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Current News

Temporary suspension of heated home birthing pools filled in advance of labour

Infection Reports

Immunisation

- **Laboratory confirmed cases of pertussis reported to the enhanced pertussis surveillance programme in England: Q1/2014**
- **Quarterly vaccination coverage statistics for children aged up to five years in the UK (COVER programme): Q1/2014**
- **Invasive meningococcal disease (laboratory reports in England): January to March 2014**
- ***Corrigendum*: Immunisation report in *HPR* 8(12), 28 March 2014**

News

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Temporary suspension of heated home birthing pools filled in advance of labour

Public Health England and NHS England have advised against the home use of birthing pools filled in advance of labour, following the first recorded case, in England, of a legionella bacteria infection being acquired by a baby born in such a facility [1,2].

NHS England issued a Patient Safety Alert rapidly notifying the healthcare system – and specifically midwives – of the possible risks associated with home birthing pools filled in advance of labour and in which temperature is maintained by use of a heater and recirculating water pump [2]. PHE and relevant local authorities are investigating the infection control measures appropriate for such pools.

The alert does not apply to the majority of home birthing pools (and fixed pools in NHS units) that are filled at the time of labour only. These do not pose the same risk provided any associated pumps are used solely to empty the pool and not for recirculation of warm water. Home birthing pools filled only at the time of labour should come with disposable liners and only be in place for a relatively short time period, reducing opportunity for bacterial growth. Birthing pools in hospitals are subject to stringent infection control procedures and monitoring.

Only two previous cases of similar infection associated with water birth have been recorded in the literature [3,4].

References

1. “PHE advises temporary suspension of heated home birthing pools filled in advance of labour in home settings”, PHE press release, 17 June 2014.

2. NHS England. Patient safety alert: “Legionella and heated birthing pools filled in advance of labour in home settings”, 17 June 2014.

3. “ *Legionella pneumophila* pneumonia in a newborn after water birth: a new mode of transmission”, *Clin. Infect. Dis*. **33** (9).

4. “Neonatal sudden death due to legionella pneumonia associated with water birth in a domestic spa bath”. *J. of Clinical Microbiology* **41**(5), 2227-2229.

Infection reports

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Enteric

Laboratory confirmed cases of pertussis reported to the enhanced pertussis surveillance programme in England: Q1/2014

In England there were 605 laboratory confirmed cases of pertussis (culture, PCR, serology or oral fluid) reported to PHE's pertussis enhanced surveillance programme in the first quarter of 2014, from January to March (see table). This was a 19% decrease in the number of cases reported during the previous quarter (747 in October to December 2013) and a 63% decrease on cases reported in the same quarter of 2013 (1625 cases between January and March 2013). There were 18 laboratory confirmed cases reported in Wales between January and March 2014, a 33% decrease in the 27 cases reported in the fourth quarter in 2013.

Typically pertussis activity peaks in the third quarter and then declines, as observed in previous years (see figure). The continued increase observed in each successive quarter between the first quarter of 2011 and third quarter of 2012 was unusual. The HPA declared a national outbreak of pertussis (level 3 incident [1]) in April 2012 and, as a response to the ongoing outbreak, the Department of Health announced the introduction of a temporary immunisation programme for pregnant women on 28 September 2012 [2]. The most recent PHE figures report that – of the mothers due to give birth in January, February and March 2014– 60.7%, 59.7% and 58.9% respectively had been immunised with a pertussis containing vaccine in pregnancy in England [3].

Following the high levels of activity, confirmed cases of pertussis first fell in the fourth quarter of 2012 and this decrease has continued overall to the first quarter of 2014 with a slight increase in the third quarter of 2013 in line with the usual seasonal pattern. The highest number of laboratory confirmed cases in England persisted in individuals aged 15 years and over whilst disease incidence continued to be highest in infants <3 months. Confirmed cases in infants less than three months were 54% lower in the first quarter of 2014 (12 cases) than the equivalent quarter in 2013 (26 cases) and similar to the last quarter of 2013 (13 cases). One pertussis related infant death was reported for infants tested between January and March 2014 in England.

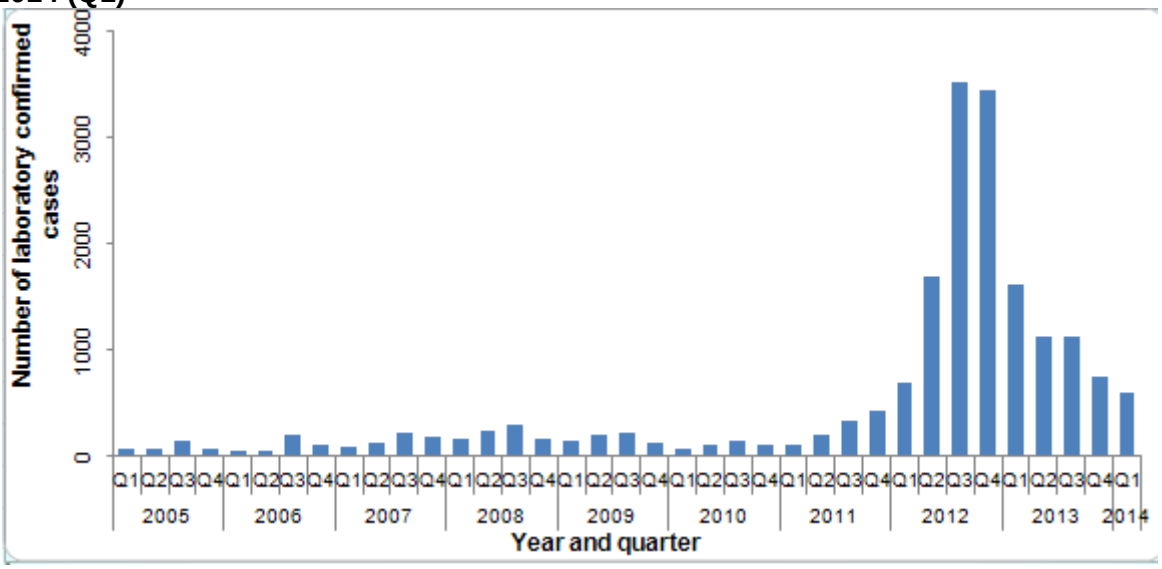
These early data in young infants following the introduction of a programme to immunise pregnant

women are encouraging. It is important to be aware, however, that raised levels of pertussis persist in older age groups. Women should continue to be encouraged to be immunised against pertussis during pregnancy in order to protect their babies from birth.

Laboratory-confirmed cases of pertussis by age and testing method in England, January to March 2014

Age group	Culture	PCR	Serology	Oral fluid only	Total
<3 months	9	3	–	–	12
3-5 months	1	3	1	–	5
6-11 months	2	1	–	–	3
1-4 years	–	1	4	2	7
5-9 years	1	1	17	5	24
10-14 years	–	1	68	11	80
15+ years	2	3	464	5	474
Total	15	13	554	23	605

Total number of laboratory-confirmed cases of pertussis per quarter in England, 2005 to 2014 (Q1)



Laboratory investigation

Bordetella pertussis PCR (for hospitalised cases <1 year old) and serological investigation by estimation of anti-pertussis toxin (PT) IgG antibody levels for older children and adults are provided by the Respiratory and Vaccine Preventable Bacteria Reference Unit (RVPBRU) at the Public Health England (PHE) Microbiology Services Division Colindale. The PCR service for hospitalised infants under one year requires either a pernasal swab or nasopharyngeal aspirate to be sent as soon as possible post-onset; for the pertussis serology service for older children and adults not less than 400 µl of separated serum should be sent at least 2-3 weeks post-onset. Serology testing is not suitable for any individual who has been immunised against pertussis in the last year. The laboratory also encourages submission of all *Bordetella pertussis* isolates for confirmation and national surveillance purposes.

Since January 2013, the RVPBRU is offering an oral fluid (OF) testing service for clinically suspected cases reported to local Health Protection Teams, who are aged between 5-16 years (<17yrs) and for children aged five to <17 years from 14 October 2013 who have been coughing for more than two weeks and have not been immunised against pertussis in the previous year. A new PCR community testing pilot for all age groups began at the end May 2013 and requires a pernasal, throat swab and OF swab to be sent to RVPBRU for testing.

Further information is available in the PHE Bacteriology Reference Department user manual at: http://www.hpa.org.uk/cfi/rsil/bordetella.htm.

References

1. *Health Protection Report* **6**(15), 13 April 2012. http://www.hpa.org.uk/hpr/archives/2012/news1512.htm#prtsss

2. Department of Health: https://www.gov.uk/government/news/pregnant-women-to-be-offered-whooping-cough-vaccination.

3. Public Health England: https://www.gov.uk/government/publications/pertussis-vaccine-uptake-in-pregnant-women-october-2012-to-march-2014.

Quarterly vaccination coverage statistics for children aged up to five years in the UK (COVER programme): January to March 2014

Coverage of all antigens evaluated at one, two and five years of age in January to March 2014 remained similar to or slightly lower than the previous quarter, with the exception of coverage of the second dose of MenC evaluated at one year. It has been noted in the last two COVER reports that coverage of two doses of this antigen has decreased in the cohorts being evaluated due to the removal of the second dose of MenC at age 16 weeks from the routine schedule for infants from 1 June 2013 [1-3]. This schedule change will adversely impact on future quarterly MenC2 coverage evaluations until the April to June 2014 quarter, when infants exclusively offered one dose of MenC will be evaluated.

For the current quarter, children evaluated at 12 months were born between January and March 2013. Those born in either January or February 2013 were scheduled to receive two doses of MenC at three and four months, however, if they had not completed the course by 1 June 2013 when the new one dose schedule was implemented (for example due to missed appointments), these children would not have needed to receive the second dose (unless Meningitec® was used for the first dose, in which case the two dose schedule was still indicated). Those born in March 2013 were scheduled for one MenC dose (Neisvac C® or Menjugate Kit®) when they reached three months in June 2013. The programmes extracting COVER data from Child Health Information Systems (CHISs) in many areas currently still count two doses as a completed primary MenC (MenC2) course and so it has not been possible to produce accurate data for MenC coverage at 12 months for the current cohort and these data have been omitted from this report.

This is a technical rather than a delivery issue and it is expected that the true coverage of primary MenC continues to be similar to other vaccines evaluated at 12 months; UK coverage of DTaP/IPV/Hib3 and PCV2 is currently around 94%. From the next evaluation, for April to June 2014, only one dose of MenC will be counted for the primary course. This is dependent on the programmes extracting data from CHIS systems being modified. The process of producing the revised information standard and a formal notice for CHIS suppliers to make this change (and others such as the addition of rotavirus vaccine) has been delayed but should be completed within the next few weeks. Until the change is made it will not be possible to accurately report primary MenC coverage from all areas.

UK MMR coverage at two years decreased by 0.1% to 93.2%, but still marginally exceeds PCV and Hib/MenC booster coverage (also offered at 12-13 months) which were 93.1% and 93% respectively. All three devolved administrations achieved at least 95% coverage for MMR1, PCV booster and Hib/MenC booster, as did nine of the 25 area teams in England. Coverage of the second dose of MMR in the UK decreased 0.2% to 88.9%, with Scotland, Wales, Northern Ireland and 17 English area teams achieving at least 90%.

New format for COVER data in England from April 2013

From April 2013, commissioning and coordination of immunisation programmes is the responsibility of NHS England [4]. Given the transfer of responsibility for public health, however, to local authorities (LAs) on 1st April 2013, population vaccination coverage is included in the Public Health Outcomes Framework (PHOF) (Indicator 3.3) [5]. In line with all the PHOF indicators, it is expected that population vaccination coverage is collected for LA resident population although for 2013/14 COVER data have been collected by LA responsible population as Primary Care Trusts (PCT) coverage collections in the NHS were based around responsible population (i.e. patients who are registered with a GP in the PCT or unregistered patients who reside in the PCT area) and many of the LAs and former PCTs are coterminous.

Quarterly request parameters for COVER data in England have been simplified in line with the PHOF outcome sub-indicators [5] and are requested in two formats, (i) by PCT responsible population to allow for continuity with historical data (until April 2015) and (ii) by LA responsible population (or resident population if available). Individual PCT, and where available, LA data are published on the HPA website [6]. To reflect the new NHS organisations in England COVER reports present coverage data by English Area Teams (tables 1a-4a). Former Strategic Health Authorities tabulations are also provided for historical comparisons (tables 1b-4b).

Results for January to March 2014

This report presents quarterly coverage data for children in the UK who reached their first, second, or fifth birthday during the evaluation quarter (January to March 2014). This is the fourth quarterly data to be collected since the re-organisation of the NHS in England.

Children who reached their first birthday in the quarter (born January to March 2013) would have been scheduled to receive their primary vaccinations according to either (i) the schedule introduced in September 2006 [7] (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)) if born in January or February 2013, or (ii) according to the revised schedule introduced in June 2014 with one dose of MenC at three months [3].

Children who reached their second birthday in the quarter (born January to March 2012) would have been scheduled to receive their third dose primary vaccinations between May and July 2012, and their first measles, mumps, and rubella (MMR) vaccination, a booster dose of Hib and MenC vaccine (given as a combined Hib/MenC vaccine) and PCV vaccine at the same visit at 12 months of age, between February and April 2013 [8].

Children who reached their fifth birthday in the quarter (born January to March 2009) would have been scheduled to receive their third dose DTaP/IPV/Hib and second MenC and PCV vaccinations between May and July 2010. They would have been scheduled to receive their first MMR between February and April 2010, their pre-school diphtheria, tetanus, acellular pertussis, inactivated polio booster and second dose MMR from April 2012. Children born between January to March 2009 were scheduled to receive Hib/MenC booster vaccine at 12 months and PCV booster vaccine at 13 months.

Methods for the COVER data collection are described on the PHE health protection website [9].

Participation and data quality

Data were received from all Health Boards (HBs) in Scotland, Northern Ireland and Wales. In England, Area Teams (ATs) and Child Health Records Departments (CHRDs) submitted data for all former PCTs. This is the fourth quarter collecting data from the new structures in the reorganised NHS and requesting coverage data in two formats; by PCT and by Local Authority (LA). There are some challenges in maintaining data flows for the PCT level collection as these organisations formally ceased to exist on 1st April 2013 and some Child Health Information Systems (CHISs) have moved to extracting at the Clinical Commission Group (CCG) level; these data were aggregated to PCT level based on postcode. In addition, many CHISs are not able to currently provide accurate LA level coverage data by the resident population, however, where LAs are coterminous with a former PCT boundary coverage data for the responsible population PCT will approximate to the LA responsible population. For those LAs not coterminous with PCT boundaries many areas were not able to provide LA responsible population coverage data. Coverage data by individual PCT and LA, where available, will be published on the HPA legacy website [6].

For the current quarter, children evaluated at 12 months were born between January and March 2013. Those born in either January or February 2013 were scheduled to receive two doses of MenC at three and four months, however, if they had not completed the course by 1 June 2013 when the new one dose schedule was implemented (for example due to missed appointments), these children would not have needed to receive the second dose (unless Meningitec® was used for the first dose, in which case the two dose schedule was still indicated). Those born in March 2013 were scheduled for one MenC dose (Neisvac C® or Menjugate Kit®) when they reached three months in June 2013. The programmes extracting COVER data from Child Health Information Systems (CHISs) in many areas currently still count two doses as a completed primary MenC (MenC2) course and so it has not been possible to produce accurate data for MenC coverage at 12 months for the current cohort and these data have been omitted from this report.

This is a technical rather than a delivery issue and it is expected that the true coverage of primary MenC continues to be similar to other vaccines evaluated at 12 months.

As of 2014/15 the COVER data for England will be classified as Official Statistics and will be subject to the code of practice associated with such data [10].

Coverage at 12 months

UK coverage at 12 months for DTaP/IPV/Hib3 decreased slightly by 0.4% to 94.4% and PCV2 decreased by 0.3% to 94.2% compared to the previous quarter (table 1a) [2]. Country-specific comparisons for minimum coverage levels achieved for DTaP/IPV/Hib3 and PCV2 evaluated at 12 months show Scotland achieved at least 97% coverage, and Northern Ireland Wales at least 96% and England at least 93%; within England 16 ATs achieved at least 95% (tables 1a).

UK coverage at 12 months for MenC2 is not shown as many of the children in this cohort were only offered one dose of vaccine routinely and therefore the would not be counted as having completed the course. This drop is related to the removal of the second dose of MenC at age 16 weeks (four months) from the routine schedule for infants from 1 June 2013 (see commentary above).

Within the UK, 109 of the 176 participating PCTs/HBs (62%) achieved at least 95% coverage at 12 months for DTaP/IPV/Hib3, and 107 (61%) achieved 95% for two doses of PCV.

Table 1a. Completed primary immunisations at 12 months by country and English Area Team: January to March 2014 (*October to December 2013*)

Country and English Area Team (AT code)	Number of PCTs/HBs†	DTaP/IPV/Hib3 %	MenC2 %	PCV2 %
United Kingdom	**176**	**94.4** *(94.8)*	n/a *(92.1)*	**94.2** (*94.5*)
Wales	**7**	**96.3** (*96.5*)	n/a (*93.5*)	**96.0** (*96.2*)
Northern Ireland	**4**	**96.7** (*97.2*)	n/a (*94.1*)	**96.8** (*97.2*)
Scotland	**14**	**97.4** (*97.7*)	n/a (*93.7*)	**97.5** (*97.8*)
England (Total)	**151**	**94.0** (*94.4*)	n/a (*91.8*)	**93.7** (*94.1*)
English Area Teams				
Cheshire, Warrington and Wirral (Q44)	4	96.9 (*96.7*)	n/a *(94.0)*	97.3 *(96.5*)
Durham, Darlington and Tees (Q45)	6	96.8 (*96.5*)	n/a (*93.5*)	96.3 (*96.2*)
Greater Manchester (Q46)	10	96.5 (*96.2*)	n/a (*92.3*)	96.1 (*96.0*)
Lancashire (Q47)	5	91.5 (*93.9*)	n/a (*89.8*)	90.4 (*91.7*)
Merseyside (Q48)	4	94.5 (*94.7*)	n/a (*90.5*)	94.6 (*94.8*)
Cumbria, Northumberland, Tyne and Wear (Q49)	7	96.7 (*97.0*)	n/a (*94.3*)	96.5 (*96.8*)
N Yorkshire and Humber (Q50)	5	96.0 (*96.1*)	n/a *(92.8)*	95.8 (*95.7*)
S Yorkshire and Bassetlaw (Q51)	5	94.9 (*95.6*)	n/a (*92.5*)	94.4 (*95.4*)
W Yorkshire (Q52)	5	96.4 (*96.8*)	n/a (*94.6*)	96.1 (*96.5*)
Arden, Herefordshire and Worcestershire (Q53)	4	97.1 (*96.8*)	n/a (*95.3*)	96.9 (*96.4*)
Birmingham and the Black Country (Q54)	8	93.3 (*93.1*)	n/a (*93.8*)	93.2 (*93.0*)
Derbyshire and Nottinghamshire (Q55)	4	96.1 (*95.8*)	n/a (*93.5*)	95.6 (*95.6*)
East Anglia (Q56)	5	95.2 (*95.8*)	n/a (*92.0*)	94.8 (*95.3*)
Essex (Q57)	5	95.7 (*96.1*)	n/a (*93.3*)	95.7 (*96.0*)
Hertfordshire and the S Midlands (Q58)	5	96.8 (*97.2*)	n/a (*93.6*)	96.5 (*96.9*)
Leicestershire and Lincolnshire (Q59)	3	96.9 (*96.7*)	n/a (*93.2*)	96.5 (*96.4*)
Shropshire and Staffordshire (Q60)	5	96.9 (*97.0*)	n/a *(96.2)*	97.0 (*97.0*)
Bath, Gloucestershire, Swindon and Wiltshire (Q64)	4	95.6 (*96.3*)	n/a (*96.8*)	95.5 (*96.1*)
Bristol, N Somerset, Somerset and S Gloucestershire (Q65)	4	96.4 (*96.1*)	n/a (*97.5*)	96.5 (*96.2*)
Devon, Cornwall and Isles of Scilly (Q66)	4	96.1 (*96.2*)	n/a (*95.7*)	96.0 (*95.9*)
Kent and Medway (Q67)	3	90.6 (*92.3*)	n/a (*95.6*)	90.5 (*92.2)*
Surrey and Sussex (Q68)	5	90.0 (*90.0*)	n/a (*86.8)*	89.8 (*89.6)*
Thames Valley (Q69)	4	94.4 (*94.7*)	n/a (*89.7*)	94.1 (*94.3*)
Wessex (Q70)	6	95.1(*97.2*)	n/a (*94.7*)	95.1 (*95.8*)
London (Q71)	31	89.1(*89.3*)	n/a (*85.3*)	88.7 (*89.3*)

† Primary Care Trusts/health boards.
n/a accurate estimate not available (see commentary above)

Table 1b. UK completed primary immunisations at 12 months by former Strategic Health Authority, England: January to March 2014 (*October to December 2013*)

Former English Strategic Health Authorities (SHAs)	PCT/HB†	DTaP/IPV /Hib3 %	MenC%	PCV2%
North East	12	96.6 (*96.7*)	n/a (*96.8*)	96.3 (*96.4*)
North West	24	95.3 (*95.5*)	n/a (*92.0*)	95.0 (*95.1*)
Yorkshire and Humber	14	95.9 (*96.3*)	n/a (*93.5*)	95.6 (*96.0*)
East Midlands	8	96.6 (*96.5*)	n/a (*93.3*)	96.2 (*96.2*)
West Midlands	17	95.2 (*95.0*)	n/a (*94.8*)	95.1 (*95.8*)
East of England	13	95.9 (*96.4*)	n/a (*93.1*)	95.6 (*96.0*)
London	31	89.1 (*89.3*)	n/a (*85.3*)	88.7 (*89.3*)
South Central	9	95.0 (*96.1*)	n/a (*91.8*)	94.8 (*95.2*)
SE Coast	8	90.2 (*90.9*)	n/a (*90.3*)	90.1 (*90.7*)
South West	14	95.7 (*95.9*)	n/a (*96.6*)	95.7 (*95.9*)

† Primary Care Trusts/health boards
n/a accurate estimate not available (see commentary above)

Coverage at 24 months

UK coverage of DTaP/IPV/Hib3 at 24 months decreased by 0.2% to 96.4% compared to the previous quarter. Surrey and Sussex (Q68) and London (Q71) are the only ATs with DTaP/IPV/Hib3 coverage below the 95% target at 91.8% and 93.1% respectively (table 2a).

UK PCV coverage was 93.1% and Hib/MenC booster coverage 93.0%, marginally lower compared to the last quarter (table 2a) [2]. Country-specific comparisons for minimum coverage levels achieved for both PCV and Hib/MenC boosters evaluated at 24 months show Scotland, Wales and Northern Ireland achieved at least 95% coverage, and England at least 92%. Within England 8 ATs achieved at least 95% (table 2a).

UK MMR coverage decreased by 0.1% to 93.2%, marginally exceeding PCV and Hib/MenC booster coverage for the second consecutive quarter (table 2a) [2]. All three devolved administrations achieved at least 95%. Twelve of the 25 English ATs achied 95%, however, with national coverage at 92.7% England is the only country in the UK below the WHO target (table 2a).

Country-specific comparisons for minimum coverage levels achieved for all four immunisations evaluated at 24 months show Scotland, Wales, and Northern Ireland achieved at least 95% coverage and England achieved at least 92%; within England nine ATs achieved 95% for all four immunisations (table 2a).

Within the UK, at least 95% coverage at 24 months was achieved by 147 of the 176 PCTs/HBs (84%) for DTaP/IPV/Hib3, 76 for Hib/MenC booster and PCV booster (43%), and 75 (43%) for MMR.

Table 2a. Completed primary immunisations at 24 months by country and English Area Team: January to March 2014 (*October to December 2013*)

Country and English Area Team (AT code*)	PCT/HB†	DTaP/IPV/Hib3 %	PCV booster %	Hib/MenC %	MMR1 %
United Kingdom	**176**	**96.4** (*96.6*)	**93.1** (*93.2*)	**93.0** (*93.2*)	**93.2** (*93.3*)
Wales	**7**	**97.8** (*97.8*)	**96.3** (*96.0*)	**95.4** (*95.4*)	**96.7** (*96.6*)
Northern Ireland	**4**	**98.5** (*98.6*)	**96.1** (*96.3*)	**96.3** (*96.5*)	**96.1** (*96.3*)
Scotland	**14**	**98.1** (*98.2*)	**95.8** (*95.6*)	**96.0** (*95.7*)	**95.8** (*95.6*)
England (Total)	**151**	**96.1** (*96.3*)	**92.6** (*92.8*)	**92.5** (*92.7*)	**92.7** (*92.9*)
English Area Teams					
Q44	4	97.4 (*98.0*)	94.7 (*94.8*)	95.3 (*95.8*)	95.1 (*95.3*)
Q45	6	98.3 (*97.5*)	95.9 (*96.4*)	96.2 (*96.2*)	95.8 (*94.8*)
Q46	10	97.4 (*97.6*)	95.1 (*94.9*)	95.0 (*94.2*)	95.2 (*95.2*)
Q47	5	95.3 (*96.9*)	90.2 (*90.4*)	89.6 (*90.0*)	93.0 (*91.0*)
Q48	4	97.0 (*96.8*)	94.1 (*96.2*)	94.0 (*95.8*)	93.5 (*96.5*)
Q49	7	98.2 (*98.6*)	96.1 (*96.6*)	96.2 (*96.5*)	96.2 (*96.8*)
Q50	5	96.7 (*97.3*)	95.2 (*95.5*)	94.5 (*94.6*)	95.0 (*95.7*)
Q51	5	97.2 (*97.4*)	93.8 (*93.5*)	95.1 (*95.4*)	93.6 (*93.5*)
Q52	5	97.7 (*97.7*)	96.2 (*95.5*)	96.4 (*95.8*)	95.8 (*95.2*)
Q53	4	98.3 (*98.0*)	96.5 (*95.6*)	94.9 (*94.6*)	96.6 (*96.2*)
Q54	8	95.3 (*95.3*)	92.5 (*92.1*)	91.4 (*90.6*)	91.9 (*91.9*)
Q55	4	97.6 (*97.9*)	94.6 (*94.9*)	94.7 (*95.0*)	94.2 (*94.7*)
Q56	5	96.6 (*96.3*)	94.0 (*93.6*)	94.2 (*94.1*)	93.5 (*93.0*)
Q57	5	97.3 (*97.5*)	95.5 (*95.6*)	96.2 (*96.2*)	95.3 (*95.0*)
Q58	5	97.7 (*97.3*)	95.7 (*95.5*)	95.9 (*95.7*)	94.9 (*95.1*)
Q59	3	97.3 (*97.6*)	95.3 (*95.7*)	95.2 (*95.5*)	94.9 (*95.3*)
Q60	5	98.1 (*98.2*)	96.7 (*96.7*)	96.2 (*95.9*)	96.6 (*95.8*)
Q64	4	97.3 (*97.7*)	95.2 (*95.5*)	93.8 (*94.1*)	94.9 (*94.9*)
Q65	4	97.5 (*97.7*)	94.5 (*94.9*)	93.9 (*94.6*)	94.2 (*94.8*)
Q66	4	97.3 (*97.0*)	94.3 (*94.7*)	93.6 (*93.8*)	94.4 (*93.7*)
Q67	3	97.0 (*97.5*)	92.5 (*93.3*)	91.2 (*92.7*)	89.2 (*93.2*)
Q68	5	91.8 (*92.4*)	86.1 (*86.6*)	86.4 (*86.9*)	87.7 (*87.9*)
Q69	4	96.2 (*96.1*)	92.4 (*93.2*)	92.9 (*93.7*)	93.3 (*94.0*)
Q70	6	96.8 (*96.9*)	94.5 (*94.4*)	94.0 (*93.8*)	94.3 (*94.1*)
Q71	31	93.1(*93.3*)	86.3 (*86.6*)	86.5 (*86.9*)	87.2 (*87.3*)

* See table 1a for key to Area Team organisational code
† Primary Care Trusts/health boards

Table 2b. Completed primary immunisations at 12 months by former Strategic Health Authority, England: January to March 2014 (*October to December 2013*)

Former English Strategic Health Authorities (SHAs)	PCT/HB†	DTaP/IPV /Hib3 %	PCV booster %	Hib/MenC %	MMR1 %
North East	12	98.3 (*98.1*)	96.0 (*95.6*)	96.2 (*96.4*)	96.0 (*95.8*)
North West	24	97.0 (*97.6*)	94.1 (*94.3*)	94.0 (*94.0*)	94.6 (*94.7*)
Yorkshire and Humber	14	97.3 (*97.5*)	95.3 (*95.0*)	95.5 (*95.3*)	95.0 (*94.9*)
East Midlands	8	97.6 (*97.9*)	95.3 (*95.4*)	95.2 (*95.5*)	94.9 (*95.2*)
West Midlands	17	96.8 (*96.7*)	94.6 (*94.1*)	93.5 (*93.0*)	94.3 (*93.9*)
East of England	13	97.2 (*96.9*)	95.0 (*94.8*)	95.4 (*95.3*)	94.4 (*94.2*)
London	31	93.1 (*93.3*)	86.3 (*86.6*)	86.5 (*86.9*)	87.2 (*87.3*)
South Central	9	96.3 (*96.4*)	93.4 (*93.8*)	93.5 (*93.8*)	93.8 (*94.2*)
SE Coast	8	93.9 (*94.4*)	88.7 (*89.2*)	88.3 (*89.2*)	88.3 (*90.0*)
South West	14	97.4 (*97.5*)	94.6 (*94.8*)	93.7 (*94.0*)	94.4 (*94.2*)

† Primary Care Trusts/health boards

Coverage at five years

With the exception of Hib/MenC which remained the same at 92.6%, UK coverage of all antigens evaluated at five years were marginally lower than in the previous quarter [2]. All countries and all but two English ATs (Surrey and Sussex (Q68), and London (Q71)) achieved at least 95% coverage for primary course DTP/Pol3 [2] (tables 3a).

UK coverage of MMR1 at five years decreased 0.1% to 94.7% and all countries and all but one English AT (Surrey and Sussex (Q68)) achieved at least 90%. Scotland, Northern Ireland, Wales and 14 English ATs achieved at least 95% coverage for MMR1 and at least 90% for MMR2 at five years (tables 3a).

Coverage of UK DTaP/IPV booster decreased 0.3% to 89.3% for all devolved administrations and all but five English ATs achieved at least 90% coverage.

Table 3a. UK completed primary immunisations and boosters at five years by country and English Area Team: January to March 2014 (*October to December 2013*)

ENGLAND Area Team (AT) code*	Number of PCTs in AT	Primary		Booster		
		DTaP/IPV Hib %	MMR1 %	MMR2 %	DTaP/ IPV %	Hib/ MenC
United Kingdom	**176**	**96.0** (*95.9*)	**94.7** (*94.8*)	**88.9** (*89.1*)	**89.3** (*89.6*)	**92.6** (*92.6*)
Wales	**7**	**97.3** (*97.3*)	**97.0** (*97.0*)	**93.0** (*92.6*)	**93.9** (*93.7*)	**93.8** (*94.0*)
N. Ireland	**4**	**97.9** (*98.3*)	**97.4** (*97.3*)	**92.8** (*92.5*)	**94.0**(*93.5*)	**96.3** (*95.6*)
Scotland	**14**	**98.3** (*98.0*)	**97.5** (*97.2*)	**93.4** (*93.2*)	**94.2** (*94.1*)	**95.9** (*95.9*)
England (Total)	**151**	**95.7** (*95.6*)	**94.2** (*94.4*)	**88.2** (*88.5*)	**88.5** (*88.8*)	**92.1** (*92.1*)
English Area Teams						
Q44	4	96.8 (*96.7*)	95.5 (*96.0*)	90.6 (90.5)	91.5 (*91.7*)	93.9 (*94.6*)
Q45	6	97.7 (*97.1*)	95.6 (*96.2*)	92.6 (*92.5*)	93.6 (*92.9*)	95.9 (*95.1*)
Q46	10	96.8 (*96.4*)	96.0 (*95.9*)	92.6 (*91.9*)	92.6 (*92.1*)	91.3 (*91.7*)
Q47	5	96.3 (*96.6*)	95.9 (*96.3*)	89.4 (*87.8*)	88.1 (*87.4*)	94.0 (*93.4*)
Q48	4	96.8 (*98.2*)	97.8 (*97.7*)	91.4 (*92.5*)	90.6 (*91.7*)	94.0 (*94.3*)
Q49	7	98.0 (*98.5*)	97.3 (*97.5*)	93.7 (*93.2*)	94.6 (*93.8*)	95.0 (*94.3*)
Q50	5	96.7 (*96.8*)	95.3 (*95.2*)	91.3 (*91.3*)	92.0 (*91.5*)	93.7 (*93.3*)
Q51	5	96.9 (*96.9*)	95.5 (*95.3*)	90.3 (*90.1*)	91.1 (*90.9*)	95.3 (*95.2*)
Q52	5	97.7 (*97.5*)	96.6 (*96.3*)	92.8 (*92.3*)	93.4 (*93.6*)	96.4 (*95.9*)
Q53	4	97.6 (*97.6*)	96.8 (*96.8*)	94.0 (*93.3*)	95.0 (*94.4*)	92.0 (*91.8*)
Q54	8	96.0 (*96.2*)	94.7 (*94.6*)	87.8 (*86.6*)	88.1 (*87.1*)	92.1 (*92.4*)
Q55	4	97.5 (*97.8*)	95.8 (*96.3*)	90.8 (*91.7*)	91.6 (*92.0*)	94.1 (*94.8*)
Q56	5	95.7 (*95.8*)	93.8 (*93.9*)	88.6 (*88.3*)	90.1 (*89.7*)	92.6 (*92.8*)
Q57	5	96.6 (*95.8*)	94.5 (*95.0*)	90.8 (*91.2*)	92.4 (*92.5*)	95.2 (*95.6*)
Q58	5	96.3 (*96.5*)	94.8 (*95.2*)	91.6 (*92.6*)	93.1 (*93.3*)	94.5 (*94.5*)
Q59	3	97.0 (*97.2*)	95.1 (*95.7*)	90.2 (*90.4*)	94.7 (*94.9*)	93.6 (*93.4*)
Q60	5	98.1 (*97.9*)	96.9 (*96.3*)	93.2 (*92.9*)	94.2 (*93.7*)	96.3 (*96.2*)
Q64	4	96.3 (*96.5*)	95.1 (*95.3*)	89.7 (*91.6*)	91.7 (*92.4*)	93.7 (*93.3*)
Q65	4	97.4 (*97.6*)	95.8 (*96.0*)	90.9 (*90.7*)	91.8 (*91.9*)	92.9 (*93.3*)
Q66	4	96.8 (*97.3*)	95.5 (*95.8*)	91.0 (*90.1*)	91.1 (*91.7*)	93.0 (*93.1*)
Q67	3	96.2 (*95.8*)	92.9 (*95.3*)	84.4 (*89.8*)	85.6 (*92.3*)	93.3 (*93.2*)
Q68	5	91.3 (88.6)	89.4 (89.6)	80.7 (*80.9*)	81.3 (*81.5*)	84.6 (*84.3*)
Q69	4	95.8 (*95.8*)	94.9 (*94.5*)	89.5 (*89.1*)	88.9 (*88.9*)	93.2 (*93.6*)
Q70	6	95.5 (*96.0*)	94.2 (*94.6*)	90.1 (*90.0*)	90.5 (*91.0*)	91.8 (*92.2*)
Q71	31	92.7 (*92.3*)	90.7 (*90.6*)	80.0 (*80.1*)	78.0 (*78.3*)	87.5 (*87.3*)

* See table 1a for key to Area Team organisational code.

3b. Completed primary immunisations and boosters at five years by former Strategic Health Authority, England: January to March 2014 (*October to December 2013*)

Former English SHAs	PCT/ HB †	Primary		Booster		
		DTaP/IPV /Hib3 %	MMR1%	MMR2 %	DTaP/ IPV %	Hib/ MenC
North East	12	98.0 (*97.8*)	96.5 (*97.0*)	93.1 (*92.8*)	94.1 (*93.4*)	95.6 (*95.1*)
North West	24	96.7 (*96.9*)	96.3 (*96.4*)	91.5 (*91.1*)	91.4 (*91.2*)	92.8 (*92.9*)
Yorkshire and Humber	14	97.2 (*97.2*)	96.0 (*95.8*)	91.9 (*91.6*)	92.5 (*92.4*)	95.4 *(95.0*)
East Midlands	8	97.2 (*97.5*)	95.4 (*95.9*)	90.8 (*91.6*)	93.3 (*93.5*)	94.0 (*94.1*)
West Midlands	17	97.0 (*97.0*)	95.8 (*95.6*)	90.8 (*90.0*)	91.5 (*90.7*)	93.2 (*93.2*)
East of England	13	96.1 *(96.2*)	94.3 (*94.6*)	90.1 (*90.4*)	91.6 (*91.7*)	94.0 (*94.3*)
London	31	92.7 (*92.3*)	90.7 (*90.6*)	80.0 (*80.1*)	78.0 (*78.3*)	87.5 (*87.3*)
South Central	9	95.8 (*96.0*)	94.7 (*94.7*)	90.0 (*89.6*)	89.8 (*89.8*)	92.7 (*92.8*)
SE Coast	8	93.2 (*91.3*)	90.8 (*91.7*)	82.2 (*84.3*)	83.0 (*85.6*)	88.1 (*87.6*)
South West	14	96.6 (*96.9*)	95.1 (*95.4*)	90.3 (*90.6*)	91.3 (*91.9*)	92.9 (*93.3*)

† Primary Care Trusts/health boards

Neonatal hepatitis B vaccine coverage in England: January to March 2014

Vaccine coverage data in England for three doses of hepatitis B vaccine in infants, born to hepatitis B surface antigen (HBsAg) positive mothers, who reached the age of one year in this quarter (i.e. those born between January to March 2013), and coverage of four doses of vaccine in infants who reached two years of age (i.e. those born between January to March 2012) are presented by Area Team (table 4a). Table 4b shows coverage by SHA for historical comparison. For both tables coverage for the previous quarter, October to December 2013, is given in brackets [2].

One hundred and twenty-five of the 151 former PCTs provided 12 month data this quarter (83%), and 120 (79%) provided 24 month data, compared to 127 in the previous quarter [2]. The quality of these data is variable and should be interpreted with caution. Where a zero was reported a check was made to ensure that this was a true zero rather than no data available. Thirty-six PCTs provided zero returns for the 12 month data, and for the 24 month data there were 38 zero returns. Fourteen of the 25 ATs provided data for the whole area (table 4a) and two former SHAs reported data from all former PCTs (table 4b). Compared to last quarter, 12 month coverage of three doses of Hep B in England increased by 3% to 87% and coverage of four doses at 24 months increased by 18% to 85% [2].

Table 4a. Neonatal hepatitis B coverage in England by English Area Team: January to March 2014 (*October to December 2013*)

Area Team (AT code)	PCT returns with 12 month data	12 month deno-minator	Coverage at 12 months	PCT returns with 24 month data	24 month deno-minator	Coverage at 24 months
Q44	4 of 4	2	100 (*50*)	4 of 4	3	100 (*100*)
Q45	2 of 6	0	– (–)	2 of 6	0	– (*100*)
Q46	10 of 10	79	85 (*88*)	10 of 10	76	92 (*87*)
Q47	2 of 5	0	– (–)	2 of 5	0	– (–)
Q48	4 of 4	9	100 (*89*)	3 of 4	7	57 (*0*)
Q49	6 of 7	5	100 (*92*)	6 of 7	6	100 (*100*)
Q50	4 of 5	2	50 (*100*)	3 of 5	2	100 (100)
Q51	3 of 5	7	86 (*100*)	3 of 5	5	100 (*60*)
Q52	5 of 5	32	88 (*90*)	5 of 5	27	96 (*77*)
Q53	3 of 4	12	100 (*100*)	3 of 4	14	100 (*89*)
Q54	4 of 8	13	85 (*90*)	4 of 8	6	83 (*75*)
Q55	4 of 4	12	83 (*85*)	4 of 4	9	100 (*86*)
Q56	5 of 5	12	83 (*69*)	5 of 5	15	93 (*100*)
Q57	5 of 5	7	86 (*16*)	5 of 5	8	75 (*29*)
Q58	5 of 5	19	100 (*97*)	5 of 5	32	91 (*86*)
Q59	2 of 3	9	11 (–)	2 of 3	9	89 (–)
Q60	5 of 5	9	100 (*100*)	3 of 5	5	100 (*100*)
Q64	4 of 4	5	100 (*86*)	4 of 4	3	33 (*100*)
Q65	4 of 4	2	100 (–)	4 of 4	3	67 (*100*)
Q66	4 of 4	2	100 (*100*)	4 of 4	0	– (*100*)
Q67	3 of 3	5	20 (*63*)	3 of 3	13	46 (*33*)
Q68	4 of 5	6	100 (*100*)	4 of 5	9	78 (*64*)
Q69	4 of 4	31	100 (*100*)	3 of 4	17	94 (*95*)
Q70	5 of 6	11	73 (*83*)	5 of 6	8	100 (*100*)
Q71	24 of 31	183	89 (*82*)	24 of 31	209	81 (*74*)
England	**125 of 151**	**474**	**87 (*84*)**	**120 of 151**	**486**	**85 *(67)***

Notes: " – " indicates "no data available" for the denominator but "not applicable" for coverage; see table 1a for key to Area Team organisational code.

Table 4b. Neonatal hepatitis B coverage in England by fromer Strategic Health Authority: January to March 2014 (*October to December 2013*)

English SHAs	PCT returns with 12 month data	12 month denominator	Coverage at 12 months	PCT returns with 24 month data	24 month denominator	Coverage at 24 months
North East	8 of 12	5	100 (*92*)	8 of 12	6	100 *(100)*
North West	20 of 24	90	87 (*87*)	19 of 24	86	90 *(86)*
Yorkshire and Humber	11 of 14	41	85 *(93*)	10 of 14	34	97 *(77)*
East Midlands	8 of 9	26	62 (*92)*	8 of 9	26	92 *(55)*
West Midlands	12 of 17	34	94 (*94*)	10 of 17	25	96 *(84)*
East of England	13 of 13	32	91 (*53*)	13 of 13	37	92 *(60)*
London	24 of 31	183	89 (*82*)	24 of 31	209	81 *(56)*
South Central	8 of 9	40	98 (*98*)	7 of 9	35	91 *(94)*
SE Coast	7 of 8	11	64 *(74*)	7 of 8	22	59 *(50)*
South West	14 of 14	12	83 (*90*)	14 of 14	6	50 *(100)*
England	**125 of 151**	**474**	**87 (*84)***	**120 of 151**	**486**	**85 *(67)***

Relevant links for country-specific coverage data

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

Northern Ireland
http://www.publichealthagency.org/directorate-public-health/health-protection/vaccination-coverage

Scotland
http://www.isdscotland.org/Health-Topics/Child-Health/Immunisation/

Wales
http://www.wales.nhs.uk/sitesplus/888/page/43510

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

References

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7. Department of Health. Important changes to the childhood immunisation programme. PL CMO (2006) 1.

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Invasive meningococcal disease (laboratory reports in England): January to March 2014

In England between January and March 2014, a total of 211 cases of invasive meningococcal disease (IMD) were reported to Public Health England [1]. This was a 14% decrease from the 245 cases reported in the first quarter of 2013 and a 15% increase from the 183 cases reported in the last quarter of 2013. Eleven cases of IMD were reported in this period in Wales.

Of the 211 cases of IMD reported in England; 63% (132) were capsular group B, 16% (33) group Y and group W, 5% (10) group C and three cases were ungrouped. Of the eleven IMD cases reported to PHE from Wales: seven were capsular group B, two group Y, one group W and one ungroupable. During the first quarter of 2014 there were no reported cases for capsular groups A, X and Z/E (table 1) in England or Wales.

Fifty-one per cent (105/207) of IMD cases reported in England were female. In England, children aged less than one year accounted for 21% (45/211) of IMD reports. The majority of infant cases (58%; [26/45]) were aged between six and 11 months, and of these 24 were group B and two were group W. In 19 infants with IMD aged between zero and five months, 14 had capsular group B, four were group W and one was ungrouped. Almost a fifth (18%; [38/211]) of cases were in children aged between one and four years of which 89% (34/38) were capsular group B disease, one group C and W and two ungrouped (table 2). More than half of the capsular group B cases (55%; [72/132]) were in children under 5 years of age. Of the 33 capsular group Y disease, the majority (79%; [26/33]) were in adults aged 45 and over and similarly the majority of group W cases were in individuals aged 45 and older (61%; [20/33]).

Table 1. Invasive meningococcal disease in England by capsular group and laboratory testing method, weeks 1-13 (Q1): 2013 and 2014*

Capsular groups ¥	Method of diagnosis						Total	
	Blood and/or CSF isolate		Blood and/or CSF non-culture		Other sites culture			
	2013 (Q1)	2014 (Q1)	2013 (Q1)	2014 (Q1)	2013 (Q1)	2014 (Q1)	2013 (Q1)	2014 (Q1)
B	88	53	101	79	2	–	191	132
C	5	7	2	3	1	–	8	10
W	14	32	2	1	–	–	16	33
Y	21	27	3	6	1	–	25	33
Ungrouped	–	–	2	3	–	–	2	3
Ungroupable *†	1	–	–	–	2	–	3	–
Total	**129**	**119**	**110**	**92**	**6**	–	**245**	**211**

* N.B. The capsular groups column in this table was amended on 2 July.
¥ No cases of Capsular groups A, X or Z/E were confirmed during any of the periods summarised in the table.
*† Ungroupable refers to invasive clinical meningococcal isolates that were non-groupable, while ungrouped cases refers to culture-negative but PCR screen (*ctrA*) positive and negative for the four genogroups [B, C, W and Y] routinely tested for.

Table 2. Invasive meningococcal disease in England by capsular group and age at diagnosis, weeks 1-13 (Q1), 2014

Capsular group	<1	1-4	5-9	10-14	15-19	20-24	25-44	45-64	65+	Total
B	38	34	9	2	15	6	12	8	8	**132**
C	–	1	2	2	–	–	1	4	–	**10**
W	6	1	–	–	2	2	2	6	14	**33**
Y	–	–	–	–	–	2	5	7	19	**33**
Ungrouped	1	2	–	–	–	–	–	–	–	**3**
Total	**45**	**38**	**11**	**4**	**17**	**10**	**20**	**25**	**41**	**211**

Reference

1. Data source: Public Heath England Meningococcal Reference Unit.

Corrigendum: Immunisation report in *HPR* 8(12), 28 March 2014

A significant section of text was omitted from the report, “Diphtheria in England: 2011-2013” published in *HPR* **8**(12), 28 March 2014.

The archived version of that issue has been corrected and re-published at:
http://www.hpa.org.uk/hpr/archives/2014/hpr1214.pdf