



# Health Protection Report

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# News

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- ▶ HPA response to flooding
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  - ▶ New Enhanced Surveillance Test (Oral Fluid Antibody) For Pertussis: Clarification of Services Offered
- 

## HPA response to flooding

HPA staff across the country have been taking part in the response efforts to the recent flooding in several regions of England particularly in Yorkshire and the Humber, East, and West Midlands. Working with the HPA Centres, they have produced advice on the possible health protection risks that might be associated with flooding. This advice addresses the likely infectious and chemical hazards that might arise in flood conditions as well as the implications for people returning to their homes after flooding <<http://www.hpa.org.uk/flooding/default.htm>>.

In Yorkshire and the Humber, three people died and thousands were either evacuated from their homes or left without power. There were major disruptions to all transport networks and hospitals have been treating emergency cases only. A stretch of the M1 motorway was closed following Concerns that the Ulley reservoir dam between Sheffield and Rotherham could be breached.

HPA staff have been working with Silver and Gold multi-agency command in their areas, providing specialist health advice and contributing to multi-agency information leaflets for the public and press statements, and frontline NHS and emergency services staff. A Scientific and Technical Advice Cell was convened in South Yorkshire involving the HPU, PCT, Environment Agency, and Yorkshire Water to risk assess contamination of drinking water supplies, concluding the risks were very low and measures were in place to deal with any localised contamination.

In the West Midlands, the worst affected areas have been Shropshire, Staffordshire, and Worcestershire.

In the Lichfield area of Staffordshire a number of properties were affected when the river Tame broke its banks and a rest room was set up in the Town Hall. In Shropshire, people were evacuated from their homes after the River Corve collapsed a 12 metre section of a main road into Ludlow and disrupted gas mains, telephone and electrical lines, and water supply.

In Worcestershire one person died due to the floods. Many drains are still blocked and many roads in the area are still closed and are likely to remain so for a while yet. Two rest centres were set up in Worcestershire, although most people were either back in their own homes or in bed and breakfast accommodation by Thursday evening.

In East Midlands the rivers Rother and Hipper, in Derbyshire, burst their banks on Monday and flooded several areas around Chesterfield and people had to be evacuated. There has also been flooding in Worksop and pockets of flooding in Lincolnshire.

Many areas remain on high alert and there is particular concern about the weather this weekend and the impact of further rain.

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## HPV vaccine

The Department of Health has agreed, in principle, to accept advice from the Joint Committee for Vaccination and Immunisation (JCVI) that Human Papilloma Viruse (HPV) vaccines should be introduced routinely for girls aged around 12-13 years, subject to independent peer review of the cost benefit analysis. Funding for this will be considered in the context of the Comprehensive Spending Review.

HPVs cause 99 per cent of invasive cervical cancer. The vaccine protects against the viruses responsible for about 70% of cases. Routine vaccination of girls could start in autumn 2008. Details of the programme will be finalised over the next few months, following further advice from JCVI and discussions with the NHS on the implementation of the programme.

Cervical cancer is the second most common cancer of women worldwide. In the UK, the lifetime risk of developing cervical cancer is one in 116. In England, 2221 new cases of invasive cervical cancer were diagnosed in 2004. In addition, around 200,000 women in England are identified through the cervical screening programme (smear tests) as having a pre-cancerous change.

The cervical screening programme (smear tests) would continue after an HPV vaccine has been introduced. This is because of the gap between the age of vaccination and age of first screening. Also, screening will be required as the vaccine does not protect against all HPV types that may cause cervical cancer.

### References

HPV vaccine. Press release GNN ref 148406P. London: Department of Health, 2007. Available at <<http://www.gnn.gov.uk/environment/fullDetail.asp?ReleaseID=293322&NewsAreaID=2&NavigatedFromDepartment=False>>.

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## New Enhanced Surveillance Test (Oral Fluid Antibody) For Pertussis: Clarification of Services Offered

In the Health Protection Report of 22 June, the launch of a new enhanced surveillance test for the laboratory confirmation of pertussis notifications was announced, which generated a lot of interest. In response to several enquiries we are seeking to clarify the precise details of the service that is being launched.

The Respiratory and Systemic Infection Laboratory and Immunisation Department of the Centre for Infections (CfI) is providing this new oral fluid service, free of charge, through HPA Health Protection Units (HPUs) specifically to seek laboratory confirmation of formally notified pertussis cases who have been coughing for more than two weeks, but whose diagnoses have not been confirmed by other methods (culture, PCR or serology). This service is also available to HPUs to support their investigations of suspected pertussis outbreaks and incidents.

The newly offered oral fluid assay was developed as a surrogate for the standard serum antibody assay, both being used to estimate IgG antibody directed against *Bordetella pertussis* pertussis toxin (PT). Although the oral fluid assay is not as sensitive as the serum assay, samples are very easy to collect and so it is an ideal assay to use where it is difficult or inappropriate to collect a blood sample.

The oral fluid assay is not a replacement for the existing serology service which remains available to NHS colleagues as a free of charge service provided in support of national surveillance for all patients with a history of coughing for more than two weeks.

# HIV/Sexually Transmitted Infections (STIs)

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## Genito-Urinary Medicine Clinics – Waiting Times Audit in England

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Rationale behind the GU waiting times audit:

Control of sexually transmitted infections within the UK is based on the principles of:

- ▶ Sexual health promotion to decrease risk of acquiring sexually transmitted infections (STIs) by increasing condom use or decreasing number of sexual partners
- ▶ Prompt recognition and treatment of STIs to prevent ongoing spread from those already infected
- ▶ Prompt contact tracing of the sexual contacts of those diagnosed with STIs

In recent years there has been increased pressure and demand on genito-urinary medicine (GUM) clinics due to increases in patient attendances. This increasing demand for sexual health services resulted in longer waiting times for those seeking treatment and therefore the potential for both increased transmission of STIs from those infected and the possibility of complications (1-3).

The national audit of waiting times in GUM clinics was developed to provide regular information on patient access. There is currently no national system for continuous monitoring of waiting times, and therefore this audit was chosen as the method for measuring progress towards access targets. The first audits took place in May and November 2004 and May 2005 and have taken place quarterly since. This quarterly monitoring will be replaced in autumn 2007 with a continuous electronic monitoring system run by the Department of Health. The final audit with the current methodology will be held in August 2007.

Following the publication of Choosing Health [4], waiting times for GUM services have become indicators for performance management in the sphere of sexual health. The Health Protection Agency (HPA) carries out the audit for the Department of Health in collaboration with the British Association for Sexual Health and HIV (BASHH).

The specific aim of the audit is to produce reports of the proportion of patients reporting waiting less than 48 hours prior to their GUM clinic appointment/slot, broken down by clinic and region of attendance and by Strategic Health Authority (SHA) and Primary Care Trust (PCT) of residence.

### Methods

The study is a cross sectional one-week survey run once every three months of patients attending all genitourinary medicine clinics in England. Patients attending for follow-up visits within six weeks of their previous visit are excluded. The data are collected through a self-completed questionnaire handed to all patients by clinic reception staff. Completed questionnaires are forwarded to the Centre for Infections, Health Protection Agency, London. Partial postcodes collected through the questionnaires are mapped to PCT codes.

The percentage of patients who were offered an appointment within 48 hours was not calculated in the 2004 audits.

During 2005 - 2006, the survey form was modified to include the question which asked the day of the week the attendance took place. This is shown on page 10 in the document *Audit of Waiting Times in Genitourinary Medicine Clinics, February 2007*, available at:

[http://www.hpa.org.uk/infections/topics\\_az/hiv\\_and\\_sti/epidemiology/Waiting\\_times\\_Introduction\\_Method\\_Feb2007.pdf](http://www.hpa.org.uk/infections/topics_az/hiv_and_sti/epidemiology/Waiting_times_Introduction_Method_Feb2007.pdf).

This change accounts for the weekends in the analysis and calculation of the percentage of patients who were offered an appointment within 48 hours. As the question pertaining to the 'day of the week' of attendance is necessary to adjust for the weekends, any questionnaire where this question was not answered was excluded from analysis from May 2006.

The analysis includes a full breakdown of waiting times, variation by sex and sexual orientation, age and appointment type and PCT data relates to the patient's residence. Further details on methodology can be found in the *GUM Waiting Times Annual Report 2006*, available at:

<[http://www.hpa.org.uk/infections/topics\\_az/hiv\\_and\\_sti/epidemiology/Waiting\\_Times/default.htm](http://www.hpa.org.uk/infections/topics_az/hiv_and_sti/epidemiology/Waiting_Times/default.htm)>

## Results

Data are Presented for 2006 and the first quarter 2007 Audit

### 2006 audit data

The main findings from the four GUM Waiting Times audits carried out in 2006 are:

- ▶ In 2006, overall, 57% of attendees in GUM clinics in England were seen within 48 hours (table 1) and 61% were offered an appointment within 48 hours (table 2). Good progress was made over the course of the year. During the November 2006 audit, 69% of patients were offered an appointment and 65% of patients were seen. Improvements were made in every SHA.
- ▶ The above improvement has occurred despite an increase in attendees in 2006, the number of attendees increased from 15,302 in the February audit to 17,490 in the November audit. The number of patients increased in all nine regions and in 144 of 303 PCTs.
- ▶ Patient Offered (PO) was 4% higher than the Patient Seen (PS) nationally and 3% to 5% higher than PS in all SHAs.
- ▶ Eighty-six per cent of patients who attended walk-in clinics and 84% of patients who had emergency appointments were seen within 48 hours. These appointment types were considerably more likely to be seen within 48 hours than patients attending routine appointments (41%).
- ▶ There was an increase in the percentage of walk-in patients seen within 48 hours at GUM clinics in every region comparing February 2006 audit with November 2006 audit (table 3).
- ▶ There were regional variations in improvements observed in the percentage of patients seen within 48 hours, with regions that started the year with the lowest access to GUM services demonstrating the greatest improvements by end of the year (table 1).
- ▶ London region shows the highest capacity for GUM services and the highest number of patients who were seen or offered an appointment to be seen within 48 hours (table 1).
- ▶ Patients who had sought services previously from other providers were more likely to be seen within 48 hours (63%) compared to those who had not sought services previously (56%). The proportion of those who sought services from other providers, attending either walk-in clinics or emergency clinics, is higher (44%) than those who did not seek sexual health services elsewhere (35%).
- ▶ Patients offered an appointment within 48 hours, but who were not seen comprised females; patients aged 25 to 34 years and 35 to 44 years; those with routine appointments; and those who did not seek sexual health services from other providers.

**Table 1 Percentage of patients seen at GUM Clinics within 48 hours in 2006 audits in England**

Region	Feb	May	Aug	Nov
East Midlands	54%	56%	53%	58%
East of England	47%	47%	50%	59%
London	68%	69%	72%	78%
North East	39%	37%	44%	53%
North West	43%	45%	49%	64%
South East	49%	54%	51%	59%
South West	52%	60%	61%	63%
West Midlands	35%	41%	51%	57%
Yorkshire & the Humber	39%	44%	45%	57%
<b>England</b>	<b>51%</b>	<b>54%</b>	<b>57%</b>	<b>65%</b>

**Table 2 The percentage of patients offered appointment at GUM Clinics within 48 hours in 2006 audits in England**

Region Name	Feb	May	Aug	Nov
East Midlands	57%	58%	56%	65%
East of England	51%	52%	55%	63%
London	70%	71%	76%	82%
North East	45%	43%	49%	59%
North West	49%	50%	53%	69%
South East	52%	56%	54%	63%
South West	57%	64%	64%	69%
West Midlands	41%	45%	56%	62%
Yorkshire & the Humber	44%	49%	50%	61%
<b>England</b>	<b>55%</b>	<b>58%</b>	<b>61%</b>	<b>69%</b>

**Table 3 The percentage of walk-in patients seen within 48 hours in 2006 audits at GUM clinics in England**

Region Name	Feb	May	Aug	Nov
East Midlands	84%	85%	83%	86%
Eastern	76%	78%	69%	77%
London	85%	88%	86%	89%
North East	80%	90%	80%	89%
North West	85%	94%	89%	90%
South East	86%	86%	87%	87%
South West	81%	86%	89%	89%
West Midlands	67%	76%	79%	88%
York & Humber	58%	65%	73%	81%
<b>England</b>	<b>83%</b>	<b>86%</b>	<b>85%</b>	<b>88%</b>

### February 2007 audit

The total number of patients during the February 2007 one-week audit was 18,691. This is the highest number of patients in any audit to date. London had the highest number of patients with 5385. Each region had a higher number of patients than the previous audit, except for the West Midlands where a decrease from 1392 to 1356 was seen. The North East region showed the largest increase in the number of patients, from 673 in November 2006 to 993 in February 2007.

The audit shows 70% of attendees were seen within 48 hours at GUM clinics in England. This is the highest figure achieved so far. It has increased from 65% in November 2006 and from 51% in February 2006.

Clinics in London displayed higher 48 hours access than in other English regions with 77% of patients being seen within 48 hours. The North East region showed 76% seen within 48 hours, which represents the greatest improvement over the year with a 66% increase in access to GUM clinics between February 2006 and February 2007 audits (from 39% to 76%). These data are available at [http://www.hpa.org.uk/infections/topics\\_az/hiv\\_and\\_sti/epidemiology/GUM\\_waiting\\_times\\_nov\\_05\\_feb\\_07.pdf](http://www.hpa.org.uk/infections/topics_az/hiv_and_sti/epidemiology/GUM_waiting_times_nov_05_feb_07.pdf).

The percentage of patients offered an appointment within 48 hours rose to 81% in England. The North East achieved the highest at 90%, and all regions achieving greater than 75%. In England, the proportional increase in the PO indicator from November 2006 to February 2007 was 15%, with an 8% proportional increase in the PS indicator over the same time period. This larger increase for the PO indicator could be partly due to changes in the questionnaires (ie, an adapted question asking "were you offered and appointment/slot within 2 working days?") from February 2007 audit. This questionnaire is available at [http://www.hpa.org.uk/infections/topics\\_az/hiv\\_and\\_sti/epidemiology/Waiting\\_times\\_Introduction\\_Method\\_Feb2007.pdf](http://www.hpa.org.uk/infections/topics_az/hiv_and_sti/epidemiology/Waiting_times_Introduction_Method_Feb2007.pdf) on page seven.

### Summary

The percentage of patients seen within 48hrs continues to rise in GU clinics in England. The full version of the recent (February 2007) audit and the summary report of the 2006 data are on the following HPA web sites:

[http://www.hpa.org.uk/infections/topics\\_az/hiv\\_and\\_sti/epidemiology/results\\_feb\\_2007.htm](http://www.hpa.org.uk/infections/topics_az/hiv_and_sti/epidemiology/results_feb_2007.htm)

[http://www.hpa.org.uk/infections/topics\\_az/hiv\\_and\\_sti/epidemiology/wtimes2006.htm](http://www.hpa.org.uk/infections/topics_az/hiv_and_sti/epidemiology/wtimes2006.htm)

## References

1. White PJ, Ward H, Cassell JA, Mercer CH, Garnett GP. Vicious and virtuous circles in the dynamics of infectious disease and the provision of health care: gonorrhoea in Britain as a model. *J Infect Dis* 2005;**192**:824-36.
2. Djuretic T, Catchpole M, Bingham JS, Robinson A, Hughes G, Kinghorn G. Genitourinary medicine services in the United Kingdom are failing to meet current demand. *Int J STD AIDS* 2001;**12**:571-2.
3. Foley E, Patel R, Green N, Rowen D. Access to genitourinary medicine clinics in the United Kingdom. *Sex Trans Infect* 2001; **77**:12-4.
4. Department of Health. *Choosing health: making healthier choices easier*. London: Department of Health, 2004.

# Immunisation

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COVER programme: January to March 2007

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## COVER programme: January to March 2007

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

*This report of the 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, January to March 2007.*

Children who reached their first birthday in the quarter would have been scheduled to receive their third-dose primary vaccinations (third-dose diphtheria, tetanus, acellular pertussis, polio, and Haemophilus influenzae type b vaccine (DTaP/IPV/Hib vaccine), and MenC vaccine between May and July 2006. Children who reached their second birthday would have been scheduled to receive their third-dose primary vaccinations between May and July 2005 and first measles, mumps, and rubella (MMR) vaccination between February and July 2006. Children who reached their fifth birthday would have been scheduled to receive their third-dose primary vaccinations between May and July 2002, their first MMR between January and July 2003, their pre-school diphtheria, tetanus, acellular pertussis, inactivated polio (DTaP/IPV) booster, and second-dose MMR from May 2005 onwards. According to the recommended Department of Health (DH) timetable, two-thirds of the children reaching their first birthday in the quarter (those born in February and March 2006) would have been scheduled to receive two doses of pneumococcal vaccine (PCV) and all those reaching their second birthday (born January to March 2005) would have been scheduled to receive one dose of PCV, as part of the pneumococcal catch-up programme run from September 2006 to March 2007 [1].

This is the third quarter to evaluate children at 24 months who have been routinely scheduled for the Pediacel® vaccine (commonly referred to as '5 in 1' vaccine containing DTaP/IPV/Hib) for their whole primary course.

### Methods

Methods of data collection for COVER, sentinel MMR coverage and neonatal hepatitis B vaccination coverage are described on the HPA website at: [http://www.hpa.org.uk/infections/topics\\_az/cover/methods.htm](http://www.hpa.org.uk/infections/topics_az/cover/methods.htm).

### Results

Data were received from all Health Boards (HBs) in Scotland and Northern Ireland, Administrative Regions (ARs) in Wales, and 149/152 Primary Care Trusts (PCTs) in England (tables 1-3). The three PCTs unable to provide data this quarter are all in London and use the Child Health Interim Application (CHIA) child health system. Problems with this system have been reported previously [2]. Seven of the 10 PCTs in London using the CHIA child health system have submitted data, however, ongoing data quality concerns and caveats have been issued by five of these PCTs. This contributes to the need for caution in evaluating the vaccination programme in London.

Individual PCT data for this quarter are published on the HPA website at [http://www.hpa.org.uk/infections/topics\\_az/cover/default.htm](http://www.hpa.org.uk/infections/topics_az/cover/default.htm).

### Coverage at 12 and 24 months

Forty-nine of the 170 participating PCTs/HBs/ARs (29%) achieved at least 95% coverage at 12 months for three doses of diphtheria, tetanus, pertussis, polio and Hib vaccine (DTaP/IPV/Hib3) and 52/170 (31%) for three doses of MenC vaccine (MenC). At least 90% coverage at 12 months for DTaP/IPV/Hib3 was achieved for all countries and all English SHAs apart from London SHA. DTaP/IPV/Hib3 coverage in London was 80.3%; PCT coverage within London ranged from 60.7% to 94.0%. Men C coverage was generally similar to DTaP/IPV/Hib3 coverage with only London and South East Coast SHAs achieving less than 90% coverage.

Ninety-nine PCTs/HBs/ARs (58%) achieved at least 95% coverage at 24 months for DTaP/IPV/Hib3, and 102/149 (68%) for MenC. One Scottish HB alone achieved 95% coverage for MMR at 24 months.

Compared to the coverage estimates reported in the October to December 2006 quarterly report, UK coverage at 12 months for DTaP/IPV/Hib3 was similar at 91%, and UK MenC coverage decreased by 0.8% to 91.2% (table 1) [2].

Overall UK coverage at 24 months was similar to the October to December 2006 coverage for all antigens, although in London coverage for DTaP/IPV/Hib3 and MenC decreased by 2.2% and 2.8% respectively. MMR coverage was highest in Scotland and Northern Ireland, both achieving at least 90.0%. Coverage for English regions (excluding London) and Wales ranged from 84.1% to 89.9% with most SHAs reporting increased coverage (table 2). London coverage remained low, and decreased by 0.3% to 73.0%.

**Table 1 Completed primary immunisations (all antigens) by 12 months: January to March 2007**

Strategic Health Authorities (SHAs)/Country	PCT/HB/AR* (total)	DTaP/IPV/Hib3 %	MenC %
English SHAs		v	
North East	12 (12)	93.8	93.6
North West	24 (24)	92.7	90.2
Yorkshire and the Humber	14 (14)	91.6	91.9
East Midlands	9 (9)	93.5	93.8
West Midlands	17 (17)	93	92.4
East of England	14 (14)	93.2	93.7
London	28 (31)	80.3	81.4
South Central	9 (9)	94.1	93.1
South East Coast	8 (8)	90	89.7
South West	14 (14)	93.8	92.8
<b>England (Total)</b>	<b>149 (152)</b>	<b>90.6</b>	<b>90.3</b>
<b>Wales</b>	<b>3 (3)</b>	<b>95.3</b>	<b>95.7</b>
<b>Northern Ireland</b>	<b>4 (4)</b>	<b>96.3</b>	<b>95.8</b>
<b>Scotland</b>	<b>14 (14)</b>	<b>94</b>	<b>97.3†</b>
<b>United Kingdom</b>	<b>170 (173)</b>	<b>91.2</b>	<b>91.2</b>

\* Primary Care Trusts/health boards/administrative regions.

† Two doses before 12 months, which is different from the rest of the UK, where this is defined as three doses before 12 months as this was the MenC schedule for this cohort

**Table 2 Completed primary immunisations (all antigens) by 24 months: January to March 2007**

Strategic Health Authorities (SHAs)/Country	PCT/HB/AR* (total)	DTaP/IPV/Hib3 %	MenC %	MMR1%
English SHAs	v			
North East	12 (12)	95.8	95.7	89.9
North West	24 (24)	95.2	94.6	87.7
Yorkshire and the Humber	14 (14)	94.4	94.5	87.3
East Midlands	9 (9)	95.5	95.3	89.2
West Midlands	17 (17)	95.6	95.5	88.3
East of England	14 (14)	95.2	96.3	86.2
London	28 (31)	84.3	84.6	73
South Central	9 (9)	95	94.4	88.5
South East Coast	8 (8)	92.4	92.6	84.1
South West	14 (14)	95.8	95.5	87.1
<b>England (Total)</b>	<b>149 (152)</b>	<b>93.1</b>	<b>93.2</b>	<b>84.9</b>
<b>Wales</b>	<b>3 (3)</b>	<b>96.9</b>	<b>95.7</b>	<b>88.2</b>
<b>Northern Ireland</b>	<b>4 (4)</b>	<b>97.6</b>	<b>97.6</b>	<b>92.3</b>
<b>Scotland</b>	<b>14(14)</b>	<b>97.6</b>	<b>97</b>	<b>92.2</b>
<b>United Kingdom</b>	<b>170 (173)</b>	<b>93.8</b>	<b>93.7</b>	<b>85.9</b>

\* Primary Care Trusts/health boards/administrative regions.

#### **Provisional pneumococcal (PCV) catch-up data**

Although there will be a one-off data collection this summer for the evaluation of the PCV catch-up programme, some Child Health Information Systems were able to provide provisional PCV catch-up coverage data for the 12 month and 24 month cohorts evaluated this quarter; data for 92 English PCTs and all administrative areas in Wales were submitted. These data are incomplete and therefore under-estimate the true coverage. Applying the recommended DH catch-up schedule, two-thirds of the 12 month cohort (ie, those born in February and March 2006) were eligible for two doses of pneumococcal vaccine when they were aged between seven and ten months [1]. Estimated English SHA PCV catch-up coverage at this age ranged from 15.2% to 39.1%; in Wales coverage was 42.6%. All of the 24 month cohort (born January to March 2005) were eligible for one dose when aged 20 to 21 months. Estimated English SHA PCV coverage at 24 months ranged from 21.7% to 59.6%; in Wales coverage was 60.1%.

#### **Coverage at 5 years**

All regions, excluding London, achieved 90% coverage for DTP/Pol3, Hib3, and MenC, with the North East, East Midlands, Northern Ireland and Scotland reporting at least 95% coverage for all three, as per the previous quarter [2] (table 3). Excluding London, DTaP/IPV coverage ranged from 79.8% to 86.4% in England. Wales reported an increase in coverage for all immunisations at 5 years when comparing the current with the previous quarter. MMR1 coverage showed slight increases across the English regions, and MMR2 coverage for England remained similar to last quarter at 73.2%. London coverage for all immunisations was lower than corresponding values for other English regions, in particular coverage for MMR2 and DTaP/IPV was 51.8% and 55.5% respectively, at least 20% lower than coverage in any other region.

**Table 3 Completed primary immunisations and boosters (all antigens) by 5 years: January to March 2007**

Strategic Health Authorities (SHAs)/Country	PCT/HB/AR* (total)	DTP/Pol3 %	Hib3 %	MenC %	MMR1 %	MMR2 %	DTaP/Pol4 %
<b>English SHAs</b>							
North East	12 (12)	95.8	95.7	95.7	91.9	81.7	85.8
North West	24 (24)	95.3	94.5	94.3	90.5	77.9	82.3
Yorkshire & Humber	14 (14)	93.8	93	93	90.1	77.5	79.8
East Midlands	9 (9)	96.2	96	95.3	91.8	78.6	84.7
West Midlands	17 (17)	95.4	94.3	94.6	89.9	79.5	85
East of England	14 (14)	93.7	92.7	93.4	85.8	73.4	80.3
London	28† (31)	84.9	84.3	82.2	77	51.8	55.5
South Central	9 (9)	92.7	91.9	90.8	87.8	74.7	81.2
South East Coast	8 (8)	92.3	92.3	92	84.5	72.4	80.5
South West	14 (14)	96	95.2	94.7	89.3	79.5	86.4
<b>England (Total)</b>	<b>(149/152)</b>	<b>93</b>	<b>92.4</b>	<b>91.9</b>	<b>87.1</b>	<b>73.2</b>	<b>78.5</b>
<b>Wales</b>	<b>3 (3)</b>	<b>95</b>	<b>94.8</b>	<b>93.1</b>	<b>88.3</b>	<b>78.3</b>	<b>85.9</b>
<b>Northern Ireland</b>	<b>4 (4)</b>	<b>96.9</b>	<b>95.8</b>	<b>95.9</b>	<b>95</b>	<b>86.5</b>	<b>88.6</b>
<b>Scotland</b>	<b>14 (14)</b>	<b>98.2</b>	<b>97.1</b>	<b>97.8</b>	<b>94.3</b>	<b>82.7</b>	<b>86.7</b>
<b>United Kingdom</b>	<b>(170/173)</b>	<b>93.7</b>	<b>93</b>	<b>92.6</b>	<b>87.9</b>	<b>74.7</b>	<b>79.9</b>

\* Primary Care Trusts/health boards/administrative regions.

†(24/31for MMR2 and DTaP/Pol4).

#### MMR sentinel surveillance scheme coverage

For methods of data collection see [http://www.hpa.org.uk/infections/topics\\_az/cover/methods.htm](http://www.hpa.org.uk/infections/topics_az/cover/methods.htm)

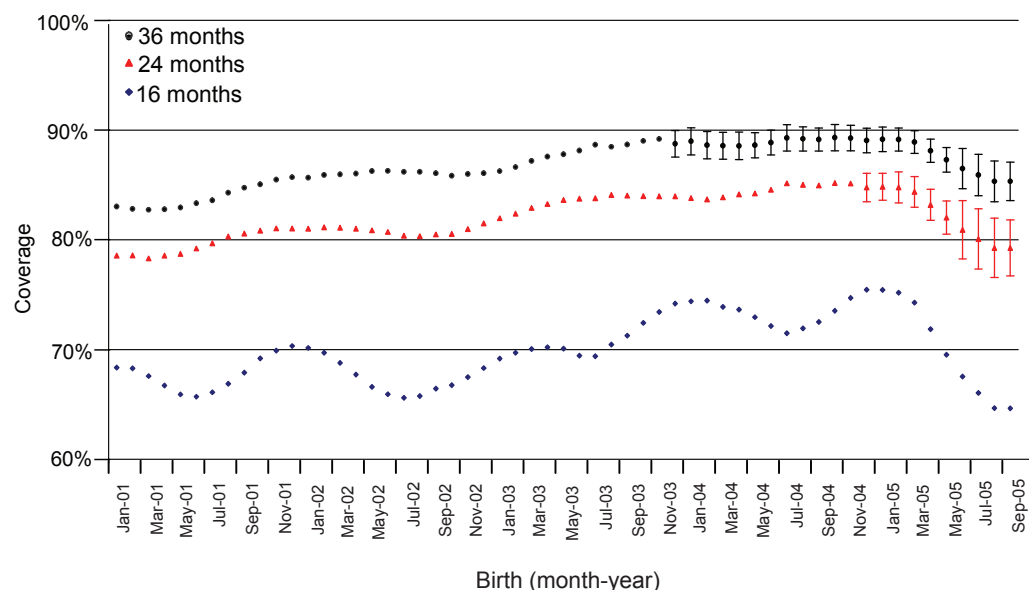
Data collected from March 2007 to May 2007 for children in the four age cohorts is summarised in table 4. The range for the three months was from 63.5% to 66.2%, at 16 months, 80.3 to 81.8% at 20 months, 84.7% to 85.3% at 24 months, and 89.3% to 89.7% at 36 months).

**Table 4 Monthly sentinel estimates of measles, mumps rubella (MMR) coverage at 16, 20, 24 and 36 months: March 2007 to May 2007**

v	Proportion of children vaccinated at each age				
	Number of PCT/trusts	16 months	20 months	24 months	36 months
Mar-07	39	63.5	81.8	84.7	89.7
Apr-07	37	64.2	81.5	85.3	89.3
May-07	37	66.2	80.3	85.2	89.3

The figure shows observed and projected MMR coverage at 16, 24, and 36 months in England for birth cohorts from April 2001 to December 2005. Projections of coverage at 24 and 36 months were made using the most recent coverage data for the same birth cohort and an estimate of the proportion, p, of those unvaccinated at each earlier age who were subsequently vaccinated by the later age. The proportion was estimated using the most recent 18 months data where final coverage was known. 95% confidence intervals were calculated based on the variability of p in the past data. The estimates of p were as follows: 41% for 16 to 24 months, 58% for 16 to 36 months, 15% for 20 to 24 months, 40% for 20 to 36 months and 28% for 24 to 36 months. Projections make the assumption that p remains constant over the period of the projection. Data at 20 months is not shown to simplify the graph as the line is close to that plotted for the 24 month data.

**Figure Observed and projected MMR coverage at 16, 24, and 36 months by birth year and month in England**



Data shown are 5 month moving averages.  
Projections are shown with 95% confidence intervals.

### Neonatal hepatitis B vaccine coverage data in England

The data presented in table 5 represents coverage for three doses of hepatitis B vaccine in those infants born to hepatitis B surface antigen (HBsAg) positive mothers who reached the age of one year in this quarter (ie, those born between January to March 2006), and coverage of four doses of vaccine in infants who reached two years of age (ie, those born between January to March 2005).

**Table 5 Neonatal hepatitis B coverage in England: January to March 2007**

Region	Returns with data	12 month denominator	Coverage at 12 months	Returns with 24 months data	24 month denominator	Coverage at 24 months
North East	9 (12)	12	58%	9 (12)	6	33%
North West	19 (24)	41	85%	19 (24)	41	59%
Yorkshire & the Humber	14 (14)	28	79%	13 (14)	23	65%
East Midlands	5 (9)	27	67%	5 (9)	22	14%
West Midlands	15 (17)	53	74%	15 (17)	51	55%
East of England	11 (14)	34	59%	11 (14)	27	48%
London	22 (31)	179	78%	23 (31)	182	58%
South Central	6 (9)	17	71%	6 (9)	16	38%
South East Coast	7 (8)	6	50%	7 (8)	10	10%
South West	11 (14)	14	36%	11 (14)	18	28%
<b>Total</b>	<b>119 (152)</b>	<b>411</b>	<b>73%</b>	<b>119 (152)</b>	<b>396</b>	<b>51%</b>

Data was received for 119/152 (78%) PCTs in England, 1% more than reported in the last quarter although some of the returns may relate to only part of the PCT due to recent mergers [3]. Coverage in England for three doses in those aged one year reached 73% overall, a 3% decrease on last quarter. Although this is lower than the coverage obtained for routine antigens at this age (table 1), the population at risk are highly mobile and high uptake is difficult to achieve [4-8]. The largest number of infants at risk is in London. An additional four London PCTs reported this quarter contributing to the increased number of infants at risk at 12 months in this region (179) – an 88% increase compared to the previous quarter. Smaller increases in the number at risk were also seen in

other regions. In London, coverage was above the national average at 78% at 12 months. Coverage in England for four doses in those aged 24 months was lower at 51%, and this was a decrease of 7% on last quarter. As data systems are still being established in some areas, it is likely that 24 month data is less complete and therefore this represents an under-estimate of coverage at this age.

### Comments

A catch-up programme for children aged between four and 23 months was conducted to complement the introduction of pneumococcal vaccine (PCV) into the routine immunisation schedule in September 2006 [1]. Preliminary data from 92 English PCTs and all administrative areas in Wales submitted this quarter provide an early indication of the success of this catch-up programme. However, these data should be treated with caution as they are incomplete and will therefore under-estimate the true coverage. A more complete 'one-off' data collection this summer will evaluate PCV coverage in all children aged 13 to 24 months at the beginning of the PCV catch-up programme (request parameters available at [http://www.hpa.org.uk/infections/topics\\_az/cover/default.htm](http://www.hpa.org.uk/infections/topics_az/cover/default.htm)). Applying the recommended DH catch-up schedule, two-thirds of the 12 month cohort (ie, those born in February and March 2006) were eligible for two doses of pneumococcal vaccine when they were aged between seven and ten months [1]. Estimated English SHA PCV catch-up coverage at this age ranged from 15.2% to 39.1%; in Wales coverage was 42.6%. All of the 24 month cohort (born January to March 2005) were eligible for one dose when aged 20 to 21 months. Estimated English SHA PCV coverage at 24 months ranged from 21.7% to 59.6%; in Wales coverage was 60.1%. Data were received for all health boards/administrative regions/strategic health authorities apart from in London where three PCTs using CHIA were unable to provide data this quarter, and five other CHIA PCTs issued caveats about ongoing data quality concerns [2]. Consequently, London coverage data should still be interpreted with caution.

Compared to the previous quarter, UK coverage at 12 months for DTaP/IPV/Hib3 remained very similar, although MenC coverage decreased by 0.8% to 91.2% (table 1)[2]. The UK continues to fail to meet WHO 24 month targets on primary immunisation because coverage is inadequate in London. UK MMR coverage at 24 months remained at 85.9% for the third successive quarter and was highest in Scotland and Northern Ireland where coverage was at least 92%. Both DTaP/IPV/Hib and MenC coverage decreased by 0.4% (93.8% and 93.7% respectively) (table 2). Pre-school booster vaccination coverage is poor, and quarterly data on coverage of the school-leaving booster is not available in England.

The 16 month MMR uptake appears to be recovering after decreases thought to be due to some parents or PCTs delaying MMR1, normally scheduled at around 13 to 15 months of age, by a month or two to accommodate the PCV and Hib/MenC boosters introduced in September 2006 (reported in the last two COVER reports [1, 2]) (table 4). Projections of coverage at 24 and 36 months using data collected by the MMR sentinel surveillance scheme are shown in the figure, and assume the proportions who get vaccinated later than recommended remain unchanged to that seen in the past data. If a greater proportion of the unvaccinated children at 16 months are subsequently vaccinated than in the past, then final coverage will exceed the projected coverage.

### Neonatal hepatitis B vaccination

Overall indications are of a general improvement in information, particularly in London where both the number of PCTs reporting and the number of at risk children identified increased and coverage remained higher than the national average, but there is still work to be done to match the quality of data on the rest of the programme. Relevant links for country specific coverage data:

#### Wales

<<http://www.wales.nhs.uk/sites/page.cfm?OrgID=368&PID=2278>>

#### Scotland

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

#### Northern Ireland

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

#### England

<<http://www.ic.nhs.uk/pubs/immstats2005to2006>>

#### Other relevant links

[http://www.hpa.org.uk/infections/topics\\_az/cover/default.htm](http://www.hpa.org.uk/infections/topics_az/cover/default.htm)

<<http://www.mmrthefacts.nhs.uk/>>

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1. Department of Health. Important changes to the childhood immunisation programme. PL CMO (2006) 1. Available online at [http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chiefmedicalofficerletters/DH\\_4137171](http://www.dh.gov.uk/en/Publicationsandstatistics/Lettersandcirculars/Professionalletters/Chiefmedicalofficerletters/DH_4137171)
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3. Department of Health. Policy and Guidance. Health reform article. Reorganisation of ambulance trusts, SHAs and PCTs. Available online at [http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/HealthReform/HealthReformArticle/fs/en?CONTENT\\_ID=4135663&chk=4bDZqY](http://www.dh.gov.uk/PolicyAndGuidance/OrganisationPolicy/HealthReform/HealthReformArticle/fs/en?CONTENT_ID=4135663&chk=4bDZqY).
4. Smith CP, Parle M, Morris DJ. Implementation of government recommendations for immunising infants at risk of hepatitis B. *BMJ* 1994; **309**:1339
5. Wallis DE and Boxall EH. Immunisation of infants at risk of perinatal transmission of hepatitis B: retrospective audit of vaccine uptake. *BMJ* 1999; **318**(7191):1112-3.
6. Dunn J, Shukla R, Neal K. Survey of neonatal hepatitis B vaccination in Leicestershire. *Comm Dis and Pub Health* 1999; **2**(3): 218-9.
7. Larcher VF, Bourne J, Aitken C, Jeffries D, Hodes D. Overcoming barriers to hepatitis B immunisation by a dedicated hepatitis B immunisation service. *Arch Dis Child* 2001; **84**(2):1149.
8. Nesbitt A, Heathcock R, Dunn J, Shukla R, Neal K. Integration of hepatitis B vaccination into national immunisation programmes. *BMJ*, 1997; **315**: 121.

# Chemical Hazards and Poisons

Last updated: 29 June 2007 , Volume 1, No 26

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- ▶ Health Effects of Climate Change in the UK – an update of the Department of Health report 2001/2002
  - ▶ Chemical Hazards and Poisons Report – Issue 9
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## Health Effects of Climate Change in the UK – an update of the Department of Health report 2001/2002

On 4 May a new report on the health effects of climate change in the United Kingdom (UK) was completed and placed, for comment, on both the Department of Health (DH) and HPA web-sites [1,2]. The report runs to 111 pages and provides a state of the art update of a DH report on the same subject published six years ago. The DH report was the first of its kind published in Europe, was widely quoted and played a part in the development of the UK's strategy on Climate Change. The new report was written by a group of distinguished experts, each with special knowledge of the areas they were asked to consider. DH and HPA thank the group for their outstanding work. Of course no report on climate change could be written without access to the latest predictions regarding climate: these were provided by the Climatic Research Unit of the University of East Anglia.

The report confirms that the climate of the UK is warming. More than a half of the increase in temperature that has occurred since the 'Little Ice Age' of 1690 has occurred during the last 40 years. And the increase is likely to continue. On a fairly conservative estimate, the same rise in mean temperature as has occurred since 1690, 2° centigrade is likely to occur within the next 100 years. Cold periods will become less common, but changes in annual rainfall are difficult to predict: Scotland may well become drier, the rest of the UK unchanged. The warmer weather will bring heat-waves: the 2003 conditions are likely to become much more common before the end of the century.

Such changes will affect health. Cold weather deaths will continue to decline. The population of the UK is adapting to warmer summers and, with the exception of heat-waves, summer deaths are unlikely to increase. Though annual average rainfall may change only a little, sudden heavy rain seems likely to become more common and flooding may well be an increasing problem. In coastal areas this may be exacerbated by a rise in sea-level. Much attention was paid to the effects of climate change on the prevalence of vector-borne diseases. Here the picture is a little more encouraging than that presented in the earlier report. Outbreaks of malaria are likely to remain rare in the UK, but Health Authorities need to be alert to the possibility of outbreaks in other European countries and the possibility that more effective vectors (species of mosquito new to the UK) may arrive in the UK. Rapid public health responses will prevent malaria becoming endemic in the UK. Tick-borne diseases are likely to become more common, but this may well have more to do with changing patterns of land use and leisure activities than with climate change.

Dry periods may affect the supply of drinking water. This is a complicated problem as sharp burst of heavy rain may lead to increased numbers of bacteria in surface water: removal of these from drinking water will need to be carefully monitored. Air pollution levels in the UK are likely to fall: ozone at ground level is an exception to this trend and levels of this pollutant may increase. This will increase attributable deaths and hospital admissions.

The report concludes with calls for greater emphasis to be placed on the study of the possible impacts of climate change, on the need to develop measures to mitigate its effects and for further research in the areas considered in the report.

## References

1. [http://www.hpa.org.uk/chemicals/publications/chapd\\_consultation\\_docs/climate\\_change\\_report.htm](http://www.hpa.org.uk/chemicals/publications/chapd_consultation_docs/climate_change_report.htm)
2. [http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH\\_074439](http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsStatistics/DH_074439)

## Related links

The Health Effects of Climate Change in the United Kingdom. *Health Protection Report* [serial online]; **1(19)**: news. Available at <<http://www.hpa.org.uk/hpr/archives/2007/hpr1907.pdf>>

## Chemical Hazards and Poisons Report

Through the Centre for Radiation, Chemical, and Environmental Hazards, the Agency publishes a series of well-established newsletters and reports which serve to keep stakeholders updated on a range of matters associated with radiation and chemical hazards that may be accessed via the HPA website. Readers wishing to obtain further information on these publications and the topics covered should make contact through the email address given.

## Chemical Hazards and Poisons Report – Issue 9

- ▶ Incident Responses: fire at a chemical factory; fatality investigated using CR1 PPE; idiopathic environmental illness
- ▶ Emergency Planning
- ▶ Environment
- ▶ Conference Reports
- ▶ Training Days for 2007

Chemical Hazards and Poisons Report - Issue 9, May 2007 ( 2.85 MB)  
[http://www.hpa.org.uk/chemicals/reports/chpr9\\_may2007.pdf](http://www.hpa.org.uk/chemicals/reports/chpr9_may2007.pdf)

Contact: Virginia Murray; email: [Virginia.murray@hpa.org.uk](mailto:Virginia.murray@hpa.org.uk)

## Radiation

Last updated: 29 June 2007, Volume 1, No 26 (PDF file)

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- ▶ [Doses to patients arising from dental x-ray examinations in the UK, 1999-2005](#)
  - ▶ [Recent newsletters on radiation hazards](#)
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### Doses to patients arising from dental x-ray examinations in the UK, 1999-2005

The HPA's Dental X-Ray Protection Service (DXPS) has provided radiation protection services to dentist in the UK since the 1970s. From the outset specially designed postal test packs have been used to undertake the remote assessment of the performance of intra oral and panoramic x-ray sets. These are the most common types of dental x-ray equipment in the United Kingdom (UK), with approximately 10 million intra-oral examinations (each comprising two bitewing radiographs) and 3 million panoramic examinations being carried out annually.

One of the strategic goals of the HPA's Radiation Protection Division is to monitor the radiation exposure of patients arising from medical and dental examinations and to recommend national reference doses for specific x-ray examinations based on analysis of the National Patient Dose Database (NPDD) maintained by the Medical Exposure Department. This work has been carried out since the 1990s. Reference doses have been set at around the third quartile value of the typical doses used for an average adult patient at each hospital or practice and act as a means of identifying those radiographic practices that are resulting in unusually high doses and are most in need of corrective action (assuming that the high patient dose is not clinically justifiable).

The NPDD now contains patient dose data for intra-oral and panoramic dental radiography, the majority of which has been contributed by DXPS. The most recent data shows a 40% decrease (from 3.9 mGy to 2.4 mGy) in the third quartile dose for intra oral examinations in the 6 year period 1999-2005. Investigation of the results from the DXPS data provides a clear illustration of the underlying trends in dental x-radiography over recent years that have lead to this reduction. The essential factors are:

- a significant reduction in the proportion of x-ray sets that are of older manufacture and operate at low kVs, and
- an attendant significant increase in the proportion of dentists using film of a faster speed rating (*ie*, more efficient film) together with an increasing use of digital imaging systems.

The reduction in the third quartile values for panoramic sets over the same time period is much less striking. Here the parameter used to quantify dose is the 'Dose Width Product' (DWP) expressed in mGy mm. The third quartile value has fallen only slightly from 67 mGy mm to 59 mGy mm. Unlike intra oral radiography there has been no radical change in the characteristics of either the x-ray equipment or the imaging systems and hence this minor reduction is not unexpected. It has been noted that some of the digital panoramic models most recently introduced into the UK are configured by the manufacturer such that their widespread use could cause the third quartile dose to *increase* over time. This is a matter of some concern and DXPS will continue to monitor the influence of the increasing use of digital panoramic equipment on patient dose, and to bring any issues of significance to the attention of the manufacturers, suppliers and users.

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## Recent newsletters on radiation hazards

Through the Centre for Radiation, Chemical and Environmental Hazards, the Agency publishes a series of well-established newsletters and reports which serve to keep stakeholders updated on a range of matters associated with radiation and chemical hazards that may be accessed via the HPA website. Readers wishing to obtain further information on these publications and the topics covered should make contact through the email address given.

### Environmental Radon Newsletter No 51

- New Radon Map for England and Wales
- Website and Dataset for England and Wales Radon Data
- Effects of Uncertainties in Radon Measurements on Radon Mapping
- Progress on the WHO International Radon Project

Available at: <[http://www.hpa.org.uk/radiation/publications/newsletters/environmental\\_radon/2007/ern51.pdf](http://www.hpa.org.uk/radiation/publications/newsletters/environmental_radon/2007/ern51.pdf)>

Contact: Jon Miles, email [Jon.miles@hpa.org.uk](mailto:Jon.miles@hpa.org.uk)

### Laser Safety Matters No 6

- Laser safety refresher.
- Physical Agents Directive
- Laser Safety Forum 2005
- International Laser Safety Conference 2007
- Update on Standards
- When an Inspector Calls
- Development of IPL Standards
- INTELLILOCK. New website
- Training

Available at <[http://www.hpa.org.uk/radiation/publications/newsletters/laser\\_safety\\_matters/index.htm](http://www.hpa.org.uk/radiation/publications/newsletters/laser_safety_matters/index.htm)>

Contact: Kirstie Grainger; email [Kirstie.grainger@hpa.org.uk](mailto:Kirstie.grainger@hpa.org.uk)

### Monitor: Newsletter of the Personal Dosimetry Service No 31

- New TLD System Launch
- New TLD System Arrangements
- "Old System" Dosimeters – Closure of Processing
- Prices from April 2007
- So How Does a TLD Work?
- Return Your Extremity Dosimeters

Available at <<http://www.hpa.org.uk/radiation/publications/newsletters/monitor/index.htm>>

Contact: [Personal.dosimetry@hpa.org.uk](mailto:Personal.dosimetry@hpa.org.uk)

## **National Registry for Radiation Workers Steering Group (NRRW)**

- Progress report on the 3<sup>rd</sup> Analysis of the NRRW cohort (vital status, mortality and cancer incidence)

Available at <<http://www.hpa.org.uk/radiation/publications/newsletters/nrrw/index.htm>>

Contact: Colin Muirhead, email [Colin.muirhead@hpa.org.uk](mailto:Colin.muirhead@hpa.org.uk)

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