

# Health Protection Report weekly report

#### Infection report

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## Quarterly vaccination coverage statistics for children aged up to five years in the UK (COVER programme): January to March 2016

This report summarises UK quarterly vaccine coverage data for each routine childhood vaccination for children who reached their first, second, or fifth birthday during the evaluation quarter (January to March 2016). Analyses are presented at NHS England local and area team, country and UK levels.

#### Key points for the fourth quarterly report for 2015/16

- Quarterly UK coverage for DTaP/IPV/Hib3 at one year decreased by 0.6% to 93.7% compared to the previous quarter. This is the first quarterly evaluation below 94% since July to September 2010. England is the only UK country with coverage for DTaP/IPV/Hib3 at this age below the WHO target of 95%, although 14 of the 25 English area teams did achieve the target.
- UK level data for completed two-dose rotavirus vaccine evaluated at one year increased to 90.4% from 89.6%.
- Compared with the previous quarter, MMR coverage at two years increased 0.1% to 92.1% and 91.5% in the UK and England respectively. Coverage at two years in Wales, Northern Ireland and Scotland decreased by 0.3%, 0.4% and 0.6% respectively. All still achieved the WHO 95% target.
- UK coverage of MMR1 exceeded the WHO target of 95%, increasing 0.3% to 95.2% compared to the previous quarter. In England coverage increasing by 0.4% to 94.9% and the three devolved administrations all achieved at least 97%.
- The decrease in coverage of the pre-school booster (DTaP/IPV) for some English area teams is thought to be a data quality issue due to an inconsistency between the information provided by PHE in the COVER user guidance and the information standard and may have resulted in the data extraction of one of the main Child Health Information Systems (CHIS) under-estimating coverage of this booster. This is currently being investigated and the English and UK coverage estimates for this vaccine should be interpreted with caution.

#### Results for January to March 2016

Children who reached their first birthday in the quarter (born January to March 2015) were scheduled for three doses of the combined diphtheria, tetanus, acellular pertussis, polio, and *Haemophilus influenzae* type b vaccine (DTaP/IPV/Hib vaccine), two doses of pneumococcal conjugate vaccine (PCV), one dose of meningococcal serogroup C conjugate vaccine (MenC vaccine) at three months of age and two doses of rotavirus vaccine at two and three months of age [1].

Children who reached their second birthday in the quarter (born January to March 2014) were scheduled to receive their third DTaP/IPV/Hib, second MenC and PCV vaccinations between May and July 2014, and their first measles, mumps, and rubella (MMR) vaccination, a booster dose of Hib and MenC (given as a combined Hib/MenC vaccine) and PCV vaccines at the same visit at 12 months of age, between February and April 2015.

Children who reached their fifth birthday in the quarter (born January to March 2011) were scheduled to receive their third dose DTaP/IPV/Hib and second MenC and PCV vaccinations between May and July 2011. They were also scheduled to receive their first MMR, Hib/MenC booster and PCV booster after their first birthday (January to March 2012) between February and April 2012, and their pre-school diphtheria, tetanus, acellular pertussis, inactivated polio booster (DTaP/IPV) and second dose MMR from January 2014.

Data presented in the appendix to this report describes coverage evaluated at the first, second and fifth birthdays by country and NHS England local and area teams.

#### 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 Record Departments (CHRDs) provided data.

In England, implementation of a new COVER Information Standard Notice (ISN) by CHIS suppliers is almost complete with 128 and 146 CHISs providing 12 month rotavirus and MenC coverage data respectively, allowing England and UK coverage estimates for these two vaccines for the second consecutive quarter (table 1a). In Scotland, Wales and Northern Ireland the programmes extracting COVER data from CHISs have been modified to reflect these changes for some time and rotavirus and MenC coverage have been reported in the last five quarterly reports. Individual former PCT and local authority (LA) data (available for 146/152 LAs), with any relevant caveats for missing data values, are available here.

This is the last quarterly COVER report to collect data by former PCT for trend comparisons. From April 2016 data will be collected by LA responsible and resident population definitions as described in the information standard published in November 2014 [2].

#### Recent immunisation programme changes

The Joint Committee on Vaccination and Immunisation (JCVI) have recommended that infants no longer require vaccination against MenC. Therefore, from 1 July 2016, infants should no longer receive the dose of MenC conjugate vaccine currently given at the second primary immunisation visit at around 12 weeks of age. Children will continue to be immunised against MenC via the Hib/MenC vaccine dose given at 12 months of age and the MenACWY conjugate vaccine dose given at around 14 years of age [3]. The last cohort to be evaluated at for MenC at 12 months of age will be those born between January and March 2016, making the January to March 2017 quarterly COVER collection the final one to evaluate MenC at 12 months.

The first routine assessment of MenB vaccine coverage for children at 12 months will be the July to September 2016 quarter (to be published in the COVER report in December 2016). In order to rapidly assess vaccine coverage of this newly implemented immunisation programme, PHE has put in place a temporary sentinel surveillance system. This uses general practice (GP) level MenB vaccine coverage data automatically uploaded via participating GP IT suppliers to the ImmForm website on a monthly basis. Preliminary vaccine coverage estimates have been published for infants aged six months of age and eligible for infant MenB immunisation. MenB coverage for the cohort evaluated at the end of April 2016 was 95.5% for one dose and 87.9% for two doses by six months of age [4].

#### Coverage at 12 months

One year old children evaluated in the current quarter (born January to March 2015), are the sixth quarterly cohort to have been routinely offered rotavirus vaccine at two and three months, and the eighth quarterly cohort offered only one primary MenC dose at three months of age [5,6]. Compared to the previous quarter, UK coverage increased by 0.8% for rotavirus to 90.4% and decreased by 0.2% for MenC to 95.5% (table 1a) [7].

UK coverage for DTaP/IPV/Hib3 and PCV2 evaluated at 12 months decreased by 0.6% and 0.5% to 93.7% and 93.9% respectively, with decreases observed in all countries (table 1a) [6]. All countries achieved at least 95% for DTaP/IPV/Hib3, PCV2 and MenC, except England which achieved over 93%. Within England, 14 out of 25 ATs achieved at least 95% coverage at 12 months for these three vaccines (table 1a), and all ATs except for Surrey and Sussex, Kent and Medway, and London achieved at least 90% for all three vaccines.

#### Coverage at 24 months

UK coverage for the primary course (three doses) of DTaP/IPV/Hib at two years of age was 95.7%. Each of the four countries achieved the 95% WHO target. Lancashire (Q47), Kent and Medway (Q67), Surrey and Sussex (Q68) and London (Q71) are the only ATs with DTaP/IPV/Hib3 coverage below 95% (table 2b).

Compared with the previous quarter, UK coverage for Hib/MenC booster decreased by 0.1% to 92.1% and PCV booster decreased 0.3% to 92.0% (table 2a) [6]. UK MMR coverage evaluated at two years increased by 0.1% to 92.1%. Country-level coverage increased by 0.1% to 91.5% in England, by 0.3% to 95.5% in Wales, and by 0.4% to 95.9% in Northern Ireland. In Scotland MMR coverage decreased by 0.6% to 95.0% (table 2a).

#### Coverage at five years

UK coverage of MMR1 exceeded the WHO target of 95%, increasing 0.3% to 95.2% compared to the previous quarter. In England coverage increasing by 0.4% to 94.9% and the three devolved administrations all achieved at least 97%. Four of the 25 ATs in England failed to achieve at least 95% (table 3b). UK MMR2 coverage increased by 0.5% to 88.8%, and is now back to a similar level reported for the July to September 2015 quarter (table 3a) [7, 8].

UK coverage evaluated at five years for DTaP/IPV/Hib3 decreased by 0.1% compared to the previous quarter to 96.0% and Hib/MenC decreased 0.4% to 93.2%.

The decrease in coverage of the pre-school booster (DTaP/IPV) some English area teams is thought to be a data quality issue due to an inconsistency between the information provided by PHE in the COVER user guidance and the information standard and may have resulted in the data extraction of one of the main Child Health Information Systems (CHIS) under estimating coverage of this booster. This is currently being investigated and the English and UK coverage estimates of this vaccine should be interpreted with caution.

#### Neonatal hepatitis B vaccine coverage in England: January to March 2016

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 2015), and coverage of four doses of vaccine in infants who reached two years of age (i.e. those born between January to March 2014) are presented by area team in table 4.

The quality of these data is variable and coverage by area team relies on small numbers. As such, data should be interpreted with caution. Where an area reported no vaccinated children, a check was made to ensure that this was zero reporting rather than absence of available data. Compared with the previous quarter, coverage for three doses by 12 months of age increased by 1% to 91% and decreased by 4% to 69% for those receiving four doses by 24 months (table 4) [6].

#### 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: <a href="http://www.isdscotland.org/Health-Topics/Child-Health/Immunisation/">http://www.isdscotland.org/Health-Topics/Child-Health/Immunisation/</a>

Wales: <a href="http://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=54144/">http://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=54144/</a>

#### Other relevant links

https://www.gov.uk/government/collections/immunisation

#### References

- Public Health England. The complete routine immunisation schedule. https://www.gov.uk/government/publications/the-complete-routine-immunisation-schedule
- 2. Public Health England. Cover of Vaccination Evaluated Rapidly (COVER): Information Standards. <a href="https://www.gov.uk/government/publications/cover-of-vaccination-evaluated-rapidly-cover-programme-information-standards">https://www.gov.uk/government/publications/cover-of-vaccination-evaluated-rapidly-cover-programme-information-standards</a>
- 3. Public Health England and NHE England. Removal of the infant dose of meningococcal serogroup C (MenC) conjugate vaccine given at three months from 1 July 2016. <a href="https://www.gov.uk/government/publications/menc-vaccination-schedule-planned-changes-from-july-2016">https://www.gov.uk/government/publications/menc-vaccination-schedule-planned-changes-from-july-2016</a>
- 4. Public Health England (2016). Preliminary vaccine coverage estimates for the new meningococcal B (MenB) immunisation programme for England, update to the end of April 2016. Available at <a href="https://www.gov.uk/government/publications/meningococcal-b-immunisation-programme-vaccine-coverage-estimates">https://www.gov.uk/government/publications/meningococcal-b-immunisation-programme-vaccine-coverage-estimates</a>
- 5. Public Health England. Rotavirus vaccination programme for infants. https://www.gov.uk/government/collections/rotavirus-vaccination-progarmme-for-infants
- 6. Department of Health/Public Health England/NHS England. Changes to the schedule for meningococcal serogroup C conjugate vaccine (NHS England/PHE/DH letter, 7 May 2013).
- 7. Public Health England (2016). Vaccination coverage statistics for children up to the age of five years in the United Kingdom, October to December 2015. *HPR* **10**(12). Available at <a href="https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-cover-programme-2015-to-2016-quarterly-data">https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-cover-programme-2015-to-2016-quarterly-data</a>
- 8. Public Health England (2015). Vaccination coverage statistics for children up to the age of five years in the United Kingdom, July to September 2015. *HPR* **9**(45). Available at <a href="https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-cover-programme-2015-to-2016-quarterly-data">https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-cover-programme-2015-to-2016-quarterly-data</a>

#### Appendix (Tables 1 to 4)

Table 1a. Completed UK primary immunisations at 12 months by country and English Local Teams: January to March 2016 (*October to December 2015*)

	Country	No. of PCTs/ HBs†	DTaP/IPV/Hib3 %	MenC%	PCV2%	Rota2%
	United Kingdom	176	93.7 (94.3)	95.5 ( <i>95.7</i> )	93.9 ( <i>94.4</i> )	90.4 (89.6)
	Wales	7	96.3 (96.9)	97.6 (97.9)	96.3 ( <i>96.8</i> )	93.9 (93 <i>.7</i> )
	Northern Ireland	4	97.1 ( <i>97.3</i> )	98.4 (98.2)	97.1 ( <i>97.4</i> )	94.8 ( <i>94.3</i> )
	Scotland	14	97.0 ( <i>97.3</i> )	97.7 (97.9)	97.1 ( <i>97.4</i> )	93.4 (93 <i>.4</i> )
	England (Total)	151	93.2 (93.8)	95.1 (95.2)	93.4 (93.9)	89.7 (89.6)
LT code	NHS England Local Teams					
Q70	Wessex	6	95.7 ( <i>95.7</i> )	96.8 ( <i>96.7</i> )	95.3 ( <i>95.7</i> )	94.3 (93.4)
Q71	London	31	88.4 (89.6)	91.0 (90.6)	88.6 ( <i>89.7</i> )	85.1 ( <i>86.3</i> )
Q72	North (Yorkshire & Humber)	15	95.3 ( <i>95.4</i> )	96.9 (96.9)	95.5 ( <i>95.5</i> )	92.6 (92.1)
Q73	North (Lancashire & Grt Manchester)	15	93.6 ( <i>94.0</i> )	94.6 (95.1)	93.6 (94.6)	80.3 (81.2)
Q74	North (Cumbria & North East)	13	96.4 (96.9)	97.2 (97.5)	96.9 (96.6)	94.0 (92.9)
Q75	North (Cheshire & Merseyside)	8	95.1 ( <i>95.2</i> )	97.4 (97.1)	95.1 ( <i>95.3</i> )	91.6 ( <i>91.4</i> )
Q76	Midlands & East (North Midlands)	9	95.6 ( <i>96.0</i> )	97.6 (97.4)	95.6 ( <i>95.7</i> )	93.8 (91.9)
Q77	Midlands & East (West Midlands)	12	93.1 ( <i>94.0</i> )	95.2 ( <i>96.5</i> )	93.3 ( <i>94.0</i> )	89.8 (89.6)
Q78	Midlands & East (Central Midlands)	8	96.3 (96.3)	97.4 ( <i>97.5</i> )	96.3 (96.2)	94.0 (93.2)
Q79	Midlands & East (East)	10	95.3 (95.5)	97.1 ( <i>96.5</i> )	95.4 (95.6)	92.3 (91.6)
Q80	South (South West)	8	94.2 (94.6)	96.2 (96.8)	94.5 (94.9)	88.5 (88.6)
Q81	South (South East)	8	88.9 (89.2)	92.9 (91.6)	89.4 (89.6)	85.1 ( <i>85.1</i> )
Q82	South (South Central)	8	94.7 ( <i>95.4</i> )	95.7 ( <i>96.5</i> )	94.6 (95.2)	91.3 (91.9)

<sup>†</sup> Primary Care Trusts/health boards.

Table 1b. Completed UK primary immunisations at 12 months NHS England Area Teams: January to March 2016 (October to December 2015)

NHS England Local team code*	English Area Team (AT code)	No. of former PCT's	DTaP/IPV/Hib3%	MenC% <sup>1</sup>	PCV2%	Rota2% <sup>2</sup>
Q70	Wessex (Q70)	6	95.7 ( <i>95.7</i> )	96.8 (96.7)	95.3 (95.7)	94.3 (93.4)
Q71	London (Q71)	31	88.4 (89.6)	91.0 (90.6)	88.6 (89.7)	85.1 (86.3)
	N Yorkshire and Humber (Q50)	5	94.7 ( <i>94.6</i> )	96.5 (97. <i>4</i> )	95.1 ( <i>95.9</i> )	92.6 (93.0)
Q72	S Yorkshire and Bassetlaw (Q51)	5	95.7 (95.2)	96.6 (96.7)	96.1( <i>94.5</i> )	93.6 (92.0)
	W Yorkshire (Q52)	5	95.4 (95.9)	97.2 (96.7)	95.3 ( <i>95.7</i> )	92.2 (92.1)
070	Greater Manchester (Q46)	10	94.1 ( <i>94.7</i> )	96.5 (96.7)	94.0 (95.1)	80.3 (81.2)
Q73	Lancashire (Q47)	5	92.0 ( <i>92.0</i> )	91.1 (9 <i>1.5</i> )	92.5 ( <i>93.0</i> )	n/a <i>(n/a³)</i>
074	Durham, Darlington and Tees (Q45)	6	96.9 ( <i>96.7</i> )	98.0 (98. <i>0</i> )	96.9 (96.7)	97.1 (96.0)
Q74	Cumbria, Northumberland, Tyne and Wear (Q49)	7	96.0 ( <i>97.0</i> )	96.7 (97.1)	96.8 ( <i>96.4</i> )	93.0 (91.7)
075	Cheshire, Warrington and Wirral (Q44)	4	96.2 (96.5)	98.1 (97. <i>4</i> )	96.2 ( <i>96.4</i> )	93.8 (93.2)
Q75	Merseyside (Q48)	4	94.2 ( <i>94.0</i> )	96.8 (96.8)	94.0 (94.3)	89.6 <i>(89.7)</i>
076	Derbyshire and Nottinghamshire (Q55)	4	95.1 ( <i>95.5</i> )	97.4 ( <i>97.0</i> )	95.1 ( <i>94.9</i> )	93.2 (90.0)
Q76	Shropshire and Staffordshire (Q60)	5	96.4 (96.8)	97.8 (97.8)	96.2 (96.6)	94.4 (93.5)
077	Arden, Herefordshire and Worcestershire (Q53)	4	96.7 ( <i>96.7</i> )	98.0 (97.8)	96.6 (96.5)	93.7 (92.9)
Q77	Birmingham and the Black Country (Q54)	8	91.2 (92.5)	93.5 (95.7)	91.5 (92.7)	87.5 (87.5)
Q78	Hertfordshire and the S Midlands (Q58)	5	96.6 ( <i>96.5</i> )	97.4 (97.3)	96.6 ( <i>96.4</i> )	94.2 (93.6)
Q70	Leicestershire and Lincolnshire (Q59)	3	95.7 ( <i>96.0</i> )	97.3 <i>(97.7</i> )	95.8 (96.0)	93.6 (92.4)
Q79	East Anglia (Q56)	5	95.5 ( <i>95.4</i> )	97.2 (96.2)	95.6 ( <i>95.5</i> )	92.5 (90.9)
Q/9	Essex (Q57)	5	94.9 ( <i>95.7</i> )	97.1 (96.8)	95.2 (95.7)	92.1 (92.3)
Q80	Bristol, N Somerset, Somerset and S Gloucestershire (Q65)	4	95.3 ( <i>95.5</i> )	96.8 ( <i>97.0</i> )	95.6 (95.8)	90.1 (89.4)
	Devon, Cornwall, Isles of Scilly (Q66)	4	93.1 ( <i>93.7</i> )	95.6 ( <i>96.5</i> )	93.4 (94.0)	86.8 (87.9)
	Kent and Medway (Q67)	3	89.4 (90.7)	93.0 (92.9)	89.7 ( <i>90.4</i> )	84.5 (85.5)
Q81	Surrey and Sussex (Q68)	5	88.6 (88.1)	92.8 (90.6)	89.2 (89.1)	85.7 (84.8)
Q82	Bath, Gloucestershire, Swindon and Wiltshire (Q64)	4	94.2 (95.0)	95.8 (96.6)	94.4 (94.9)	91.6 (91.0)
	Thames Valley (Q69)	4	95.0 ( <i>95.7</i> )	95.7 (96. <i>4</i> )	94.8 (95.4)	91.1 <i>(91.4)</i>

n/a: accurate estimate not available (see commentary above)

<sup>1.</sup> Based on coverage data from 146/151 former PCTs, see full tables <a href="here">here</a>

<sup>2.</sup> Based on coverage data from 128/151 former PCTs, see full tables <a href="here">here</a>

<sup>3.</sup> Data quality issues reported

<sup>\*</sup> See table 1a for key to local team organisational code

Table 2a. Completed UK primary immunisations at 24 months by country and NHS England local team: January to March 2016 (*October to December 2015*)

Country	No. of former PCTs/ HBs†	DTaP/IPV/Hib3 %	PCV booster	Hib/MenC %	MMR1 %
United Kingdom	176	95.7 ( <i>95.7</i> )	92.0 (92.3)	92.1 (92.2)	92.1 (92.0)
Wales	7	97.7 (97.6)	95.9 (95.6)	95.0 ( <i>95.0</i> )	95.5 ( <i>95.2</i> )
Northern Ireland	4	98.3 ( <i>98.3</i> )	96.3 (96.0)	95.9 ( <i>95.9</i> )	95.9 <i>(95.5)</i>
Scotland	14	97.8 (98.1)	95.2 (95.6)	95.4 ( <i>95.7</i> )	95.0 <i>(95.6)</i>
England (Total)	151	95.3 ( <i>95.4</i> )	91.3 (91.7)	91.5 ( <i>91.7</i> )	91.5 (91.4)
NHS England local teams*					
Q70	6	96.3 (96.3)	93.9 (93.9)	93.8 (93.9)	93.8 (93.5)
Q71	13	92.1 (92.1)	84.8 (85.2)	85.1 (85.2)	85.3 ( <i>85.0</i> )
Q72	15	96.6 ( <i>97.0</i> )	94.3 ( <i>94.4</i> )	94.2 (94.3)	94.0 (93.7)
Q73	15	94.5 ( <i>94.6</i> )	91.0 (92.3)	90.9 (92.0)	91.2 (92.1)
Q74	13	97.7 ( <i>97.6</i> )	94.4 ( <i>95.4</i> )	95.5 (96.1)	95.3 (95.1)
Q75	8	97.1 (97.2)	92.8 (93.4)	94.0 (93.8)	93.8 (93.5)
Q76	9	97.6 (97.2)	94.8 ( <i>94.4</i> )	94.9 ( <i>94.3</i> )	94.7 (94.1)
Q77	12	96.3 ( <i>95.9</i> )	92.9 ( <i>92.4</i> )	93.0 (92.5)	93.0 (92.4)
Q78	8	97.2 (97.1)	94.7 (94.9)	94.8 ( <i>94.7</i> )	94.5 ( <i>94.4</i> )
Q79	10	96.3 (96.4)	93.6 (93.7)	93.6 ( <i>93.6</i> )	93.3 (93.2)
Q80	8	96.1 (96.9)	92.6 (93.4)	92.6 (93.2)	92.4 (93.1)
Q81	8	92.0 ( <i>91.4</i> )	87.1 ( <i>87.0</i> )	87.6 (86.9)	87.6 (86.9)
Q82	8	96.5 ( <i>96.6</i> )	92.9 (92.9)	93.3 (92.9)	93.1 (92.8)

<sup>\*</sup> See table 1a for key to local team organisational code.

<sup>†</sup> Primary Care Trusts/health boards

Table 2b. Completed primary immunisations at 24 months by NHS England Area Teams: January to March 2016 (October to December 2015)

NHS England Local Team Code*	Area Team code*	No. of former PCTs†	DTaP/IPV/Hib3 %	PCV booster	Hib/MenC %	MMR1 %
Q70	Q70	6	96.3 ( <i>96.3</i> )	93.9 (93.9)	93.8 (93.9)	93.8 ( <i>93.5</i> )
Q71	Q71	31	92.1 (92.1)	84.8 (85.2)	85.1 ( <i>85.2</i> )	85.3 ( <i>85.0</i> )
	Q50	5	95.9 ( <i>96.9</i> )	94.4 (95.1)	94.1 ( <i>94.4</i> )	93.9 (94.1)
Q72	Q51	5	96.4 ( <i>96.5</i> )	92.0 (93.3)	92.6 (93. <i>4</i> )	92.6 (92.1)
	Q52	5	97.2 ( <i>97.4</i> )	95.3 ( <i>94.7</i> )	95.2 (94.8)	95.0 ( <i>94.4</i> )
070	Q46	10	96.2 ( <i>96.8</i> )	92.5 (94.0)	92.2 (93.6)	93.0 ( <i>93.7</i> )
Q73	Q47	5	90.9 ( <i>90.0</i> )	87.7 (88.6)	87.9 ( <i>88.7</i> )	87.5 ( <i>88.5</i> )
074	Q45	6	97.9 (97.9)	93.1 ( <i>95.7</i> )	95.8 (96.9)	95.0 ( <i>94.9</i> )
Q74	Q49	7	97.7 (97.5)	95.2 (95.2)	95.4 ( <i>95.5</i> )	95.4 (95.2)
075	Q44	4	97.3 ( <i>97.4</i> )	92.8 (93.5)	94.7 (94.9)	94.9 ( <i>94.5</i> )
Q75	Q48	4	96.8 (96.9)	92.9 (93.2)	93.3 (92.7)	92.6 ( <i>92.6</i> )
070	Q55	4	97.6 (97.2)	94.0 (94.5)	94.1 ( <i>94.1</i> )	93.9 (93.9)
Q76	Q60	5	97.8 ( <i>97.3</i> )	95.9 ( <i>94.4</i> )	95.9 ( <i>94.5</i> )	95.7 ( <i>94.4</i> )
077	Q53	4	98.1 ( <i>97.9</i> )	95.4 (94.9)	95.8 (95.2)	96.3 ( <i>95.8</i> )
Q77	Q54	8	95.4 (94.8)	91.7 (91.1)	91.5 ( <i>91.0</i> )	91.4 (90.6)
0.70	Q58	5	97.3 ( <i>97.5</i> )	95.2 (95.5)	95.3 ( <i>95.4</i> )	95.0 ( <i>94.7</i> )
Q78	Q59	3	97.1 ( <i>96.4</i> )	93.8 (93.7)	94.0 ( <i>93.4</i> )	93.8 (93.9)
070	Q56	5	96.0 (96.2)	93.3 (93.5)	93.3 (93.4)	93.4 (93.1)
Q79	Q57	5	96.6 ( <i>96.6</i> )	93.9 (93.9)	94.0 (93.9)	93.1 ( <i>93.3</i> )
000	Q65	4	96.6 ( <i>96.6</i> )	92.8 (93.3)	93.0 (93.3)	92.4 (92.9)
Q80	Q66	4	95.7 (97.1)	92.5 (93.5)	92.3 (93.1)	92.4 (93.4)
004	Q67	3	94.5 (93.1)	88.3 (88.8)	88.4 (89.1)	88.1 ( <i>88.5</i> )
Q81	Q68	5	90.3 (90.2)	86.1 ( <i>85.7</i> )	87.0 ( <i>85.5</i> )	87.2 ( <i>85.9</i> )
000	Q64	4	96.5 (96.9)	92.7 (92.8)	92.8 (93.0)	92.5 (92.5)
Q82	Q69	4	96.6 (96.4)	93.0 (92.9)	93.6 (92.8)	93.4 (92.9)

 $<sup>^{\</sup>star}$  See table 1a and 1b for keys to NHS England local team/Area Team organisational code.

<sup>†</sup> Former Primary Care Trusts

Table 3a. Completed UK primary immunisations and boosters at five years by country and NHS England local team: January to March 2016 (*October to December 2015*)

	Number of PCTs/HBs†	Prin	nary	Booster			
Country		DTaP/IPV Hib3%	MMR1%	MMR2%	DTaP/IPV% <sup>\$</sup>	Hib/ MenC%	
United Kingdom	176	96.0 (96.1)	95.2 (94.9)	88.8 ( <i>88.3</i> )	87.6 <sup>\$</sup> ( <i>88.2</i> ) <sup>\$</sup>	93.2 (93.6)	
Wales	7	96.2 (96.6)	97.0 (97.1)	91.4 (9 <i>1.9</i> )	92.4 (92.3)	94.1 ( <i>94.0</i> )	
N. Ireland	4	97.9 (98.3)	97.4 ( <i>97.8</i> )	93.4 (93.1)	94.1 (93.6)	96.7 (97.1)	
Scotland	14	98.3 ( <i>98.0</i> )	97.3 (97.2)	92.9 (92.9)	93.5 (93.5)	96.4 (95.9)	
England (Total)	151	95.7 ( <i>95.8</i> )	94.9 (94.5)	88.2 (87.6)	86.7 <sup>\$</sup> ( <i>87.4</i> ) <sup>\$</sup>	92.8 (93.3)	
English Local Teams							
Q70	6	96.4 ( <i>95.8</i> )	95.3 (94.3)	90.3 (90.2)	88.9 (90.6)	94.1 (93.8)	
Q71	31	92.3 (92.6)	90.6 (90.5)	80.4 (77.6)	77.4 (76.5)	88.2 ( <i>88.7</i> )	
Q72	15	97.2 ( <i>97.0</i> )	96.8 (95.9)	91.6 (90.8)	90.5 (91.5)	94.3 (95.3)	
Q73	15	96.2 ( <i>96.7</i> )	96.2 ( <i>96.4</i> )	87.7 ( <i>88.4</i> )	86.6 (86.8)	93.3 (94.0)	
Q74	13	98.3 (98.1)	97.6 (97.1)	94.5 (93.1)	93.6 ( <i>93.6</i> )	96.5 (96.4)	
Q75	8	97.0 (97.1)	96.8 (96.8)	91.0 ( <i>90.9</i> )	91.5 ( <i>91.5</i> )	94.9 (93.9)	
Q76	9	96.9 ( <i>97.5</i> )	97.2 (96.3)	91.1 (91.0)	89.4 (91.4)	95.4 (95.9)	
Q77	12	96.7 (96.2)	96.2 (95.6)	88.9 (88.8)	88.1 ( <i>88.1</i> )	93.3 ( <i>93.4</i> )	
Q78	8	97.1 ( <i>97.4</i> )	96.1 ( <i>95.8</i> )	91.2 (91.8)	91.3 (92.6)	93.7 (95.2)	
Q79	10	96.5 (96.3)	95.6 ( <i>94.4</i> )	90.6 (90.1)	89.8 (91.0)	93.6 (94.2)	
Q80	8	97.3 (97.4)	96.0 (96.5)	90.5 (90.7)	89.5 ( <i>87.5</i> )	95.4 (95.7)	
Q81	8	92.3 (92.4)	91.9 ( <i>90.0</i> )	83.0 (82.1)	79.7 (82.0)	89.0 (90.1)	
Q82	8	96.7 ( <i>96.7</i> )	95.8 ( <i>95.8</i> )	90.5 (90.6)	88.9 (91.0)	94.4 ( <i>94.6</i> )	

<sup>\*</sup> See table 1a for key to NHS England local team organisational code.

<sup>\$</sup> The decrease in coverage of the pre-school booster (DTaP/IPV) some English area teams is thought to be a data quality issue due to an inconsistency between the information provided by PHE in the COVER user guidance and the information standard and may have resulted in the data extraction of one of the main Child Health Information Systems (CHIS) under estimating coverage of this booster. This is currently being investigated and the English and UK coverage estimates of this vaccine should be interpreted with caution

### 3b. Completed primary immunisations and boosters at five years by NHS England Area Team, January to March 2016 (*October to December 2015*)

NHS England	Area Team (AT) code*	No. of former PCTs† in AT	Prim	nary	Booster			
local team Code*			DTaP/IPV Hib3 %	MMR1 %	MMR2 %	DTaP/ IPV %\$	Hib/ MenC	
Q70	Q70	6	96.4 (95.8)	95.3 (94.3)	90.3 (90.2)	88.9 (90.6)	94.1 (93.8)	
Q71	Q71	31	92.3 (92.6)	90.6 (90.5)	80.4 (77.6)	77.4 ( <i>76.5</i> )	88.2 (88.7)	
	Q50	5	97.2 (96.6)	96.6 (95.4)	91.4 (90.5)	91.7 (90.8)	94.7 ( <i>94.4</i> )	
Q72	Q51	5	96.9 ( <i>96.4</i> )	96.5 (95.0)	91.8 (89.2)	88.8 (89.8)	93.2 ( <i>94.5</i> )	
	Q52	5	97.4 (97.5)	97.1 ( <i>96.7</i> )	91.6 ( <i>91.9</i> )	90.8 (92.8)	94.8 (96.2)	
070	Q46	10	96.8 (97.4)	96.5 (96.9)	90.0 (91.2)	89.1 ( <i>89.8</i> )	93.8 (94.4)	
Q73	Q47	5	95.1 ( <i>95.4</i> )	95.6 (95.4)	83.1 (82.5)	81.4 (80.6)	92.3 (93.1)	
074	Q45	6	98.5 (98.1)	97.4 (97.0)	95.4 (94.1)	95.3 (93.9)	97.4 (96.9)	
Q74	Q49	7	98.2 (98.1)	97.7 (97.2)	94.0 (92.5)	92.5 (93.3)	95.9 (96.7)	
075	Q44	4	97.2 (97.0)	97.0 (96.6)	91.9 ( <i>91.4</i> )	92.6 (92.2)	94.6 ( <i>94.7</i> )	
Q75	Q48	4	96.7 (97.1)	96.7 (97.0)	90.1 (90.3)	90.4 (90.7)	95.1 ( <i>93.0</i> )	
070	Q55	4	97.9 (97.5)	97.6 (96.2)	90.0 (90.6)	88.7 (91.0)	94.8 ( <i>95.7</i> )	
Q76	Q60	5	95.6 ( <i>97.6</i> )	96.7 (96.6)	92.4 (91.6)	90.3 ( <i>92.0</i> )	96.2 (96.0)	
077	Q53	4	98.4 (97.6)	98.3 (97.3)	93.8 (93.1)	94.7 (92.9)	95.8 (95.1)	
Q77	Q54	8	95.7 (95.5)	95.0 (94.6)	86.2 (86.5)	84.6 ( <i>85.5</i> )	91.9 ( <i>92.4</i> )	
070	Q58	5	97.1 ( <i>97.4</i> )	96.1 ( <i>95.4</i> )	91.5 (92.0)	91.9 (92.8)	94.3 ( <i>95.7</i> )	
Q78	Q59	3	97.0 (97.5)	96.2 (96.6)	90.5 (91.4)	90.2 (92.2)	92.6 (94.2)	
	Q56	5	96.2 (95.6)	95.2 (93.8)	90.8 (89.4)	89.0 ( <i>90.4</i> )	92.2 (92.9)	
Q79	Q57	5	96.9 ( <i>97.0</i> )	96.1 ( <i>95.1</i> )	90.3 (91.0)	91.0 (91.8)	95.5 (95.9)	
	Q65	4	97.6 ( <i>97.8</i> )	96.1 ( <i>96.7</i> )	89.4 (90.1)	91.8 (88.3)	95.9 (96.3)	
Q80	Q66	4	97.1 ( <i>97.1</i> )	95.9 (96.3)	91.4 (91.3)	87.4 (86.7)	95.0 (95.2)	
	Q67	3	95.4 ( <i>95.4</i> )	94.7 (93.2)	85.4 ( <i>82.4</i> )	82.4 (82.9)	92.4 (93.7)	
Q81	Q68	5	90.2 (90.5)	89.9 ( <i>88.0</i> )	81.4 (81.9)	77.9 (81 <i>.4</i> )	86.8 (87.7)	
	Q64	4	96.9 ( <i>96.9</i> )	96.4 (95.9)	90.7 ( <i>90.7</i> )	87.6 ( <i>92.6</i> )	94.1 (95.3)	
Q82	Q69	4	96.6 (96.6)	95.4 (95.8)	90.4 (90.2)	89.8 (90.6)	94.6 (93.8)	

 $<sup>^{\</sup>star}$  See table 1a and 1b for keys to NHS England local team/Area Team organisational code .

<sup>†</sup> Former Primary Care Trusts.

<sup>\$</sup> The decrease in coverage of the pre-school booster (DTaP/IPV) some English area teams is thought to be a data quality issue due to an inconsistency between the information provided by PHE in the COVER user guidance and the information standard and may have resulted in the data extraction of one of the main Child Health Information Systems (CHIS) under estimating coverage of this booster. This is currently being investigated and the English and UK coverage estimates of this vaccine should be interpreted with caution

Table 4. Neonatal hepatitis B coverage in England by NHS England Area Team January to March 2016 (October to December 2015)

Area Team (AT code)*	Former PCT returns with 12 month data	12 month deno- minator	% Coverage at 12 months	Former PCT returns with 24 month data	24 month deno- minator	% Coverage at 24 months
Q44	2 of 4	-	<b>-</b> (100)	2 of 4	3	100 ( <i>50</i> )
Q45	6 of 6	8	100 (87)	6 of 6	-	0 (100)
Q46	9 of 10	50	78 ( <i>64</i> )	9 of 10	119	39 (37)
Q47	0 of 5	-	- (-)	0 of 5	- (-)	- (-)
Q48	0 of 4	_	- (-)	0 of 4	-	<b>-</b> (33)
Q49	7 of 7	3	67 (83)	7 of 7	8	100 (86)
Q50	5 of 5	6	83 (100)	5 of 5	7	29 (43)
Q51	5 of 5	19	100 ( <i>100</i> )	4 of 5	18	100 (100)
Q52	5 of 5	22	95 (97)	5 of 5	22	100 (87)
Q53	2 of 4	12	100 ( <i>100</i> )	1 of 4	11	100 (100)
Q54	6 of 8	30	97 (100)	6 of 8	13	46 (71)
Q55	4 of 4	8	100 ( <i>100</i> )	4 of 4	12	83 (100)
Q56	5 of 5	6	83 (80)	5 of 5	7	100 (100)
Q57	3 of 5	5	100 ( <i>100</i> )	2 of 5	4	75 (100)
Q58	5 of 5	24	100 ( <i>100</i> )	5 of 5	29	97 (100)
Q59	2 of 3	13	92 ( <i>0</i> )	2 of 3	7	86 (100)
Q60	5 of 5	5	100 ( <i>100</i> )	5 of 5	6	83 ( <i>75</i> )
Q64	4 of 4	8	100 ( <i>100</i> )	4 of 4	8	88 (100)
Q65	4 of 4	6	100 ( <i>100</i> )	4 of 4	4	100 (82)
Q66	4 of 4	1	100 ( <i>100</i> )	4 of 4	-	<b>-</b> (100)
Q67	3 of 3	17	100 ( <i>100</i> )	3 of 3	6	100 ( <i>100</i> )
Q68	5 of 5	10	100 ( <i>100</i> )	5 of 5	6	83 (40)
Q69	4 of 4	25	88 (82)	4 of 4	23	83 (73)
Q70	6 of 6	33	100 ( <i>100</i> )	5 of 6	14	71 (100)
Q71	26 of 31	170	85 (89)	25 of 31	168	69 (77)
England	127 of 151	481	91 (90)	122 of 151	495	69 (73)

<sup>\*</sup> See table 1b for key to NHS England Area Team organisational code

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