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# CDR WEEKLY



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## News

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### Legionnaires' disease in Sandwell

Seven patients from the West Midlands (four women aged between 46 and 59 years and three men aged between 41 and 63 years) fell ill with legionnaires' disease between 7 and 18 August 2002. One case, a male aged 51 has died and the others are recovering. Five of the patients live in Sandwell; two of the men (one mistakenly believed at first to have been infected abroad) live further afield but work in the area. A search of CDSC's national database did not reveal any linked cases living elsewhere. Confirmation of diagnosis was by detection of urinary antigen in all seven cases. The infection has been confirmed as *Legionella pneumophila* serogroup 1 by the PHLS Respiratory and Systemic Infection Laboratory at the Central Public Health Laboratory (CPHL) in Colindale. No clinical isolates are currently available. The Sandwell Department of Public Health convened an outbreak control team meeting on 22 August 2002 after it was informed of the second local case.

Cases have been interviewed extensively about their movements during the two weeks before onset of illness. A search for any unrecognized cases is underway locally. Officers of Sandwell Metropolitan Borough Council and the Health and Safety Executive in conjunction with staff from the Water and Environmental Microbiological Reference Unit at CPHL, have carried out checks on all known wet cooling systems in the area from which patients are likely to have been infected and have looked extensively for any other potential sources that may not be on their registers. Priority has been given to a number of industrial sites with cooling systems, including the place of work of the two patients resident outside the district. These cooling systems have been sampled and rendered non-infectious through emergency treatment procedures.

Dr Iain Blair, CCDC, (tel: 0121 500 1614) would like to be notified of any case of legionnaires' disease thought to have visited Birmingham or the Black Country (Walsall, Wolverhampton, Sandwell, and Dudley) during the two weeks before onset of illness, and whose illness began after 1 August. As usual, legionnaires' disease cases should also be notified to Dr Carol Joseph at CDSC (email: [cjoseph@phls.org.uk](mailto:cjoseph@phls.org.uk))

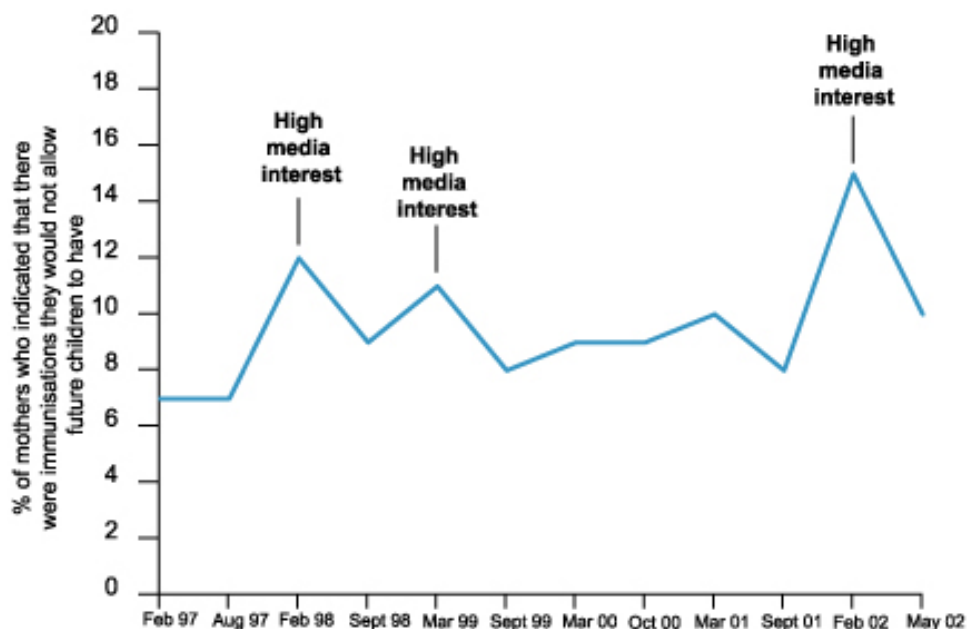
## Effects of media reporting on MMR coverage

Recent media reporting has concentrated on reports of links between MMR vaccine, bowel disease and autism. The stories have been largely negative, implying that receipt of MMR carries risks of bowel disease and autism.

In May 2002, *Immunisation Information*\* commissioned an additional survey to complement their long-term survey of mothers' opinions and understanding of the national childhood immunisation programme (1). This interim survey of 501 mothers included key baseline measurements and a series of additional questions. Ninety per cent of the mothers surveyed claimed to have seen some advertising, information, or publicity relating to immunisation, with 75% (68% of all mothers) of these specifying MMR. Mothers were asked if they had been 'put off' immunisation by any of the information they had seen and whether they had delayed giving their children any immunisations. Twenty-two per cent of those mothers who had seen some publicity were 'put off' by what they had seen, most commonly a television programme (50%) or newspaper article (29%).

The survey shows the effect that the media can have on mothers' intentions to immunise. The number of mothers' who did not plan to immunise a future child matched periods of high media interest in MMR, as was the case in February 1998, March 1999, and February 2002 (figure 1).

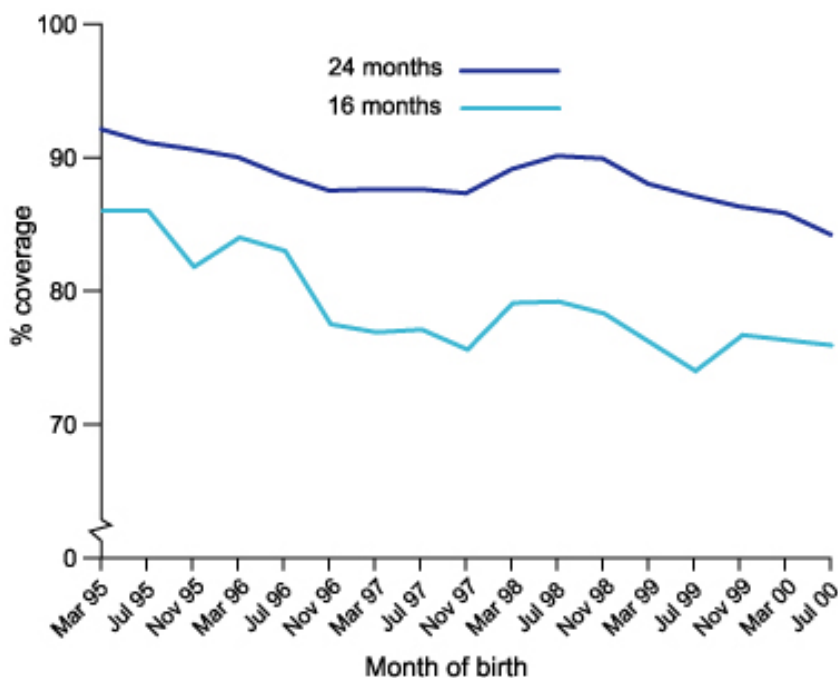
**Figure 1 Mothers' responses to the question "Are there any immunisations that you would not allow a future child to have?"**



Base: All mothers of 0-2 years old (May 02 n=501, main waves n=c.1000)

When examining current or future behaviour, 21% of mothers claim to have delayed giving their child the MMR vaccine at some point. Sixty-one per cent of this subgroup (13% of all mothers), however, claim to have subsequently had their child immunised with MMR and a further 16% (3% of all mothers) intended to have their child immunised in the future. Of those mothers who had delayed MMR, 62% had done so because of doubts about its safety. The rest cited practical reasons such as the child being unwell at the time or being on holiday. This result confirms the trend seen in sentinel surveillance of coverage at 16 months and 24 months of age. For children born before 2000, the decline in coverage at 16 months has not been reflected in coverage at 24 months, which suggests that many mothers delay their decisions about vaccination but then subsequently choose to accept MMR vaccine (fig 2). The apparent narrowing of the difference between coverage at 16 and 24 months in children born more recently may reflect the fact that data are now collected on a monthly basis, and therefore may be less complete. Prospective data collected on coverage at 36 months will help to determine whether there is further improvement in coverage due to parents delaying MMR vaccination until after the second birthday.

**Figure 2 MMR vaccine coverage at 16 and 24 months**



Media reporting has suggested that a large number of mothers are choosing not to immunise their children. This is not supported by the findings of this survey which shows that only 6% of mothers surveyed claim to have permanently refused MMR.

These results show that the media has an important influence on mothers' attitudes to immunisation. When media reporting about MMR vaccine is negative mothers will be negatively influenced. Positive scientific results are not, however, given the same media prominence and are therefore less influential in affecting parents' attitudes. Sentinel surveillance of MMR coverage at 16 months shows similar trends to the proportion of mothers who believe that MMR is safe (1,2). It is important to note that, despite the stories in the media, the majority of mothers remain inclined to immunise their children and that coverage figures may be further distorted by those choosing to delay. Sustained negative media reporting could, however, threaten a continued decline in the number of mothers choosing to immunise their child. For this reason, new MMR information materials are being provided direct to health professionals and parents.

\* Immunisation Information is part of the communicable disease and immunisation team at the Department of Health, Previously at Health Promotion England and the Health Education Authority.

1. CDSC. MMR vaccine coverage falls in the United Kingdom. *Commun Dis Rep CDR Wkly* 1999; **9** (5): 37.

2. Ramsay ME, Yarwood J, Lewis D, Campbell H, White JM. Parental confidence in MMR vaccine: evidence from vaccine coverage and attitudinal surveys. *JCGP* 2002 (in press)

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## **SOPHID update for 2001: prevalent diagnosed infections in England, Wales and Northern Ireland**

Provisional figures for the Survey of Prevalent Diagnosed HIV Infections (SOPHID), show that 25,197 individuals were living with diagnosed HIV infection in England, Wales, and Northern Ireland in 2001. This is a 16% rise on the total for 2000, and is the largest proportional annual increase since 1995 when comparable data was first collected. The accelerating increase in numbers will be associated with increasing demand on treatment and care resources. Regional breakdowns of the survey results can be found on the HIV/AIDS homepage at [www.phls.org.uk](http://www.phls.org.uk), under epidemiological data.

## Human west Nile virus in the United States 2002 – update

In July 2002, a news item in *CDR Weekly* (1) highlighted how the first seven human cases of encephalitis attributed to West Nile Virus (WNV) had been reported to the Centers for Disease Control and Prevention (CDC) in the United States (US) in 2002. West Nile Virus infection circulates between birds and mosquitoes with animals and humans only occasionally being infected through biting mosquitoes. Even when humans are infected it is thought that less than one per cent of individuals suffer severe disease (2).

Transmissions to humans have increased, and spread to previously unaffected areas of the US, with evidence of confirmed human cases or of active infections amongst birds, animals and mosquitoes, in all of the states east of the Rocky Mountains. As of 29 August, CDC had received reports of 555 human cases, including 28 deaths, since the start of 2002. This compares with a total of 149 cases in the first three years since West Nile Virus was first recognised in the US (*ie* 1999-2001). Numbers for 2002 will continue to rise as more reports are known to be coming to CDC (see <http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>).

Although many states have evidence of some infection, the risk is very uneven. The heaviest burden is in Louisiana, Mississippi, Illinois, Texas, Missouri, Ohio, and Michigan, which were not affected in the earlier years. Some of the states that were previously affected are escaping relatively lightly. For example, New York State, which experienced a substantial outbreak in 1999, has so far this year only reported five human cases (3) <<http://www.cdc.gov/od/oc/media/wncount.htm>>. Detailed current information on the American situation, including more preventive advice and case numbers, are available at the CDC website <<http://www.cdc.gov/ncidod/dvbid/westnile/index.htm>>.

No cases among people visiting the US and returning to Europe have been reported to the PHLS, and fortunately the parts of the US most favoured by European tourists (Florida, the North East, California, and the mountain states) have only been lightly affected this year. Visitors to the US are, however, advised to take the same precautions as US citizens, particularly if visiting affected areas. Guidance for travellers on how to protect themselves against the mosquitoes which transmit the infection to humans is available on the PHLS website, along with other information concerning West Nile Virus <[http://www.phls.org.uk/topics\\_az/west\\_nile/menu.htm](http://www.phls.org.uk/topics_az/west_nile/menu.htm)>.

The experience in the US will not necessarily be repeated elsewhere, for example in Western Europe. In the United Kingdom (UK), transmission of viral infections from mosquitoes is almost unknown, unlike in the US and tropical countries. In France, intensive surveillance around a site in the Camargue, where horses were known to have been affected by West Nile Virus in 2000, found no evidence of transmission of WNV in mosquitoes or horses in 2001. There was also no evidence of human cases of disease (4).

The PHLS is carrying out surveillance for human West Nile Virus encephalitis. Clinicians and microbiologists are asked to report suspected cases of WNV infection (encephalitis or meningitis fitting the case definition in the table 1) to Dr Susan Hahné, (tel 020 8200 6868 ext 3444; email: [shahne@phls.org.uk](mailto:shahne@phls.org.uk)) who is coordinating the surveillance in CDSC. Appropriate samples (specifications in table 1) of suspected cases should be sent to Dr Graham Lloyd at the Centre for Applied Microbiological Research, Porton Down, Salisbury, Wiltshire, SP4 OJG; tel: 01980 612 100, email: [graham.lloyd@camr.org.uk](mailto:graham.lloyd@camr.org.uk)). In addition, a retrospective survey of recent cases of encephalitis is being undertaken by the UK Clinical Virology Network with the PHLS (contact: Dr Chloe Sellwood, PHLS HQ; tel: 020 8200 1295 ext 4073, email: [csellwood@phls.org.uk](mailto:csellwood@phls.org.uk)) and the Centre for Applied Microbiological Research (CAMR).

1. PHLS. First human cases of West Nile virus in the United States in 2002. *Commun Dis Rep CDR Wkly* 2002; **12** (29): news. Available at <<http://www.phls.org.uk/publications/cdr/archive02/News/news2902.html#WNV>>

2. Crook, PD, Crowcroft NS, Brown DW. West Nile Virus and the threat to the UK. *Commun Dis Public Health* 2002; **5** (2): 138-43. Available at <[http://www.phls.org.uk/topics\\_az/west\\_nile/menu.htm](http://www.phls.org.uk/topics_az/west_nile/menu.htm)>.

3. Nash D, Mostashari F, Fina A. The outbreak of West Nile Virus infection in the New York City area in 1999. *N Eng J Med* 2001; **344**: 1807-14.

4. Perra A, Zientara S, Burgue B, Zeller H, Hars J, Matieu B et al. La surveillance du virus West Nile en France en 2001. *Bulletin Epidemiologique Hebdomadaire* 2002; **33**: 161-3.

## Case definition for suspected WNV infection in humans

A case of encephalitis or meningitis, defined by the specific criteria below, presenting from 1 June 2002 to 30 September 2002.

### 1. Encephalitis

Any person with suspected viral encephalitis with **all the following criteria**

1. Fever  $>38^{\circ}$  **and**
2. Altered mental state (altered level of consciousness, agitation, lethargy) and/or other evidence of cortical involvement (eg focal neurological findings, seizures) **and**
3. Cerebrospinal fluid (CSF) pleocytosis with predominant lymphocytes and/or elevated protein with a negative Gram stain and culture **and**
4. No alternative microbiological cause identified eg HSV

### 2. Meningitis

Any person with suspected viral (aseptic) meningitis with **all the following criteria**

1. Fever  $>38^{\circ}$  **and**
2. Headache, stiff neck and/or other meningeal signs **and**
3. CSF pleocytosis with predominant lymphocytes and/or elevated protein and a negative Gram stain and culture **and**
4. No alternative microbiological cause identified eg enterovirus.

### Details about testing

For testing for West Nile Virus in suspected cases as defined above, the following specimens should be sent to CAMR (for contact details see above):

**1. Paired whole blood specimens.** The acute phase specimen 0 to 8 days after onset and the convalescent phase sample 14 to 21 days after onset. By the eighth day of illness, a large majority of infected persons will have detectable IgM antibody to West Nile Virus. In most cases this will still be detectable up to 2 months post illness and can be detected in some cases 12 months post infection. By 3 weeks post-infection serum IgG to West Nile Virus is detectable.

**2. CSF, ideally acute phase (< 8 days of onset).** As early as the first few days following infection, anti-capture ELISA can detect IgM to West Nile Virus. Virus may also be isolated or be detected by reverse transcriptase polymerase chain reaction (RT-PCR), in acute phase CSF within 8 days of onset. CSF samples collected later in the disease can however also be useful for diagnosis.

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## Update to the immunoglobulin handbook

*Immunisation against infectious disease* (“the green book”) published in 1992 and 1996, incorporated a section on immunoglobulins, as well as having specific advice for its use under each relevant disease section. Many immunoglobulin-issuing centres, however, still referred to the pink *Immunoglobulin handbook*, first issued by the PHLS in 1990, for specific advice for preparations. During October and November 2001, work began on updating the original edition of the pink handbook. A pilot edition was sent to all district immunisation co-ordinators in December 2001 and a notice of its availability on the PHLS website was posted on the vaccination and immunisation web group. Following an increase in measles cases in January 2002 and the subsequent near elimination of all immunoglobulin stock from Colindale, the measles page was re-written to reflect better its use in situations such as this. The handbook was distributed more widely within the PHLS network to all issuing centres in May 2002.

Anecdotally, the 'pink handbook' has been beneficial as a guide for doctors who provide on-call duties and may need to issue immunoglobulins. To assess the usefulness and need of the pink handbook, an audit is currently being undertaken. The review will hope to ascertain the following:

- Which health professionals use the handbook.
- If the health professional has ever requested immunoglobulin issue.
- How best to inform health professionals of its availability and any updates .
- If it has helped health professionals in dealing with immunoglobulin issues from CDSC.

- What other resources are available to provide immunoglobulin information.
- Whether it is useful in addition to the green book or to be incorporated into the green book.

The current edition of the *Immunoglobulin handbook* (April 2002) can be found at [http://www.phls.co.uk/topics\\_az/immunoglobulin/immunoglobulinHandbook.pdf](http://www.phls.co.uk/topics_az/immunoglobulin/immunoglobulinHandbook.pdf).

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## HIV/STIs

Last updated: 30 August 2002  
Next update due: 26 September 2002

### HIV infection and AIDS in the United Kingdom: monthly report – August 2002

*United Kingdom data from the PHLS AIDS and STD Division, Scottish Centre for Infection and Environmental Health, Institute of Child Health, London, and Oxford Haemophilia Centre (on behalf of UK Haemophilia Centre Doctors' Organisation).*

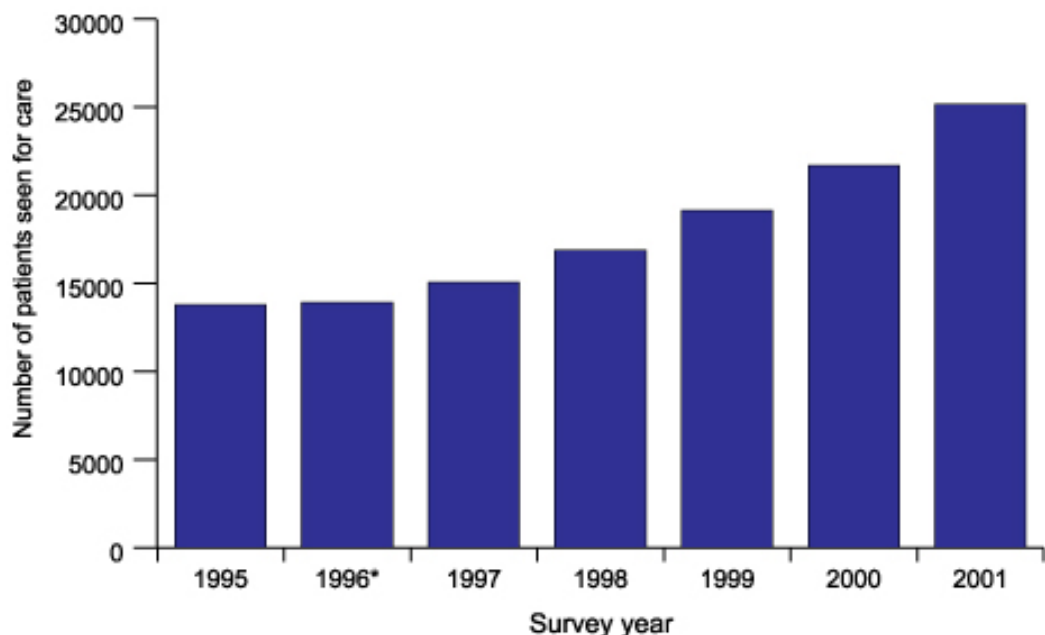
### SOPHID update for 2001: prevalent diagnosed HIV infections in England, Wales and Northern Ireland

The annual survey of prevalent HIV infections diagnosed (SOPHID) aims to include reports of all individuals in England, Wales, and Northern Ireland with diagnosed HIV who attended for HIV-related treatment or care within the previous calendar year. The survey collects information on patient residence and provides local health planners with estimates of the number of individuals within their local population who have diagnosed HIV infection. Since HIV budgets were mainstreamed from April 2002, the information will be used centrally to take some account of the uneven distribution of HIV in NHS main allocations, and is also used locally to map patient flows for treatment.

In 2001 there were 25,197 diagnosed individuals reported to SOPHID (including paediatric cases). This represents a 16% increase when compared to 2000 (see figure 1). Since it started in 1995 the survey has shown an upward trend in prevalent diagnosed HIV infections. Between 1997 and 2000 there was an annual increase of 13%. The increase shown for 2001 departs from this linear trend.

Increased diagnosis as a result of the promotion of HIV testing and the effect of highly active anti-retroviral therapy (HAART) in delaying death can partially explain the increase. For 2001, 325 HIV-related deaths in England, Wales, and Northern Ireland were reported by the end of June 2002. Although this number will rise if further deaths are reported, it represents a marked decrease in deaths since the 1995 peak of 1545.

**Figure 1 The number of reports of individuals diagnosed with HIV and who attended for HIV-related treatment or care by calendar year (includes patients who died within that year)**



\*In 1996 the survey did not include data from Ireland

The distribution of prevalent diagnosed HIV infection remains focussed on London with 60% of individuals (15,038) residing there, followed by 10% (2507) in the South East region and 7% (1872) in the North West region. When considering the region of treatment there is an even greater concentration in London. Sixty-five percent (16,364) of those reported were treated in London.

### Route of infection

Table 1 shows a breakdown of the 2001 SOPHID survey by route of HIV infection, sex, and ethnicity. More individuals were infected through sex between men than through sex between men and women. While numbers continue to increase, however, the proportion of individuals infected through sex between men continues to fall, from 55% (10,650) in 1999, 52% (11,380) in 2000, to 50% (12,556) in 2001. In contrast the proportion of individuals infected through sex between men and women continues to rise, from 29% (5506) in 1999, to 31% (6762) in 2000, and to 36% (9167) in 2001. This gradual shift in proportions has been occurring since the SOPHID survey began. Among individuals reported to CDSC as newly diagnosed in England, Wales, and Northern Ireland in 2001, the number infected through sex between men and women (2371) has continued to increase sharply whereas the number infected through sex between men (1359) has remained steady (data as reported to end June 2002)(1).

**Table 1: Diagnosed HIV infected patients in 2001 by probable route of infection, sex and ethnicity – SOPHID results**

Ethnicity	Probable route of HIV infection											Total	
	Sex between men		Injecting drug use		Sex between men and women		Blood / blood products		Mother to infant		Other / NK		
	M	F	M	F	M	F	M	F	M	F	M		F
White	10220	518	227	1168	1035	320	25	50	48	482	62	14155	
Black-Caribbean	256	6	1	165	207	2	4	7	7	35	15	705	
Black-African	160	11	7	1878	3802	26	25	304	305	145	261	6924	
Black-other/Black unspecified	166	2	0	86	106	2	1	2	0	15	8	388	
Indian/Pakistani/Bangladeshi	74	4	2	97	68	10	4	6	5	21	10	301	
Other/ mixed	538	38	19	88	104	7	3	48	57	30	10	942	
Other Asian/Oriental	99	1	2	43	80	4	2	2	–	8	4	245	
NK	1043	22	22	103	137	18	1	3	6	127	55	1537	
<b>Total</b>	<b>12556</b>	<b>602</b>	<b>280</b>	<b>3628</b>	<b>5539</b>	<b>389</b>	<b>65</b>	<b>422</b>	<b>428</b>	<b>863</b>	<b>425</b>	<b>25197</b>	

### Ethnicity

Fifty-six per cent (14,155) of individuals reported to SOPHID in 2001 were described as white and 27% (6924) as black-African. The proportion of individuals reported as white in 1999 was 63% (12,115) and in 2000 60% (12,985). The proportion for black-Africans was 20% (3902) in 1999 and 23% (4969) in 2000.

There is a strong association between route of HIV infection and ethnicity. Among those heterosexually infected 62% (5680) were described as black-African and 24% (2203) as white. Among individuals reported as infected through sex between men 81% (10220) were described as white and 1% as black-African. An association also exists between sex and ethnicity. For those reported as probably infected through sex between men and women most ethnic groups present a greater number of females than males; for black-Africans 67% (3802) of those reporting their probable route of infection as sex between men and women are female. In contrast, males predominate (53% (1168)) among heterosexually infected individuals of white ethnicity. Regional breakdowns of the SOPHID survey results for 2001 can be found on the HIV/AIDS homepage at [http://www.phls.org.uk/topics\\_az/hiv\\_and\\_sti/hiv/hiv.htm](http://www.phls.org.uk/topics_az/hiv_and_sti/hiv/hiv.htm), under epidemiological data.

1. CDSC. AIDS/HIV quarterly surveillance tables: cumulative UK data to end June 2002. Table 6a.1 [online][cited 30 August 2002]. Available at [http://www.phls.org.uk/topics\\_az/hiv\\_and\\_sti/hiv/epidemiology/files/q0206.pdf](http://www.phls.org.uk/topics_az/hiv_and_sti/hiv/epidemiology/files/q0206.pdf).