



NEWS

ENTERIC

RESPIRATORY

IMMUNISATION

HIV/STIs

BACTERAEamia

ZOOSES

TRAVEL HEALTH

DIARY

BACK ISSUES

SEARCH

Main stories this week:

Acute respiratory infection with pericarditis and/or myocarditis in Greece

Mycobacterium bovis outbreak in cattle in North Wales

Monitoring of antenatal screening for HIV in the United Kingdom

Reports of UK diagnoses of HIV infection for 2001 already exceed 4000

Diary dates:

International conference on zoonoses: from science to policy

Updated this week:

Immunisation:

Virus infections, England and Wales: laboratory reports, weeks 13-16/02

Invasive meningococcal infections, England and Wales: laboratory reports, weeks 05-08/02

Serious hazards of transfusion (SHOT): 2000-1 annual report

HIV:

HIV infection in women giving birth in the United Kingdom – trends in prevalence and proportions diagnosed to the end of June 2001

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NEWS

ENTERIC

RESPIRATORY

IMMUNISATION

HIV/STIs

BACTERAEMIA

ZOOZOSES

TRAVEL HEALTH

DIARY

BACK ISSUES

SEARCH

News

Last updated: 26 April 2002

Next update due: 2 May 2002

Contents

Cases of acute respiratory infection with pericarditis and/or myocarditis in Greece

[Mycobacterium bovis outbreak in cattle in North Wales](#)

[Monitoring of antenatal screening for HIV in the United Kingdom](#)

[Reports of UK diagnoses of HIV infection for 2001 already exceed 4000](#)

[Top](#) | [PDF](#)

Cases of acute respiratory infection with myocarditis and pericarditis in Greece

Greek authorities have been investigating an apparent outbreak of acute respiratory infection followed by myocarditis and/or pericarditis. Three deaths in young and middle-aged adults took place in April (the first on 5 April; two in Crete and one in northern Greece). Following the second death Greek authorities initiated intense surveillance nationwide with a case definition of myocarditis and/or pericarditis (diagnosed with a combination of clinical, laboratory investigations) preceded within ten days by upper respiratory tract infection (URTI). As of 25 April, 44 cases had been reported to the national centre. Clinical symptoms are typical of URTI (fever, cough, etc) but in addition, myalgia has been a characteristic feature. There has been no increase in aseptic meningitis. The majority of cases have been in middle-aged adults, with both sexes equally represented. There have been very few cases in children, although case histories have revealed URTIs in child contacts preceding the adult cases. Cases have occurred all over Greece and it is unclear whether the surveillance is detecting an outbreak or a seasonal increase. No cases have been reported among people visiting Greece for business or tourism.

Investigations of the first two deaths have confirmed an enterovirus on PCR testing at the University Hospital in Athens and Thessaloniki. Stool specimens of two other cases have also found evidence of enterovirus infection. Enteroviruses can cause a number of clinical syndromes including myocarditis and pericarditis which is most commonly associated with coxsackie virus (1).

On 23 April, Greek authorities issued advice that personal hygiene should be intensified. They also alerted all doctors about the syndrome. On 24 April schools were closed three days early for the two-week Greek Orthodox Easter holiday. Following consultation with national medical experts and public health officials, Greek authorities stated that the situation did not justify any restriction on travel, recreational activities, sports events, or public meetings. The situation has been monitored by representatives of national European surveillance centres under the auspices of the European Community Network for Communicable Disease. A meeting of the representatives during an EC/Spanish Presidency conference in Madrid endorsed the public health advice of the Greek authorities (2). Similar advice has been issued by the World Health Organization (3). The situation will continue to be monitored by the Greek authorities and the national representatives using the EC Early Warning and Response System (HSSCD EUPHIN)

1. Coxsackievirus diseases. In: Chin J, editor. *Control of communicable diseases manual*. 17th ed. Washington: American Public Health Association, 2000. p139-32.

2. Present and future of epidemiological surveillance in Europe: action and needs; April 25-26 2002; Madrid, Spain.

3. World Health Organization. Acute respiratory syndrome in Greece - update. *Communicable Disease Surveillance and Response* [online] [cited 26 April 2002]; 26 April 2002. Available at <<http://www.who.int/disease-outbreak-news/n2002/april/26april2002.html>>.

***Mycobacterium bovis* outbreak in cattle in North Wales**

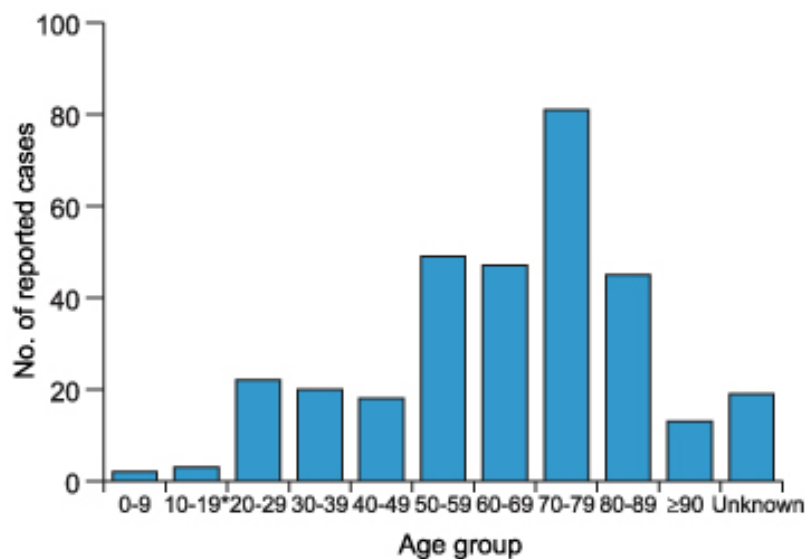
An outbreak of *Mycobacterium bovis* infection in cattle has again raised the question about the potential human health consequences of bovine tuberculosis. The detection of new *M. bovis* infection among cattle in an area of north Wales which was previously free of the disease comes after a nine month suspension of routine screening due to the outbreak of foot and mouth disease. While the overall incidence and number of reported outbreaks of disease in cattle has increased annually since 1990, the number of cases of *M. bovis* disease reported in humans remains low at about 40 cases per year since 1993 (range 28-49); less than 1% of tuberculosis complex isolates. Within the United Kingdom (UK), tuberculosis caused by *M. bovis* occurs predominantly in people born in the UK, aged 55 years and above.

It is estimated that in the 1930's around 6% of all human tuberculosis in the UK was due to *M. bovis* and up to 40% of cattle were infected. The widespread introduction of milk pasteurisation and a programme of screening, culling and quarantine of herds and inspection of meat led to a dramatic reduction in the incidence of *M. bovis* infection. *M. bovis* causes a clinically indistinguishable form of disease to *M. tuberculosis*. The vast majority of cases of tuberculosis caused by *M. bovis* are attributable to drinking contaminated unpasteurised milk. There are no documented instances of infection associated with eating contaminated meat.

An enhanced system for the surveillance of *M. bovis* in humans began in 1999 to complement the existing mycobacterial isolate surveillance system (Mycobnet) which gathers data from all reference and regional laboratories in the UK. The system was modified in January 2001 to improve the timeliness of data collection and gather more comprehensive information on risk factors for exposure and susceptibility to *M. bovis*. The aim of enhanced surveillance is to give a more clear understanding of the epidemiology of *M. bovis* and inform UK policy. The PHLS Mycobacterium Reference Unit is conducting a study in partnership with others to identify *M. Bovis* exposure. Future work will include a case-control study to explore risk factors for human infection.

Government research continues into the factors that make cattle herds vulnerable to *M. bovis* infection and evaluation of control methods, including badger culling. While the risk posed to cattle from badgers remains contentious, the evidence that they are a significant source of infection is considered compelling. The threat to public health posed by *M. bovis* in the UK is very low.

Figure Distribution of reported *M. bovis* cases by age group, United Kingdom, 1993 to 2000



Monitoring of antenatal screening for HIV in the United Kingdom

Data from the national Unlinked Anonymous Prevalence Monitoring Programme aligned with obstetric reports to the National Study of HIV in Pregnancy and Childhood indicate that at least 63% of HIV-infected pregnant women in England had been diagnosed by the time they gave birth in the first half of 2001. In inner London at least 83% had been diagnosed, in outer London 61%, and in the rest of England, at least 33%. The proportion of pregnant women diagnosed prior to delivery in inner London between January 2000 and June 2001 therefore exceeded the national target of 80% set by the Department of Health for 2002. Although these findings indicate that there may have been a decline in detection rates in outer London and elsewhere in England in the first half of 2001 when compared with the progress made in 2000, previous experience suggests that the estimates will rise when late reports of diagnosed women are incorporated. Detection rates also appear to have improved in Scotland in 2001, with at least 75% of HIV-infected pregnant women being diagnosed prior to delivery, although there is not yet an official policy of universal offer of routine antenatal testing.

It remains essential to maintain high levels of diagnosis of HIV infection in pregnancy. If women are aware of their HIV infection they can be offered interventions that reduce the risk of vertical transmission from one in four to less than one in 50 (1).

The surveillance systems currently in place need to be maintained in order to monitor progress towards achieving national targets introduced by the Department of Health in 1999, with the ultimate goal of an 80% reduction in the number of children acquiring HIV infection from their mothers (2). Systems for monitoring the offer and uptake of antenatal testing for HIV and other infections have been developed in the London, and Northern and Yorkshire regions and it is important that these are not only sustained but also extended to other regions.

1. Duong T, Ades AE, Gibb D, Tookey P, Masters J. Vertical transmission rates for HIV in the British Isles: estimates based on surveillance data. *BMJ* 1999; **319**:1227-9.

2. Health Service Circular. *Reducing mother to baby transmission of HIV (HSC 1999/183)*. London: NHS Executive, 1999.

[Top](#) |

Reports of United Kingdom diagnoses of HIV infection for 2001 already exceed 4000

By the end of March 2002, 4164 HIV diagnoses had been reported in the United Kingdom (UK) for 2001. This is the highest annual total ever reported, and it will rise further as late reports come in. The majority of these infections were acquired heterosexually, usually abroad. Sex between men remains the major route of HIV transmission within the UK.

[Back to top](#)

- NEWS
- ENTERIC
- RESPIRATORY
- IMMUNISATION
- HIV/STIs
- BACTERAEMIA
- ZOONOSES
- TRAVEL HEALTH
- DIARY
- BACK ISSUES
- SEARCH

Immunisation

Last updated: 25 April 2002
Next update due: 23 May 2002

Contents

- Virus infections, England and Wales: laboratory reports, weeks 13-16/02
- Invasive meningococcal infections, England and Wales: laboratory reports, weeks 01-04/02
- Serious hazards of transfusion (SHOT): 2000-1 annual report

Virus infections, England and Wales: laboratory reports, weeks 13-16/02

Laboratory reports	Number of reports received				Total reports 09-12/02	Cumulative total 2002
	13/02	14/02	15/02	16/02		
Coxsackie A	–	–	3	–	3	7
Coxsackie B	–	–	–	1	1	22
Cytomegalovirus	7	16	43	16	82	325
Echovirus	–	3	5	3	11	120
Parvovirus B19	10	13	39	27	89	273
Varicella zoster virus	3	11	10	10	34	182

[Next](#) | [Top](#) |

Invasive meningococcal infections, England and Wales: laboratory reports, weeks 05-08/02

	Method of diagnosis			Total reports 05-08/02	Cumulative total* 2002
	CSF and blood		Other sites		
	culture	non-culture**	culture		
Group A	–	–	–	–	–
Group B	72	75	25	172	401
Group C	16	6	1	23	55
Group W135	3	10	2	15	30
Group X	1	–	–	1	2
Group Y	2	–	1	3	6
Group Z	–	–	–	–	–
Group 29E	–	–	–	–	–
Ungroupable	–	–	1	1	1
Ungrouped	–	24	–	24	36
Total	94	115	30	239	531

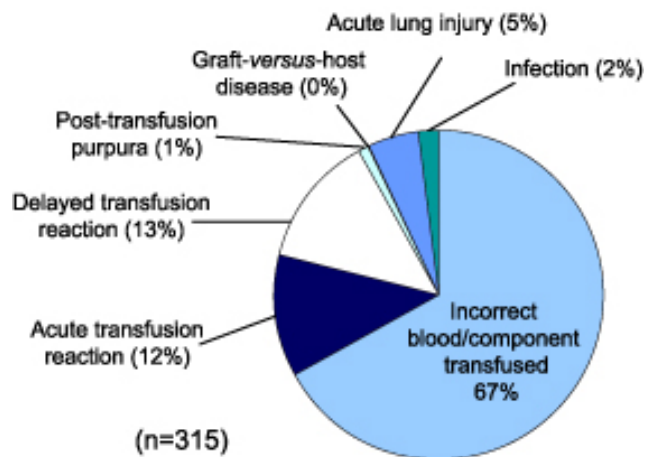
* combined CDSC and Meningococcal Reference Unit data. ** latex antigen, microscopy, polymerase chain reaction.

Serious hazards of transfusion (SHOT): 2000-01 Annual Report

The surveillance system for all major complications of blood transfusion (serious hazards of transfusion, [SHOT]) (1) issued its fifth annual report on 10 April (2).

The 2000-1 SHOT report documents cases of the relatively rare incidents of serious complications associated with blood transfusion in the United Kingdom (UK) during 2000-1 (figure), and cumulatively for five years since October 1996. The fifth annual report describes a similar profile of complications as the previous annual reports.

Figure Cases of serious complications associated with blood transfusion reported in the United Kingdom: 2000 to 2001



Ninety-two per cent (379/413) of eligible hospitals participated by either reported a case or confirming that they had no cases to report. This was an improvement on last year when 72% of eligible hospitals documented their participation. Just over 3.4 million blood components (red cells, platelets, fresh frozen plasma, and cryoprecipitate) were issued by the transfusion services of the UK during this year.

Of 43 initial reports of post-transfusion infections in UK during 2000-01, six (14%) were classified, after appropriate investigations, as transfusion-transmitted infections. These contributed only 1.9% of the all complications of transfusion initially reported this year.

Four of these cases were due to bacterial contamination of platelets: one each due to *Staphylococcus epidermidis*, *Staphylococcus aureus*, *Bacillus cereus* (fatal), and Group B streptococcus.

Two cases of viral transmission were reported this year. One HBV infection was detected by routine testing of a patient four months after red cell transfusion. Testing of the archived samples from the implicated donation and of subsequent samples from the donor showed the donation to have been collected during early acute HBV infection (HBV DNA positive, anti-HBc negative and with very low levels of HBsAg that had not been detected by routine donation testing). One recipient was traced and found to have HTLV I infection after the donor of a unit of red cells she had been given nine years previously (1991) presented as a patient with adult T-cell lymphoma and HTLV I infection. The recipients of five other components from this donor were either dead or not fit to accept testing. The infected recipient had no other risk factors for HTLV I infection. Transfusion-transmitted HTLV infection has been previously documented in the UK (3). Since these cases were transfused, leucodepletion may have reduced the risk of HTLV transmission by transfusion. Nevertheless, HTLV testing of all blood donations has been recommended and is due to start in the UK later this year in order

to prevent infectious donations entering component production.

Full details of all these cases, and of the non-infectious complications are included in the Annual Report (2).

Thirty-five cases of transfusion-transmitted infections have been reported in UK since October 1995 (table). Twenty-one (60%) of these were bacterial contaminations, including six of seven deaths. The majority of these cases (17/21) involved transfusion of platelets.

Table Cumulative total transfusion-transmitted infections: reported in UK between 1/10/1995-30/9/2001 by year of transfusion*

Infection	Year of transfusion									Total	Deaths
	pre-1995	1995	1996	1997	1998	1999	2000	2001 (to end Sep)			
HAV	–	–	1(1)	–	–	–	–	–	–	1(1)	–
HBV	1(1)‡	1(1)	1(1)	1(1)	1(1)	2(3)	1(1)	–	–	8(9)	–
HCV	–	–	1(1)	1(1)	–	–	–	–	–	2(2)	–
HIV§	–	–	1(3)	–	–	–	–	–	–	1(3)	–
Bacteria	–	1(1)	1(1)	3(3)	4(4)†x2	4(4)a	7(7)†x3	1(1)	–	21(21)	6
Malaria	–	–	–	1(1)†	–	–	–	–	–	1(1)	1
HTLV I	1(1)	–	–	–	–	–	–	–	–	1(1)	–
Total	2(2)‡	2(2)	5(7)	6(6)	5(5)	6(6)	8(8)	1(1)	–	35(38)	7

*The number of incidents is shown with the total number of identified infected recipients in brackets. †Infection was implicated in the death of a recipient. ‡One household member who was caring for the recipient was diagnosed with acute HBV. §One additional investigation, initially reported during 97-98 and concluded during 98-99, failed to confirm or refute transfusion transmission of HIV infection during the early 1990s. As the patient had received multiple transfusions, and had no other risk factors for infection, transfusion with HIV infectious blood was concluded to be the probable, although unproven, source of infection.

The data from this surveillance system have confirmed the current rarity of transmission of known viral infections, and have focused attention onto bacterial contamination as the commonest reported infectious complication of transfusion. The report recommends further efforts to prevent bacterial contaminations, and that hospitals consult guidelines (available from blood centres) about the appropriate investigation of post-transfusion reactions that are suspected to be due to bacteria. The past year has seen ongoing evaluation by the Blood Services of methods to minimise bacterial contamination – in particular the diversion of the first few mL of blood collected (most likely to contain skin flora) away from the primary pack that enters component production, improved arm cleansing techniques, bacterial screening of platelets and pathogen inactivation of platelets. SHOT data will be one source of information used to evaluate these strategies as they are introduced.

1. CDSC Surveillance of the complications of blood transfusion. *Commun Dis Rep CDR Wkly* 1996; **6**: 409
2. Serious Hazards of Transfusion Scheme. *Annual Report 2000-01*. Manchester: SHOT, 2002. (Copies can be obtained from the SHOT office (tel 0161 251 4208), price £25 to non-NHS, or viewed at <http://www.shot.demon.co.uk/>)
3. Harrison P, Ala FA, Milligan DW, Skidmore S. Failure to screen may be a false economy. *BMJ* 1996; **312**: 706-7.

[Back to top](#)

- NEWS
- ENTERIC
- RESPIRATORY
- IMMUNISATION
- HIV/STIs
- BACTERAEamia
- ZOONOSES
- TRAVEL HEALTH
- DIARY
- BACK ISSUES
- SEARCH

HIV/STIs

Last updated: 25 April 2002
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AIDS and HIV infection in the United Kingdom: monthly report

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

One thousand four hundred and thirty new diagnoses of HIV infection were reported to the United Kingdom (UK) data set in the first quarter of 2002. Four hundred and twenty-five of these were classified as probably infected through sex between men, 646 through sex between men and women, 20 through injecting drug use (IDU), and three through blood transfusion abroad. At the end of the quarter the probable route of infection was unresolved for 335 of the reported cases. Of the reports received 557 (39%) were of HIV infections diagnosed in the first quarter of 2002, and 787 (55%) were of diagnoses in 2001. These 787 reports of HIV diagnoses made in 2001 received during the last quarter bring the total for that year to 4164 (table 1). This is the first time the number of HIV diagnoses reported for a single year has exceeded 4000, and the number will rise further as more delayed reports are received. Of the total reported by the end of March 2002, 53% were reported as probably having acquired infection heterosexually, and 32% through sex between men. The majority of the heterosexually acquired infections diagnosed were acquired abroad, often in sub-Saharan Africa, by people infected with HIV before moving to the UK. Sex between men remains the most frequent route for transmission of HIV infection within the UK.

Table 1 HIV infected individuals* by year of first reported HIV diagnosis: UK data† to the end of March 2002‡

How infection was probably acquired	Year of diagnosis											
	<1992	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	Total
Sex between men§	12776	1639	1498	1480	1465	1539	1390	1344	1326	1437	1338	27232
Sex between men and women	2253	780	766	793	849	837	1005	1154	1405	1880	2226	13948
Injecting drug use	2301	187	203	168	181	172	168	130	109	100	89	3808
Blood products eg for haemophilia	1333	4	4	2	–	2	2	2	1	1	2	1353
Blood/tissue transfer	163	20	13	15	20	19	25	8	18	21	19	341
Mother to infant	117	57	66	60	59	60	82	92	80	95	52	820
Other/ undetermined	528	53	63	53	65	56	51	69	91	189	438	1656
Total	19471	2740	2613	2571	2639	2685	2723	2799	3030	3723	4164	49158

* individuals with laboratory reports of infection, or with AIDS or death reported but no matching laboratory report.

† includes 68 reported from the Channel Islands or Isle of Man.

‡ numbers, particularly for recent years, will rise as further reports are received.

§ includes 669 who also injected drugs

HIV infection in women giving birth in the United Kingdom – trends in prevalence and proportions diagnosed to the end of June 2001

National unlinked anonymous (UA) monitoring of prevalence of HIV-1 infection in women proceeding to delivery, by testing for maternal antibody in infant dried blood spots, began in the United Kingdom (UK) in 1988*. Since 1992, the survey has covered approximately 70% of UK. The results of UA monitoring are aligned with reports of HIV-infected pregnant women made through the Royal College of Obstetricians and Gynaecologists (RCOG) to the National Study of HIV in Pregnancy and Childhood. This alignment provides estimates of the proportions of HIV infected pregnant women who have had their infection diagnosed prior to pregnancy or during current antenatal care (table 2).

*The unlinked surveys for England are managed for the Department of Health by CDSC (PHLS) (UA surveys in SE Thames and all regions outside the Thames area) and by ICH (London) (UA surveys in NE, NW and SW Thames and the National Study of HIV in Pregnancy & Childhood). The survey in Scotland is co-ordinated by the Scottish Centre for Infection and Environmental Health and the Neonatal Metabolic Screening Laboratory, Stobhill General Hospital, Glasgow. A steering group chaired by the Department of Health oversees the UA surveys, reviews strategy, and ensures that the data are collected, analysed, and presented in the most useful way for purchasers and providers.

Table 2 HIV infection in pregnant women giving birth in the United Kingdom, 1995 to June 2001: alignment of dried blood spot survey data with confidential reports through the Royal College of Obstetricians and Gynaecologists



These estimates have attracted considerable interest since it became apparent in 1994 that interventions during pregnancy and in the perinatal period can reduce the risk of transmission of HIV from mother to child from one in four to less than one in 50 (1). The uptake of such interventions by diagnosed HIV-infected pregnant women is high and there are also benefits for women themselves in having their infection diagnosed early.

Interim results derived from these surveys are presented in tables 2 and 3. Data in table 2 show findings for London, the rest of England, and Scotland to the end of June 2001. Results for health authority of residence of the mother at the time of delivery to the end of 2000 are given in table 3. The maternal HIV infection detection rates are initial estimates only and are likely to rise when late reports of diagnosed HIV-infected women are incorporated. Health authority data do not necessarily apply to individual hospitals in those areas because women living in one health authority may receive their care elsewhere. This is especially the case in urban areas such as London.

Table 3 Dried blood spot survey: United Kingdom 1997 to 2000: prevalence of maternal HIV infection and alignment with confidential reports from Royal College of Obstetricians and Gynaecologists† by participating health authorities



Hospital-specific data, based on the alignment of the results from the unlinked anonymous testing of antenatal bloods and RCOG notifications are, however, available for 14 major London hospitals. This information will also be available in the future in regions where the infant dried blood spot survey has been enhanced through linkage of birth registration data to dried blood spots prior to unlinked anonymisation and subsequent HIV testing. Methodologies for both surveys have been described in detail elsewhere (2,3).

Prevalence of HIV infection

In the first half of 2001, the prevalence of HIV was highest in inner London with 111 women (48 per 10,000) who gave birth to live-born infants in this area being infected with HIV (table 2). In the same time period in outer London, 87 HIV-infected women (30 per 10,000) gave birth to live-born infants (table 2). This is the highest annual number ever reported and a substantial rise since 2000. Within London, the prevalence varied considerably according to maternal health authority of residence and in 1999 and 2000 combined ranged from 50 per 10,000 women in Lambeth Southwark and Lewisham, to 6.7 per 10,000 women in Barking and Havering (table 3).

Outside London, the prevalence of HIV infection among women giving birth to live-born infants has remained low, although in England in the first six months of 2001 there were 64 births to HIV-infected women (4.0 per 10,000 women). In Scotland, 16 HIV infected women gave birth to live-born infants in

2001 (3.0 per 10,000) (table 2).

Estimates of the prevalence of HIV in pregnant women have also been made for health authorities in the UK not covered by the UA programme (table 4). These estimates have been derived using available data from the dried blood spot programme and the survey of prevalent HIV infections diagnosed (SOPHID) (4).

Table 4 Estimated prevalence of maternal HIV infection and alignment with confidential reports from the Royal College of Obstetricians and Gynaecologists for districts not participating in the dried blood spot survey – 1999 and 2000 combined

Region and health authority	Estimated number of positives* (diagnosed cases)†	Number of births in health authority	Estimated prevalence per 10,000
Eastern			
Cambridgeshire	3(1)	10400	2.9
Norfolk	2(-)	13028	1.5
Suffolk	2(-)	15164	1.3
Total	7(1)	38592	1.8
Northern and Yorkshire			
County Durham	1(-)	13316	0.8
Gateshead and south Tyneside	1(-)	7584	1.3
North Cumbria	1(-)	6532	1.5
Newcastle and north Tyneside	2(2)	10340	1.9
Northumberland	1(-)	6332	1.6
Sunderland	-(-)	6418	0.0
Tees	1(-)	13002	0.8
Total	7(2)	63524	1.1
South-East			
Isle of Wight, Portsmouth and south east Hampshire	3(-)	14762	2.0
North and mid Hampshire	2(-)	14020	1.4
Southampton and south west Hampshire	3(2)	11868	2.5
Total	8(2)	40650	2.0
South West			
Avon	5(3)	23120	2.2
Cornwall and Isles of Scilly	1(1)	9950	1.0
Dorset	3(5)	13508	2.2
Gloucestershire	2(1)	12772	1.6
North and east Devon	1(-)	9608	1.0
South and west Devon	2(-)	12112	1.7
Somerset	1(-)	10530	0.9
Wiltshire	2(-)	14988	1.3
Total	17(10)	106588	1.6
Wales			
Bro Taf	3(1)	17816	1.7
Dyfed Powys	1(-)	9742	1.0

Gwent	1(-)	13250	0.8
Morgannwg	1(-)	10634	0.9
North Wales	1(-)	14876	0.7
Total	7(1)	66318	1.1
West Midlands			
Walsall	1(-)	6866	1.5
Total	1(-)	6866	1.5
Northern Ireland total	3(1)	48200	0.6

* Estimated number of HIV positive samples using data from the Dried Blood Spot Survey and the Survey of Prevalent HIV Infections diagnosed.

† Reported numbers of births to HIV infected mothers whose maternal infections had been diagnosed before or during pregnancy. Data based on confidential reports to the Royal College of Obstetricians and Gynaecologist (RCOG). Recent figures are subject to reporting delays. District data do not necessarily apply directly to individual hospitals in those districts because women who live in one district may receive antenatal care elsewhere. This is especially the case in urban areas.

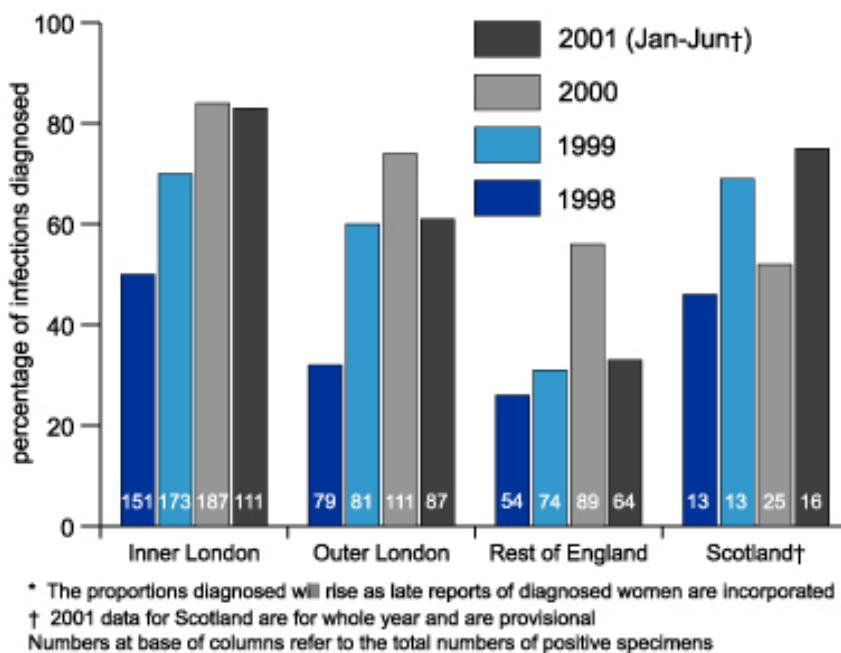
Proportions of maternal HIV infections diagnosed: monitoring performance towards national targets

National targets and objectives were set in 1999 that involve the offer and recommendation of an HIV test to all pregnant women throughout England. It is intended that by increasing the uptake of antenatal HIV testing to 90%, and by increasing the proportion of HIV infections diagnosed prior to delivery to 80%, an 80% reduction in the proportion of children acquiring HIV infection from their mothers should be achieved by December 2002 (5,6).

In 2000, there were an estimated 452 birth to HIV-infected women in the UK. It is estimated with current antenatal HIV testing uptake, this would have resulted in about 45 infants acquiring HIV from their mothers. Although the improvements in maternal diagnosis have contributed to a decrease in the number of HIV infections passed from mother to child, fewer than ten infant HIV infections would have occurred had all maternal HIV infections been diagnosed and appropriate interventions offered to all HIV-infected pregnant women (7).

Information on the proportion of maternal HIV infections diagnosed, provides health authority-specific data for monitoring the performance of antenatal HIV testing initiatives (table 3). Data for the first half of 2001 for inner London showed that of the 111 maternal infections detected through UA testing, 83% (92 of 111) could be aligned with reports of infected women to the National Study of HIV in Pregnancy and Childhood (table 2 and figure 1). Of the 70 women who had not been diagnosed prior to pregnancy, 51 (73%) were identified during the current period of antenatal care. The proportion of pregnant women diagnosed prior to delivery in inner London between January 2000 and June 2001 therefore exceeded the target of 80% set by the Department of Health for 2002. In outer London and elsewhere in England at least 61% (53 of 87) and 33% (21 of 64), respectively, of maternal HIV infections were diagnosed prior to delivery in the first six months of 2001. In Scotland, 75% (12 of 16) of maternal infections were diagnosed by the time of delivery in 2001 (table 2 and figure 1). Although these findings indicate that there has been a decline in detection rates in outer London and the rest of England in the first half of 2001 when compared with 2000, previous experience suggests that these estimates will rise as further reports of women with diagnosed HIV infection are made. The proportions diagnosed in England in 2000, for example, are substantially higher compared to this time last year (8).

Figure 1 Proportion of maternal HIV infections diagnosed prior to delivery: 1998 to June 2001



Direct routine monitoring of the coverage (offer and uptake) of antenatal testing for infections, including HIV, is also being undertaken in the London region and, more recently, the Northern and Yorkshire region, to monitor progress towards the government targets. Preliminary results show that across London 71% of pregnant women are being tested for HIV infection. Coverage rates, however, vary substantially by maternity unit and the data requested is often difficult for units to collect (9). In Northern and Yorkshire in 2001, 77% of women booked for antenatal care were tested for HIV (unpublished data). It is important that these monitoring schemes are sustained, and extended to cover the rest of the UK. The proportion of maternal infections diagnosed will continue to be monitored through the alignment of obstetric reports of HIV infected pregnant women made to the National Study of HIV in Pregnancy and Childhood with results from the unlinked anonymous dried blood spot programme.

The fourth UK Survey of antenatal testing policy, a collaborative project between the Institute of Child Health (London) and the PHLs Communicable Disease Surveillance Centre, has recently been completed and will provide a valuable insight into the development of policy and practice in antenatal screening. Preliminary results show that about 80% of all English maternity units had implemented the routine offer policy by the end of 2000, including all those in London.

Results from the unlinked anonymous surveys of pregnant women, together with all other unlinked anonymous data, are published annually by the Department of Health. Additionally, local results, broken down by year and health authority, are forwarded every six months to directors of public health, regional epidemiologists, and local collaborators in the unlinked anonymous surveys.

1. Duong T, Ades AE, Gibb D, Tookey P, Masters J. Vertical transmission for HIV in the British Isles: estimates based on surveillance data. *BMJ* 1999; **319**: 1227-9.

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[Back to top](#)

Table 2 HIV infection in pregnant women giving birth in the UK 1995 – June 2001: alignment of dried blood spot survey data with confidential reports through the Royal College of Obstetricians and Gynaecologists*

Area of residence of mother	Number tested using the UA method†	Number of births to HIV infected mothers (a)‡	Prevalence per 10000	Number of maternal HIV infections reported as diagnosed*		Estimated percentage diagnosed before birth ((b+c)/a)	Percentage of infections diagnosed during antenatal care (c/[a-b])
				Diagnosed before pregnancy (b)	Diagnosed during pregnancy (c)		
Inner London							
1995	43906	118	27	18	11	25	11
1996	45543	134	29	25	21	34	19
1997	45713	124	27	34	19	43	21
1998	44561	151	34	39	37	50	33
1999	44503	173	39	65	59	72	55
2000	45129	187	41	80	82	87	77
Jan-June 2001	22893	111	48	41	51	83	73
Outer London							
1995	60596	74	12	11	5	22	8
1996	62370	70	11	12	7	27	12
1997	60694	76	13	11	6	22	9
1998	59340	79	13	15	10	32	16
1999	57784	81	14	22	24	57	41
2000	58723	111	19	27	50	69	60
Jan-June 2001	28953	87	30	21	32	61	48
Rest of England‡							
1995	346793	38	1.1	4	1	13	3
1996	349175	59	1.7	10	7	29	14
1997	349983	56	1.6	10	2	21	4
1998	348686	54	1.5	12	2	26	5
1999	338653	74	2.2	17	6	31	11
2000	327364	89	2.7	24	26	56	40
Jan-June 2001	160777	64	4.0	4	17	33	28
Scotland							
1995	60899	15	2.5	9	1	67	17
1996	59290	16	2.7	8	2	63	25
1997	59604	15	2.5	4	0	27	0
1998	57298	13	2.3	5	1	46	13
1999	55374	13	2.3	8	1	69	20
2000	53347	25	4.7	9	4	52	25
2001¶	52707	16	3.0	8	4	75	50

* Confidential reports of diagnosed HIV antibody-positive pregnancies made through the Royal College of Obstetricians and Gynaecologists to the National Study of HIV in Pregnancy and Childhood. The reports are subject to reporting delay, particularly for recent years.

† Data provided from the unlinked anonymous (UA) dried blood spot survey.

‡ Not all districts participate in the dried blood spot survey in their areas. It is estimated that 55% of births in the rest of England are covered by this survey. UA specimens from women receiving antenatal care in Northern & Yorkshire Region are included.

¶ Provisional data

Table 3 Dried blood spot survey: United Kingdom 1997-2000 – prevalence of maternal HIV infection and alignment with confidential reports from Royal College of Obstetricians and Gynaecologists† by participating health authorities

Region and health authority/board	1997-1998			1999-2000			Region and health authority/board	1997-1998			1999-2000		
	Positives* (diagnosed cases)†	Tested	Prevalence per 10 000	Positives* (diagnosed cases)†	Tested	Prevalence per 10 000		Positives* (diagnosed cases)†	Tested	Prevalence per 10 000	Positives* (diagnosed cases)†	Tested	Prevalence per 10 000
Northern and Yorkshire§							South East (continued)						
Bradford	1 (-)	9807	-	2 (1)	9497	2.1	East Sussex Brighton and Hove	3 (1)	15606	1.9	2 (-)	14650	1.4
Calderdale/Halifax†	- (-)	4800	-	- (-)	4047	-	East Surrey	1 (-)	8513	1.2	6 (2)	8217	7.3
Dewsbury	- (-)	4759	-	- (-)	4520	-	Northamptonshire	- (-)	14548	-	5 (2)	14827	3.4
Grimsby	- (-)	5019	-	1 (1)	5103	4.0	Oxfordshire	5 (2)	13763	3.6	2 (2)	13209	1.5
Huddersfield	- (-)	5391	-	1 (1)	4741	4.4	West Kent	4 (-)	24680	1.6	6 (5)	22968	2.6
Hull	- (-)	11042	-	- (-)	9753	-	West Surrey	3 (-)	20227	1.5	3 (1)	20084	1.5
Leeds East	4 (2)	6135	6.5	3 (3)	5653	11.0	West Sussex	5 (2)	16235	3.1	11 (4)	15733	7.0
Leeds West	4 (2)	7396	5.4	- (-)	8840	-	Region total	29 (7)	164439	1.8	48 (30)	159013	3.0
Pontefract‡	- (-)	3698	-	- (-)	1601	-	West Midlands						
Wakefield	- (-)	3067	-	- (-)	4040	-	Birmingham	8 (2)	30720	2.6	11 (10)	28889	3.8
York	- (-)	7100	-	- (-)	6474	-	Coventry	1 (-)	7755	1.3	2 (-)	7508	2.7
Region total	9 (4)	68295	1.3	11 (6)	64269	1.7	Dudley	1 (-)	7200	1.4	1 (-)	6952	1.4
Trent							Herefordshire	- (-)	3508	-	- (-)	3191	-
Barnsley	1 (-)	5168	1.9	0 (-)	4687	-	North Staffordshire	4 (-)	10378	3.9	- (1)	9948	-
Doncaster	2 (1)	7085	2.8	1 (1)	7146	1.4	Sandwell	2 (1)	7474	2.7	1 (-)	7253	1.4
Leicestershire	4 (2)	21874	1.8	10 (4)	21486	4.7	Shropshire	1 (-)	9831	1.0	2 (-)	9477	2.1
Lincolnshire	2 (1)	13163	1.5	2 (1)	12258	1.6	Solihull	- (-)	4224	-	1 (-)	4038	2.5
North Derbyshire	- (-)	7880	-	1 (-)	7309	1.4	South Staffordshire	- (-)	12959	-	3 (-)	12089	2.5
North Nottinghamshire	1 (-)	9053	1.1	0 (-)	8377	-	Warwickshire	1 (-)	10771	1.0	1 (-)	10471	1.0
Nottingham	3 (-)	15057	2.0	5 (3)	14206	3.5	Wolverhampton	- (-)	6527	-	4 (1)	6249	6.4
Rotherham	- (-)	6049	-	0 (-)	5805	-	Worcestershire	- (-)	11992	-	- (-)	11703	-
Sheffield	3 (3)	12195	2.5	2 (1)	11653	1.7	Region total	18 (3)	123339	1.5	26 (12)	117768	2.2
South Derbyshire	1 (1)	13412	0.8	1 (-)	13106	0.8	North West						
South Humber	- (-)	8134	-	0 (1)	7686	-	Bury and Rochdale	2 (-)	10209	2.0	1 (-)	9266	1.1
Trent total	17 (8)	119070	1.4	22 (11)	113719	1.9	East Lancashire	2 (-)	13227	1.5	- (-)	12155	-
Eastern							Isle of Man	- (-)	1775	-	- (-)	1693	-
Bedfordshire	7 (1)	14804	4.7	14 (1)	14217	9.8	Liverpool	1 (-)	12273	0.8	3 (3)	11513	2.6
Hertfordshire	3 (1)	25958	1.2	7 (3)	24625	2.8	Manchester	3 (2)	10497	2.9	8 (2)	10866	7.4
North Essex	2 (1)	20452	1.0	4 (-)	19652	2.0	Morecombe Bay	1 (-)	3062	3.3	- (-)	3034	-
South Essex	5 (1)	16126	3.1	7 (2)	14963	4.7	North Cheshire	1 (-)	8356	1.2	1 (-)	8160	1.2
Region total	17 (4)	77340	2.2	32 (6)	73457	4.4	North West Lancashire	3 (-)	10407	2.9	2 (1)	9024	2.2
London							Salford and Trafford	3 (-)	10650	2.8	3 (-)	9644	3.1
Barking and Havering	5 (-)	11011	4.5	7 (4)	10389	6.7	Sefton	- (-)	4390	-	- (-)	4492	-
Barnet Enfield and Haringey	56 (15)	23215	24.0	82 (50)	22403	37.0	South Cheshire	2 (1)	14340	1.4	3 (1)	13754	2.2
Bexley Bromley and Greenwich	17 (8)	19188	8.9	21 (13)	18441	11.0	South Lancashire	2 (-)	6602	3.0	1 (1)	5892	1.7
Brent and Harrow	21 (9)	13023	16.0	29 (23)	12561	23.0	St Helens and Knowsley	- (-)	7181	-	1 (-)	6910	1.4
Camden and Islington	21 (13)	10967	19.0	30 (25)	11418	26.0	Stockport	- (-)	6426	-	- (-)	5897	-
Croydon	11 (1)	8920	12.0	32 (13)	8828	36.0	West Pennine	- (-)	5815	-	- (-)	5332	-
Ealing Hammersmith and Hounslow‡	38 (23)	25416	15.0	39 (28)	23974	16.0	Wigan and Bolton	1 (-)	13639	0.7	1 (-)	12847	1.0
East London and The City	77 (30)	23928	32.0	109 (79)	23741	46.0	Wirral	32 (-)	7337	-	- (-)	7312	-
Hillingdon	5 (2)	6839	7.3	6 (1)	6430	9.3	Region total	21 (3)	138849	1.5	24 (8)	130479	1.8
Kensington Chelsea and Westminster‡	15 (1)	4866	31.0	9 (8)	4979	18.0	Scotland						
Kingston and Richmond	8 (-)	7406	11.0	7 (1)	9494	7.4	Argyll and Clyde	2 (-)	10441	1.9	- (-)	9836	-
Lambeth Southwark and Lewisham	99 (48)	25322	39.0	120 (95)	23899	50.0	Ayrshire and Arran	1 (-)	8207	1.2	3 (-)	7463	4.0
Merton Sutton and Wandsworth	30 (16)	16554	18.0	34 (34)	16458	21.0	Borders	1 (-)	2159	4.6	- (-)	2053	-
Redbridge and Waltham Forest	27 (5)	13653	20.0	27 (18)	13124	21.0	Dumfries and Galloway	- (-)	3120	-	- (-)	2806	-
Region total	430 (171)	210308	20.0	552 (409)	206139	27.0	Fife	2 (-)	7609	2.6	2 (-)	7070	2.8
South East							Forth Valley	- (-)	6413	-	2 (-)	6040	3.3
Berkshire	4 (-)	21534	1.9	7 (10)	20979	3.3	Grampian	1 (-)	11846	0.8	2 (1)	11051	1.8
Buckinghamshire	1 (1)	15791	0.6	2 (-)	15699	1.3	Greater Glasgow	6 (3)	20446	2.9	6 (1)	18567	3.2
East Kent	3 (1)	13542	2.2	4 (4)	12647	3.2	Highlands	- (-)	4894	-	1 (1)	4348	2.3
							Lanarkshire	1 (-)	13593	0.7	1 (-)	12961	0.8
							Lothian	11 (6)	17966	6.1	10 (9)	17271	5.8
							Orkney	- (-)	426	-	- (-)	325	-
							Shetland	- (-)	547	-	1 (-)	515	19.0
							Tayside	3 (1)	8724	3.4	10 (10)	7920	13.0
							Western Isles	- (-)	504	-	- (-)	491	-
							Scotland total	28 (10)	116895	2.4	38 (22)	108717	3.5

* Positives from an unlinked anonymous seroprevalence survey which covers London, six regions in England, outside London, and Scotland.
† Reported numbers of births to HIV infected mothers whose maternal infections had been diagnosed before or during pregnancy. Data based on confidential reports to the Royal College of Obstetricians and Gynaecologists (RCOG) to the National study of HIV in Pregnancy and Childhood. Recent figures subject to reporting delays. Health Authority data do not necessarily apply directly to individual hospitals in those Health Authorities because women who live in one Health Authority may receive antenatal care elsewhere. This is especially the case in urban areas such as London.
‡ Specimens collected from the former district Riverside have been allocated to Ealing Hammersmith and Hounslow Health Authority.
§ Results for Riverside are 1997-1998: 12 positives out of 10 668. 1999-2000: 22 positives out of 11 128.
¶ Unlinked anonymous specimens from women receiving antenatal care.
†† Centres left survey in 1999/2000.



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