

## Communicable Disease Report

### Encephalitis in the first three years of life

A survey of confirmed or suspected acute or subacute encephalitis in children aged 2 months to 3 years in the United Kingdom and Republic of Ireland starts on 1 October 1998 (box). It aims to determine the aetiology of encephalitis in young children and in particular to investigate the role of human herpesviruses-6 and -7 (HHV-6 and HHV-7), two recently discovered viruses that cause primary infection within the first three years of life and have been known to cause encephalitis. Encephalopathy in early childhood contributes substantially to chronic neurological handicap and its impact on individual families, often made worse by diagnostic uncertainty, may be devastating. It is hoped that more accurate diagnosis will help to curtail unnecessary investigation, rationalise treatment, and enable more reliable prognoses to be given.

Dr Kate Ward of the Department of Virology, University College London is collaborating with the PHLS Communicable Disease Surveillance Centre to organise the survey, which is being coordinated by the British Paediatric Surveillance Unit (BPSU). Paediatricians are being asked to report cases of encephalitis (as defined in the box) on the cards sent out monthly by the BPSU. Microbiologists and virologists are asked to test specimens from children with encephalitis in line with their usual practice and to help to collect surveillance data for the study. Cases should be reported to Dr Ward (contact details in box) as soon as possible so that she can organise free HHV-6/-7 testing of cerebrospinal fluid (saliva and acute and convalescent blood as necessary). She will seek brief details on the case, discuss further investigations, and send a brief questionnaire together with prepaid packages for the return of specimens. Results will be returned by fax.

#### Encephalitis in the first three years of life

##### Case definition

Report **any child aged 2 months to third birthday with acute or subacute encephalitis**

- 1) include **encephalitis of known infectious or post-infectious aetiology (unless due to pyogenic infection)**
- 2) also include **convulsions in a febrile child** :
  - (i) with a total duration of more than 30 minutes;
  - or (ii) followed by coma lasting 2 hours or more;
  - or (iii) followed by paralysis or other neurological signs not previously present and lasting 24 hours or more
- 3) exclude:
  - (i) viral (aseptic) meningitis without encephalopathy;
  - (ii) the following confirmed causes: pyogenic infections, hypoxic/ischaemic, vascular, toxic, metabolic, neoplastic;
  - (iii) uncomplicated fits/convulsions or a series of fits/convulsions lasting less than 30 minutes

##### Contact details

Please report to Dr Kate Ward (tel: 0171 504 9134; fax: 0171 580 5896; or radiopage 01893 243731 leaving a telephone number as a message)

### Encephalitis in the first three years of life

**Invasive meningococcal infections**  
weeks 32-36/98

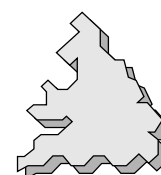
**Vaccine preventable diseases of childhood**  
weeks 35-38/98

**Virus infections**  
weeks 35-38/98

**COVER/Körner:**  
April to June 1998

**Notifications of infectious diseases:**  
week 37/98

**AIDS and HIV infection in the United Kingdom:**  
monthly report



### Invasive meningococcal infections, England and Wales: laboratory reports, weeks 32-36/98

	Method of diagnosis			Total reports 32-36/98	Cumulative total to week 36* 1998
	CSF and blood culture	non-culture†	Other sites culture		
Group A	–	–	–	–	–
B	41	20	10	71	760
C	25	15	1	41	550
W135	1	–	–	1	24
X	1	–	–	1	4
Y	2	–	–	2	19
29E	–	–	–	–	2
Ungroupable	–	–	2	2	30
Ungrouped	–	14	–	14	281
<b>Total</b>	<b>70</b>	<b>49</b>	<b>13</b>	<b>132</b>	<b>1670</b>

\* combined CDSC and Meningococcal Reference Unit data

† latex antigen, microscopy, polymerase chain reaction

### Vaccine preventable diseases of childhood, England and Wales: laboratory reports, weeks 35-38/98

Laboratory reports	Number of reports received				Total reports 34-38/98	Cumulative total to week 38	
	35/98	36/98	37/98	38/98		1998	1997
<b><i>Bordetella pertussis</i></b>	9	4	10	9	32	245	432
<b><i>Haemophilus influenzae</i> type b*</b>	–	–	–	–	–	25	42
<b>Measles†</b>	2	–	–	–	2	56	50
<b>Mumps†</b>	1	1	1	–	3	76	147
<b>Rubella</b>	2	1	2	1	6	80	90

\* invasive disease only

† includes cases confirmed by salivary IgM antibody tests

***Bordetella pertussis***: three neonates (aged less than 1 month); 19 infants (aged 1 to 11 months), including nine aged less than 3 months; five children aged 1 to 4 years; two aged 5 to 9 years; F 11y; M 19y; two age not reported.  
**Measles**: M 4y with no history of vaccination; F 16y recently

arrived from Russia.

**Mumps**: M 6y, M 14y, M 26y.**Rubella**: four adults aged 25 years and over (1 male, 3 females, including F 35y recent stillbirth); two age and sex not known.

### Salivary IgM antibody tests in cases notified to ONS, weeks 30-34/98

	Cases		Salivary IgM antibody results		
	Notified	Tested (%)	Total positive	Recently vaccinated	Confirmed
<b>Measles</b>	330	159 (48)	1	–	1
<b>Mumps</b>	138	31 (22)	–	–	–
<b>Rubella</b>	291	141 (48)	2	–	2

### Virus infections, England and Wales: laboratory reports, weeks 35-38/98

Laboratory reports	Number of reports received				Total reports 35-38/98	Cumulative total 1998
	35/98	36/98	37/98	38/98		
<b>Coxsackie A</b>	1	2	–	1	4	35
<b>Coxsackie B</b>	8	7	–	7	22	187
<b>Cytomegalovirus</b>	22	19	18	25	84	962
<b>Echovirus</b>	2	3	10	1	16	141
<b>Parvovirus B19</b>	97	65	51	78	291	3807
<b>Varicella zoster virus</b>	21	16	12	9	58	418

**Coxsackie A:** A9, 3; A untyped, 1. Two M 2y, M25y, and M 30y. Two cases were reported from East Anglia.

**Coxsackie B:** B1, 1; B2, 1; B3, 1; B4, 8; B5, 1; untyped 10. One neonate; five infants, including M 3m with intussusception and F 3m with meningitis (cerebrospinal fluid (CSF) isolate); six children aged 1 to 4 years, including M 1y with thrombocytopenic purpura and M 4y with suspected meningitis (serology); M 5y with acute lymphocytic leukaemia; eight patients aged 15 to 44 years, including M 23y with meningism (serology); F 66y with meningitis (serology). North Western region reported 8 cases, Merseyside 4, and South Western 3.

**Cytomegalovirus:** four neonates; six infants, including F 2m who had suffered intrauterine growth retardation; two patients aged 1 to 4 years; three 5 to 9 years; two 10 to 14 years; 36 aged 15 to 44 years, including F 38y with myocarditis; 22 aged 45 to 64 years; seven 65 years or over; two whose ages were not reported. Twenty-eight patients were immunocompromised: 23 had undergone transplants (renal 7, unspecified 16), M 1y had severe combined immunodeficiency, 1 was HIV antibody positive, and for three the causes were not stated. Two regions reported more than a tenth of the cases: Wessex and Oxford (10 cases each), and East Anglia (9).

**Echovirus:** type 3, 2; type 4, 3; type 5, 1; type 9, 4; type 11, 1; type 25, 1; type 32, 1; untyped 3. F 20d (CSF isolate); five

infants, including F 8m with myocarditis; one child aged 1 to 4 years; two children aged 10 to 14 years; five patients aged 15 to 44 years, including M 31y, F 30, and F 32y (CSF isolates); one aged 65 years or over; and one whose age was not stated. Trent region reported 4 cases, North Western 3, and East Anglia, South West Thames, and South Western regions 2 each.

**Epstein-Barr virus (64):** eight patients aged 1 to 4 years; two aged 5 to 9 years; seven 10 to 14 years; 37 aged 15 to 44 years; seven 45 to 64 years; and three 65 years or over. Six patients were reported to have liver dysfunction.

**Herpes simplex virus:** M 6d, M 20y, M 27y, M 33y, F 51y, F 60y (CSF isolates). F 59y with encephalitis and chronic lymphocytic leukaemia, who died (CSF isolate). Nineteen eye infections were reported.

**Parvovirus B19:** one infant; three patients aged 1 to 4 years; five aged 5 to 9 years, including M 6y with hepatosplenomegaly; nine 10 to 14 years; 226 aged 15 to 44 years; 45 aged 45 to 64 years; one aged 65 years or over; and one whose age was not reported. Eighteen were pregnant women, one of whom had a hydropic fetus and one baby who died in utero. Two regions reported more than 10% of cases: East Anglia (43), and Wessex (31).

**Varicella zoster virus (58):** 11 detected in CSF, six by culture.

## COVER/Körner: April to June 1998

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

This is the 13th quarterly report of the merged COVER/Körner programme. It presents coverage data for children in the United Kingdom (UK) who reached their first or second birthday during the evaluation quarter (April to June 1998) and who completed primary vaccination by that birthday. For the first time, primary and booster vaccination data are also provided for children in England and Wales who reached their fifth birthdays during the evaluation quarter. Children who reached their first birthday in the quarter would have been scheduled for their third dose primary vaccinations (third dose DTP, Hib, and polio) from August to October 1997. Children who reached their second birthdays would have been scheduled for their first MMR vaccination from May to October 1997: third dose primary vaccinations for these children would have been scheduled for August to

October 1996. Children who reached their fifth birthdays would have been scheduled for their third dose primary vaccinations from August to October 1993, their first MMR from May to October 1994, and their preschool booster DT and polio (from August 1996) and second dose MMR (from October 1996) onwards.

### Methods

Modified versions of the computer programmes used for the annual Körner returns (KC51), previously collected by the Departments of Health in England and Wales, Northern Ireland, and Scotland, were used to collect data from computerised child health information systems. Data sets were submitted during August and September 1998 for children resident in districts and health boards on 30 June

**Table 1 Completed primary vaccinations (all antigens) by 12 months and 24 months: April to June 1998**

Region/country	Number of participating districts (total)	% coverage at 12 months			% coverage at 24 months			
		DTPol3	P3	Hib3	DTPol3	P3	Hib3	MMR
Northern and Yorkshire	13 (13)	92.9	91.9	92.7	95.5	94.1	95.3	90.7
Trent	10 (11)	89.5	88.9	89.6	94.2	93.3	93.3	89.2
Anglia and Oxford	10 (10)	93.4	92.5	92.9	95.7	94.4	95.2	91.2
North Thames	14 (14)	90.4	89.5	90.0	93.9	93.0	93.4	87.1
South Thames	11 (12)	90.6	89.9	90.4	94.7	93.7	94.3	85.9
South and West	12 (12)	94.2	93.3	94.0	96.5	95.1	96.2	91.1
West Midlands	14 (14)	93.5	92.1	93.4	96.8	95.5	96.4	91.5
North West	16 (16)	91.7	90.4	91.4	95.7	94.0	95.3	89.7
<b>England</b>	<b>100 (102)</b>	<b>92.0</b>	<b>91.0</b>	<b>91.8</b>	<b>95.3</b>	<b>94.1</b>	<b>94.9</b>	<b>89.4</b>
<b>Wales</b>	<b>5 (5)</b>	<b>93.4</b>	<b>91.5</b>	<b>93.2</b>	<b>95.9</b>	<b>93.1</b>	<b>95.5</b>	<b>88.2</b>
<b>Northern Ireland</b>	<b>4 (4)</b>	<b>94.2</b>	<b>93.0</b>	<b>94.2</b>	<b>96.5</b>	<b>95.1</b>	<b>96.4</b>	<b>90.2</b>
<b>Scotland</b>	<b>15 (15)</b>	<b>95.0</b>	<b>94.1</b>	<b>94.8</b>	<b>97.1</b>	<b>95.8</b>	<b>96.8</b>	<b>92.7</b>
<b>United Kingdom</b>	<b>124 (126)</b>	<b>92.4</b>	<b>91.4</b>	<b>92.2</b>	<b>95.6</b>	<b>94.2</b>	<b>95.2</b>	<b>89.7</b>
(District/health board range)		(69.2-98.0)	(69.2-97.4)	(68.5-97.8)	(77.4-99.0)	(77.0-98.3)	(77.4-98.9)	(68.7-97.8)

1998 and reaching their first, second or fifth birthdays during the evaluation quarter (April to June 1998). The numbers were requested of children completing a primary course of each antigen (three doses of diphtheria (D3), tetanus (T3), pertussis (P3), polio (Pol 3), and *Haemophilus influenzae* type b (Hib 3) vaccines, and one dose of measles, mumps, and rubella (MMR1) vaccine at 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, Hib 3), a preschool booster dose (DTPol4), at least one dose of MMR (MMR1) and two doses of MMR (MMR2) at any time up to their fifth birthdays.

## Results

### Coverage at 12 and 24 months

Data were received from all but two districts in England and from all districts and health boards in Wales, Northern Ireland and Scotland (table 1). Three trusts, each serving part of a district, were unable to provide data this quarter due to problems with new computer software. Thirty-six districts and health boards achieved the 95% target for D3 (29%), 15 for P3 (12%), and 32 for Hib 3 (26%) at 12 months of age. Ninety-two districts and health boards achieved 95% coverage for D3 (74%), 58 for P3 (47%), and 89 for Hib (72%) at 24 months of age. Only three (3%) districts and health boards achieved 95% coverage for MMR at 24 months. National coverage at both 12 and 24 months of age for all antigens was similar to last quarter, except for MMR at 24 months which fell by 0.7%<sup>1</sup>.

### Coverage at 5 years

Data were received from 72/102 (71%) districts in the English regions. The five Welsh districts provided data for coverage of DTPol4, MMR1, and MMR2. No data are available from Northern Ireland or Scotland. Coverage in England and Wales at 5 years for DTPol4 was 84.1%, for MMR1 94.3%, and for MMR2 75.3% (table 2). Coverage in England at 5 years was 94.9% for DTPol3, 92.7% for P3, and 93.6% for Hib3.

### Comment

Coverage of all antigens, at both 12 and 24 months of age, has remained similar for the past four quarters, except for MMR at 24 months<sup>1</sup>. The drop of 0.7% for MMR at 24 months relates to children scheduled to be immunised between May to October 1997 and is the first appreciable decrease to be observed since a drop of 1% was recorded three quarters ago<sup>2</sup>.

Adverse reports in news media suggesting a link between MMR vaccine and autism were beginning to circulate at that time and may have influenced parents. UK coverage of MMR at 24 months is now 2.8% lower than it was in the equivalent quarter three years ago, when 27% of districts achieved the target of 95% coverage compared with only 3% in this quarter<sup>3</sup>. A new Department of Health/Health Education Authority MMR leaflet has been issued to help restore public confidence and enable parents to make informed decisions about immunisation. An updated MMR factsheet (for health professionals and parents) has also been produced<sup>4</sup>.

This report includes coverage data for 5 year olds – monitoring the uptake of preschool booster vaccines (DTPol4 and MMR2) as well as any 'catch-up' of completed primary immunisations after the second birthday (DTPol3, P3, Hib 3, and MMR1) – for the first time. Some districts/trusts are experiencing difficulties in producing these data, however, as their child health computer software is still being developed. Consequently, only 71% of English districts have reported and the data may not be truly representative of the country as a whole, nor be strictly comparable with earlier data for the same birth cohort. In regions where less than three quarters of the districts have provided data (Trent, Anglia and Oxford, South and West, and West Midlands), coverage should be interpreted with particular caution. An important factor in the validity of these data is the continued maintenance of accurate registers of resident children and records of immunisations given up to and beyond school entry. This area needs particular attention in some parts of the UK. When all districts/trusts can take part these data will provide a unique and valuable tool for evaluating all aspects of the childhood immunisation programme up to the age of 5.

## References

1. CDSC. COVER/Korner: January to March 1998. *Commun Dis Rep CDR Wkly* 1998; 8: 229-30.
2. CDSC. COVER/Korner: July to September 1997. *Commun Dis Rep CDR Wkly* 1998; 8: 43-4.
3. White JM, Rush M, Leon S, Ramsay MEB. COVER/Körner 95-1 (April to June 1995) vaccination coverage statistics for children up to 2 years old in the United Kingdom. *Commun Dis Rep CDR Rev* 1995; 5: R186-7.
4. CDSC. Sentinel surveillance shows small decline in MMR coverage. *Commun Dis Rep CDR Wkly* 1998; 8: 317.

**Table 2 Completed primary vaccinations (all antigens) by five years: April to June 1998**

Region/country	Number of participating districts (total)	% coverage at 5 years					
		DTPol3	P3	Hib3	DTPol4	MMR1	MMR2
Northern and Yorkshire	13 (13)	96.0	93.6	95.1	86.2	95.4	80.6
Trent	6 (11)	96.7	94.7	95.5	82.5	96.6	76.4
Anglia and Oxford	7 (10)	93.8	92.1	92.6	84.9	93.3	78.4
North Thames	13 (14)	93.2	90.5	91.1	80.3	92.3	73.2
South Thames	12 (12)	92.9	91.4	91.8	81.5	92.3	71.3
South and West	5 (12)	97.1	95.4	96.3	91.6	96.6	85.2
West Midlands	2 (14)	97.6	95.3	95.1	84.4	96.9	76.1
North West	14 (16)	96.5	93.7	95.5	85.0	95.6	72.3
<b>England</b>	<b>72 (102)</b>	<b>94.9</b>	<b>92.7</b>	<b>93.6</b>	<b>84.0</b>	<b>94.3</b>	<b>75.4</b>
<b>Wales</b>	<b>5 (5)</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>84.9</b>	<b>94.7</b>	<b>74.4</b>
<b>England and Wales</b>	<b>77 (107)</b>	<b>na</b>	<b>na</b>	<b>na</b>	<b>84.1</b>	<b>94.3</b>	<b>75.3</b>

Data are for England and Wales only, unless otherwise stated. Weekly numbers are provisional and should not be used to indicate trends.

Registered as a newspaper.

## Notifications of infectious diseases

Doctors in England and Wales have a statutory duty to notify a 'proper officer' of the local authority (usually the consultant in communicable disease control) of cases of certain infectious diseases (*CDR Review* 1993; 3: R19-25). Notifications of infectious diseases, not all of which are microbiologically confirmed, prompt local investigation and action to control the diseases. Proper officers are required each week to inform the Registrar General of the

number of cases of each disease that have been notified. The responsibility for collating the weekly returns from proper officers, and publishing analyses of local and national trends has been transferred to CDSC from ONS (*CDR Weekly* 1997; 7: 145). Data published here – and an expanded form of table 2 with data to district level – are also available in an electronic format to Epinet subscribers on the PHLS network.

**Table 1 Notifications of infectious diseases\* in the past 6 weeks, with totals for the current year compared with corresponding periods of the two preceding years**

	Week						Cumulative totals to week 37 <sup>†</sup>			Cumulative totals from mid-year to week 37 <sup>‡</sup>			
	32/98	33/98	34/98	35/98	36/98	37/98	1996 (i)	1997 (ii)	1998 (iii)	95/96(a)	96/97(b)	97/98(c)	
Typhoid fever presumed contracted	Cases	3	1	1	2	1	4	139	83	86	44	27	28
	Abroad <sup>§</sup>	2	1	1	2	1	3	122	75	75	36	23	24
	GB	1	–	–	–	–	1	17	8	11	8	4	4
Paratyphoid fever presumed contracted	Cases	4	4	4	1	1	2	78	59	83	24	13	28
	Abroad <sup>§</sup>	4	4	3	1	1	1	77	53	76	23	11	24
	GB	–	–	1	–	–	1	1	6	7	1	2	4
Dysentery	Cases	35	37	64	55	28	51	1588	1719	1141	523	468	453
Food poisoning formally notified ascertained	Cases	2164	2233	2422	2549	2045	2516	57944	66189	65074	23343	26652	25153
	Cases	1215	1210	1236	1402	1078	1367	35336	38482	36386	14178	15378	13627
	Cases	949	1023	1186	1147	967	1149	22608	27707	28688	9165	11274	11526
Tuberculosis	Cases <sup>¶</sup>	115	118	121	130	64	88	4027	4261	4341	1248	1251	1339
Whooping cough	Cases	28	21	37	29	29	33	1358	2035	1124	688	758	333
Scarlet fever	Cases	45	32	31	18	19	14	3784	2746	2673	579	470	464
Meningitis meningococcal	Cases	33	27	29	23	24	15	1937	1729	1469	578	335	343
	Cases	16	18	16	10	13	8	868	881	829	176	152	169
	influenzal ( <i>Haemophilus influenzae</i> )	Cases	1	–	–	–	–	–	31	24	18	13	4
other specified	Cases	11	7	8	6	7	3	752	583	444	292	139	117
	unspecified	Cases	5	2	5	7	4	4	286	241	178	97	40
Meningococcal septicaemia (without meningitis)	Cases	24	19	22	27	14	15	800	1006	1064	180	192	226
Tetanus	Cases	1	1	2	1	–	–	4	4	8	1	2	8
Measles	Cases	68	72	57	46	27	54	4397	2890	2991	900	787	708
Mumps	Cases	32	23	18	11	20	18	1277	1354	1173	372	334	318
Rubella	Cases	57	53	50	45	21	30	7980	2433	2686	1006	665	605
Viral hepatitis	Cases	59	58	51	58	47	67	1795	2178	2167	477	796	670
Malaria	Cases	15	19	17	26	21	44	1263	1110	803	586	510	258
Leptospirosis	Cases	–	1	–	1	–	2	5	14	21	2	5	9
Acute encephalitis infective	Cases	–	–	1	3	1	–	16	20	19	1	2	8
	Cases	–	–	1	2	–	–	11	13	14	1	2	5
	post-infectious	Cases	–	–	–	1	1	–	5	7	5	1	2
Ophthalmia neonatorum	Cases	3	1	2	4	3	2	186	151	141	54	41	39
<b>Special cases</b>													
Cholera	Cases	–	1	2	2	–	1	22	23	38	10	10	12
Diphtheria	Cases	–	–	1	1	1	1	6	15	15	2	1	6
Typhus	Cases	–	1	–	1	–	–	2	5	5	2	1	5
Relapsing fever	Cases	–	–	–	–	1	–	–	–	1	2	1	1

All figures include late returns

\* includes notifications from Port Health Authorities

† Cumulative totals commencing week ended (i) 5 Jan (ii) 3 Jan (iii) 2 Jan

‡ Cumulative totals from mid-year commencing week ended (a) 5 July (b) 4 July (c) 3 July

§ Includes cases of un stated origin

¶ Excluding chemoprophylaxis

**Table 2 Notifications of infectious diseases in week 37/98 (standard regions, counties, and unitary authorities)**

Area	Measles	Mumps	Rubella	Dysentery	Scarlet fever	Whooping cough	Viral hepatitis	TB all forms*	Meningitis†	Food poisoning notified§	ascertained#	Malaria
<b>North</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>5</b>	<b>1</b>	<b>4</b>	<b>6</b>	<b>3</b>	–	<b>80</b>	<b>84</b>	–
Tyne and Wear †	3	1	–	1	–	1	4	1	–	15	31	–
Cumbria	–	–	–	1	–	–	2	–	–	8	29	–
Durham	1	–	1	–	–	–	–	–	–	24	10	–
Northumberland	2	–	–	–	–	1	–	–	–	–	9	–
Hartlepool	–	–	–	1	–	–	–	1	–	7	–	–
Middlesbrough	–	–	–	–	–	–	–	–	–	4	–	–
Redcar and Cleveland	–	–	–	–	–	2	–	1	–	2	–	–
Stockton-on-Tees	–	–	–	–	1	–	–	–	–	14	–	–
Darlington	–	–	–	2	–	–	–	–	–	6	5	–
<b>Yorkshire and Humberside</b>	<b>8</b>	<b>3</b>	<b>7</b>	<b>7</b>	<b>4</b>	<b>3</b>	<b>6</b>	<b>10</b>	<b>1</b>	<b>132</b>	<b>130</b>	<b>2</b>
South Yorkshire †	6	–	2	2	3	1	–	2	–	41	32	1
West Yorkshire †	2	3	3	5	1	2	4	7	1	42	76	1
North Yorkshire	–	–	–	–	–	–	–	1	–	28	21	–
City of Kingston upon Hull	–	–	2	–	–	–	–	–	–	3	–	–
East Riding of Yorkshire	–	–	–	–	–	–	1	–	–	2	–	–
North East Lincolnshire	–	–	–	–	–	–	1	–	–	5	–	–
North Lincolnshire	–	–	–	–	–	–	–	–	–	4	–	–
York	–	–	–	–	–	–	–	–	–	7	1	–
<b>East Midlands</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>3</b>	<b>1</b>	<b>4</b>	–	<b>2</b>	<b>2</b>	<b>85</b>	<b>92</b>	<b>4</b>
Derbyshire	1	–	2	–	1	–	–	–	1	23	4	–
Leicestershire	–	1	1	–	–	2	–	1	–	14	–	1
Lincolnshire	–	–	–	–	–	–	–	–	–	9	24	–
Northamptonshire	–	–	–	–	–	–	–	–	1	17	15	–
Nottinghamshire	–	–	–	2	–	–	–	1	–	9	27	–
Derby	–	–	–	–	–	–	–	–	–	11	–	–
Leicester	1	–	–	–	–	1	–	–	–	2	1	2
Rutland	–	–	–	–	–	–	–	–	–	–	–	–
Nottingham	–	–	–	1	–	1	–	–	–	–	21	1
<b>East Anglia</b>	–	–	<b>2</b>	–	–	<b>3</b>	<b>1</b>	<b>1</b>	–	<b>53</b>	<b>51</b>	<b>2</b>
Cambridgeshire	–	–	–	–	–	–	–	1	–	14	11	2
Norfolk	–	–	–	–	–	2	1	–	–	7	23	–
Suffolk	–	–	–	–	–	–	–	–	–	27	17	–
Peterborough	–	–	2	–	–	1	–	–	–	5	–	–
<b>South East</b>	<b>27</b>	<b>7</b>	<b>9</b>	<b>23</b>	<b>2</b>	<b>6</b>	<b>26</b>	<b>29</b>	<b>4</b>	<b>564</b>	<b>289</b>	<b>31</b>
Greater London	11	4	3	14	2	1	16	26	2	272	19	28
Bedfordshire	–	–	–	–	–	–	1	–	–	5	7	–
Buckinghamshire	–	–	–	1	–	–	–	–	–	5	13	–
East Sussex	–	–	–	–	–	–	–	–	1	15	6	–
Essex	3	–	–	–	–	–	–	–	–	34	45	–
Hampshire	2	1	–	3	–	2	–	–	–	27	42	1
Hertfordshire	2	–	–	1	–	1	3	–	–	15	50	–
Kent	–	1	1	–	–	–	–	2	1	41	14	–
Oxfordshire	–	–	–	1	–	–	2	–	–	8	26	–
Surrey	–	1	–	–	–	–	–	–	–	37	17	–
West Sussex	2	–	–	2	–	–	2	–	–	22	18	–
Luton	–	–	1	–	–	–	1	–	–	8	7	–
Southend-on-Sea	–	–	–	–	–	–	–	–	–	–	–	1
Thurrock	1	–	–	–	–	–	–	–	–	5	–	–
Medway Towns	1	–	1	–	–	–	–	–	–	5	–	–
Bracknell Forest	1	–	–	–	–	–	–	–	–	8	–	–
Newbury	–	–	–	–	–	–	–	–	–	10	1	–
Reading	1	–	–	1	–	–	–	–	–	2	5	–
Slough	–	–	–	–	–	–	–	–	–	3	1	–
Windsor and Maidenhead	–	–	–	–	–	–	–	–	–	6	3	–
Wokingham	2	–	–	–	–	2	–	–	–	7	2	1
Milton Keynes	–	–	1	–	–	–	–	–	–	16	–	–
Brighton and Hove	–	–	–	–	–	–	–	–	–	3	–	–
Portsmouth	–	–	–	–	–	–	–	1	–	8	–	–
Southampton	1	–	2	–	–	–	1	–	–	1	13	–
Isle of Wight	–	–	–	–	–	–	–	–	–	1	–	–
<b>South West</b>	–	–	–	<b>4</b>	<b>3</b>	<b>4</b>	<b>10</b>	<b>6</b>	<b>2</b>	<b>144</b>	<b>137</b>	<b>1</b>
Cornwall and Isles of Scilly	–	–	–	–	–	–	–	2	–	15	16	–
Devon	–	–	–	–	–	–	–	–	1	19	18	–
Dorset	–	–	–	–	1	–	6	1	–	20	16	1
Gloucestershire	–	–	–	–	–	2	–	1	–	7	2	–
Somerset	–	–	–	1	–	–	–	–	–	21	–	–
Wiltshire	–	–	–	–	–	–	–	–	–	7	–	–
Bath and NE Somerset	–	–	–	–	–	–	–	–	–	–	7	–
Bristol	–	–	–	1	–	–	1	–	–	1	40	–
North Somerset	–	–	–	–	–	–	–	–	–	7	10	–
South Gloucestershire	–	–	–	–	1	–	–	1	–	1	14	–
Plymouth	–	–	–	1	–	–	1	–	–	20	–	–
Torbay	–	–	–	–	–	–	1	–	1	3	14	–
Bournemouth	–	–	–	–	–	–	1	1	–	6	–	–
Poole	–	–	–	1	1	1	–	–	–	14	–	–
Swindon	–	–	–	–	–	1	–	–	–	3	–	–

Area	Measles	Mumps	Rubella	Dysentery	Scarlet fever	Whooping cough	Viral hepatitis	TB all forms*	Meningitis†	Food poisoning notified§	ascertained#	Malaria
<b>West Midlands</b>	<b>7</b>	<b>3</b>	<b>6</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>8</b>	<b>21</b>	<b>2</b>	<b>96</b>	<b>156</b>	<b>1</b>
West Midlands †	4	1	5	2	–	1	8	17	2	54	91	1
Worcester	1	–	–	4	–	–	–	–	–	19	11	–
Shropshire	–	–	–	–	–	–	–	1	–	3	12	–
Staffordshire	2	2	1	–	1	–	–	1	–	12	13	–
Warwickshire	–	–	–	–	–	–	–	–	–	5	16	–
Hereford	–	–	–	–	–	–	–	–	–	2	1	–
The Wrekin	–	–	–	–	–	–	–	1	–	1	5	–
Stoke-on-Trent	–	–	–	–	–	–	–	1	–	–	7	–
<b>North West</b>	<b>3</b>	<b>3</b>	<b>2</b>	<b>3</b>	<b>2</b>	<b>6</b>	<b>8</b>	<b>11</b>	<b>4</b>	<b>120</b>	<b>117</b>	<b>3</b>
Greater Manchester †	1	1	1	1	2	3	6	7	1	29	39	2
Merseyside †	2	–	1	1	–	–	1	–	2	34	26	–
Cheshire	–	–	–	–	–	1	–	3	–	12	9	1
Lancashire	–	1	–	1	–	–	–	1	–	41	33	–
Halton	–	–	–	–	–	–	–	–	1	1	–	–
Warrington	–	1	–	–	–	2	1	–	–	3	5	–
Blackburn	–	–	–	–	–	–	–	–	–	–	2	–
Blackpool	–	–	–	–	–	–	–	–	–	–	3	–
<b>Wales</b>	<b>1</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>–</b>	<b>2</b>	<b>2</b>	<b>5</b>	<b>–</b>	<b>93</b>	<b>93</b>	<b>–</b>
Isle of Anglesey	–	–	–	–	–	–	–	–	–	2	1	–
Gwynedd	–	–	–	–	–	–	–	–	–	4	2	–
Conwy	–	–	–	–	–	1	1	–	–	4	2	–
Denbighshire	–	–	–	–	–	–	–	–	–	2	–	–
Flintshire	–	–	–	–	–	1	–	–	–	1	6	–
Wrexham	–	–	–	–	–	–	–	–	–	3	6	–
Powys	–	–	–	–	–	–	–	–	–	–	1	–
Ceredigion	–	–	–	–	–	–	1	–	–	1	–	–
Pembrokeshire	–	–	–	–	–	–	–	–	–	–	–	–
Carmarthenshire	–	–	–	–	–	–	–	1	–	1	1	–
Swansea	–	–	–	–	–	–	–	–	–	1	–	–
Neath and Port Talbot	–	–	–	–	–	–	–	–	–	–	–	–
Bridgend	–	–	–	–	–	–	–	–	–	11	–	–
Vale of Glamorgan	–	–	–	–	–	–	–	–	–	10	–	–
Rhondda, Cynon, Taff	–	–	–	–	–	–	1	–	–	7	–	–
Merthyr Tydfil	–	–	–	–	–	–	–	–	–	6	–	–
Caerphilly	–	–	–	–	–	–	–	–	–	12	–	–
Blaenau Gwent	–	–	–	–	–	–	–	–	–	–	3	–
Torfaen	–	–	–	–	–	–	–	–	–	1	–	–
Monmouthshire	–	–	–	–	–	–	–	2	–	–	5	–
Newport	1	–	–	–	–	–	–	–	–	9	–	–
Cardiff	–	–	–	–	–	–	–	1	–	18	66	–

\* Excluding prophylaxis. † All forms. § Formally notified. # Ascertained by other means. †Metropolitan county.

Unitary authorities are shown in italics.

## Notifications in week 37/98 of infectious diseases not shown in table 2

**Cholera:** one case; in Lancashire.

**Diphtheria:** one case; in Greater London (toxigenic *Corynebacterium ulcerans*).

**Leptospirosis:** two cases; in Cambridgeshire and in Staffordshire.

**Meningitis – meningococcal:** 8 cases; one in each of Devon, Greater London, Greater Manchester, Kent, Merseyside, Northamptonshire, West Midlands, and West Yorkshire.

**Meningococcal septicaemia (without meningitis):** 15 cases; three in Cheshire, two in Derbyshire and in Greater Manchester, and one in each of Conwy, Hampshire, Hertfordshire, Merseyside, South Yorkshire, Warwickshire, West Midlands, and West Yorkshire.

**Ophthalmia neonatorum:** two cases; in Dorset and West Yorkshire.

**Paratyphoid fever:** two cases; one presumed to have been contracted abroad – from Derbyshire, and one of one presumed to have been contracted in Great Britain – from Rhondda CYNon Taff.

**Typhoid fever:** four cases; three presumed to have been contracted abroad – two from Greater London and one from Berkshire, and one presumed to have been contracted in Great Britain – from Greater Manchester.

No cases of acute encephalitis, acute poliomyelitis, anthrax, meningitis influenzal (*Haemophilus influenzae*), plague, rabies, relapsing fever, smallpox, tetanus, typhus, viral haemorrhagic fever, or yellow fever were notified.

Table 3 Weekly analysis report of notifications above expected rates in week 37/98

District	County	Observed number	Expected number	Ratio observed/expected	District	County	Observed number	Expected number	Ratio observed/expected
<b>Dysentery</b>					<b>Measles</b>				
Darlington	Durham	2	0.10	20.16	Blyth Valley	Northumberland	2	0.08	23.66
Kirklees	West Yorkshire	4	0.38	10.46	Cannock Chase	Staffordshire	2	0.10	20.18
Malvern Hills	Hereford and Worcester	4	0.09	44.26	Rotherham	South Yorkshire	3	0.28	10.84
Wandsworth	Greater London	4	0.26	15.31	<b>Mumps</b>				
<b>Food poisoning</b>					Lichfield				
<i>All</i>					Staffordshire				
Braintree	Essex	15	6.10	2.46	<b>Rubella</b>				
Bristol	Bristol	41	19.53	2.10	Peterborough				
Cardiff	Cardiff	84	15.08	5.57	Cambridgeshire				
Doncaster	South Yorkshire	28	14.27	1.96	<b>Scarlet fever</b>				
Easington	Durham	13	4.71	2.76	Doncaster				
Leeds	West Yorkshire	61	35.33	1.73	<b>Tuberculosis†</b>				
Mid Suffolk	Suffolk	11	3.88	2.84	Birmingham				
Preston	Lancashire	35	6.54	5.35	Ealing				
Purbeck	Dorset	8	2.19	3.66	Wandsworth				
Richmondshire	North Yorkshire	8	2.26	3.54	<b>Viral hepatitis</b>				
Solihull	West Midlands	24	9.89	2.43	<i>All</i>				
South Lakeland	Cumbria	14	4.89	2.86	Copeland				
South Oxfordshire	Oxfordshire	14	6.01	2.33	North Tyneside				
Torbay	Devon	17	6.04	2.81	Rochdale				
Wakefield	West Yorkshire	31	15.46	2.01	Salford				
<b>Formally notified</b>					West Dorset				
Arun	West Sussex	11	3.60	3.06	<b>Whooping cough</b>				
Bridgend	Bridgend	11	3.45	3.18	Gloucester				
Caerphilly	Caerphilly	12	4.49	2.67	Havant				
Camden	Greater London	13	4.89	2.66	Oadby and Wigston				
Cardiff	Cardiff	18	8.18	2.20	Redcar and Cleveland				
Ealing	Greater London	17	7.72	2.20	Wokingham				
Easington	Durham	13	2.55	5.09					
Liverpool	Merseyside	23	12.44	1.85					
Malvern Hills	Hereford and Worcester	9	2.42	3.72					
Merton	Greater London	16	4.74	3.38					
Mid Suffolk	Suffolk	8	2.10	3.80					
Milton Keynes	Buckinghamshire	16	5.10	3.14					
Plymouth	Devon	20	6.80	2.94					
Poole	Dorset	14	3.67	3.81					
Preston	Lancashire	16	3.55	4.51					
Purbeck	Dorset	6	1.19	5.06					
Scarborough	North Yorkshire	11	2.88	3.82					
Stockton-on-Tees	Stockton-on-Tees	14	4.71	2.97					
Vale of Glamorgan	Vale of Glamorgan	10	3.14	3.18					
Wandsworth	Greater London	20	7.01	2.86					
Wolverhampton	West Midlands	17	6.46	2.63					
<b>Malaria</b>									
Greenwich	Greater London	3	0.18	16.32					
Hackney	Greater London	10	0.17	59.19					
Newham	Greater London	3	0.20	15.10					

† Excluding prophylaxis

Note: This table shows those districts from which the rates of notifications reported this week were significantly higher than expected ( $P < 0.005$ ). The number of notifications in each district is shown in the third column (observed). The number expected if the national rate is applied to the district population is shown in the fourth column (expected). The fifth column shows by how many times the number of notifications exceeds the expected number (ratio observed/expected). Caution must be exercised when interpreting this table, as listing is wholly dependent on comparable reporting of notifiable infectious diseases from all districts of England and Wales and on local patterns of disease.

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

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

During August 1998, 41 new cases of AIDS were reported in the United Kingdom (UK), 10 of whom had died. Sixteen were probably infected with HIV through sexual intercourse between men (3 died), 19 through sexual intercourse between men and women (5 died), 5 through injecting drug use (2 died), and 1 through blood/tissue transfer. This is the first month since reporting began in which sex between men and women has been the HIV risk factor associated with the largest number of reported AIDS cases. It should be remembered, however, that reporting is subject to variable delays, but the observation is consistent with progression to AIDS in gay men having been influenced by treatment uptake. Thirteen of the 19 cases reported in August acquired infection in sub-Saharan Africa.

## HIV infection attributed to treatment with clotting factor concentrates (blood products)

Clotting factor concentrate production is a batch process involving the pooling of plasma from several thousand donations. This means that one donation infectious for HIV could contaminate a batch of concentrate used to treat many patients. Patients with haemophilia, who form the great majority of those exposed to HIV infection through blood product treatment, have been monitored throughout the epidemic by the UK Haemophilia Centre Directors' Organisation (UKHCDO).

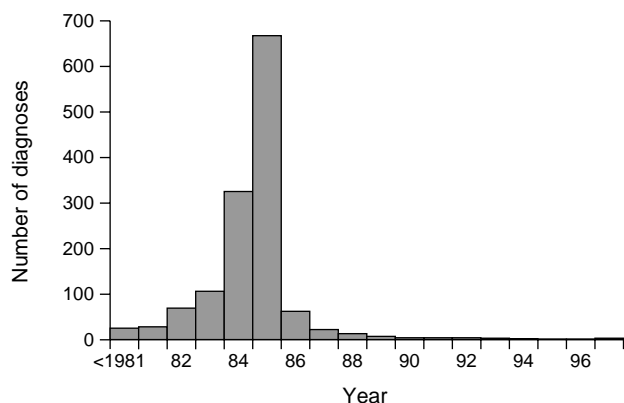
By the end of August 1998, 1346 individuals had been reported in the UK as HIV infected through treatment with blood products, 1325 (1318 male and 7 female) of whom are recorded through the UKHCDO as having been treated for coagulation disorders, usually haemophilia A or B. A further 4024 are recorded as having been tested and found HIV negative (RJD Spooner, personal communication). The other 21 reports (17 males and 4 females) of transmission of HIV infection associated with blood products relate either to individuals with coagulation

disorders that have not been treated regularly in this country, or to blood product treatment to control excessive bleeding from some other cause. Eight hundred and one (60%) of the 1346 cases are reported to have died.

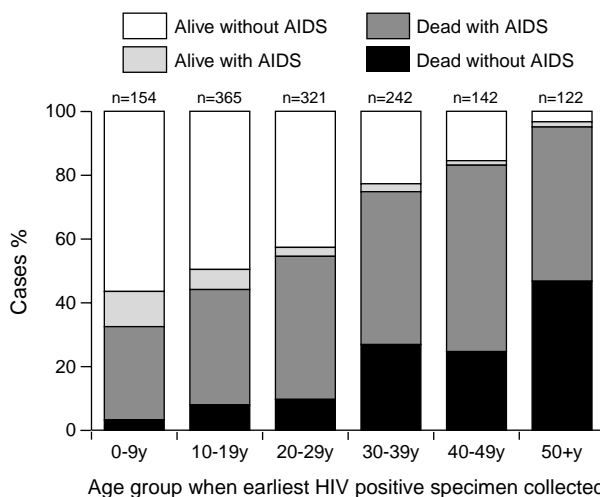
Most of the HIV infections attributed to blood product treatment were diagnosed more than a decade ago, but some exposed individuals chose not to be tested until they developed HIV related symptoms (figure 1). Retrospective testing of stored specimens after HIV tests became available in the mid 1980s has established that transmission occurred from the late 1970s onwards. No transmission of HIV through the use of blood products in the UK has been recorded since the introduction of heat treatment for clotting factor concentrates, which was completed by 1985.

As HIV infections associated with blood product treatment are related to the need for treatment rather than to behaviour, which may be age related, the age distribution of these cases differs from those exposed to infection by most other routes. Thirty-nine per cent of those diagnosed were under 20 years of age, compared with 1% for the other risk categories combined. Progression of HIV related disease has been shown to be age related<sup>1</sup>, and this effect remains apparent in the UK cohort of blood product associated HIV transmissions (figure 2). Ninety-five per cent of those aged 50 years or more when first diagnosed with HIV infection were known to have died by the end of August 1998, compared with 32% of those known to have been HIV infected before they were 10 years of age. Two hundred and twenty-two (28%) of the 801 who have died have done so without developing an AIDS defining condition. This proportion is much higher than the proportion of 'non-AIDS' deaths (5%) reported for HIV infected individuals overall<sup>2</sup>.

**Figure 1 HIV infection through blood products: UK data to end of August 1998**



**Figure 2 Survival of patients infected with HIV through blood product treatment by age group: UK data to end of August 1998**



**Table 1 Country/region of diagnosis of HIV infections transmitted through blood product treatment: UK data to end August 1998**

Country and region of report	Total HIV diagnosis	Number (%) associated with blood products
England:		
Northern and Yorkshire	1147	170 (14.8)
Trent	840	67 (8.0)
Anglia and Oxford	1267	175 (13.8)
North Thames	15842	217 (1.4)
South Thames	5473	164 (3.0)
South and Western	1428	108 (7.6)
West Midlands	996	130 (13.0)
North Western	1855	167 (9.0)
<b>England total</b>	<b>28848</b>	<b>1198 (4.2)</b>
<b>Wales</b>	<b>496</b>	<b>53 (10.6)</b>
<b>Northern Ireland</b>	<b>165</b>	<b>18 (10.9)</b>
<b>Scotland</b>	<b>2733</b>	<b>77 (2.8)</b>
<b>United Kingdom total</b>	<b>32242</b>	<b>1346 (4.2)</b>

As the incidence of haemophilia is similar throughout the UK, infections attributed to blood product treatment have been spread more evenly across the country than those associated with most other risk categories (table 1). They have contributed a larger proportion of the total of diagnosed HIV infections in regions where the numbers of infections diagnosed in other risk groups have been comparatively low. The relatively small number of blood product associated HIV infections recorded in Scotland (77) reflects Scotland's self-reliance for clotting factor, which was produced from local, volunteered donations in the early 1980s. In the rest of the UK a higher proportion of the clotting factor used was imported from manufacturers who paid donors for providing plasma.

### Heterosexual spread from those infected through blood product treatment

Eighty-two cases (1 male, 81 female) have been reported to have acquired HIV infection through heterosexual contact with someone HIV infected through blood product treatment. Their ages at HIV diagnosis range from 16 to 60 years (median 26 years). Twenty-four of the patients have died, four of them without an AIDS defining condition being reported; a further 9 have been reported as having AIDS and are not known to have died. Although some of these infections may have occurred before the risk was fully understood others may have been acquired more

recently. Seven of the 38 cases diagnosed since the beginning of 1990 were aged 20 years or younger.

### HIV-2 infections identified in the UK

HIV-2 infections diagnosed in the UK were last summarised in August 1997<sup>3</sup>. That account is updated to the end of August 1998 here. Thirty-two people in the UK (21 male and 11 female) have been diagnosed with HIV-2 infection. Seven of the 32 have been reported as having AIDS, and four of these have died. A further two have died without AIDS being reported. The probable routes of infection were sex between men (2 cases), blood transfusion abroad (6), heterosexual sex (22), not known (2). Twenty-five cases were associated with travel to west Africa, two with Portugal, and one with India. Two cases were probably acquired in the UK, and for two cases no information is available about where infection might have been acquired. Two children born to HIV-2 infected mothers from west Africa have been reported; one child has been shown to be uninfected, and the other has been lost to follow up. Eight people (seven males and one female) have been reported with a dual diagnosis of HIV-1 and HIV-2 infection. Three were exposed to HIV through sex between men (one in Malaysia), three through sex between men and women (two in Africa), and two through injecting drug use in Portugal.

Major parts of the unlinked anonymous (UA) testing programme (those covering genitourinary medicine clinics, antenatal clinics, and pregnancy termination specimens) identify HIV-2 positivity. Thirty-six of 1 608 787 specimens tested between 1990 to 1997 were positive for HIV-2 but negative for HIV-1. A further 9807 were positive for HIV-1 only and 13 were positive for both. In some cases the same individual may have been included more than once, and if they have had a diagnostic test they may be included among the cases described in the previous paragraph too. The UA programme has established, however, that HIV-1 infections outnumber HIV-2 infections in the UK by 200 to 1.

1. Darby SC, Ewart DW, Giagrande PLF, Spooner RJD, Rizza CR. The importance of age at infection with HIV-1 for survival and development of AIDS in UK haemophilia population. *Lancet* 1996; **347**: 1573-9.
2. Laurichesse HAA, Mortimer J, Evans BG, Farrington CP. Pre-AIDS mortality in HIV infected individuals in England Wales and Northern Ireland, 1982-1996. *AIDS* 1998; **12**: 651-8.
3. CDSC. HIV-2 infection in the UK. *Commun Dis Rep CDR Wkly* 1997; **7**: 308.

This report was prepared from voluntary confidential reports by clinicians and microbiologists sent directly to the PHLS AIDS Centre at CDSC (0181 200 6868) and to the Scottish Centre for Infection and Environmental Health (SCIEH) (0141 300 1100), returns by haemophilia centre directors to the Oxford Haemophilia Centre (01865 225316), and returns to the British Paediatric Surveillance Unit. Paediatric data are compiled at the Institute of Child Health, London (0171 829 8686) in collaboration with CDSC and SCIEH.