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Severe Acute Respiratory Syndrome – further update

As of 26 March 2003, 1323 cases of Severe Acute Respiratory Syndrome (SARS) have been reported to the World Health Organization (WHO) from 13 countries, including 49 deaths – a case fatality rate of 4%. This total includes 792 cases and 31 deaths in Guangdong Province in China between 16 November 2003 and 28 February 2003 – all other cases have been reported after 1 February 2003 (1). All the cases reported are probable cases <http://www.phls.org.uk/topics_az/SARS/management_guidance.htm> except for the 37 suspect cases under investigation reported by the United States, and an undetermined number of those from Guandong. Excluding Guangdong, the most severely affected area is Hong Kong, with 316 case notifications and 10 deaths. Infection control measures have been substantially increased in Hong Kong <http://www.info.gov.hk/dh/ap.htm>. Limited local transmission has also been reported to WHO as taking place in Hanoi (Vietnam), Singapore, Taiwan, and Toronto (Canada) (1). WHO does not currently recommend restrictions on travel to any of the affected areas.

Intense international investigations to find the cause of the condition continue. The WHO preliminary clinical description of 21 March states that the majority of cases have occurred in previously healthy adults, aged between 25 to 70 years. Cases have also, however, been reported in children in association with transmission among close family members, and the predominance of younger adults may reflect, to an extent the outbreaks taking place among hospital staff. The incubation period is typically two to seven days but can be as long as ten days. Between 10 and 20% of the cases required assistance with breathing (2).

In addition to the two probable cases of SARS already reported to WHO from the United Kingdom (3), a third case was reported on 24 March. He is a 28 year old man who returned from Hong Kong on 17 March. He has been hospitalised in London, presenting with high fever, cough, myalgia and pneumonia. His chest x-ray shows a basal consolidation. He is reported as being moderately ill and stable. He has no history of contact with a known case. The two other patients, though still hospitalised, are recovering. So far, rapid detection of cases, their isolation, and strict control measures seem to be effective in preventing further transmission in the UK. Two earlier pobable cases and some suspect cases, have been withdrawn as cases as microbiological investigations have found evidence of known pathogens.

At the request of the Chinese Ministry of Health, an international team of experts has gone to investigate any link between the outbreak of what the Chinese authorities consider was SARS in the Guangdong Province in China in November 2002 and the later SARS outbreaks (4).

The PHLS Communicable Disease Surveillance Centre continues to coordinate the UK response to SARS working with public health bodies in Northern Ireland, Scotland and Wales. The response is being built around guidance about laboratory investigation (led by the Central Pubic Health Laboratory), surveillance, management and treatment, and infection control in hospital and the community. Advice for travellers from the UK has also been developed including leaflets for those travelling to or returning from affected areas. This information has been developed with a range of experts from inside and

outside the PHLS and is available on the PHLS website at <http://www.phls.co.uk/topics_az/SARS/menu.htm>. Comments on the guidance is welcomed and should be sent to respcdsc@phls.org.uk

Continuing transmission in Hong Kong and perhaps other parts of China, Singapore, Taiwan and Toronto, Canada means that it is important that people who become ill within ten days of returning from these areas, and fit the case definition for suspect or probable cases of SARS are reported promptly to local public health officials and then onto CDSC. A surveillance form for reporting suspect and probable cases to CDSC can be downloaded at <http://www.phls.co.uk/topics_az/SARS/sars_form_help.htm>.

1. World Health Organization. Cumulative number of reported cases. [online] Geneva: WHO, 2003, 26 March 2003. [cited 27 march 2003]. Available at: <http://www.who.int/csr/sarscountry/2003_03_26/en/>.

2. World Health Organization. Preliminary clinical description of severe acute respiratory syndrome. [online] Geneva: World Health Organization, 21 March 2003. [cited 27 march 2003]. Available at <http://www.who.int/csr/sars/clinical/en/>

3. PHLS. Severe Acute Respiratory Syndrome – update. Commun Dis Rep CDR Wkly [serial online] 2003 [cited 27 March 2003]; 13 (12): news. Available at: <http://www.phls.org.uk/publications/cdr/PDFfiles/2003/cdr1203.pdf>

4. World Health Organization. Update 10 – data from China, countries introduce stringent control measures. [online] Geneva: World Health Organization, 21 March 2003. [cited 27 march 2003]. Available at <http://www.who.int/csr/don/2003_03_24B/en/>

Immunisation

Last updated: 27 March 2003
Next update due: 25 April 2003

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Virus infections, England and Wales: laboratory reports, weeks 09-12/03

Laboratory reports	Number of reports received				Total reports 09-12/03	Cumulative total 2003
	09/03	10/03	11/03	12/03		
Coxsackie A	1	–	–	–	**1**	**4**
Coxsackie B	–	4	3	–	**7**	**22**
Cytomegalovirus	15	17	44	9	**85**	**250**
Echovirus	1	1	–	–	**2**	**19**
Parvovirus B19	12	26	20	21	**79**	**264**
Varicella zoster virus	7	8	13	8	**36**	**94**

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Invasive meningococcal infections, England and Wales: laboratory reports, weeks 48- 52/02

	Method of diagnosis			Totalreports 48-52/02	Cumulative* total 2002
	CSF and blood		Other sites		
	Culture	*Non-culture*	*Culture*		
Group A	–	–	–	–	**1**
B	60	55	4	**119**	**1334**
C	4	4	–	**8**	**162**
W135	5	–	–	**5**	**81**
X	–	–	–	–	**3**

Y	2	–	–	**2**	**25**
Z	–	–	–	–	–
29E	–	–	–	–	–
Ungroupable	–	–	–	–	**2**
Ungrouped	–	7	–	**7**	**110**
Total	**71**	**66**	**4**	**141**	**1718**

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

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Laboratory confirmed cases of measles, mumps, and rubella, England and Wales: October to December 2002

The four-weekly reporting of laboratory confirmed cases of measles, mumps, and rubella (MMR) previously published in the *CDR Weekly* have been replaced by quarterly reporting. Cases include those confirmed by oral fluid IgM antibody tests and routine laboratory reports (table 1). Analyses are by date of onset rather than by week of report as was used previously in this section. Cases confirmed by oral fluid antibody detection from 1995 are available from:

- <http://www.phls.org.uk/topics_az/measles/data_not_confirmed.
- <http://www.phls/topics_az/mumps/data_quarter.ht
- <http://www.phls/topics_az/rubella/data_rub_not.htm

and total confirmed cases by region and age from:

- <http://www.phls.org.uk/topics_az/measles/data_reg_age.htm>
- <http://www.phls/topics_az/mumps/data_reg_age.htm>
- <http://www.phls/topics_az/rubella/data_reg_age.htm>

Table 1 Total confirmed cases of measles, mumps, and rubella, and oral fluid IgM antibody tests in cases notified to ONS, weeks 40-53/02

	Cases			Oral fluid	IgM antibody	Results		
	Notified	**Tested**	**%**	**Total positive**	**Recently vaccinated**	**Confirmed**	**Other lab confirmed**	**Total confirmed cases**
Measles	567	501	88%	59	6	53	42	**95**
Mumps	484	320	66%	83	–	83	76	159
Rubella	333	244	73%	–	–	–	5	**5**

Measles

Ninety-five cases of confirmed measles with onset dates in the fourth quarter of 2002 were reported giving a provisional total of 314 cases for the year. This compared to 71 cases in 2001 and 100 in 2000. Eighty-four (84%) were aged less than 15 years (ten less than 1 year, 33 aged between 1 and 4 years; 20 aged between 5 and 9 years; and 17 aged between 10 and 14 years); three were aged between 15 and 19 years; and 12 were adults aged between 20 and 47 years. All but three were unvaccinated.

The majority of cases were from London (60) and the South East (23). Fifteen confirmed cases were linked to an outbreak at a nursery/primary school in South London. Further cases in unvaccinated children and young adults were linked to the previously reported cluster in travelling families (1,2) and seven additional cases from the North West region were also linked to this cluster. Eight cases were reported in members of Polish communities in London and the South East.
There have been 69 confirmed cases of measles with onset dates in 2003. In addition to the five confirmed cases associated with the travelling-community in Cardiff (3), these include a cluster of 12 cases associated with a nursery in North London, six cases at a boarding school in the South East, and four cases in children from Sussex, Oxfordshire, and Warwickshire (2) who visited a holiday camp in the South East during half-term. The index case at the holiday camp was linked through an older sibling to the boarding school.

Mumps

One hundred and fifty-nine cases of mumps with onset dates in the fourth quarter of 2002 were confirmed, giving a provisional total of 474 cases for the year. This compares with 767 and 697 cases in 2001 and 2000 respectively. Seventy-five per cent of the cases reported this quarter were from two regions; Northern and Yorkshire (60) and Wales (59). Only four cases were reported from Wales during the previous quarter (2).

Seventy-seven per cent (123/159) of the cases were born between 1983 and 1990, aged between 12 and 19 years, and were predominately associated with outbreaks in secondary schools. Most will have either had no MMR vaccine or only one dose (those born between 1983 and 1986 may have been offered a single-dose as part of a school entry catch-up programme from 1988, when MMR was introduced, and those born from 1987 will have been offered one routinely scheduled dose of MMR vaccine). Some of these cohorts are now old enough to be in higher education and there have been reports of cases in four universities, two in the Northern and Yorkshire region and two in the South East. Similarly, cases were identified amongst military trainees in the previous quarter. These cases emphasise the importance of ensuring all those entering college, university or other centres for further education, and military recruits have received at least one dose of MMR, preferably two (4).

Table 2 Laboratory confirmed cases of mumps by age group and region, England and Wales: weeks 40-53/02

	Age group							
Region	**<1y**	**1-4y**	**5-9y**	**10-14y**	**15-19y**	**≥ 20y**	**not known**	**Total**
Northern and Yorkshire	–	–	–	4	44	10	2	**60**
Trent	–	1	–	–	–	3	–	**4**
Eastern	–	–	–	–	2	–	–	**2**
London	–	–	–	2	–	–	1	**3**
South East	–	–	–	2	4	4	–	**10**
South West	–	–	–	2	4	1	–	**7**
West Midlands	–	1	–	–	3	1	–	**5**
North West	–	–	–	–	3	6	–	**9**
Wales	–	1	4	35	18	1	–	**59**
Total	**–**	**3**	**4**	**45**	**78**	**26**	**3**	**159**

Rubella

Only five cases of rubella with onset dates in the fourth quarter of 2002 were confirmed; one male aged 4 years and four adults aged between 21 and 38 years (one male, three females). No cases of congenial rubella were reported.

References

1. PHLS. Laboratory confirmed cases of measles, mumps and rubella, England and Wales: April to June 2002. *Commun Dis Rep CDR Wkly* [serial online] 2002 [cited 27 March 2003]; **12** (39): immunisation. Available at

<http://www.phls.org.uk/publications/cdr/PDFfiles/2002/cdr3902.pdf >

2. PHLS. Laboratory confirmed cases of measles, mumps and rubella, England and Wales: July to September 2002. *Commun Dis Rep CDR Wkly* [serial online] 2002 [cited 23 March 2003]; **12** (48): immunisation. Available at <http://www.phls/publications/cdr/PDFfiles/2002/cdr4802.pdf>

3.PHLS. Measles outbreak in Cardiff. *Commun Dis Rep CDR Wkly* [serial online] 2003 [cited 25 March 2003]; **13** (11): news. Available at <http://www.phls/publications/cdr/PDPfiles/2003/CDR1103.pdf>

4.Department of Health. Measles, Mumps and Rubella. *Immunisation against Infectious Disease* [online]. London HMSO 1996. Available at <http://www.doh.gov.uk/greenbook/index.htm>

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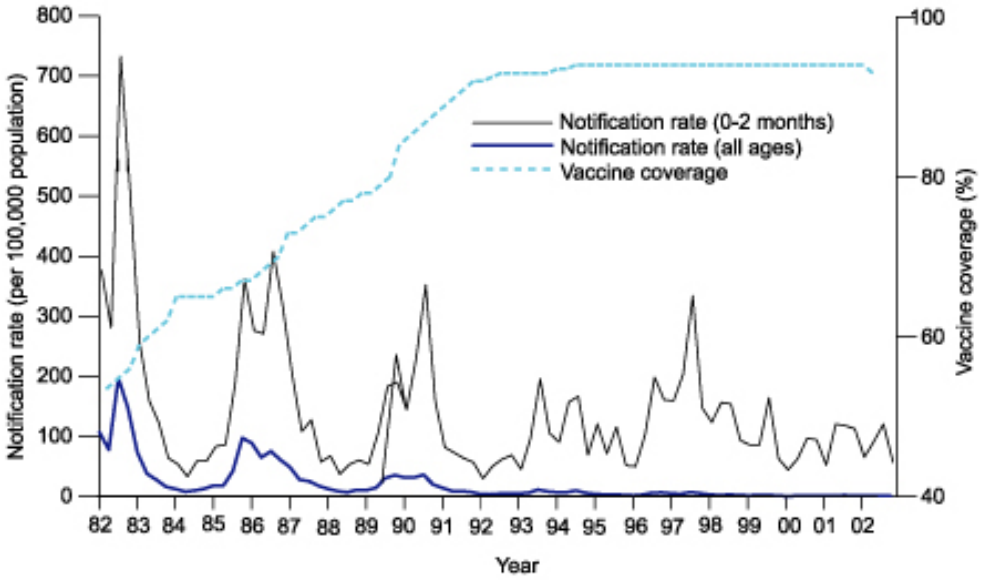
Whooping cough: enhanced laboratory surveillance of pertussis, England and Wales 2002

Enhanced laboratory surveillance of pertussis was established in 1994 at the PHLS Communicable Disease Surveillance Centre (CDSC), London. CDSC receives reports on culture- confirmed cases of *Bordetella pertussis* from laboratories in England and Wales. Reports to CDSC are reconciled with data sent to the Pertussis Reference Laboratory (PRL) at Manchester University, who provide reports on isolates sent for serotyping. Since January 2002, the PHLS Respiratory and Systemic Infection Laboratory (RSIL) have provided PCR testing to infants aged under 6 months with suspected pertussis, and high-titre pertussis toxin (PT) IgG serology testing for adults with a cough persisting longer than 21 days and for children with a cough persisting for more than 14 days (1). These cases are likely to have been culture-negative and testing with PCR and/or serology have therefore increased case ascertainment. The reporting medical doctor should report information on: vaccination history, severity, complications associated with the illness, antibiotic prophylaxis (and treatment), and history of exposure.

Figure 1 Quarterly notification rates of whooping cough (all ages and infants aged 0-2 months, per 100,000 population) and pertussis vaccine coverage, England and Wales: 1982-2002*



A total of 384 cases of pertussis were reported to the pertussis enhanced laboratory surveillance system in England and Wales in 2002, of which 36% (139/384) were confirmed only by PCR and/or serology (table 1). In individuals 5 years and over, patients diagnosed by PCR and/or serology comprised the majority of laboratory confirmed cases (105/147, 70%); most of these cases were confirmed serologically. The number of cases diagnosed by the enhanced methods increased progressively throughout 2002, comprising nearly half of the total confirmed in the last quarter of the year (table 2).

Table 1 Laboratory confirmed cases of pertussis infection England and Wales: January to December 2002*

Age Group	PCR and/or serology	Culture	**Total**	Percentage increase in case ascertainment through PCR and/or Serology
< 3 months	13	116	**129**	11
3-5 months	6	38	**44**	16
6-11 months	–	7	**7**	–
1-4 years	15	31	**46**	48
5-9 years	26	22	**48**	118
10-14 years	22	8	**30**	275
≥15 years	57	14	**71**	407
NK†	–	9	**9**	–
Grand Total	**139**	**245**	**384**	**57**

* All data are provisional † NK = not known
Since January 2002, infants <= 6 months of age with suspected pertussis have been offered PCR testing through the Respiratory and Systemic Infection Laboratory (RSIL). Adults with a cough persisting for > 21 days and children with a cough persisting for > 14 days, have been offered serology testing through RSIL. These cases are likely to have been culture-negative, and testing with PCR and/or serology have increased case ascertainment.

Table 2 Laboratory Confirmed Cases of Pertussis Infection England and Wales: January to December 2002*

Quarter	PCR and/or Serology	Culture	pcr/serology reports as a % of total	**Grand Total**
Q1	11	63	15%	**74**
Q2	57	78	42%	**135**
Q3	49	80	38%	**129**
Q4	22	24	48%	**46**
Grand Total	**139**	**245**	**36%**	**384**

* All data are provisional

The apparent increase, particularly in adult cases, is explained by the availability of enhanced diagnostic methods, which have been increasingly used during the four quarters, as illustrated by the increasing proportion of reports diagnosed by PCR and or serology.

There were a total of 245 culture confirmed reports in 2002 compared to 298 in 2001 (http://www.phls.org.uk/topics_az/whoopingcough/data.htm). As in previous years, culture--positive cases in infants under 1 year comprised the majority of all culture- positive cases (161/245, 66%); of these 116 (72%) were infants under 3 months who were too young to be vaccinated (table 3).

Table 3 Laboratory confirmed cases of pertussis infection England and Wales: January to December 2002*

Age Group	**Quarter**				**Total**
	Q1	**Q2**	**Q3**	**Q4**	Number (% total)
< 3 months	29	39	43	18	129 (33.6)
3-5 months	12	13	14	5	44 (11.5)
6-11 months	1	2	3	1	7 (1.8)
1-4 years	7	18	18	3	46 (12.0)
5-9 years	11	21	12	4	48 (12.5)
10-14 years	3	10	10	7	30 (7.8)

>15 years	11	23	29	8	71 (18.5)
NK	–	9	–	–	9 (2.3)
Grand Total	**74**	**135**	**129**	**46**	**384**

* All data are provisional

In 2002, there were 882 notifications (provisional data) of pertussis infection, compared with 888 in 2001. Prior to the introduction of pertussis immunisation in the 1950s, the average number of notification in England and Wales exceeded 100,000. The lowest annual number of statutory notifications on record occurred in 2000 with 712 reports and notifications have since remained low (figure 1). Notification rates, as with the culture-positive reports, are highest in infants under 3 months. Statutory notifications (based on clinical diagnosis) are higher than laboratory reports because laboratory diagnosis by culture is insensitive and the diagnosis of whooping cough is often made clinically without investigation, especially in older children.

The numbers of cases of pertussis have remained low, despite the fact that an epidemic year for pertussis is overdue. The last peak year occurred in 1997 when there were 2989 notified cases. The periodicity of the epidemic cycle has gradually extended (hence a decreased amplitude) as high vaccination coverage has been sustained since the early 1990s (figure 1).

1.PHLS. Whooping cough: enhanced laboratory surveillance of pertussis, first quarter and statutory notifications to week 26: 2002. *Commun Dis Rep CDR Wkly* [serial online] 2002 [cited 27 March 2003]; **12** (30): immunisation. Available at<http://www.phls.co.uk/publications/cdr/PDFfiles/2002/cdr3002.pdf>

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COVER programme : October to December 2002

Vaccination coverage statistics for children up to five years of age in the United Kingdom

This report of the COVER programme presents coverage data for children in the United Kingdom (UK) who reached their first, second, or fifth birthday during the evaluation quarter – October to December 2002 (annual COVER year begins on 1 April each year, *ie*, 1 April to 30 June 2002 is first quarter 2002). This is the tenth quarter to include coverage data on Meningococcal conjugate Group C vaccine (MenC) following its introduction in the UK vaccination programme in November 1999 (1). Children who reached their first birthdays in the quarter would have been scheduled to receive their third-dose primary vaccinations (third-dose diphtheria, tetanus, and pertussis (DTP vaccine), *Haemophilus influenzae* type b (Hib vaccine), polio vaccine, and MenC vaccine) during the period between February and April 2002. Children who reached their second birthdays would have been scheduled to receive their third-dose primary vaccinations between February and April 2001 and first measles, mumps, and rubella (MMR) vaccination between October 2001 and April 2002. Children who reached their fifth birthdays would have been scheduled to receive their third-dose primary vaccinations between February and April 1998, their first MMR during the period October 1998 to April 2000, their pre-school DT booster, polio, and second-dose MMR from February 2001 onwards. One catch-up dose of MenC would have been scheduled from April 2000 onwards.

Methods

Data from computerised child-health information systems were submitted in February and March 2003 for children resident in UK health authorities, health boards, and British Forces Germany (BFG) on 31 December 2002 and reaching their first, second, or fifth birthdays during the evaluation quarter (October to December 2002). The numbers were requested of children completing a primary course of each antigen: (three-doses of diphtheria (D3), tetanus (T3), pertussis (P3), polio (Pol3), *Haemophilus influenzae* type b (Hib3), Meningococcal conjugate Group C (MenC3) vaccines; and one dose of measles, mumps, and rubella (MMR1) vaccine any time up to their first or second birthdays. Numbers were also requested for resident children who had received a primary course of each antigen (DTPol3, P3, and Hib3), a preschool booster dose (DTPol4), at least one MMR (MMR1), and two doses of MMR (MMR2) at any time up to their fifth birthdays.

For this quarter, COVER data were collected for each old health authority area (where available). The data are evaluated against the World Health Organization (WHO) targets of 95% coverage for each antigen (except MenC) by two years of age at the national level and at least 90% coverage in each health authority (2).

Results

Coverage at 12 and 24 months

Data were received from all health authorities and health boards in the UK (tables 1 and 2), however, two trusts serving parts of two health authorities were unable to submit data for this quarter. Thirteen of the participating health authorities/boards (10.9%) achieved the 95% target at 12 months for three-doses of diphtheria, tetanus, and polio vaccine (DTPol3), 11 (9.2%) for three-doses of pertussis vaccine (P3), and 15 (12.6%) for three-doses of Hib vaccine (Hib3). Fifty-eight health authorities/boards (48.7%) achieved 95% coverage at 24 months for DTPol3, 46 (38.6%) for P3, and 55 (46.2%) for Hib3 and all countries/regions, except for London, achieved at least 90% coverage for these antigens. No health authorities/boards achieved 95% coverage for MMR at 24 months. Coverage for the UK was slightly higher (from 0.1 to 0.6%) for all antigens at 12 and 24 months compared to that reported in the previous quarter (3), except for Hib3 at 12 months, which remained the same and MMR1 at 24 months, which fell by 2.0% to 81.0%.

Table 1 Completed primary immunisations (all antigens) by 12 months: October to December 2002

Region/Country	HA* (total)	DTPol3 %	P3 %	Hib3 %	MenC %
Regions of England					
Northern & Yorkshire	13 (13)	91.2	90.7	90.9	90.4
Trent	11 (11)	91.5	91	91.4	91.2
Eastern	7 (7)	92.7	92.3	92.7	92.2
London	14 (14)	84.1	83.8	83.7	83.1
South East	13 (13)	91.8	91.3	91.7	91
South West	8 (8)	92.6	92.2	92.5	91.8
West Midlands	13 (13)	90.9	90.5	90.9	90.8
North West	16 (16)	91.2	90.7	91	90.9
England (Total)	**95 (95)**	**90.3**	**89.9**	**90.1**	**89.8**
Wales	5 (5)	93.5	92.4	93.3	93.4
Northern Ireland	4 (4)	94.3	94	94.3	94.6
Scotland	15 (15)	95.6	95.3	95.4	94.6
United Kingdom	119 (119)	91	90.6	90.8	90.5

*Health authorities/health boards participating

Table 2 Completed primary immunisations (all antigens) by 24 months: October to December 2002

Region/Country	HA* (total)	DTPol3 %	P3 %	Hib3 %	MenC %	MMR1%
Regions of England						
Northern and Yorkshire	13 (13)	93.9	93.5	93.6	92.7	83.5
Trent	11 (11)	95.5	95.1	95.4	94.5	84.9
Eastern	7 (7)	94.9	94.3	94.7	93.9	81.2
London	14 (14)	88.9	88.6	88.1	85.8	72.8
South East	13 (13)	93.9	93.3	93.6	92.4	80.3
South West	8 (8)	95.4	94.7	95	93.8	81.2
West Midlands	13 (13)	94.1	93.4	93.8	93.9	82.2
North West	16 (16)	94.2	93.5	93.8	94	81.5
England (Total)	**95 (95)**	**93.5**	**93**	**93.2**	**92.3**	**80.4**
Wales	5 (5)	95.3	93.9	94.9	94.7	78.8
Northern Ireland	4 (4)	96.9	96.3	97	96.7	87.5
Scotland	15 (15)	97.3	96.9	96.8	96.2	86.6
United Kingdom	119 (119)	94	93.4	93.6	92.8	81

*Health authorities/health boards participating

The country specific 12 month coverage for MenC vaccine was 89.8% in England, 93.4% in Wales, and 94.6% in Northern Ireland. Coverage for the 24 month cohort was 92.3% in England, 94.7% in Wales, and 96.7% in Northern Ireland. This is the fourth 24 month cohort to be entirely routinely scheduled for three-doses of MenC vaccine.

Coverage at 5 years

Data were received from all health authorities/health boards in England, Wales, and Northern Ireland. Coverage at 5 years increasedby 0.2% for Hib3 and P3 and remained the same for DTPol3 and DTPol4 compared to the previous quarter, while MenC fell by 0.3%. Coverage for MMR1 remained at 90.6%, while MMR2 decreased by 0.9% to 73.1% (table 3) (3). Country specific data for MenC catch-up coverage at five years was 83.6% in England, 88.9% in Wales, and 93.2% in Northern Ireland (table 3).

Table 3 Completed primary immunisations (all antigens) by 5 years: October to Decmeber 2002

Region/Country	HA* (total)	DTPol3 %	P3 %	Hib3 %	MenC %	MMR1 %	MMR2 %	DTPol4 %

Regions of England								
Northern and Yorkshire	13 (13)	95.2	94	94.3	84.8	92.5	79.3	82.6
Trent	11 (11)	96.3	95.6	95.7	88.7	93.7	78.2	82.4
Eastern	7 (7)	94.3	93.3	93.7	87.1	90.7	76.9	82.2
London	14 (14)	87.7	86.8	86.4	63.7	82.1	56.9	62.5
South East	13 (13)	93.4	92.5	92.7	85.6	90	72.9	81.5
South West	8 (8)	96.4	95.4	95.8	88.5	92.9	78.7	86.9
West Midlands	13 (13)	95.5	94.3	94.3	88.2	92.9	78	82.2
North West	16 (16)	95.5	94.2	94.7	88.3	92.5	75.2	80
England (Total)	**95 (95)**	**93.9**	**92.9**	**93.1**	**83.6**	**90.4**	**73.7**	**79.3**
Wales	5 (5)	94.7	92.2	94.1	88.9	89.2	71.5	81.2
Northern Ireland	4 (4)	97.6	96.8	97.2	93.2	97.1	86.8	89.3
Scotland	15 (15)	–	–	–	–	–	90.4	95.0
England, Wales, and Northern Ireland	104 (104)	94.1	93	93.3	84.2	90.6	73.1	79.2

*Health authorities/health boards
††No data available at 5 years

British Forces Germany Health Service

Comparable COVER data have been received from the regions across British Forces Germany (BFG). The BFG child population is approximately 1500 and is spread over five separate geographical regions throughout Germany. The average coverage at 12 months (n= 232) was100% for all antigens; average coverage at 24 months (n= 232) was 99.6% for DTPol3, P3, Hib3, and MenC, and 95.7 % for MMR1. Average coverage at five years (n= 207) was 99.5% for DTPol3, P3, Hib3, and MenC, and 99.0% for MMR1, 95.6% for MMR2, and 96.6% for DTPol4.

MMR sentinel surveillance scheme coverage

In order to give a more timely indication of trends in MMR coverage a sentinel surveillance scheme has monitored MMR coverage in a sample of children becoming 16 and 24 months of age in a particular month in England from April 1999 . Since March 2002, this information has been routinely collected every month and was recently extended to include coverage at 20 and 36 months of age to help determine whether there is further improvement in coverage as children get older because some parrents delay, rather than avoid, MMR vaccination. This sentinel scheme is based on a sample of trusts/health authorities in England and represents approximately 20% of the population, although monthly reporting is not always complete for the whole sample. This means that these data are not sufficiently detailed to allow us to compare different regions, and will be subject to greater variability than the national data due to varying monthly sample size. Data collected from December 2002 to February 2003 for children in the four age cohorts is summarised in table 4 (range for the three months was from 65.5% to 66.8% at 16 months, 75.7% to 76.1% at 20 months, 79.9% to 80.4% at 24 months, and 87.0% to 88.4% at 36 months).

Table 4 Monthly sentinel estimates of measles, mumps, and rubella (MMR) coverage at 16, 20, 24, and 36 months: December 2002 to February 2003

Evaluation month	Number of HA/trusts	Age at vaccination			
		16 months	20 months	24 months	36 months
Dec 02	36	66.80%	76.10%	80.40%	88.00%
Jan 03	39	66.10%	76.10%	80.20%	88.40%
Feb 03	33	64.5%	75.8%	78.6%	86.5%

Comments

MenC coverage increased by 0.6% at both 12 and 24 months, to 90.5% and 92.8% respectively. This means that, now the programme is established, coverage for this antigen is rapidly approaching levels achieved for other antigens evaluated at the same ages. Coverage for all other antigens at 12 and 24 months of age is slightly higher than the previous quarter (3).

Although the London region continues to report the lowest coverage for all childhood vaccines, this quarter has seen a slight increase in coverage for most antigens. More importantly, while all regions have seen a drop this quarter for MMR at 24 months, the coverage for London has remained virtually the same. This improvement coincides with the development and implementation of local plans, at the initiative of the Department of Health, aimed at improving coverage in the health authorities with lowest coverage, most of which are in London.

There was considerable adverse publicity in relation to MMR vaccine at the end of 2001 and early in 2002. This will have contributed to the 2% decrease in MMR coverage at 24 months, a cohort of children who would have been scheduled to receive their MMR between October 2001 and April 2002 (4). The decrease was observed across the UK, in all countries and in each English region (except London) indicating that the effect was widespread. Coverage of MMR is now approaching the levels last seen in 1988/89 when the vaccine was introduced. The monthly sentinel estimates of MMR coverage at 16 months for December 2002 to February 2003 (representing children born between July and September 2001) suggests that routine MMR coverage at 24 months may not improve in the near future (table 4). Coverage of at least one dose of MMR at five years, however, remains at 90%.

Up to April 2002, COVER data were collected by the Communicable Disease Surveillance Centre (CDSC) for each health authority only. Health authorities were dissolved in April 2002. In order to allow continuity of data, CDSC has continued to collect data for health authorities. In addition, immunisation coverage is now being collected for Primary Care Trusts (PCTs), which have different boundaries and populations to health authorities. It has become increasingly difficult to collect data corresponding to health authorities following the reorganisation of primary care. Consequently, quarterly evaluations commencing in April 2003 will be published for PCT relevant populations only. Caution should be exercised in interpreting recent trends in the light of the possible impact of primary care reorganisation and the fact that for some areas complete data for the old health authorities are no longer available.

Relevant links

- <http://www.phls.co.uk/facts/Immunisation/Measles/meas.htm>
- <http://www.phls.co.uk/facts/Vaccination/VaccIndex.htm>
- <http://www.show.scot.nhs.uk/scieh/>
- <http://www.cdscni.org.uk/surveillance/Coveragestats/default.asp>
- <http://www.phls.wales.nhs.uk/jabs.htm>
- <http://www.mmrthefacts.nhs.uk/>
- <http://www.immunisation.nhs.uk>
- <http://www.doh.gov.uk/public/sb0218.htm/>

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HIV/STIs

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HIV infection in women giving birth in the United Kingdom – trends in prevalence and proportions diagnosed to the end of June 2002

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, started in the United Kingdom (UK) in 1988. Since 1992, the survey has covered approximately 70% of UK births. 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 (NSHPC). 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 1).

Table 1 Trend in HIV infection in pregnant women giving birth in the UK: alignment of dried blood spot survey data with confidential reports through the RCOG*

The unlinked surveys for England are managed for the Department of Health by the PHLS Communicable Disease Surveillance Centre (CDSC) (UA surveys in South East Thames and all regions outside the Thames area) and by ICH (London) (UA surveys in North East, North West and South West Thames and the National Study of HIV in Pregnancy and 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 Public Health Laboratory Service 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.

These estimates have attracted considerable interest since it became apparent in 1994 that interventions implemented 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, and the uptake of such interventions by diagnosed HIV-infected pregnant women is high (1). There are also direct benefits for the mother's own health from having her HIV infection diagnosed earlier than might otherwise have happened.

Interim results derived from these surveys are presented in tables 1 and 2. Data in table 1 show findings for London, the rest of England, and Scotland to the end of June 2002. Results for health authority of residence of the mother at the time of delivery to the end of 2001 are given in table 2. 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.

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 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 2002, the prevalence of HIV was highest in London with an estimated 205 HIV infected women (39 per 10,000) giving birth to live-born infants (table 1). In the same time period in 2001 an estimated 198 HIV infected women (39/10,000) gave birth to live-born infants. Within London, prevalence continues to vary substantially according to maternal health authority of residence. In 2000 and 2001 combined, prevalence ranged from 6.3/10,000 women in Kingston and Richmond to 52/10,000 women giving birth in Lambeth Southwark and Lewisham; the highest prevalence ever reported in London. The median prevalence in London in 2000 and 2001 was 27.5/10,000 women giving birth (table 2).

Table 2 Dried blood spot survey - England and Scotland 1998 to 2001: prevalence of maternal HIV infection* and alignment with confidential reports from Royal College of Obestetricians and Gynaecologists† by participating Health Authorities

Outside London, the prevalence of HIV infection among women giving birth to live-born infants has remained low. Prevalence in the rest of England for the first half of 2002 is estimated to be 3.5/10,000, and in Scotland 4.8/10,000 women (table 1). 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 3). 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 3 Estimated prevalence of maternal HIV infection and alignment with confidential reports from the Royal College of Obstetricians and Gynaecologists for Health Authorities not participating in the dried blood or antenatal surveys - 2000 and 2001 combined

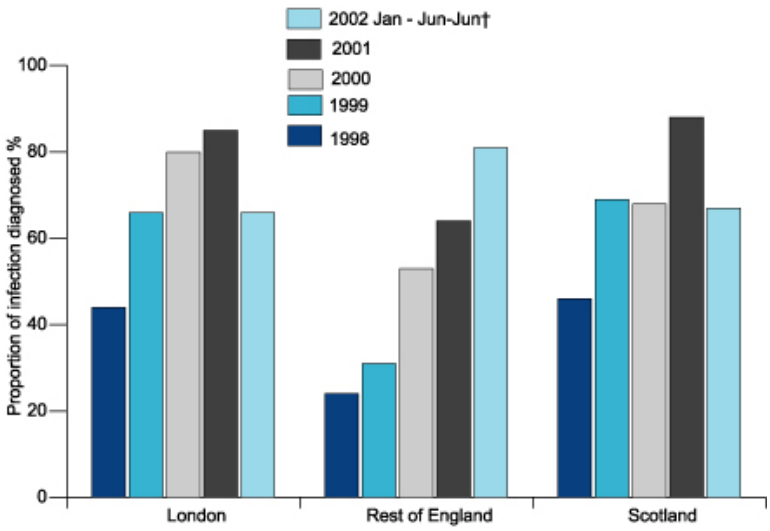
Proportions of maternal HIV infections diagnosed: monitoring performance towards national targets

National targets and objectives that involve the offer and recommendation of an HIV test to all pregnant women throughout England were set in 1999. 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).

Information on the proportion of maternal HIV infections diagnosed provides health authority-specific data for monitoring the performance of antenatal HIV testing initiatives (table 2). In London, for the first half of 2002, 135 diagnosed maternal infections had been reported to the NSHPC by the end of the year, giving a minimum overall detection rate of 66% (135/205) and an antenatal detection rate of 53% (table 1 and figure 1). The data for the rest of England in the first half of 2002 show an overall detection rate of 81% (57/70), meeting the Department of Health target for the first time. For Scotland, data show that at least 67% (8/12) of maternal HIV infections were diagnosed before delivery in the first half of 2002 (table 1 and figure 1). The equivalent overall detection rates in the same period of 2001 for London, the rest of England, and Scotland were 73%, 33% and 75% respectively (7).

These half-year data are, however, subject to reporting delay and the estimated proportion of infections diagnosed should be treated as a minimum estimate only.In 2001, it can be estimated that there were about 560 births to HIV-infected women in the UK. Assuming a transmission rate of about 25% for undiagnosed women, and 2% for diagnosed women (allowing for late diagnoses and a small proportion of diagnosed women declining interventions [1]), about 50 infants would have acquired infection from their mothers. Continued improvements in detection rates prior to delivery have resulted in the proportion of HIV infected mothers passing the infection on to their child decreasing and, despite an increase in the number of HIV infected women giving birth, the actual number of vertically acquired infections was probably similar in 2001 to 2000. Had all maternal HIV infections been diagnosed prior to delivery and appropriate interventions offered in 2001, an estimated 13 infant HIV infections would have occurred (8).

Figure1. Estimated proportion of maternal HIV infections diagnosed prior to delivery*: 1998- end of June 2002 †



* The proportions diagnosed will rise as late reports of diagnosed women are incorporated.
† These data are minimum estimates subject to reporting delay.

National survey of antenatal HIV testing

A study of the implementation and uptake of antenatal HIV screening was carried out in all maternity units within the UK and Ireland by the Institute of Child Health and CDSC in 2001 and 2002. Units were asked whether a routine offer and recommendation policy had been implemented in their units and the uptake of testing since then. A full report detailing results for 2001/02 is yet to be published but summary results show that the routine offer policy was in place in all but one English unit by the end of 2002. During 2001 and the first part of 2002 uptakeof the test varied; within London three-quarters of respondents reported an uptake rate of more that 80% compared to 50% of centres in the rest of England. Uptake rates had improved in most units since implementation of the policy began (personal comunication from NHSPC).

The proportion of maternal infections diagnosed before delivery will continue to be monitored through the alignment of obstetric reports of HIV infected pregnant women made to the NSHPC with results from the unlinked anonymous dried blood spot programme. This parallel surveillance approach needs to be maintained in order to evaluate overall and antenatal detection rates in pregnancy.

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 and more recently Strategic Health Authority (effective from April 2002), are forwarded every six months to directors of public health, regional epidemiologists, and local collaborators in the unlinked anonymous surveys.

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Table 1: Trend in HIV infection in pregnant women giving birth in the UK: alignment of dried blood spot survey data with confidential reports through the RCOG*

Area of residence of mother	Number tested using the UA method†	UA number of births to HIV infected mothers (a)†	Prevalence per 10,000	Number of maternal HIV infections reported as diagnosed		Estimated percentage diagnosed before birth ((b+c)/a)	Estimated percentage of infections first diagnosed during antenatal care (c/(a-b))
				before pregnancy (b)	during pregnancy (c)		
London							
1995	104,502	192	18	32	17	26%	11%
1996	107,913	204	19	38	29	33%	17%
1997	106,407	200	19	46	24	35%	16%
1998	103,901	230	22	55	47	44%	27%
1999	102,287	254	25	86	82	66%	49%
2000	103,852	298	29	106	133	80%	69%
2001	103,840	363	35	122	187	85%	78%
2002 Jan-Jun§	52,986	205	39	55	80	66%	53%
Rest of England‡							
1995	346,793	38	1.1	3	0	8%	0%
1996	349,175	59	1.7	10	7	29%	14%
1997	349,983	56	1.6	10	3	23%	7%
1998	348,686	54	1.5	11	2	24%	5%
1999	338,653	74	2.2	16	7	31%	12%
2000	327,364	89	2.7	22	25	53%	37%
2001	319,153	135	4.2	15	72	64%	60%
2002 Jan-Jun§	201,996	70	3.5	13	44	81%	77%
Scotland							
1995	60,899	15	2.5	9	1	67%	17%
1996	59,290	16	2.7	8	2	63%	25%
1997	59,604	15	2.5	4	0	27%	0%
1998	57,298	13	2.3	5	1	46%	13%
1999	55,374	13	2.3	8	1	69%	20%
2000	53,347	25	4.7	12	5	68%	38%
2001	52,707	16	3.0	9	5	88%	71%
2002 Jan-Jun§	24,935	12	4.8	6	2	67%	33%

* Confidential reports of diagnosed HIV 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

§ These data are minimum estimates subject to reporting delay

Table 2: Dried blood spot survey - England & Scotland 1998 to 2001: prevalence of maternal HIV infection* and alignment with confidential reports from Royal College of Obestetricians and Gynaecologists† by participating Health Authorities

	1998 and 1999 combined				2000 and 2001 combined			
Region and Health Authority/board	**Prevalence of HIV per 10,000* (no. HIV-infected/no. tested)**		**Estimated proportion (%) of maternal HIV infections reported as diagnosed prior to delivery† (no. diagnosed/no. HIV-infected)**		**Prevalence of HIV per 10,000* (no. HIV-infected/no. tested)**		**Estimated proportion (%) of maternal HIV infections reported as diagnosed prior to delivery† (no. diagnosed/no. HIV-infected)**	
London								
Barking & Havering	**6.5**	(7 / 10714)	**29**	(2 / 7)	**20**	(21 / 10459)	**105**	(22 / 21)
Barnet, Enfield & Haringey	**27**	(61 / 22511)	**46**	(28 / 61)	**44**	(101 / 22780)	**71**	(72 / 101)
Bexley, Bromley & Greenwich	**11**	(20 / 19032)	**45**	(9 / 20)	**15**	(27 / 18168)	**89**	(24 / 27)
Brent & Harrow	**19**	(24 / 12629)	**63**	(15 / 24)	**31**	(39 / 12742)	**103**	(40 / 39)
Camden & Islington	**22**	(24 / 10880)	**67**	(16 / 24)	**30**	(36 / 11868)	**100**	(36 / 36)
Croydon	**25**	(22 / 8762)	**41**	(9 / 22)	**47**	(41 / 8789)	**49**	(20 / 41)
Ealing, Hammersmith & Hounslow‡	**12**	(31 / 24812)	**71**	(22 / 31)	**21**	(48 / 23323)	**81**	(39 / 48)
East London & The City	**45**	(107 / 23634)	**57**	(61 / 107)	**46**	(113 / 24717)	**88**	(99 / 113)
Hillingdon	**9.1**	(6 / 6603)	**17**	(1 / 6)	**7.8**	(5 / 6448)	**60**	(3 / 5)
Kensington, Chelsea & Westminster ‡	**17**	(8 / 4790)	**13**	(1 / 8)	**25**	(13 / 5110)	**85**	(11 / 13)
Kingston & Richmond	**12**	(9 / 7813)	**0**	(0 / 9)	**6.3**	(6 / 9498)	**50**	(3 / 6)
Lewisham, Southwark & Lambeth	**44**	(109 / 24556)	**66**	(72 / 109)	**52**	(124 / 23756)	**95**	(118 / 124)
Merton, Sutton & Wandsworth	**24**	(39 / 16224)	**64**	(25 / 39)	**24**	(40 / 16653)	**98**	(39 / 40)
Redbridge & Waltham Forest	**13**	(17 / 13228)	**47**	(8 / 17)	**35**	(47 / 13381)	**68**	(32 / 47)
London Region total	**23**	**(484 / 206188)**	**56**	**(269 / 484)**	**32**	**(661 / 207692)**	**84**	**(558 / 661)**
South East								
Berkshire	**2.4**	(5 / 21077)	**80**	(4 / 5)	**7.9**	(16 / 20369)	**106**	(17 / 16)
Buckinghamshire	**1.3**	(2 / 15468)	**50**	(1 / 2)	**5.1**	(8 / 15601)	**100**	(8 / 8)
East Kent	**2.3**	(3 / 12983)	**33**	(1 / 3)	**4.0**	(5 / 12451)	**120**	(6 / 5)
East Sussex, Brighton & Hove	**1.3**	(2 / 15318)	**50**	(1 / 2)	**2.1**	(3 / 14377)	**100**	(3 / 3)
East Surrey	**6.2**	(5 / 8129)	**40**	(2 / 5)	**9.6**	(8 / 8362)	**50**	(4 / 8)
Northamptonshire	**3**	(5 / 14477)	**20**	(1 / 5)	**4.7**	(7 / 14879)	**100**	(7 / 7)
Oxfordshire	**1.5**	(2 / 13191)	**0**	(0 / 2)	**3.1**	(4 / 13074)	**75**	(3 / 4)
West Kent	**0.4**	(1 / 24297)	**0**	(0 / 1)	**3.1**	(7 / 22317)	**86**	(6 / 7)
West Surrey	**2.0**	(4 / 20213)	**0**	(0 / 4)	**2.0**	(4 / 19648)	**100**	(4 / 4)
West Sussex	**5.0**	(8 / 15944)	**50**	(4 / 8)	**5.2**	(8 / 15522)	**25**	(2 / 8)
South East Region total	**2.3**	**(37 / 161097)**	**38**	**(14 / 37)**	**4.5**	**(70 / 156600)**	**86**	**(60 / 70)**
Eastern								
Bedfordshire	**5.6**	(8 / 14289)	**13**	(1 / 8)	**15**	(22 / 14443)	**36**	(8 / 22)
Hertfordshire	**2.0**	(5 / 25169)	**20**	(1 / 5)	**6.4**	(16 / 25082)	**69**	(11 / 16)
North Essex	**0.5**	(1 / 19871)	**100**	(1 / 1)	**3.6**	(7 / 19618)	**14**	(1 / 7)
South Essex	**5.1**	(8 / 15638)	**13**	(1 / 8)	**5**	(7 / 14769)	**19**	(4 / 21)
Eastern Region total	**2.9**	**(22 / 74967)**	**18**	**(4 / 22)**	**7.0**	**(52 / 73912)**	**36**	**(24 / 66)**
Trent								
Barnsley	**2.1**	(1 / 4866)	**100**	(1 / 1)	**0**	(0 / 4552)	**0**	(0 / 0)
Doncaster	**1.5**	(1 / 6809)	**100**	(1 / 1)	**1.4**	(1 / 7124)	**100**	(1 / 1)
Leicestershire	**2.3**	(5 / 21584)	**20**	(1 / 5)	**7.1**	(15 / 21242)	**60**	(9 / 15)
Lincolnshire	**1.4**	(1 / 6920)	**0**	(0 / 1)	**1.5**	(1 / 6554)	**100**	(1 / 1)
North Derbyshire	**0**	(0 / 7606)	**0**	(0 / 0)	**1.4**	(1 / 7094)	**0**	(0 / 1)
North Nottinghamshire	**0.0**	(0 / 8674)	**0**	(0 / 0)	**0**	(0 / 8210)	**0**	(0 / 0)
Nottingham	**2.8**	(4 / 14544)	**25**	(1 / 4)	**5.1**	(7 / 13778)	**14**	(1 / 7)
Rotherham	**0**	(0 / 5928)	**0**	(0 / 0)	**0**	(0 / 5678)	**0**	(0 / 0)
Sheffield	**1.7**	(2 / 12069)	**100**	(2 / 2)	**3.5**	(4 / 11523)	**0**	(0 / 4)
South Derbyshire	**0.7**	(1 / 13407)	**100**	(1 / 1)	**0.8**	(1 / 12412)	**100**	(1 / 1)
South Humber	**1**	(1 / 13663)	**0**	(0 / 1)	**0**	(0 / 13084)	**0**	(1 / 0)
Trent Region total	**1.4**	**(16 / 116070)**	**44**	**(7 / 16)**	**2.7**	**(30 / 111251)**	**47**	**(14 / 30)**

* 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 & 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 & Hounslow Health Authority. Results for Riverside are as follows: (1998-1999: 9 positives out of 10,835. 2000-2001: 22 positives out of 11,164).

§ Unlinked anonymous specimens from women receiving antenatal care. This does not cover all Health Authorities fully. This may lead to an over-estimate of diagnosis rates.

PW-2: Dried blood spot survey - England & Scotland 1998 to 2001: prevalence of maternal HIV infection* and alignment with confidential reports from Royal College of Obestetricians and Gynaecologists† by participating Health Authorities

	1998 and 1999 combined				2000 and 2001 combined			
Region and Health Authority/board	**Prevalence of HIV per 10,000* (no. HIV-infected/no. tested)**		**Estimated proportion (%) of maternal HIV infections reported as diagnosed prior to delivery† (no. diagnosed/no. HIV-1 infected)**		**Prevalence of HIV per 10,000* (no. HIV-infected/no. tested)**		**Estimated proportion (%) of maternal HIV infections reported as diagnosed prior to delivery† (no. diagnosed/no. HIV-1 infected)**	
Northern & Yorkshire§								
Bradford	**1.0**	(1 / 10028)	**100**	(1 / 1)	**4.5**	(4 / 8868)	**100**	(4 / 4)
Calderale & Kirklees	**0**	(0 / 14649)	**-**	(0 / 0)	**3**	(3 / 10433)	**-**	(1 / 3)
East Riging	**0**	(0 / 10508)	**-**	(0 / 0)	**1**	(1 / 8903)	**-**	(1 / 1)
Leeds	**5**	(8 / 14798)	**-**	(1 / 8)	**4.4**	(6 / 13704)	**50**	(3 / 6)
North Yorkshire	**0**	(0 / 6675)	**-**	(0 / 0)	**2**	(1 / 6080)	**-**	(3 / 1)
South Humber	**0**	(0 / 5210)	**-**	(0 / 0)	**4**	(2 / 4532)	**50**	(1 / 2)
Wakefiled	**0.0**	(0 / 6449)	**-**	(0 / 0)	**1.9**	(1 / 5364)	**200**	(2 / 1)
Northern & Yorkshire Region total	**1.3**	**(9 / 68317)**	**22**	**(2 / 9)**	**3.1**	**(18 / 57884)**	**83**	**(15 / 18)**
West Midlands								
Birmingham	**3.3**	(10 / 29954)	**30**	(3 / 10)	**5.6**	(16 / 28546)	**75**	(12 / 16)
Coventry	**0.0**	(0 / 7688)	**0**	(0 / 0)	**8.0**	(6 / 7462)	**0**	(0 / 6)
Dudley	**1.4**	(1 / 7014)	**0**	(0 / 1)	**0.0**	(0 / 6892)	**0**	(0 / 0)
Herefordshire	**0**	(0 / 3393)	**0**	(0 / 0)	**0**	(0 / 3082)	**0**	(0 / 0)
North Staffordshire	**1.0**	(1 / 10266)	**0**	(0 / 1)	**0**	(0 / 9720)	**0**	(1 / 0)
Sandwell	**0.0**	(0 / 7273)	**0**	(1 / 0)	**4.1**	(3 / 7331)	**67**	(2 / 3)
Shropshire	**1.0**	(1 / 9785)	**0**	(0 / 1)	**4.4**	(4 / 9136)	**0**	(0 / 4)
Solihull	**0**	(0 / 4105)	**0**	(0 / 0)	**2.5**	(1 / 4023)	**100**	(1 / 1)
South Staffordshire	**2**	(2 / 12678)	**0**	(0 / 2)	**0.8**	(1 / 11880)	**0**	(0 / 1)
Warwickshire	**1.9**	(2 / 10648)	**0**	(0 / 2)	**2.9**	(3 / 10330)	**33**	(1 / 3)
Wolverhampton	**6**	(4 / 6438)	**25**	(1 / 4)	**0.0**	(0 / 6201)	**0**	(1 / 0)
Worcestershire	**0**	(0 / 11970)	**0**	(0 / 0)	**2**	(2 / 11451)	**50**	(1 / 2)
West Midlands Region total	**1.7**	**(21 / 121212)**	**24**	**(5 / 21)**	**3.1**	**(36 / 116054)**	**53**	**(19 / 36)**
North Western								
Bury & Rochdale	**2.0**	(2 / 10118)	**0**	(0 / 2)	**2.3**	(2 / 8808)	**0**	(0 / 2)
East Lancashire	**1.5**	(2 / 12915)	**0**	(0 / 2)	**1**	(1 / 12105)	**100**	(1 / 1)
Isle of Man	**0**	(0 / 1791)	**0**	(0 / 0)	**0**	(0 / 1644)	**0**	(0 / 0)
Liverpool	**1.7**	(2 / 11922)	**100**	(2 / 2)	**3.5**	(4 / 11336)	**50**	(2 / 4)
Manchester	**3.4**	(4 / 11754)	**50**	(2 / 4)	**12**	(13 / 10492)	**31**	(4 / 13)
Morecombe Bay	**0.0**	(0 / 3284)	**0**	(0 / 0)	**0**	(0 / 2473)	**0**	(1 / 0)
North Cheshire	**1**	(1 / 8462)	**0**	(0 / 1)	**0.0**	(0 / 7759)	**0**	(0 / 0)
North West Lancashire	**2.0**	(2 / 9842)	**0**	(0 / 2)	**2.3**	(2 / 8701)	**150**	(3 / 2)
Salford & Trafford	**3.8**	(4 / 10521)	**0**	(0 / 4)	**2.2**	(2 / 9093)	**50**	(1 / 2)
Sefton	**0**	(0 / 4122)	**0**	(0 / 0)	**0**	(0 / 5798)	**0**	(0 / 0)
South Cheshire	**2.8**	(4 / 14197)	**25**	(1 / 4)	**0.0**	(0 / 13409)	**0**	(0 / 0)
South Lancashire	**1.5**	(1 / 6458)	**100**	(1 / 1)	**0.0**	(0 / 5832)	**0**	(0 / 0)
St Helens & Knowsley	**1**	(1 / 7269)	**0**	(0 / 1)	**0.0**	(0 / 6402)	**0**	(0 / 0)
Stockport	**0**	(0 / 6300)	**0**	(0 / 0)	**0**	(0 / 5590)	**0**	(0 / 0)
West Pennine	**0**	(0 / 5682)	**0**	(0 / 0)	**0**	(0 / 5235)	**0**	(1 / 0)
Wigan & Bolton	**0.0**	(0 / 13596)	**0**	(0 / 0)	**1.6**	(2 / 12527)	**0**	(0 / 2)
Wirral	**0**	(0 / 7443)	**0**	(0 / 0)	**0**	(0 / 7093)	**0**	(0 / 0)
North Western Region total	**1.6**	**(23 / 145676)**	**26**	**(6 / 23)**	**1.9**	**(26 / 134297)**	**50**	**(13 / 26)**

* 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 & 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 & Hounslow Health Authority. Results for Riverside are as follows: (1998-1999: 9 positives out of 10,835. 2000-2001: 22 positives out of 11,164).

§ Unlinked anonymous specimens from women receiving antenatal care. This does not cover all Health Authorities fully. This may lead to an over-estimate of diagnosis rates.

PW-2: Dried blood spot survey - England & Scotland 1998 to 2001: prevalence of maternal HIV infection* and alignment with confidential reports from Royal College of Obestetricians and Gynaecologists† by participating Health Authorities

	1998 and 1999 combined				2000 and 2001 combined			
Region and health authority/board	**Prevalence of HIV per 10,000* (no. HIV-infected/no. tested)**		**Estimated proportion (%) of maternal HIV infections reported as diagnosed prior to delivery† (no. diagnosed/no. HIV-1 infected)**		**Prevalence of HIV per 10,000* (no. HIV-infected/no. tested)**		**Estimated proportion (%) of maternal HIV infections reported as diagnosed prior to delivery† (no. diagnosed/no. HIV-1 infected)**	
Scotland								
Argyll & Clyde	**0.0**	(0 / 10044)	**0**	(0 / 0)	**2**	(2 / 9320)	**50**	(1 / 2)
Ayrshire & Arran	**1.3**	(1 / 7852)	**0**	(0 / 1)	**4.1**	(3 / 7384)	**33**	(1 / 3)
Borders	**0.0**	(0 / 2031)	**0**	(0 / 0)	**0**	(0 / 2071)	**0**	(2 / 0)
Dumfries & Galloway	**0**	(0 / 2944)	**0**	(0 / 0)	**0**	(0 / 2687)	**0**	(0 / 0)
Fife	**2.7**	(2 / 7403)	**50**	(1 / 2)	**1.4**	(1 / 7163)	**100**	(1 / 1)
Forth Valley	**2**	(1 / 6259)	**0**	(0 / 1)	**1.7**	(1 / 5810)	**0**	(0 / 1)
Grampian	**0.0**	(0 / 11638)	**0**	(0 / 0)	**3.8**	(4 / 10461)	**50**	(2 / 4)
Greater Glasgow	**2.6**	(5 / 19341)	**0**	(0 / 5)	**3.3**	(6 / 18248)	**50**	(3 / 6)
Highlands	**0**	(0 / 4651)	**0**	(0 / 0)	**2.4**	(1 / 4249)	**100**	(1 / 1)
Lanarkshire	**0.0**	(0 / 13221)	**0**	(0 / 0)	**0.8**	(1 / 12626)	**0**	(0 / 1)
Lothian	**6.8**	(12 / 17539)	**75**	(9 / 12)	**7.1**	(12 / 16951)	**108**	(13 / 12)
Orkney	**0**	(0 / 373)	**0**	(0 / 0)	**0**	(0 / 320)	**0**	(0 / 0)
Shetland	**0**	(0 / 548)	**0**	(0 / 0)	**21**	(1 / 472)	**0**	(0 / 1)
Tayside	**6.0**	(5 / 8297)	**100**	(5 / 5)	**12**	(9 / 7801)	**78**	(7 / 9)
Western Isles	**0.0**	(0 / 526)	**0**	(0 / 0)	**0**	(0 / 452)	**0**	(0 / 0)
Scotland total	**2.3**	**(26 / 112667)**	**58**	**(15 / 26)**	**3.9**	**(41 / 106015)**	**76**	**(31 / 41)**

* 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 & 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 & Hounslow Health Authority. Results for Riverside are as follows: (1998-1999: 9 positives out of 10,835. 2000-2001: 22 positives out of 11,164).

§ Unlinked anonymous specimens from women receiving antenatal care. This does not cover all Health Authorities fully. This may lead to an over-estimate of diagnosis rates.

Table 3. Estimated prevalence of maternal HIV infection and alignment with confidential reports from the Royal College of Obstetricians and Gynaecologists for Health Authorities not participating in the dried blood or antenatal surveys - 2000 and 2001 combined

Region and Health Authority	Number of births in health authority	Estimated number of positives*	Diagnosed cases†	Estimated prevalence per 10,000
Eastern				
Cambridge	15852	5	1	2.9
Norfolk	15108	2	2	1.5
Suffolk	13840	2	3	1.6
Total	**44800**	**9**	**6**	**2.0**
Northern & Yorkshire				
County Durham	11792	1	1	1.0
Gateshead & South Tyneside	7001	1	1	1.6
Newcastle & North Tyneside	9653	2	1	2.1
North Cumbria	6018	1	3	2.1
Northumberland	5630	1	-	1.2
Sunderland	5772	0	-	0.0
Tees	12138	2	2	1.5
Total	**58004**	**9**	**8**	**1.5**
South-East				
Isle of Wight	2284	0	1	2.1
North & Mid Hampshire	12534	3	1	2.2
Southampton & South West Hampshire	11072	4	3	3.3
Total	**25890**	**7**	**5**	**2.7**
South West				
Avon	21732	5	2	2.5
Cornwall & Isles of Scilly	8885	1	2	1.4
Dorset	12292	3	4	2.3
Gloucestershire	11741	3	2	2.5
North & East Devon	8825	1	-	1.4
Somerset	9653	1	1	1.0
South & West Devon	10950	2	-	1.4
Wiltshire	13727	2	-	1.4
Total	**97805**	**18**	**11**	**1.8**
Wales				
Bro-Taf	15932	3	1	1.9
Dyfed Powys	9160	1	-	1.4
Gwent	12141	1	1	1.0
Morgannwg	10268	1	1	1.2
North Wales	13774	1	1	1.0
Total	**61275**	**8**	**4**	**1.3**
West Midlands				
Walsall	6399	1	-	1.6
Total	**6399**	**1**	**-**	**1.6**

*Estimated number of HIV positive samples using data from the Dried Blood Spot survey and the Survey of Prevalent 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 Gynaecologists(RCOG). Recent figures are 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.