



Health Protection Report

weekly report

Volume 3 Number 38 Published on: **25 September 2009**

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NICE guidance on improvements to coverage of childhood immunisation programmes

The National Institute for Health and Clinical Excellence (NICE) has published guidance on measures to improve immunisation uptake among children and young people [1]. Intended primarily for health professionals but also likely to be of interest to parents, the guidance refers in particular to groups and settings where immunisation coverage is known to be low. The guidance is framed around six recommendations: the first five apply to all vaccinations for children from birth to 19 years (vaccine programmes; information systems; training; contribution of nurseries, schools and colleges of further education; and targeting groups at risk of not being fully immunised); the sixth focuses on the hepatitis B vaccination programme for infants – an example of a programme targeted at a particular “low-coverage” group.

Further developments related to childhood immunisation programmes are reported in the Commentary section of the COVER report in the Routine Reports section of this issue.

References

1. NHS National Institute for Health and Clinical Excellence. *NICE public health guidance 21. Reducing differences in the uptake of immunisations (including targeted vaccines) among children and young people under 19 years*. September 2009. Available at: <http://www.nice.org.uk/PH21>.

World Rabies Day – 28 September 2009

Monday 28 September is World Rabies Day – a global initiative led by the Alliance for Rabies Control to raise awareness and understanding about the importance of rabies prevention worldwide. The Alliance for Rabies Control was formed in 2006, and the World Rabies Day initiative now involves human and animal health partners at the international, national, and local levels, veterinary and medical organizations, and other partners.

The primary message of World Rabies Day is that rabies is a preventable disease, and yet kills 55,000 people needlessly each year, of whom half are children under the age of 15 [1].

Rabies is transmitted to humans mainly by bites, but exposure may also occur through contamination of broken skin or mucous membranes with saliva from an infected animal or bat. Infection with rabies virus causes an acute nervous system disease; encephalomyelitis. It is a fatal condition but it is preventable by vaccination.

In many countries rabies is primarily a disease of children, who are particularly at risk due to their close contact with dogs, the major global source. This is because children are more likely to suffer multiple bites and scratches to the face and head, both of which carry a higher risk of contracting rabies. In addition

children are often unaware of the danger that dogs transmit rabies and may not tell their parents when a bite, lick, or scratch has occurred from an infected animal.

Since virtually all human rabies is caused by dog bites, vaccination of canine populations has proved extremely successful in reducing its incidence in humans. In Mexico, for example, a 92% reduction in the prevalence of canine rabies due to vaccination was accompanied by an 82% reduction in the number of reported human deaths from the infection [2]. And in India, following a “catch-spay-vaccinate and release” programme for the street dog population in Chennai, for the first time since records began there have been no human rabies deaths for over a year [3].

For the UK population the key public health issue is for those who may be at risk because of their work (see below) or as a result of travelling to countries where rabies is circulating in animals. Travellers should stay away from stray or unattended animals and, if bitten in a country where rabies is present, wash the wound immediately and seek medical advice; if a person has not had treatment in that country they should still seek medical advice immediately on return, even if the bite was weeks before.

The UK has been free of indigenous classical animal rabies for over a century but occasional cases have occurred in quarantined animals creating a hazard that warrants vaccination of those working with imported animals. The last UK case of indigenously acquired classical rabies in a human was in 1902. Cases occurring since then have all been acquired abroad, usually through dog bites. European Bat Lyssavirus 2 (EBLV2), a rabies-like virus, has been isolated in bats in the UK, and in 2002 a man who was a licensed bat handler died in Scotland from infection with EBLV2 [3]. The Department of Health recommends that those who regularly handle bats, whether a licensed bat handler or not, should be vaccinated against rabies as a precaution. In addition individuals who are bitten or scratched by a bat within the UK should seek medical attention as soon as possible to determine whether they need post-exposure prophylaxis (PEP).

Further information

About PEP: see Chapter 27, Immunisation against infectious disease ("The Green Book") at: http://www.hpa.org.uk/web/HPAwebFile/HPAweb_C/1216022456494).

Expert advice and supply of vaccine and immunoglobulin: from the HPA Centre for Infections (tel: 020 8200 4400).

About World Rabies Day: at the official web site www.worldrabiesday.org and in the Alliance for Rabies Control's September 2009 newsletter <http://www.rabiescontrol.net/ARCnewsletter14.pdf>

References

1. WHO. Human and Animal Rabies, Rabies: A neglected zoonotic disease. Available at: <http://www.who.int/rabies/en/> [accessed on 24 September, 2009].
2. Fooks T and Harkess G. Rabies – a “one health approach”, Health Protection Matters, Spring 2008 (number 10), Health Protection Agency. Available at: http://www.hpa.org.uk/webw/HPAweb&HPAwebStandard/HPAweb_C/1208245975751?p=1158945066420
3. The Newsletter of the Alliance for Rabies Control, September 2009. <http://www.rabiescontrol.net/ARCnewsletter14.pdf>
4. Fooks AR, McElhinney LM, Pounder DJ, Finnegan CJ, Mansfield K, Johnson N, et al. Case report: isolation of a European bat lyssavirus type 2a from a fatal human case of rabies encephalitis. *J Med Virol* 2003; 71(2): 281-9.

Revised publication schedule for mandatory surveillance data: an update

The monthly HCAI mandatory MRSA bacteraemia and *Clostridium difficile* surveillance data schedule [1] requires amendment to take into account guidelines on pre-release access to official statistics.

As these data are official statistics, the HPA intends to abide by the Pre-release Access to Official Statistics Order 2008 which specifies that pre-release access may not be granted for a period in excess of 24 hours prior to publication.

To allow orderly briefing of Ministers within guidelines, to support their capacity to respond to questions arising, it has been decided to amend the publication formula to avoid Mondays and days which follow public holidays. This means the first monthly publication will be on 3 November 2009, with subsequent publications on the first Wednesday of the month thereafter (table 1).

These publication dates have been selected by Dr Christine McCartney, HPA Executive Lead for the Healthcare-Associated Infections and Antimicrobial Resistance Programme, in consultation with specialist officials at the Department of Health.

Table 1: Monthly, quarterly, and annual publications framework

Monthly		Quarterly commentary (in <i>Health Protection Report</i>)		Annual	
Publication date	Period covered (months & year)	Publication date	Data period (9 quarters up to...)	Publication date	Data period
Tuesday, 3 November 2009	September 2008 – September 2009				
Wednesday, 2 December 2009	October 2008 – October 2009	Thursday, 3 December 2009*	Q3 2009		
Wednesday, 6 January 2010	November 2009 – November 2010				
Wednesday, 3 February 2010	December 2009 – December 2010				
Wednesday, 3 March 2010	January 2009 – January 2010	Friday, 19 March 2010	Q4 2009		
Wednesday, 7 April 2010	February 2009 – February 2010				
Wednesday, 5 May 2010	March 2009 – March 2010				
Wednesday, 2 June 2010	April 2009 – April 2010	Friday, 18 June 2010	Q1 2010		
Wednesday, 7 July 2010	May 2009 – May 2010			Friday, 16 July 2010	F/y 2009/10
Wednesday, 4 August 2010	June 2009 – June 2010				
Wednesday, 1 September 2010	July 2009 – July 2010	Friday, 17 September 2010	Q2 2010		
Wednesday, 6 October 2010	August 2009 – August 2010				
Wednesday, 3 November 2010	September 2009 – September 2010				
Wednesday, 1 December 2010	October 2009 – October 2010	Friday, 17 December 2010	Q3 2010		

* This publication will not appear in the *HPR*.

Reference

1. Revised publication schedule for mandatory MRSA bacteraemia and *Clostridium difficile* surveillance, *Health Protection Report* 3(35), 4 September 2009, <http://www.hpa.org.uk/hpr/archives/2009/news3509.htm#schedule>.

Consultation on changes to the LabBase exceedance reporting system

An important component of the HPA's communicable disease surveillance arrangements, the LabBase exceedance reporting system, is under review.

The system operates by comparing the number of laboratory reports (for each organism) during a particular week with the number received in the corresponding week, and in the three weeks either side, over the previous five years. "Exceedance reports" are automatically generated when there has been a notable divergence from the expected range of total cases reported.

The current arrangements have been operating for more than a decade during which time LabBase has identified a number of outbreaks, and helped confirm suspected outbreaks, including those involving *Salmonella* Oranienburg, *Salmonella* Typhimurium DT120 and *Salmonella* Typhimurium DT191a.

However, there is currently a feeling both at the Centre of Infections and elsewhere within the Agency that the current system needs to be upgraded. The false positive rate is increasing and utilisation of the system is in decline, threatening to make the system obsolete, with consequent risk that significant outbreaks will be missed.

A number of key decisions have already been taken to improve the system: to use the date of specimen collection (rather than date of upload); to change the geographical areas; and explicitly to include healthcare-associated infections.

Users within the Agency are being consulted about the outputs that should be available from the system and how they should be presented and accessed.

If you work for the Agency and would like to receive a copy of the proposal, please email: edward.wynne-evans@hpa.org.uk.

Pandemic influenza: UK second wave intensifies

The HPA Weekly National Influenza Report of 24 September 2009 (week 39) [1] has summarised the UK (and international) situation as follows:

- ▶ Pandemic influenza activity continues to increase throughout the United Kingdom, particularly in school-aged children;
- ▶ In week 38 (week-ending 20 September), the weekly influenza/influenza-like-illness (ILI) consultation rates increased throughout the UK. Rates were below the normal winter seasonal baseline thresholds in England, Wales and Scotland, but above newly defined provisional threshold levels in Northern Ireland;
- ▶ The National Pandemic Flu Service (NPFS) continued to issue antiviral drugs to people in England and the number of assessments and antiviral collections through this service increased over the past week;
- ▶ At least 21 schools throughout England have reported outbreaks of ILI since the beginning of the autumn term, with virological confirmation of pandemic influenza in at least one case in 11 of the schools. School outbreaks have also been reported in Scotland and Northern Ireland;
- ▶ Interpretation of data to produce estimates on the number of new cases continued to be subject to a considerable amount of uncertainty due to the operation of the NPFS. HPA modelling gave an estimate of 9000 (range 5000 – 20,000) new cases in England in week 38. The estimated number of new cases has increased in all regions and age groups;
- ▶ The main influenza virus circulating in the UK continued to be the pandemic (H1N1) 2009 strain, with few influenza H1 (non-pandemic), H3 and B viruses detected. Two of 973 pandemic viruses tested have been confirmed to carry a mutation which confers resistance to the antiviral drug oseltamivir; both have been shown phenotypically to be resistant to the drug but retain sensitivity to zanamivir;
- ▶ The majority of pandemic influenza cases continued to be mild. The cumulative number of deaths reported due to pandemic (H1N1) 2009 in the UK was 82. A total of 324 new patients were hospitalised in England with suspected pandemic influenza in week 38, an increase over the previous week. The highest hospitalisation rates have consistently been in the under-5-years age group and the recent increases have been seen particularly in children under 15;
- ▶ According to the European Centre for Disease Prevention and Control (ECDC), by 22 September, 4144 deaths due to pandemic influenza had been reported globally. In week 37 Ireland, Sweden and Northern Ireland reported medium activity, while other European countries reported low levels.

Reference

1. HPA. [Weekly National Influenza Report: week 39](http://www.hpa.org.uk/swineflu/surveillance&epidemiology) (24 September 2009, PDF 162 KB), HPA website: www.hpa.org.uk/swineflu/surveillance&epidemiology.

Infection reports

Volume 3 Number 38 Published on: 25 September 2009

Immunisation

▶ **Quarterly vaccination coverage statistics for children aged up to five years in the United Kingdom (COVER): April to June 2009**

Quarterly vaccination coverage statistics for children aged up to five years in the United Kingdom (COVER): April to June 2009

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, April to June 2009.

Children who reached their first birthday in the quarter (born April to June 2008) were the eighth quarterly birth cohort to have been scheduled to receive their primary vaccinations according to the new schedule introduced on 4 September 2006 [1] (three doses diphtheria, tetanus, acellular pertussis, polio, and *Haemophilus influenzae* type b vaccine (DTaP/IPV/Hib vaccine) two doses each of meningococcal serogroup C conjugate vaccine (MenC vaccine) and pneumococcal conjugate vaccine (PCV), completing between August and October 2008.

Children who reached their second birthday in the quarter (born April to June 2007) would have been scheduled to receive their third dose primary vaccinations between August and October 2007 and first measles, mumps, and rubella (MMR) vaccination between May and October 2008. These children are the seventh quarterly birth cohort to be routinely scheduled to receive a booster dose of Hib and MenC vaccine (given as a combined Hib/MenC vaccine) at 12 months, and a PCV vaccine at 13 months of age [1].

Children who reached their fifth birthday in the quarter (born April to June 2004) would have been scheduled to receive their third dose primary vaccinations between August and October 2004, their first MMR between May and October 2005, their pre-school diphtheria, tetanus, acellular pertussis, inactivated polio (DTaP/IPV) booster and second dose MMR from August 2007 onwards, and a catch-up dose of a Hib-containing vaccine from September 2007 [2].

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/webw/HPAweb&Page&HPAwebAutoListDate/Page/1209454766294?p=1209454766294>.

Results

Data were received from all Health Boards (HBs) in Scotland and Northern Ireland, Administrative Regions (ARs) in Wales, and Primary Care Trusts (PCTs) in England. This is the third quarter (since January to March 2004) all 31 London PCTs have submitted a return. However, ongoing data quality concerns mean that there is a continued need for caution when evaluating the vaccination programme in London. Caveats have been issued by seven London PCTs; for four of these, and for four other PCTs in London, unreliable data for some antigens have been excluded from the analysis presented in this report.

Individual PCT data for this quarter are published on the HPA website at
http://www.hpa.org.uk/infections/topics_az/cover/default.htm.

Coverage at 12 months

Compared to the previous quarter, UK coverage at 12 months for PCV increased by 0.3% to 92.4%, whereas coverage for DTaP/IPV/Hib3 and MenC remained at similar levels (table 1) [3]. Country-specific comparisons at 12 months show Scotland and Northern Ireland achieved at least 96% coverage and Wales at least 95% for all three immunisations. In England, four regions (North East, East Midlands, West Midlands and South West) achieved 94% coverage for all three immunisations, and London was the only English region to report coverage below 90% for any immunisation at 12 months (table 1) [3].

Sixty-four of the 173 participating PCTs/HBs/ARs (37%) achieved at least 95% coverage at 12 months for DTaP/IPV/Hib3, and 60 (35%) achieved 95% for two doses of PCV and MenC vaccine.

Table 1. Completed primary immunisations (all antigens) by 12 months: April to June 2009

Strategic Health Authorities (SHAs)/Country	PCT/HB/AR*† (total)	DTaP/IPV/Hib3 %	MenC2 %	PCV2 %
English SHAs				
North East	12 (12)	95.2	94.5	94.9
North West	24 (24)	94.1	93.9	93.9
Yorkshire and the Humber	14 (14)	93.5	92.8	92.9
East Midlands	9 (9)	94.7	94.3	94.7
West Midlands	17 (17)	94.5	94.5	94.4
East of England	14 (14)	94.3	93.7	93.9
London	31 (31)	82.7	81.0	82.2
South Central	9 (9)	94.6	93.9	94.3
South East Coast	8 (8)	91.2	91.1	90.6
South West	14 (14)	94.7	94.5	94.6
England (Total)	152 (152)	91.9	91.3	91.6
Wales	3 (3)	95.8	95.6	95.6
Northern Ireland	4 (4)	97.1	96.9	96.9
Scotland	14 (14)	97.3	97.2	97.3
United Kingdom	173 (173)	92.7	92.1	92.4

* Primary Care Trusts/health boards/administrative regions

† Number of trusts reporting DTaP/IPV/Hib3 coverage

Coverage at 24 months

Compared to the previous quarter, MMR coverage in the UK and in England increased by 0.7%, with the greatest improvement in an English region reported by East Midlands (1.9% increase to 89.6%). [3] (table 2). The North West region, Wales, Northern Ireland and Scotland all achieved MMR coverage of at least 90%.

UK PCV booster coverage, reported for the seventh time this quarter, increased by 1% to 86.8% and Hib/MenC booster increased by 0.5% to 89.1% when compared to the previous quarter (table 2) [3]. East Midlands, North East, Northern Ireland and Scotland all achieved PCV coverage of at least 90%, and all countries and regions, except London and South East Coast, achieved Hib/MenC coverage of at least 90%.

UK coverage for DTaP/IPV/Hib at 24 months remained similar to the last quarter's figure at 94.8%, with eight English regions and Scotland, Northern Ireland and Wales achieving at least 95% (table 2) [3].

95% coverage at 24 months was achieved by 120 of the 173 PCTs/HBs/ARs (69%) for DTaP/IPV/Hib3, by 95/173 (55%) for MenC, by 17 for the Hib/MenC booster and 8 for the PCV booster, and by four Scottish Health Board and two English PCTs for MMR.

Table 2. Completed primary immunisations (all antigens) by 24 months: April to June 2009

Strategic Health Authorities (SHAs)/Country	PCT/HB/AR*† (total)	DTaP/IPV /Hib3 %	Infant MenC%	PCV Booster%	Hib/MenC%	MMR1%
English SHAs						
North East	12 (12)	96.8	97.0	90.1	93.7	89.9
North West	24 (24)	96.5	94.6	88.1	90.1	90.2
Yorkshire and the Humber	14 (14)	95.8	95.9	88.8	91.7	88.0
East Midlands	9 (9)	96.6	96.7	91.2	92.6	89.6
West Midlands	17 (17)	96.6	95.3	89.6	91.2	89.5
East of England	14 (14)	95.5	95.9	86.5	91.9	86.0
London	31 (31)	86.4	82.8	73.8	76.2	76.8
South Central	9 (9)	96.5	94.6	89.5	92.0	89.7
South East Coast	8 (8)	94.2	92.8	85.9	88.4	85.9
South West	14 (14)	96.1	95.4	88.7	90.5	88.4
England (Total)	152 (152)	94.2	92.9	85.8	88.4	86.3
Wales	3 (3)	97.2	95.7	89.7	93.0	90.5
North. Ireland	4 (4)	98.4	96.5	91.8	90.9	90.6
Scotland	14 (14)	98.3	96.3	93.8	94.1	93.3
United Kingdom	173 (173)	94.8	93.4	86.8	89.1	87.2

* Primary Care Trusts/health boards/administrative regions.

† Number of trusts reporting DTaP/IPV/Hib3 coverage

Coverage at five years

All countries and English regions, except for London, achieved at least 92% coverage for DTP/Pol3, Hib3 and MenC, with Scotland and two English regions (North East and South West) reporting at least 95% coverage for all three immunisations (table 3).

Compared to the previous quarter, UK MMR1 coverage increased by 0.3% to 90.7%, with both Scotland and Northern Ireland achieving at least 95%. UK MMR2 coverage increased by 1% (to 82%) and DTaP/IPV booster increased by 0.7% (to 84.4%) with most countries/regions reporting increased coverage for both these pre-school booster vaccines [3]. The greatest increases were seen in London where coverage for both MMR2 and DTaP/IPV increased by 2.3% (data from five PCTs for MMR2 and 7 PCTs for DTaP/IPV excluded from these estimates due to problems with child health systems), and in South East Coast where MMR2 increased by 2.4% and DTaP/IPV increased by 2.6%. Despite this, London coverage is still lower than corresponding values for other English regions and in particular, pre-school booster coverage for MMR2 and DTaP/IPV is at least 10% lower than other regions.

Table 3. Completed primary immunisations and boosters (all antigens) by 5 years: April to June 2009

Strategic Health Authorities (SHAs)/country	PCT/HB/AR* †	Primary				Pre-school booster	
		DTP/Pol3 %	Hib3 %	MenC %	MMR1 %	MMR2 %	DTaP/IPV %
English SHAs							
North East	12 (12)	96.4	96.0	96.7	93.7	83.6	85.7
North West	24 (24)	95.6	93.5	94.7	93.5	85.0	86.9
Yorkshire & Humber	14 (14)	95.1	94.6	94.5	92.2	83.5	83.6
East Midlands	9 (9)	94.1	93.5	95.0	92.0	85.7	87.0
West Midlands	17 (17)	96.1	94.9	95.3	92.7	85.3	88.6
East of England	14 (14)	93.7	93.2	94.0	88.0	80.3	84.0
London	31 (31)	83.4	82.0	81.3	82.6	69.0§	67.5 §§
South Central	9 (9)	94.0	93.4	93.6	91.5	82.9	86.7
Sth. East Coast	8 (8)	92.9	92.9	92.1	88.8	79.2	84.0
South West	14 (14)	95.7	95.3	95.0	91.8	83.5	87.4
England (Total)	152 (152)	93.0	92.1	92.2	90.0	81.0	83.4
Wales	3 (3)	95.9	94.9	93.3	92.4	84.7	89.0
Northern Ireland	4 (4)	97.2	93.6	94.5	95.7	88.9	91.4
Scotland §	14 (14)	98.3	97.3	97.6	96.2	87.5	89.5
United Kingdom	173 (173)	93.7	92.7	92.8	90.7	82.0	84.4

* Primary Care Trusts/health boards/administrative regions.

† Number of trusts reporting DTP/Pol3 coverage.

§ unreliable data from 5PCTs excluded.

§§ unreliable data from 7 PCTs excluded.

MMR sentinel surveillance scheme coverage in England

For methods of data collection see:

<http://www.hpa.org.uk/webw/HPAweb&Page&HPAwebAutoListDate/Page/1209454766294?p=1209454766294>

Data collected from June to August 2009 for children in the four age cohorts is summarised in table 4, and ranged from 75.1 to 76.1% at 16 months, 83.1 to 83.6% at 20 months, 86.7% to 87.0% at 24 months, and 89.9% to 90.5% at 36 months.

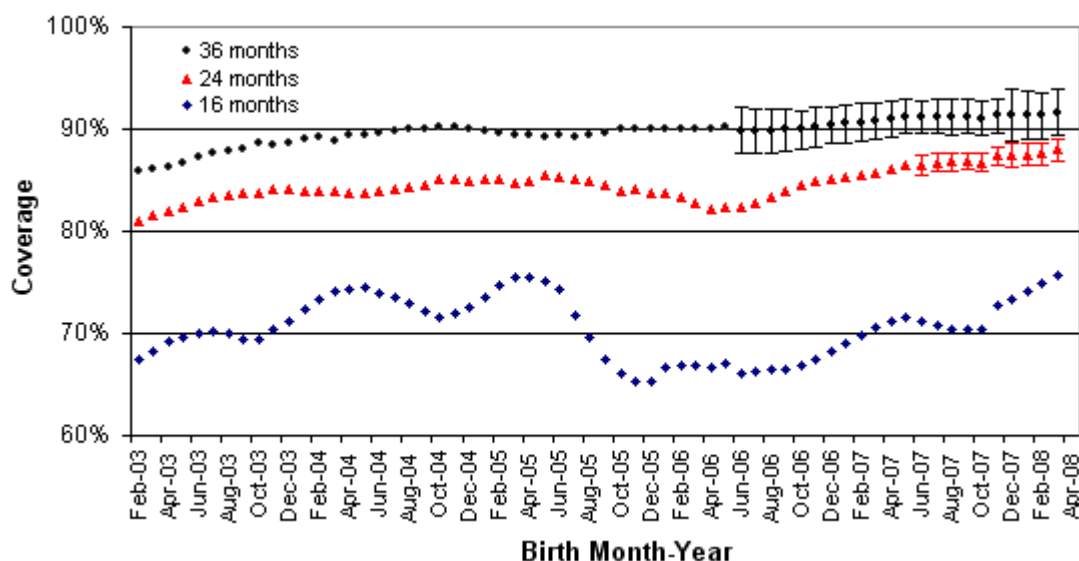
Table 4. Monthly sentinel estimates of measles, mumps rubella (MMR) coverage at 16, 20, 24 and 36 months: June 2009 to August 2009

Evaluation month	Proportion of children vaccinated at each age				
	Number of PCT/trusts	16 months	20 months	24 months	36 months
June 2009	35	75.1	83.1	86.7	89.9
July 2009	35	75.9	83.6	87.0	90.0
August 2009	35	76.1	83.6	86.8	90.5

The figure shows observed and projected MMR coverage at 16, 24 and 36 months in England for birth cohorts from October 2002 to March 2008. 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: 50.6% for 16 to 24 months, 65.5% for 16 to 36 months, 22% for 20 to 24 months, 47.5% for 20 to 36 months and 35.3% for 24 to 36 months. Projections make the assumption that p remains

constant over the period of the projection, however, this assumption is likely to be affected by the current MMR catch-up campaign and therefore the projections will probably be under-estimated. 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



Note. Data shown are five-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 April and June 2008), and coverage of four doses of vaccine in infants who reached two years of age (ie those born between April and June 2007).

Table 5. Neonatal hepatitis B coverage in England: April to June 2009

Region	Returns with 12 month data	12 month denominator	Coverage at 12 months	Returns with 24 month data	24 month denominator	Coverage at 24 months
North East	7 (12)	9	44%	7(12)	8	38%
North West	19 (24)	45	64%	19 (24)	39	51%
Yorkshire & the Humber	14 (14)	28	79%	14 (14)	26	54%
East Midlands	7 (9)	21	43%	7 (9)	28	29%
West Midlands	16 (17)	58	72%	16 (17)	50	42%
East of England	12 (14)	31	65%	12 (14)	38	74%
London	27 (31)	249	67%	27 (31)	288	53%
South Central	8 (9)	47	85%	7 (9)	23	61%
South East Coast	5 (8)	0	-	5 (8)	0	-
South West	11 (14)	11	18%	11 (14)	11	9%
Total	126(152)	499	67%	125 (152)	511	51%

Data were received from 126/152 (83%) PCTs in England, 7% more than reported in the last quarter [3]. Some of the returns may relate to only part of the PCT due to mergers [4]. Coverage in England for three doses in those aged one year has remained similar at 67% [3] (table 5). Coverage in England for four doses in those aged 24 months increased by 5% to 51% compared to the last quarter [3].

Commentary

UK MMR coverage at 24 months is now 87.2%, up 0.7% compared to the previous quarter and at a level last recorded more than eight years ago in 2001 [3, 5]. This upward trend was observed in all countries (except Northern Ireland) and all but one English region, particularly in the East Midlands, South East Coast and North West regions where increases of 1.9%, 1.4% and 1.4% respectively were reported. UK coverage of two doses of MMR at five years of age also increased, up 1% to 82%, the highest level recorded since the COVER programme started evaluating MMR2 in April to June 1998 [6]. Again, increased coverage was observed in many English regions, and all countries (except Northern Ireland), particularly in the South East Coast, London and South Central regions where coverage rose 2.4%, 2.3% and 2.2% respectively. MMR2 coverage data in London was calculated using data from 26 of the 31 PCTs; data from five PCTs was excluded due to quality concerns indicating there is a continued need for caution when evaluating the vaccination programme in London. UK coverage of at least one dose of MMR at aged five increased by 0.3% to 90.7%; coverage in Scotland and Northern Ireland continues to exceed 95% [3].

These improvements are thought to reflect the impact of the ongoing MMR catch-up programme targeting all unvaccinated children up to 18 years of age in England announced by the Chief Medical Officer in August 2008 [7], and local NHS and health protection staff efforts to increase MMR coverage in all unvaccinated children followed the widely reported rise in measles incidence across England and Wales during 2008/09 [8].

Both the MMR catch-up and Vital Signs immunisation indicator initiatives, which require all PCTs to cover immunisation in their operational plans for sign-off by their strategic health authority [9], have resulted not only in improvements in the total number of children receiving vaccinations but also in the quality of data held on some child health information systems due to data cleaning. However, the roll out of new child health systems, particularly in London, has resulted in some PCTs being unable to provide reliable data for all the immunisations evaluated in this COVER report, particularly for children aged five years.

Children reaching their second birthday in the quarter (born April to June 2007) were the seventh quarterly birth cohort recorded by COVER to be offered the new booster Hib/MenC and PCV vaccines, introduced in September 2006. UK coverage for both booster vaccines evaluated at 24 months continues to increase. Coverage of the Hib/MenC booster, offered at 12 months, was up 0.5% to 89.1% compared to the previous quarter's estimates, with eight of the 10 English regions and all devolved administrations now achieving at least 90% coverage [3]. PCV booster increased by 1% to 86.8%; with only two English regions, Northern Ireland and Scotland achieving at least 90%. The PCV booster is offered at the same time as MMR at around 13 months, and coverage for these two vaccines is similar at both national and regional levels.

At the beginning of September, the NHS Information Centre published the *NHS Immunisation Statistics England 2008-09* which includes corrected annual coverage data by Primary Care Trust (PCT) for children aged 12 months, 24 months and five years, for England [10].

The National Institute for Health and Clinical Excellence (NICE) has since published guidance on measures to improve immunisation uptake among children and young people [11]. Intended primarily for health professionals but also likely to be of interest to parents, the guidance refers in particular to groups and settings where immunisation coverage is known to be low. The guidance is framed around six recommendations: the first five apply to all vaccinations for children from birth to 19 years (vaccine programmes; information systems; training; contribution of nurseries, schools and colleges of further education; and targeting groups at risk of not being fully immunised); the sixth focuses on the hepatitis B vaccination programme for infants – an example of a programme targeted at a particular “low-coverage” group.

NICE has developed tools to help organisations put the guidance into practice; these can be accessed from its website at www.nice.org.uk/PH21.

On 15 September, the BMA sent a letter to all UK General Practitioners and Local Medical Committees detailing the arrangements for H1N1 vaccinations [12]. Undertaking this vaccination campaign will entail a considerable amount of work for practices, and to allow practice staff some flexibility during this period the BMA state “the collection date for the data on childhood immunisations for the third quarter, ie the December date, will be delayed by six weeks to mid-February”. Therefore, the July to September 2009 COVER report will be delayed and data will be requested from PCTs/child health departments in

February for both the July to September and the October to December 2009 quarters. These two COVER reports will both be published in the *HPR* at the end of March 2010. (Information on the exact dates for data returns will be posted on the HPA website at <http://www.hpa.org.uk/HPA/Topics/InfectiousDiseases/InfectionsAZ/1204031508679/>).

Relevant links for country-specific coverage data are as follows:

England

<http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/immunisation>

Northern Ireland

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

Scotland

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

Wales

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

Other relevant links

http://www.hpa.org.uk/infections/topics_az/cover/default.htm

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

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10. The NHS Information Centre for Health and Social Care. *Statistical Bulletin. NHS Immunisation Statistics, England: 2008-09*. Available at: <http://www.ic.nhs.uk/statistics-and-data-collections/health-and-lifestyles/immunisation>.
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