black African women in the population as a whole. In general, black African and Caribbean communities in the UK are disproportionately affected by HIV. The HPA has published a short report examining this issue in more detail, available at:
http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1225441603957 .

3 Exposure to HIV

3.1 Transmission routes

Sexual contact is by far the most common HIV transmission route: in 2009, at least 95% of newly diagnosed cases were acquired in this way. The chart below compares the number of HIV diagnoses arising from heterosexual, male homosexual, and non-sexual exposure.



[1] Figures from 1999 onwards have been adjusted for cases where exposure has not yet been determined

[2] Figures for 2009 have also been adjusted for reporting delay

Since 2004, HIV cases attributable to heterosexual contact have declined by 34%. Between 2004 and 2007 those cases arising from sex between men increased by 15%. In 2007 there were 2,895 HIV cases acquired through sex between men. This was the highest number ever recorded, and constituted 38% of all cases. Since 2007 the number of cases attributable to sex between men has decreased.

Historically, the primary exposure risk for HIV was homosexual male contact: in years prior to 1992, heterosexual contact was the cause of just 12% of all HIV infections, whilst sex between men was the cause of 61% of cases. Heterosexual sex has been the most common cause of HIV infection in the UK since 1999.

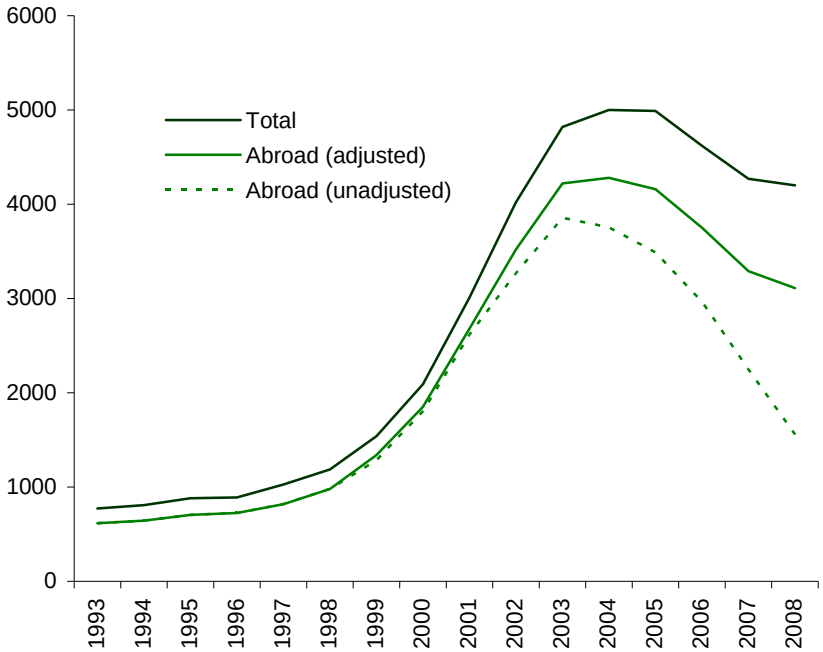
The importance of injecting drug use as a means of HIV transmission has also declined since 1992, although the numbers of individuals acquiring infections through this route has not changed dramatically: in 1993 the figure was 223 and the adjusted estimate for 2009 is 149.

Blood products in the UK have been routinely screened for HIV since 1985, and are destroyed if it is detected. All blood products (including US imports) in the UK have been 'virtually HIV-free' since 1988[3] and HIV acquired in this manner is correspondingly extremely rare (less than 0.5% of all diagnoses since 1993); it most commonly occurs in individuals treated with infected blood abroad.

3.2 Exposure abroad

A significant proportion of individuals diagnosed with HIV in the UK were originally infected abroad. The chart below shows trends in HIV diagnoses in the UK following presumed heterosexual exposure outside the UK. Reliable data are not available for other means of exposure.

Chart 8: HIV diagnoses from heterosexual exposure, by geographical origin of infection, 1993-2008



[3] The Archer Inquiry on NHS Supplied Contaminated Blood and Blood Products

Adjusting for cases where origin of infection has not yet been determined, around three quarters of all HIV cases are acquired abroad; this is a decline from a peak of over 85% between 1999 and 2004. Of those cases acquired through heterosexual sex abroad, around 80% are acquired in Africa.

3.3 HIV prevalence among asylum seekers

Asylum seekers are entitled to free NHS treatment. Since in this context asylum seekers are considered part of the local resident population, there are no separate records of services provided to asylum seekers.

SN/HA/3053 looks at health screening for migrants and includes further data on HIV and TB.

4 Prevalence of HIV

4.1 Diagnosed HIV prevalence

This is estimated using the Survey of Prevalent HIV Infections Diagnosed (SOPHID), a cross-sectional survey of all individuals with diagnosed HIV infection who attend HIV-related care within the NHS in England, Wales, and Northern Ireland (E, W & NI) within a calendar year.

In 2009, there were 65,319 individuals in the UK accessing HIV care. Risk factors for these existing cases are broadly similar to those for new diagnoses, with around 40% of individuals acquiring their infection through male homosexual sex, and 35% being of black African ethnicity.

As with the diagnosis statistics in Section 2, it is difficult to make inferences about *incidence* of HIV (the number of new cases in, say, a year) from the SOPHID data. In particular, prevalence over time may be observed to rise even as incidence remains the same for two reasons: firstly, the availability of HAART[4] (drugs which slow down the rate at which HIV is able to reproduce) from the mid-1990s onwards has led to dramatic improvements in the life expectancy of people with HIV in the UK; secondly, since the SOPHID data deals only with *diagnosed* HIV, rising prevalence may reflect a fall in the number of undiagnosed cases.

4.2 Total and undiagnosed HIV prevalence

Some individuals infected with HIV and living in the UK have not yet been diagnosed. Overall prevalence of HIV must therefore take the form of an estimate. This is derived from a number of sources, including SOPHID, data on previously undiagnosed HIV infections seen at GUM clinics, and the National Survey of Sexual Attitudes and Lifestyles. In 2009, the HPA estimated that 80,800 individuals in the UK were living with HIV, a crude prevalence rate of 127 per 100,000 individuals. Given that there are 65,319 diagnosed HIV infections, the implication of this estimate is that 19% of individuals with HIV are unaware of their infection.

[4] Highly active anti-retroviral therapy

5 International data

Global surveillance of HIV and AIDS is undertaken jointly by UNAIDS and WHO. Detailed country-level epidemiological data is available at http://www.unaids.org/en/KnowledgeCentre/HIVData/Epidemiology/epifactsheets.asp

In addition, through their adoption of the 2001 Declaration of Commitment on HIV/AIDS, UN Member States committed themselves to regularly report on their progress in responding to HIV to the General Assembly. In 2008, countries based their progress report on 25 core indicators. A record 147 countries (out of 192 member states) produced such reports; these are available at

http://www.unaids.org/en/KnowledgeCentre/HIVData/CountryProgress/2007CountryProgressAllCountries.asp

HIV and AIDS are both pandemic according to WHO definitions. UNAIDS and WHO estimate that as of 1st January 2008, around 29 million people have died from AIDS since it was first recognized on 1st December 1985. HIV prevalence in the global population is estimated at 33 million (0.8% of all individuals), of whom 2 million are children. An estimated 2 million from died from AIDS in 2007[5].

Globally, the percentage of people living with HIV has remained steady since 2000, although numbers of people living with HIV has increased due to the higher life expectancy offered by anti retroviral therapies.

The map overleaf is based on 2007 UNAIDS epidemiological data and shows global HIV prevalence in 15-49 year-olds. Regional disparities are thrown in to high relief: the countries of sub-Saharan Africa are particularly blighted by HIV, with prevalence generally exceeding 1 in 10 individuals, while most of central Asia has prevalence rates of between 1 and 2 in 1,000.

Table 2 summarizes HIV prevalence and AIDS mortality by world region for 2007 and 2001, with regions ranked by the percentage prevalence of HIV in adults in 2007. Two-thirds of HIV-infected individuals live in sub-Saharan Africa, where the prevalence rate is 5%, compared with 0.8% globally and 0.2% in the United Kingdom. Three-quarters of all AIDS-related deaths occurred in sub-Saharan Africa.

Finally, table 3 summarizes HIV and AIDS data from 2007 and 2001 for the 20 countries with the highest prevalence rates. All of these countries are in sub-Saharan Africa. Outside of this region, the Bahamas had the highest HIV prevalence in 2007, with a rate of 3%.

[5] All figures in Section 5 taken from UNAIDS *2008 Report on the global AIDS epidemic*

Global prevalence of HIV in 15-49 year-olds, 2007

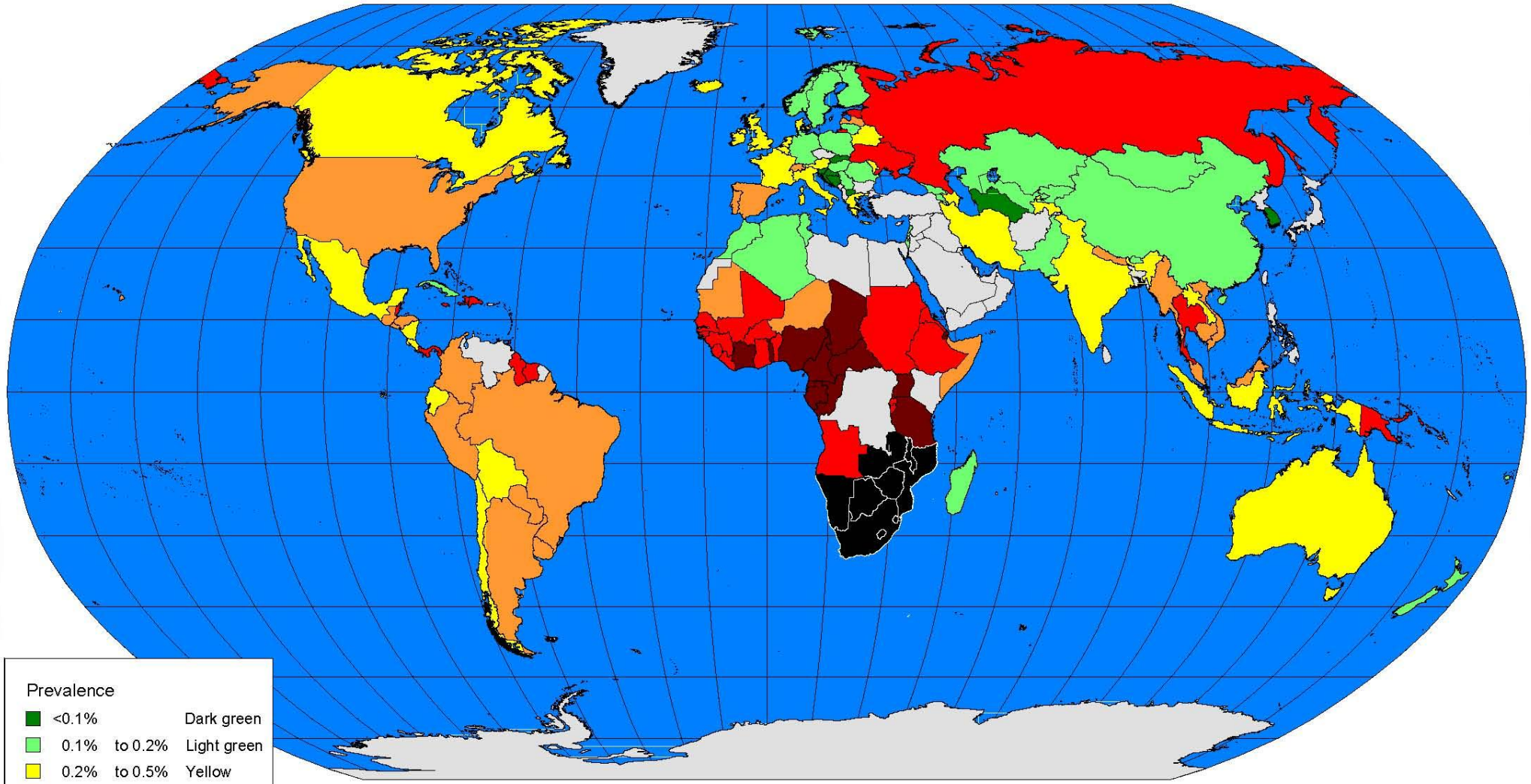


Table 3: summary figures on HIV prevalence and AIDS mortality, world regions, 2001 and 2007

World Region	Estimated numbers with HIV, 2007	Estimated numbers with HIV, 2001	Adult (15-49) prevalence percent, 2007	Adult (15-49) prevalence percent, 2001	Deaths from AIDS in adults and children, 2007	Deaths from AIDS in adults and children, 2001
Sub-Saharan Africa	22,000,000	20,400,000	5.0	5.7	1,500,000	1,300,000
Caribbean	230,000	210,000	1.1	1.1	14,000	15,000
Eastern Europe and Central Asia	1,500,000	650,000	0.8	0.4	58,000	6,700
North America	1,200,000	1,100,000	0.6	0.6	23,000	18,000
Latin America	1,700,000	1,400,000	0.5	0.5	63,000	47,000
Oceania	74,000	25,000	0.4	0.2	1,000	…
South and South-East Asia	4,200,000	4,200,000	0.3	0.4	340,000	250,000
Western and Central Europe	730,000	610,000	0.3	0.2	8,000	9,600
North Africa and Middle East	380,000	300,000	0.3	0.3	27,000	22,000
East Asia	740,000	490,000	0.1	0.1	40,000	15,000
Global	**33 000 000**	**29 500 000**	**0.8**	**0.8**	**2 000 000**	**1 700 000**

Table 4: summary figures on HIV prevalence and AIDS mortality for the 20 most heavily HIV-infected countries, 2001 and 2007

Country	Estimated numbers with HIV, 2007	Estimated numbers with HIV, 2001	Adult (15-49) prevalence percent, 2007	Adult (15-49) prevalence percent, 2001	Deaths from AIDS in adults and children, 2007	Deaths from AIDS in adults and children, 2001
Swaziland	190,000	160,000	26.1	26.3	10,000	7,700
Botswana	300,000	280,000	23.9	26.5	11 000	16,000
Lesotho	270,000	250,000	23.2	23.9	18,000	13,000
South Africa	5,700,000	4,700,000	18.1	16.9	350,000	180,000
Namibia	200,000	150,000	15.3	14.6	5,100	6,700
Zimbabwe	1,300,000	1,900,000	15.3	26.0	140,000	150,000
Zambia	1,100,000	940,000	15.2	15.4	56,000	78,000
Mozambique	1,500,000	1,000,000	12.5	10.3	81,000	47,000
Malawi	930,000	850,000	11.9	13.3	68,000	60,000
Central African Republic	160,000	130,000	6.3	6.4	11,000	8,800
United Republic of Tanzania	1,400,000	1,400,000	6.2	7.0	96,000	110,000
Gabon	49,000	38,000	5.9	5.6	2,300	1,800
Uganda	940,000	1,100,000	5.4	7.9	77,000	120,000
Cameroon	540,000	530,000	5.1	6.0	39,000	29,000
Côte d'Ivoire	480,000	590,000	3.9	6.0	38,000	43,000
Chad	200,000	150,000	3.5	3.4	14,000	8,600
Congo	79,000	84,000	3.5	4.4	6,400	8,300
Equatorial Guinea	11,000	9,500	3.4	3.7	…	…
Togo	130,000	110,000	3.3	3.6	9,100	7,200
Djibouti	16,000	13,000	3.1	3.1	1,100	<1,000
Nigeria	2,600,000	2,200,000	3.1	3.2	170,000	130,000

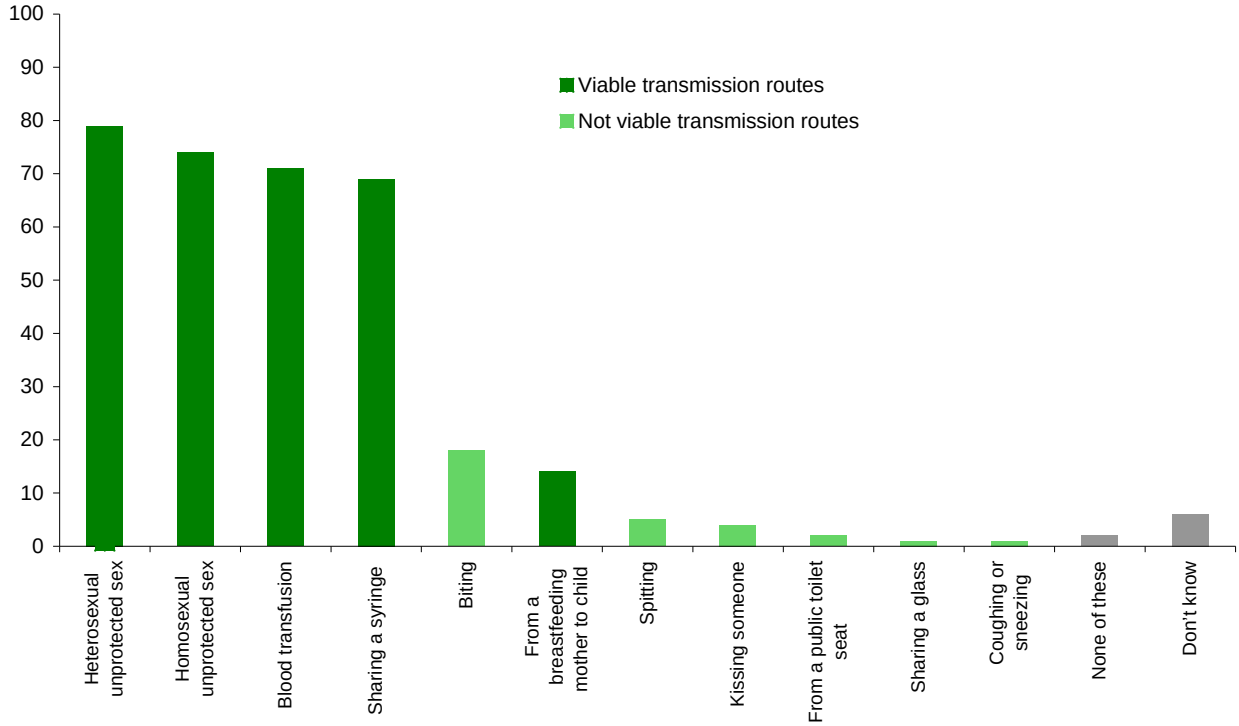
6 Public awareness and opinion in the UK

A 2007 MORI survey commissioned by the National Aids Trust investigated the knowledge and attitudes of the UK public towards HIV and AIDS[6]. The following section summarises some results from this

6.1 Knowledge of how HIV is transmitted

The chart below shows how respondents answered when asked to identify from a list the correct ways by which HIV can be transmitted. It was more typical for individuals to be ignorant of a viable transmission route, than to specify a non-viable one.

Chart 12: Proportion of sample 'believing' in various transmission routes for HIV, 2007 survey data, UK



[6] *Public Attitudes towards HIV, 2007*

6.2 Attitudes to HIV sufferers

These are summarised in the following chart:

Chart 13: Survey response to various questions on HIV