Health Protection Agency

CDR WEEKLY

the Communicable Disease Report Weekly

Current Issue: Volume 15 Number 38 **Published on:** 22 September 2005

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Last updated: **22 September 2005**
Next update due: **29 September 2005**

News

Verotoxin-producing *E.coli* O157 (VTEC O157) at a school in the south Wales valleys

On Friday 16 September 2005, staff at Prince Charles Hospital, Merthyr Tydfil, Wales, reported nine cases of bloody diarrhoea that had presented at the hospital to the National Public Health Service for Wales and local authorities. There have now been 56 cases (defined as any people residing in south Wales presenting with bloody diarrhoea in September) of which 12 have been confirmed microbiologically as verotoxin-producing *Escherichia coli* O157 (VTEC O157).

Onset dates range from 10 to 20 September with all but one of the primary cases being in school age children from 26 different schools. Of 15 initial cases, all had eaten school meals and the adult case was a school meals supervisor. The early epidemiological investigation has focussed on the foods supplied to the school meals service, since 60% of pupils take school meals in the area and because of the widespread distribution of the cases among different schools in this part of Wales.

The number of cases, so far, is almost double the normal annual total for Wales, which is around 30. Parents have been advised to keep children out of school if they develop symptoms of gastroenteritis.

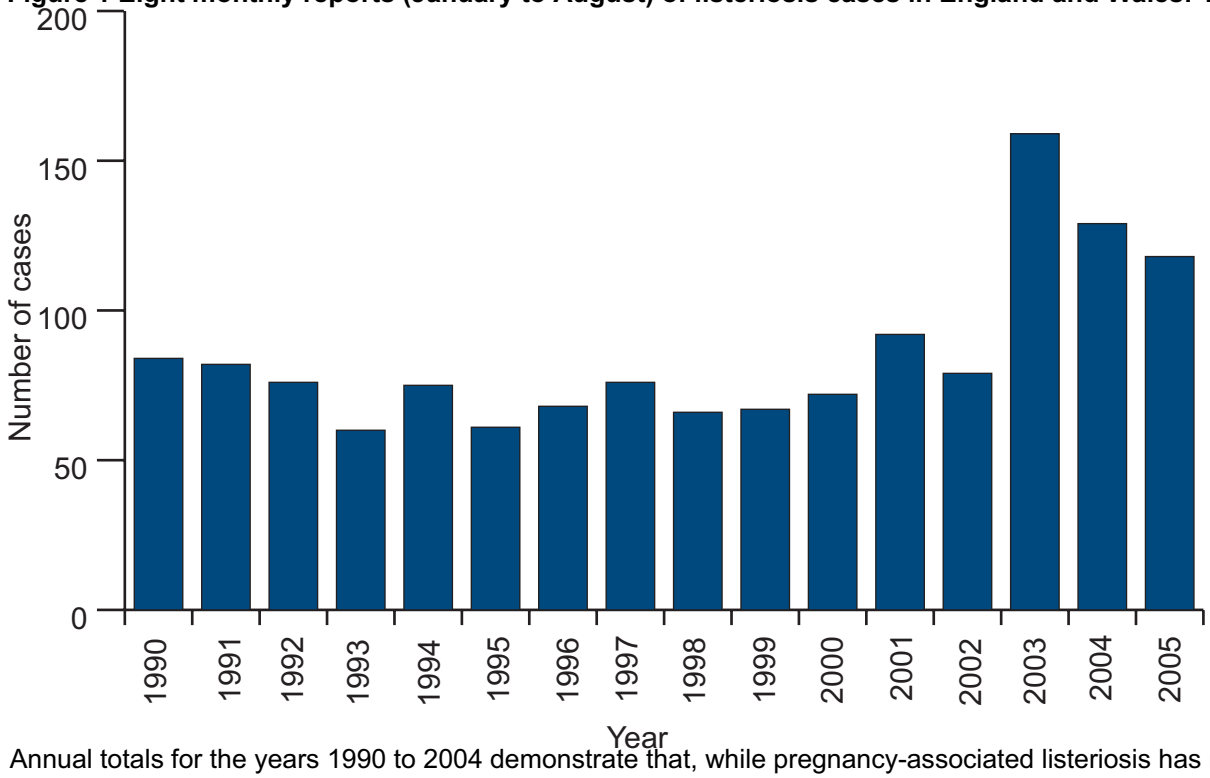
Control measures to remove ready-to-eat foods (as opposed to foods cooked on the school premises) and to curtail educational activities which might facilitate person-to-person spread have been put in place.

Further information on VTEC O157 is available from the Health Protection Agency website at:
<http://www.hpa.org.uk/infections/topics_az/ecoli/O157/menu.htm>

The changing epidemiology of listeriosis in England and Wales

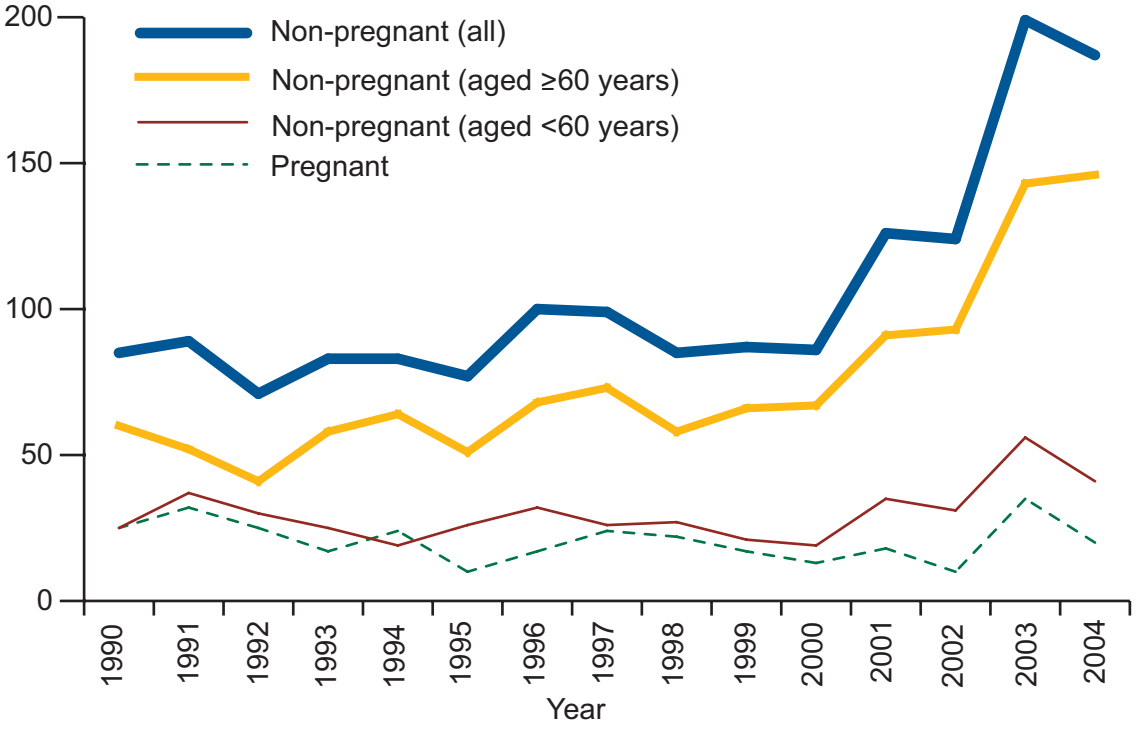
Between 1 January and 30 August 2005, a provisional total of 118 cases of *Listeria monocytogenes* infection were reported to the Health Protection Agency Centre for Infections (figure 1). This represents a continued increase in incidence compared to the same period in 1990 to 2002.

Figure 1 Eight monthly reports (January to August) of listeriosis cases in England and Wales: 1990 to 2005



Annual totals for the years 1990 to 2004 demonstrate that, while pregnancy-associated listeriosis has remained relatively stable, non pregnancy-associated listeriosis has risen dramatically between 2001 and 2004, especially in people aged 60 years and over (figure 2). This increase has occurred in most NHS regions and cannot be explained by seasonality, gender, underlying illness, or *L. monocytogenes* subtype.

Figure 2 Annual totals of listeriosis cases by patient category and age group, England and Wales: 1990 to 2004



Laboratories in England and Wales are requested to refer *L. monocytogenes* isolates from clinical and food samples to Kathie Grant, Centre for Infections, for confirmation and subtyping (telephone: 020 8327 6505; e-mail: kathie.grant@hpa.org.uk). Clinical and exposure questionnaires for the routine follow-up of all cases of *L. monocytogenes* infection have been developed and are available on the Health Protection Agency website at: <http://www.hpa.org.uk/infections/topics_az/listeria/questionnaires.htm>.

Please send copies of completed questionnaires to Iain Gillespie at the Centre for Infections (telephone: 020 8327 7486; email: Iain.Gillespie@hpa.org.uk).

Indonesia reports second laboratory-confirmed case of human influenza A (H5N1) infection

On 16 September 2005, a second fatal case of avian influenza infection was reported to the World Health Organization (WHO) by the Indonesian Ministry of Health (1). A woman aged 37 years from Jakarta died on 10 September 2005 after developing symptoms on 31 August 2005. The source of her infection has yet to be identified. The Indonesian government, assisted by WHO, is currently investigating those who had close contact with the woman, including the hospital staff that treated her. The woman lived in an area where contact with chickens and ducks could frequently occur and poultry samples have been taken by the agriculture authorities.

This is Indonesia's second laboratory-confirmed case of influenza A (H5N1). The first laboratory confirmed case occurred in July 2005 in a man aged 38 years who tested positive for influenza A (H5N1) (2). Laboratory tests on samples from the man's two daughters did not meet the criteria for acute influenza A (H5N1) infection. The Ministry of Health in Viet Nam has also retrospectively confirmed a case of influenza A (H5N1) infection in a male farmer aged 35 years from Ben Tre Province, who died on 31 July 2005 (3).

This case and that of the Indonesian woman brings the total number of fatal human infections since December 2003, to 59 from a total of 114 laboratory confirmed infections.

References

1. World Health Organization [online]. Communicable Disease Surveillance and Repsonse (CSR). Avian influenza-situation in Indonesia – update 29. Geneva: WHO, 16 September 2005 [accessed 20 September 2005]. Available at: <http://www.who.int/csr/don/2005_09_16/en/index.html>.
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3. World Health Organization. [online]. Communicable Disease Surveillance and Repsonse (CSR). Avian influenza-situation in Viet Nam – update 30. Geneva: WHO, 19 September 2005 [accessed 20 September 2005]. Available at: <http://www.who.int/csr/don/2005_09_19/en/index.html>.

Japanese encephalitis in India and Nepal

Since July 2005, there has been an outbreak of Japanese encephalitis (JE) occurring in northern India and Nepal which has so far affected over 5000 people, mainly children, with over 1000 deaths reported (1). The outbreak has affected the states of Uttar Pradesh (3551 cases, 764 deaths) and neighbouring Bihar (238 cases, 58 deaths) in India and most regions of Nepal (1540 cases, 259 deaths); western, mid-western, and far-western regions of Nepal have been most affected.

JE is transmitted by the bite of the Culex spp mosquito and is endemic in many parts of India. Thousands of cases are reported each year (2). Peak transmission season (betwen May and October) in northern India occurs during and just after the monsoon season when major outbreaks coincide with heavy rains and flooding. Case numbers in the region are reported to be higher this year than in previous years.

The risk of JE for British travellers who stay for short periods in urban areas is low. All travellers to endemic areas should be advised to practice insect bite avoidance methods, particularly between dusk and dawn, when the mosquito vector is most active (3). There is vaccine available for prevention of JE in travellers in certain circumstances and further information about the prevention of JE in travellers is available from the National Travel Health Network and Centre at <http://www.nathnac.org/pro/factsheets/japanese_enc.htm>.

References

1. World Health Organization, Regional Office for South East Asia (SEARO). Japanese Encephalitis in India and Nepal, 2005 [online] [cited 20 September 2005]. Available at <http://w3.whosea.org/en/Section10/Section392_10316.htm>.
2. Kabilan L, Rajendran R, Arunachalam N, Ramesh S, Srinivasan S, Philip Samuel P, et al. Japanese encephalitis in India: An overview. *Indian J Paediatr*. 2004; **71**(7): 609-15.
3. National Travel Health Network and Centre. Japanese encephalitis in India – update [online] 15 September 2005 [cited 21 September 2005]. Available at: <http://www.nathnac.org/pro/clinical_updates/JE_india_nepal_220905.htm>.

Last updated: **22 September 2005**
Next update due: **22 October 2005**

Immunisation

Laboratory reports of invasive meningococcal infections, England and Wales: weeks 21 to 25

	Method of diagnosis			Total reports	Cumulative*
	CSF and blood Culture	Non-culture	Other sites	21-25/05	Total to week 25/2005
Group A	–	–	–	–	**1**
B	32	37	8	**77**	**769**
C	1	1	-	**2**	**19**
W135	–	–	–	–	**13**
X	–	–	–	–	–
Y	3	–	1	**4**	**29**
Z	–	–	–	–	–
29E	–	–	–	–	**1**
Ungroupable	–	–	–	–	–
Ungrouped	–	4	–	**4**	**40**
Total	**36**	**42**	**9**	**87**	**872**

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

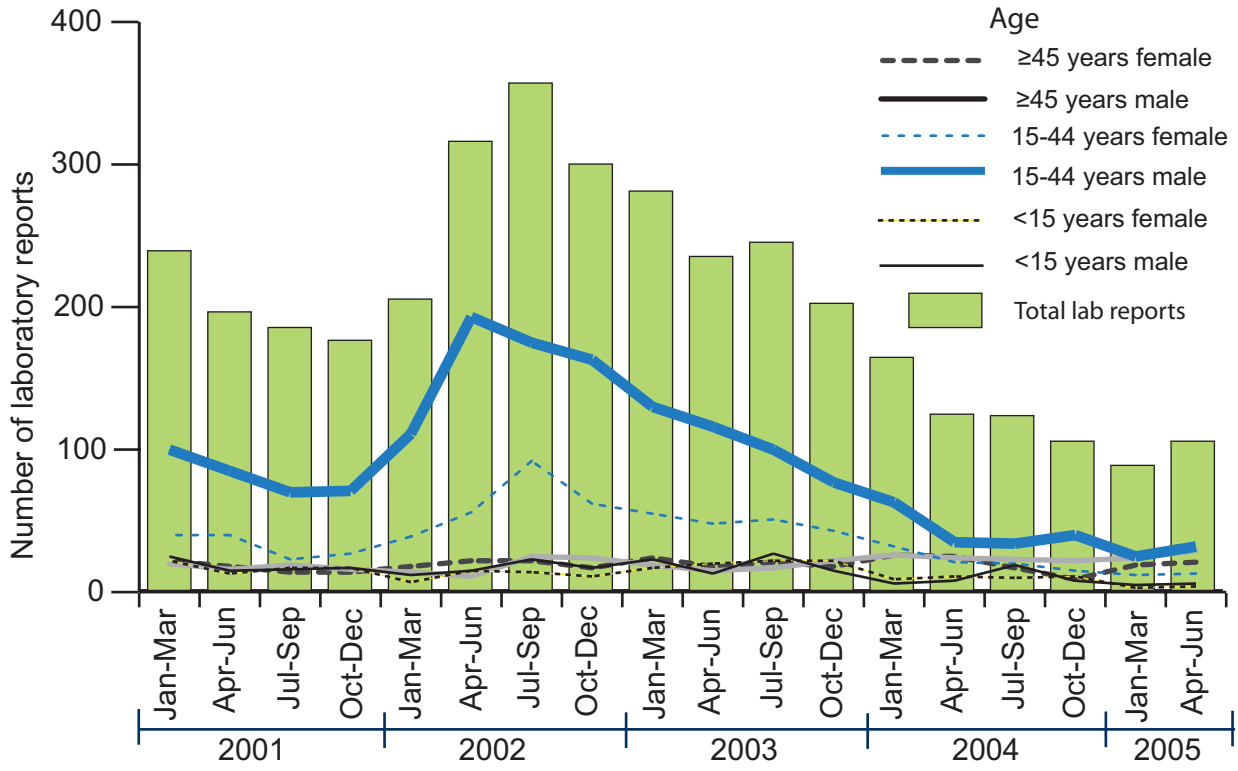
Laboratory reports of hepatitis A in England and Wales: April to June 2005

During the first quarter of 2005, 111 laboratory reports of hepatitis A were made to the Health Protection Agency Centre for Infections (CfI), 11% (14) fewer than in the equivalent quarter of 2004. This follows the trend of an overall decrease in the number of cases compared to the equivalent quarters in the 2004. Twenty-nine per cent (32) were men aged from 15 to 44 years (table 1) and the majority of cases occurred in the North West region. One person acquired their infection abroad (America) and no infections were reported to be in injecting drug users (IDUs). The overall number of cases of hepatitis A in the second quarter of 2005 increased by 25% (22), compared to that of the first quarter of 2005 (1). This is due to a general increase in all age groups, with the exception of females aged under 15 years, and females aged over 45 years. The number of cases reported in males aged from 15 to 44 years increased by 28% (7), and in males aged 45 years and over an increase of 21% (5) on last quarter occurred (figure 1).

Table Laboratory reports of hepatitis A in England and Wales: April to June 2005*

Group	Male	Female	Not known	Total
1-4	3	1	–	**4**
5-9	3	2	–	**5**
10-14	–	1	–	**1**
15-24	8	3	1	**12**
25-34	13	4	–	**17**
35-44	11	6	2	**19**
45-54	8	7	–	**15**
55-64	6	4	–	**10**
≥65	15	10	1	**26**
Not known	1	–	1	**2**
Total	**68**	**38**	**5**	**111**

Figure Number of laboratory reports of hepatitis A by age group and sex: January 2001 to June 2005



Under-reporting of cases, and variations in regional reporting are continuing in the absence of a strategy or action to improve national surveillance data quality. A total of 133 cases of hepatitis A were formally notified in the first quarter of 2005, 17% more than laboratory confirmed. The number of notifications exceeded the number of laboratory reports for five English regions, while the number of laboratory reports exceeded the number of notifications for three English regions and Wales. Two regions had the same number of laboratory reports and notifications. Discrepancy between notifications and laboratory reports remained highest in the South East, where 25 cases were formally notified and only two laboratory reports were made, and London with 20 cases notified and only six laboratory reports. Conversely, in the North West region there were 41 laboratory reports and only 20 notifications.

Priorities for improving control of hepatitis A include enhancing risk-factor reporting by clinicians to laboratories and from laboratories to CfI, increasing the speed and rates of notification of cases by clinicians to Health Protection Units, obtaining greater participation in laboratory reporting of cases, and providing better detection and definition of outbreaks.

References

1. Health Protecion Agency. Laboratory reports of hepatitis A infection in England and Wales: January to March 2005. *Commun Dis CDR Wkly* [serial online] 2005 [cited 19 September 2005]; **15**(30): Immunisation. Available at:<http://www.hpa.org.uk/cdr/archives/2005/cdr3005.pdf>.

Laboratory reports of hepatitis C in England and Wales: April to June 2005

Table Laboratory reports of hepatitis C in England and Wales: April to June 2005*

Group	Male	Female	Not known	Total
1-4	8	8	–	**16**
5-9	2	2	–	**4**
10-14	1	–	–	**1**
15-24	91	83	3	**177**
25-34	410	198	9	**617**
35-44	397	144	7	**548**
45-54	218	86	2	**306**
55-64	57	39	1	**97**
≥65	25	31	3	**59**
Not known	10	2	5	**17**
Total	**1219**	**593**	**30**	**1842**

A total of 1842 reports of hepatitis C infection were reported in the second quarter of 2005 (*ie*, from April to end of June 2005) (table 1). Sixty-four per cent (1165/1825) of the cases occurred in those aged 25 to 44 years. The ratio of males to females was 2:1.

References

1. Health Protection Agency. Laboratory reports of hepatitis A infection in England and Wales: October to December 2004. *Commun Dis Rep CDR Wkly* [serial online] 2005 [cited 27 July 2005]; **15**(16): Immunisation. Available at <http://www.hpa.org.uk/cdr/archives/2005/cdr1605.pdf>.
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COVER programme: April to June 2005

Quarterly vaccination coverage statistics for children aged up to five years in the United Kingdom

This report of the Cover of Vaccination Rapidly (COVER) programme presents quarterly coverage data for children in the United Kingdom (UK) who reached their first, second, or fifth birthday during the evaluation quarter, April to June 2005, and coincides with publication by the Department of Health of 2004-05 annual coverage data by Primary Care Trust (PCT) for children aged 12 months, 24 months, and five years, for England (1).

Children who reached their first birthday in the quarter would have been scheduled to receive their third-dose primary vaccinations (third-dose diphtheria, tetanus, pertussis (DTP vaccine), *Haemophilus influenza*e type b (Hib vaccine), polio vaccine, and [Meningococcal conjugate Group C] MenC vaccine) between August and October 2004. Children who reached their second birthday would have been scheduled to receive their third-dose primary vaccinations between August and October 2003 and first measles, mumps, and rubella (MMR) vaccination between April and October 2004. Children who reached their fifth birthday would have been scheduled to receive their third-dose primary vaccinations between August and October 2000, their first MMR between April and October 2001, their pre-school diphtheria, tetanus, acellular pertussis (DTaP) booster, polio, and second-dose MMR from August 2003 onwards.

Methods

Data from computerised child health information systems were submitted in August and September 2005 for children resident in Administrative Regions in Wales, Health Boards in Scotland and Northern Ireland, and for children in the Primary Care Trust (PCT) responsible population (as defined below) in England, on 30 June 2005. Data were collected for those reaching their first, second, or fifth birthdays during the evaluation quarter (April to June 2005) and 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 given at any time up to their first or second birthdays. Numbers were also requested for children who had received a primary course of each antigen (DTPol3, P3, and Hib3), a pre-school booster dose (DTPol4), at least one MMR (MMR1), and two doses of MMR (MMR2) given at any time up to their fifth birthday.

COVER data in England were collected by PCT and summarised by Government Office Regions (GORs). The PCTs and GORs have different boundaries and populations to health authorities and regional health authorities used in quarterly reports before April 2003. The PCT responsible population for COVER data includes all children registered with a general practitioner (GP) whose practice forms part of the PCT, regardless of where the child is resident. In addition, the PCT responsible population will also include any children not registered with a GP, who are resident within the PCTs statutory geographical boundary. Children resident within the PCT geographical area, but registered with a GP belonging to another PCT, are the responsibility of that other PCT <http://www.hpa.org.uk/infections/topics_az/vaccination/REQ05-1.pdf>.

These data are evaluated against the World Health Organization (WHO) targets of 95% coverage annually for each antigen (except MenC) by two years of age at the national level and of at least 90% coverage

annually in each strategic health authority (2).

Results

Coverage at 12 and 24 months

Data were received from all Health Boards (Scotland and Northern Ireland), Administrative Regions (Wales) (PCT/HB/AR), and 294 PCTs (England) (tables 1 and 2). Eighty-four of the participating localities (27%) achieved at least 95% coverage at 12 months for three doses of diphtheria, tetanus, polio and Hib vaccine (DTPol3, Hib3). Eighty-one (26%) achieved at least 95% coverage at 12 months for three doses of MenC vaccine (MenC), and 80 (25%) for three doses of pertussis vaccine (P3). All countries and all English regions except for London, achieved at least 90% coverage at 12 months for these antigens. One hundred and sixty-four localities (52%) achieved at least 95% coverage at 24 months for DTPol3, 151 (48%) for P3, 146 (46%) for Hib3, and 152 (48%) for MenC. One Scottish Health Board reached 95% coverage for MMR at 24 months. Compared to the previous quarter, UK coverage at 12 months increased by 0.1% to 0.2% for all antigens. Coverage for the UK at 24 months increased by 0.1% for P3, by 0.2% for MenC, and remained the same for DTPol3 and Hib3. MMR1 coverage increased by 1.3% to 83.0% (tables 1 and 2) (3).

Table 1 Completed primary immunisations (all antigens) by 12 months: April to June 2005

Region/Country	Reports* (total)	DTPol3 %	P3 %	Hib3 %	MenC %
Regions of England					
North East	16 (16)	93	92.9	92.5	93
North West	42 (42)	92	92	91.9	91.9
Yorkshire and the Humber	34 (34)	90.2	90.2	90.2	90
East Midlands	28 (28)	92	92	91.7	90.8
West Midlands	30 (30)	92.1	92	92	92.2
East of England	35 (41)	93.2	93.1	93.1	92.9
London	28 (31)	82.5	82.5	82.2	81.8
South East	49 (49)	91.6	91.5	91.4	91.3
South West	32 (32)	92.3	92.2	92.1	91.9
England (Total)	**294 (303)**	**90.4**	**90.3**	**90.2**	**90.1**
Wales	**3 (3)**	**94.1**	**94**	**93.7**	**93.9**
Northern Ireland	**4 (4)**	**95.1**	**95**	**95.5**	**95.5**
Scotland	**15 (15)**	**95.1**	**95.1**	**95.1**	**94**
United Kingdom	**316 (325)**	**91.1**	**91**	**91**	**90.7**

*Reports from PCTs/health boards/administrative regions.

Table 2 Completed primary immunisations (all antigens) by 24 months: April to June 2005

Region/Country	Reports* (total)	DTPol3 %	P3 %	Hib3 %	MenC %	MMR1%
Regions of England						
North East	16 (16)	94.9	94.4	94.7	94.9	86.7
North West	42 (42)	94.2	93.8	93.8	94	84.7
Yorkshire and the Humber	34 (34)	92.6	92.3	92.3	92	84.8
East Midlands	28 (28)	96.5	96.2	96	95.3	87
West Midlands	30 (30)	95.2	94.7	94.8	95	84.4
East of England	35 (41)	94.2	93.8	93.8	93.6	82.8
London	28 (31)	87.7	87.6	87.3	86.8	70.8
South East	49 (49)	93.8	93.5	93.7	93.5	82.2
South West	32 (32)	94.6	94.2	94.4	94.1	83.7
England (Total)	**294 (303)**	**93.3**	**93**	**93**	**92.8**	**82.1**
Wales	**3 (3)**	**95.6**	**94.8**	**95.3**	**95.2**	**83.7**
Northern Ireland	**4 (4)**	**96.6**	**96**	**96.7**	**96.8**	**90.4**
Scotland	**15 (15)**	**97.4**	**97**	**97**	**96.5**	**89.5**
United Kingdom	**316 (325)**	**93.8**	**93.5**	**93.5**	**93.3**	**83**

*Reports from PCTs/health boards/administrative regions.

The country specific 12 month coverage for MenC vaccine was 90.1% in England, 93.9% in Wales, 95.5% in Northern Ireland, and 94.0% in Scotland. Coverage for the 24 month cohort was 92.8% in England, 95.2% in Wales, 96.8% in Northern Ireland, and 96.5% in Scotland.

Coverage at 5 years

Data were received from 300 localities in England, Northern Ireland, and Wales. Compared to last quarter, coverage at five years increased by 0.1% for DTPol3 and P3, and by 0.2% for MenC. Coverage for DTPol4 increased by 0.7% to 80.4%. Coverage for MMR1 increased by 0.2% to 89.0%, while MMR2 increased by 0.6% to 75.0% (table 3) (3). Country-specific data for MenC coverage at five years was 91.8% in England, 94.0% in Wales and 95.5% in Northern Ireland (table 3). Data were also received for DTPol4 and MMR2 in children reaching their sixth birthday in Scottish health boards; coverage was 94.7% and 88.7% respectively.

Table 3 Completed primary immunisations (all antigens) by 5 years: April to June 2005

Region/Country	Reports* (total)	DTPol3 %	P3 %	Hib3 %	MenC %	MMR1 %	MMR2 %	DTPol4 %
Regions of England								
North East	16 (16)	96.1	95.2	95.7	94.7	92.7	81.2	85.1
North West	42 (42)	95	94.1	94.2	93.6	90.9	76.5	80.9
Yorkshire and the Humber	34 (34)	94.7	93.9	93.8	92.5	90.5	76	79.7
East Midlands	28 (28)	96.7	96.1	96.1	95.1	93.2	79.4	84.6
West Midlands	30 (30)	96	95.2	94.8	94.6	91.7	77.6	82.9
East of England	35(41)	94.8	94	94.4	93	88.4	78.6	84.9

	London	28 (31)	86.7	86.3	86	82.4	79.6	58.3	61.8
	South East	48 (49)	93.7	93	93.3	91.7	88	74.2	81.9
	South West	32 (32)	96.6	96	95.7	93.5	90.7	78.7	84.3
England (Total)		**293(303)**	**94**	**93.3**	**93.3**	**91.8**	**88.8**	**74.5**	**79.9**
Wales		**3 (3)**	**95**	**93.4**	**94.7**	**94**	**88.4**	**75.6**	**83.2**
Northern Ireland		**4 (4)**	**97.6**	**97.2**	**96.7**	**95.5**	**95.7**	**86.8**	**88.6**
Scotland 6 years†		**15 (15)**	**–**	**–**	**–**	**–**	**–**	**88.7**	**94.7**
England, Wales, and Northern Ireland		**315(325)**	**94.2**	**93.4**	**93.5**	**92**	**89**	**75**	**80.4**

*Reports from PCTs/health boards/administrative regions.
† No data available at 5 years.

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. Initially, this information was requested every four months for all children in the participating trusts/health authorities who were turning 16 months or 24 months old in the defined one month period. From March 2001, the request was made quarterly so that the information coincided with routine COVER reports. Since March 2002, this information has been routinely collected every month and was extended in June 2002 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 parents delay MMR vaccination. This sentinel scheme is based on a sample of trusts/PCTs 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 geographically representative or 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 June to August 2005 for children in the four age cohorts is summarised in table 4 (range for the three months was from 74.1% to 75.2% at 16 months, 79.9% to 80.4% at 20 months, 82.5% to 83.8% at 24 months, and 85.3% to 86.8% at 36 months).

Comments
Coverage of MMR at 24 months in the UK increased by 1.3% to 83.0% this quarter compared to last (3), with all regions and countries showing improvement (range 0.3% to 3.0%). This increase in MMR at 24 months was predicted by data from the sentinel surveillance scheme of early MMR coverage at 16 months (4), and these data for June to August 2005 suggest that further increases should follow early next year (table 4). More modest increases in coverage at 5 years were observed, where MMR1 rose by 0.2% to 89.0%, MMR2 by 0.6% to 75.0%, and DTPol4 by 0.7% to 80.4% (table 3). All other antigens at 12 months, 24 months, and 5 years were either the same as, or very similar to, the previous quarter.

Table 4 Monthly sentinel estimates of measles, mumps, and rubella (MMR) coverage at 16, 20, 24, and 36 months: June to August 2005

Evaluation month	Number of PCTs/trust	Age at vaccination			
		16 months	20 months	24 months	36 months
June 05	38	74.1	79.9	82.5	85.3
July 05	38	75.2	80.4	83.8	86.2
August 05	38	74.3	79.9	83.5	86.8

Reporting to the COVER programme is usually complete, but this quarter nine PCTs in England failed to produce reports, three in London and six in the East of England. Data have not been provided from the PCTs in London and Essex because of problems relating to the implementation of new child health systems as part of the NHS programme for IT, Connecting for Health. Currently the problems reported with the immunisation component of the child health

system affect scheduling of appointments, identification of defaulters, running of *ad hoc* queries, exclusion of neonatal deaths, linkage of mother and child (*eg*, for neonatal hepatitis B vaccination coverage), and identification of denominators such as practice and PCT populations. London and Essex contracts are with different local service providers. The system in Essex is planned to be rolled out to other areas in the East of England regional cluster in the coming months. Unless the problems are resolved as a matter of urgency, provision of services based on the Child Health System, including COVER data, will be disrupted or interrupted for a growing number of PCTs in the near future.

This week the Department of Health are publishing 2004-05 annual coverage data by PCT for children aged 12 months, 24 months, and five years for England in *the Statistical Bulletin NHS Immunisation Statistics, England: 2003-05* (1) which also shows a rise in MMR coverage at 24 months. MMR at 2 years was up by 1% in the UK to 81.7%.

Relevant links for country specific coverage data

Wales
<http://www.wales.nhs.uk/sites/page.cfm?OrgID=368&PID=227>.

Scotland
<http://www.show.scot.nhs.uk/scieh/>.

Northern Ireland
<http://www.cdscni.org.uk/surveillance/Coveragestats/default.asp>.

England
<http://www.publications.doh.gov.uk/public/sb0416.htm>.

Other relevant links
<http://www.hpa.org.uk/infections/topics_az/vaccination/vac_coverage.htm>.
<http://www.mmrthefacts.nhs.uk/>.

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Hepatitis B vaccine coverage data in England: April to June 2005

Infants born to mothers who are chronically infected with hepatitis B are at high risk of acquiring infection perinatally (1). Infection acquired at birth leads to chronic infection in about 80% of cases, with the consequent risk of chronic liver disease, cirrhosis or primary hepatocellular carcinoma (2). Since 1988, it has been recommended that such infants receive active vaccination against hepatitis B, with the additional use of hepatitis B immunoglobulin in infants born to anti-HBe negative women. Immunisation can prevent the development of chronic hepatitis B infection in over 90% of such infants (3).

Following the introduction of universal antenatal testing for hepatitis B in April 2001, the Health Protection Agency Centre for Infections (CfI) has been attempting to collate coverage data on infants born to hepatitis B positive mothers at their first and second birthdays. Since April 2005, this data collection has been integrated into the routine COVER programme (4). The data presented below represents coverage for three doses of hepatitis B vaccine in those infants born to HBsAg positive mothers who reached the age of one year in this quarter (*ie*, those born between April and June 2004), and coverage of four doses of vaccine in infants who reached two years of age (ie, those born between April and June 2003).

Data was received for 150 PCTs in England, and coverage in one year old children reached 80% overall (table 1). Although this is lower than the coverage obtained for routine antigens at this age, the population at risk are highly mobile and high uptake is difficult to achieve (5-9). The largest number of infants at risk are in London, and coverage in London region was 82%, similar to the coverage reported for other antigens at this age (table 1, COVER report,:April to June 2005). Coverage for four doses in those aged 24 months was lower at 66%. As data systems may have only recently been established it is likely that 24 month data is less complete and, therefore, this represents an under-estimate of coverage at this age.

Table 1 Neonatal hepatitis B vaccine coverage data in England : April to June 2005

Region	Returns with data	12 months denominator	Coverage at 12 months	24 months denominator	Coverage at 24 months
North East	9	2	100%	1	100%
North West	27	27	93%	29	79%
Yorkshire & Humberside	17	27	85%	20	65%
East Midlands	5	3	67%	5	100%
West Midlands	18	37	73%	28	32%
East of England	23	29	59%	22	27%
London	16	106	82%	114	75%
South East	32	28	86%	21	86%
South West	6	1	100%	1	0%
Total	**150**	**260**	**80%**	**241**	**66%**

Around half of PCTs are still unable to provide data and many PCTs that sent in returns had zero cases in this period. It is unclear whether these latter returns represent valid data for areas with a low prevalence of infection or missing data – PCTs reporting no infants at risk are asked to review their data to ensure that information is being correctly recorded. It should be possible to estimate the number of infants at risk from HBsAg prevalence in the local antenatal population. PCTs that were unable to submit data are asked to urgently review the systems for obtaining this data so that this important group of infants can be monitored prospectively.

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Laboratory confirmed cases of measles, mumps, and rubella, England and Wales: April to June 2005

The quarterly reporting of laboratory confirmed cases of measles, mumps, and rubella (MMR) include those confirmed by oral fluid IgM antibody tests and routine laboratory reports (table 1 and 2). Analyses are by date of onset. Regional figures relate to Government Office Regions rather than regional health authorities (pre-April 2002 definitions) as used previously in this section. Quarterly figures for cases confirmed by oral fluid antibody detection only from 1995 are available on the Health Protection Agency website at:

<http://www.hpa.org.uk/infections/topics_az/measles/data_not_confirmed.htm>
<http://www.hpa.org.uk/infections/topics_az/mumps/data_quarter.htm>
<http://www.hpa.org.uk/infections/topics_az/rubella/data_rub_not.htm>

and annual total numbers of confirmed cases by health region and age from:

<http://www.hpa.org.uk/infections/topics_az/measles/data_reg_age.htm>
<http://www.hpa.org.uk/infections/topics_az/mumps/data_reg_age.htm>
<http://www.hpa.org.uk/infections/topics_az/rubella/data_reg_age.htm>

Table 1 Total confirmed cases of measles and rubella, and oral fluid IgM antibody tests in cases notified to ONS*, weeks 14-26/05

	Cases			Oral fluid†	IgM antibody	Results		
	Notified	Tested	%	Total positive	Recently vaccinated	Confirmed	Other lab confirmed	Total confirmed cases
Measles	645	559	86.7	20	4	16	7	23
Rubella	386	262	67.9	2	–	2	7	9

*ONS = Office for National Statistics

The cohort at an increased risk of mumps, because they have either received no MMR vaccine or only one dose, were born between 1981 and 1990 (1). In 2004, the number of notified cases and the proportion of oral fluid samples tested and confirmed increased dramatically. The overall confirmation rate for the year was around 60% and over three quarters of those were born between 1981 and 1986 (*ie* , aged between 18 and 23 years) were confirmed by IgM. False negative results can occur in a small proportion of cases, particularly if the sample is taken early, and, therefore, it is likely that virtually all cases in this age range are genuine mumps (2). The Health Protection Agency, therefore, recommended at the beginning of February 2005 that, during this period of increased mumps incidence, oral fluid samples should not be taken from individuals with clinical mumps who were born between 1981 and 1986, and that they should be managed as if there were a confirmed case. Samples, however, should continue to be taken from cases in all other age groups or where it is clinically important to confirm the diagnosis (*eg*, where a complication has been observed) (2) . As a result of these recommendations to limit testing temporarily, the number of laboratory confirmed cases in this age group will be artificially low and underestimate the true burden of infection. For the purpose of reporting, therefore, all notified cases of mumps in this age group are being counted as confirmed. The age group has been expanded to include those aged between 15 and 24 years due to the manner in which notification data are aggregated (table 2).

Table 2 Total confirmed cases of mumps weeks 14-26/05

All ages excluding 15-24 year olds							15-24 year olds	All Ages
Oral fluid IgM antibody results								
Notified	Tested	Percentage tested	Total positive	Recently vaccinated	Confirmed (a)	Other lab confirmed (b)	Notified, assumed confirmed (c)	Total confirmed (a+b+c)
7098	3379	47.6	1468	12	1456	536	14,886	**16,878**

Measles
Twenty-three cases of confirmed measles with onset dates in the second quarter of 2005 were reported compared to seventeen cases in the first quarter of 2005 (3). Nineteen were children aged under 10 years (one aged under 1 year, 14 aged between 1 and 4 years; four aged between 5 and 9 years). Four adults aged between 22 and 44 years were also reported. None of the cases had a documented history of vaccination with MMR, but one had received a single measles vaccine.

Cases were reported from six regions of England : London (15), East Midlands (3), South West (2), North West (1), Yorkshire and the Humber (1), and West Midlands (1). One case was imported from Pakistan and a D4 genotype was identified from this case. Two cases in siblings, aged 5 and 9 years, contracted measles in Disneyland, California, United States. One sibling was oral fluid IgM positive, her sibling was not confirmed serologically, but was PCR positive and a D9 strain was identified from this case. An outbreak of measles occurred in a nursery in north east London. There were six confirmed cases, five in children aged under two years and one teacher. Five cases were confirmed by oral fluid testing and one was serum IgM positive. A D8 strain was identified from all six cases. The index case for this outbreak is thought to have acquired the infection in an Accident and Emergency department. A further two cases were confirmed in a nursery in north west London. One of these cases had previously attended the nursery associated with the outbreak in north east London.

There was a cluster of three cases in the East Midlands region; no samples suitable for genotyping were available. The small number of cases this quarter and the variety of genotypes circulating is a good indicator that no indigenous measles transmission is currently occurring.

Mumps
Sixteen thousand eight hundred and sixty-six cases of mumps with onset dates in the second quarter of 2005 were either laboratory confirmed or assumed to be genuine mumps due to their age compared to 16,656 in the first quarter of 2005 (3) . The total number of mumps cases notified in this quarter was 21,984 compared to 20,715 in the first quarter of this year (provisional data). This is by far the highest quarterly total of both confirmed cases and notified cases since oral fluid surveillance began in 1995. All regions in England and Wales reported cases this quarter. The largest increase was seen in Yorkshire and the Humber region with 867 more cases in this quarter compared to the first quarter of 2005 (1795 to 2662). Increases were also seen in the English regions including: London (946 to 1484), East of England (845 to 1238), North East (1471 to 1583), and Wales (1262 to 1264). The number of cases decreased in the other regions during this quarter with the number in the South West falling from 2261 to 1460. One case of suspected encephalitis was reported in an unvaccinated individual aged 22 years, (serum IgM positive). Eight cases reported meningitis as a complication, two of which had a history of vaccination (four oral fluid IgM positive; three serum IgM positive; and one cerebrospinal fluid [CSF] isolate). Two were children aged under 15 years, six were adults aged between 20 and 29 years, three were aged 30 years and over, and one was of unknown age.

Table 3 Confirmed cases of mumps by age group and region, England and Wales: weeks 14-26/05

Region	Age group								
	<1y	1-4y	5-9y	10-14y	15-19y*	20-24y*	≥25y	Not known	Total
North East	1	4	6	44	960	484	83	1	**1583**
North West	–	10	24	118	1550	797	231	8	**2738**
Yorkshire and the Humber	1	13	15	87	1512	868	159	7	**2662**
East Midlands	–	5	3	40	580	430	86	3	**1147**
West Midlands	1	5	24	63	779	513	91	5	**1481**
East of England	–	5	7	27	654	416	119	10	**1238**
London	–	7	14	46	780	515	116	6	**1484**
South East	1	11	16	67	863	679	154	2	**1793**
South West	1	3	9	44	761	536	104	2	**1460**
Wales	–	–	8	19	818	391	25	3	**1264**
Not known	–	2	2	8	-	-	14	2	**28**
Total	**5**	**65**	**128**	**563**	**9257**	**5629**	**1182**	**49**	**16,878**

*Notified cases of mumps.

Rubella

Nine confirmed cases of rubella were reported in this quarter, none of whom had a documented history of vaccination. Three cases were in children, a possible congenital rubella case which is currently being followed-up, one aged 1 year, and one aged nine years.. Five cases were adult males (aged between 19 and 40 years), one of whom had a history of recent travel to Switzerland. One case was in a pregnant woman who had acquired the infection in Russia . A genotype was obtained in this case which was identified as a 1g strain. Rubella remains a rare disease in England and Wales with only 14 (provisional) confirmed cases throughout 2004 (provisional data).

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