



## Infection report

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### Quarterly vaccination coverage statistics for children aged up to five years in the UK (COVER programme): April to June 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. Analyses are presented at NHS England local and area team, country and UK levels.

#### Key points for the first quarterly report for 2016/17

- Quarterly UK coverage for DTaP/IPV/Hib3 at one year decreased by 0.1% to 93.6 compared to the previous quarter (January to March 2016). This is the second quarterly evaluation below 94% since July to September 2010. England continues to be the only UK country with coverage below the WHO 95% target, although 5 out of the 13 NHS England local teams achieved the target.
- These findings continue the decreasing trends in coverage highlighted in the recently published 2015-16 annual immunisation statistics for England. Vaccine coverage for most childhood vaccines evaluated 12 and 24 months of ages decreased for the third consecutive year, a drop of around 1% compared to 2012-13. MMR at 24 months has decreased 0.8% since its 2013/14 peak
- UK level data for completed two-dose rotavirus vaccine evaluated at one year decreased by 0.3% from the previous quarter to 90.1%, with small decreases observed in all countries.
- Coverage is above the WHO 95% target for all vaccines evaluated at two years of age in all devolved administrations. In England only DTaP/IPV/Hib3 coverage achieved 95%, and coverage for the three vaccines offered in the second year of life (PCV booster, Hib/MenC booster and MMR1) remained around 91.4%.
- UK coverage of MMR1 at 5 years old continues to exceed the WHO target of 95%, increasing 0.2% to 95.4%. In England, coverage increased by 0.1% to 95% and all three devolved administrations achieved at least 97%. The recently published [2015-16 annual immunisation statistics](#) have also noted that, coverage at 5 years which predominantly reflects vaccinations given more than two years ago, continues to increase for all vaccines except for the DTaP/IPV booster doses offered from three and four months of age.
- The [Tuberculosis in England 2016 report](#) presenting data to end of 2015 was published this month. It included experimental annual 2015-16 BCG coverage figures for local authorities running a universal neonatal programme, collected as part of the annual 2015-16 COVER programme in England using data from Child Health Information Systems (CHISs). In this quarterly COVER report BCG coverage data for the first quarter of 2016-17 are presented alongside the annual data showing the potential impact of the BCG vaccine shortage. Nine of the

10 local authorities with a TB incidence over 40 per 100,000 in London reported coverage ranging from 22.3% to 92.6%.

## 1. Cohort definitions for April to June 2016

Children who reached their first birthday in the quarter (born April to June 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 April to June 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 May and July 2015.

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

Children born to hepatitis B surface antigen (HBsAg) positive mothers, who reached their first birthday in this quarter (born April to June 2015) were scheduled to receive an initial dose of hepatitis B vaccine at birth, with further doses at one and two months of age, and those who reached their second birthday in this quarter (born April to June 2014) were scheduled to receive a four dose at one year of age.

Children born in areas where there is a universal neonatal BCG programme (i.e. TB incidence  $\geq 40/100,000$ ) who reach their first birthday in this quarter (born April to June 2015) were scheduled to receive BCG at birth.

Appendix A describes coverage evaluated at the first, second and fifth birthdays by country and NHS England local and area teams.

## 2. 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) [2] by CHIS suppliers for the vaccination schedule changes introduced in 2013 is almost complete, with MenC coverage data at 12 months available for all 152 local authorities (LAs) and 12 month rotavirus coverage data for all but eight LAs. Due to limitations in the current CHIS IT infrastructure, the requested change to collecting COVER data by resident rather than responsible LA population has been postponed, and for the foreseeable future COVER will only be requesting CHISs to submit data by responsible LA population. This is the first quarterly COVER report to publish data by LA responsible population and individual LA data, with relevant caveats, are available [here](#).

## 3. 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 eligible for MenB immunisation. MenB coverage for the cohorts evaluated at the end of August 2016 was 95.8% for one dose and 87.8% for two doses by 26 weeks of age and 94.3% and 91.5% for one and two doses respectively at 52 weeks [4].

## 4. Results

### 4.1 Coverage at 12 months

Compared to the previous quarter (January-March 2016), UK coverage in April to June 2016 decreased by 0.3% for rotavirus to 90.1%, by 0.2% for PCV2 to 93.7%, and by 0.1% for DTaP/IPV/Hib3 to 93.6%. MenC coverage remained at 95.5% (table 1a) [5]. All devolved administrations achieved above 96% for DTaP/IPV/Hib3, PCV2 and MenC. In England coverage was least 93% for these three vaccines and 12 out of 25 ATs reached the 95% target at 12 months, with all ATs achieving at least 90% for all three vaccines except Kent and Medway, and London (table 1a).

### 4.2 Coverage at 24 months

UK coverage for the primary course (three doses) of DTaP/IPV/Hib at two years of age decreased 0.2% to 95.5% compared to the previous quarter (table 2a) [5]. Each of the four countries achieved the 95% WHO target. Lancashire (Q47), North Yorkshire and Humber (Q50), Kent and Medway (Q67), Surrey and Sussex (Q68) and London (Q71) are the only ATs with DTaP/IPV/Hib3 coverage below 95% (table 2b). UK coverage for Hib/MenC and PCV boosters remained at 92.1% and 92.0% respectively (table 2a) [5].

UK MMR coverage evaluated at two years decreased by 0.1% to 92%, back to the level recorded in the October to December 2015 quarter [6]. Country-level coverage increased by 0.1% and 0.2% in Scotland and Wales respectively to 95.7%, but decreased by 0.9% to 95.0% in Northern Ireland and by 0.1% to 91.4% in England, (table 2a). Four English ATs achieved the WHO target of 95% (Cheshire, Warrington and Wirral (Q44), Durham, Darlington and Tees (Q45), Arden, Herefordshire and Worcestershire and Hertfordshire (Q53) and the South Midlands (Q58), table 2b).

### 4.3 Coverage at five years

UK coverage evaluated at five years for both DTaP/IPV/Hib3 and MMR1 exceeded the WHO target of 95%; DTaP/IPV/Hib3 increased by 0.2% compared to the previous quarter to 96.2% and MMR1 increasing 0.2% to 95.4% (table 3a) [5]. MMR1 coverage in Scotland and Wales achieved at least 97%, in Northern Ireland reached 98%. In England, MMR1 coverage was 95% overall with only two of the 25 ATs in England (London, Surrey and Sussex) failed to achieve this level (table 3b). UK MMR2 coverage decreased by 0.6% to 88.2%, and is now back to a similar level reported for the October to December 2015 quarter (table 3a) [5, 6].

UK coverage of the pre-school booster (DTaP/IPV) decreased by 0.6% to 87.6% with decreases recorded in all countries, although the greatest drop was in England (down 0.8% to 85.9%). In April 2016, English CHSs were asked to follow the recommended minimum age for this booster vaccine, 3 years and 4 months, to calculate coverage as specified in the COVER ISN [2]. Doses given prior to this age are no longer included in vaccine coverage calculations. This may have contributed to the recorded decline in coverage in areas where some children are routinely receiving the vaccine earlier. It is

recommended that all call recall systems standardise on scheduling the pre-school booster from 3 years and 4 months.

#### **4.4. Neonatal hepatitis B vaccine coverage in England**

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 April to June 2015), and coverage of four doses of vaccine in infants who reached two years of age (i.e. those born between April to June 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 decreased by 4% to 87% and decreased by 6% to 63% for those receiving four doses by 24 months (table 4) [5].

#### **4.5. BCG vaccine coverage in England**

The BCG immunisation programme across England is based on risk of exposure to TB. The vaccine is recommended at birth for all children that live in an area that has a TB incidence of higher than 40 per 100,000 population. Neonatal BCG has been included in the data extraction template from local CHISs since April 2015, as part of the COVER (Cover of vaccination evaluated rapidly) programme. This provides an opportunity to estimate BCG vaccine at 12 months for LAs offering a universal neonatal programme. For the first time, the 2016 annual TB report for England (published in September 2016) includes experimental annual 2015-16 BCG coverage figures for local authorities running a universal neonatal programme, collected as part of the annual 2015-16 COVER programme in England. This quarterly COVER report presents BCG coverage data for the first quarter of 2016-17 alongside the 2015-16 annual data for comparison. There are currently 11 LAs in England with a high incidence of TB, of which 10 are running a universal programme. Due to large cross-boundary movement, there are a further 25 local authorities in London and one outside London that offer a universal vaccination. Coverage estimates for children born between April and June 2015 in LAs with high TB incidence ranged from 22.3% to 92.6%. In the remaining 24 London LAs, coverage ranged from 3.9% to 85%.

COVER collections for BCG data have only recently been established and data are of variable quality. Estimates of low coverage may therefore in part be reflecting poor data quality, and should be interpreted with caution. A shortage of BCG vaccine since May 2015 has likely impacted on coverage in 2015-16, and more so on coverage between April-June 2016, which refers to those born between April and June 2015.

## Relevant links for country-specific coverage data

**Quarterly England data:** <https://www.gov.uk/government/collections/vaccine-uptake#cover-of-vaccination-evaluated-rapidly-programme>

**Annual England data:** <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/sites3/page.cfm?orgid=457&pid=54144/>

### **COVER submission and publication dates:**

<https://www.gov.uk/government/publications/vaccine-coverage-statistics-publication-dates>

### **Other relevant links**

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

## References

1. 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. <https://www.gov.uk/government/publications/cover-of-vaccination-evaluated-rapidly-cover-programme-information-standards>
  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. <https://www.gov.uk/government/publications/menc-vaccination-schedule-planned-changes-from-july-2016>
  4. Public Health England (2016). Preliminary vaccine coverage estimates for the new meningococcal B (MenB) immunisation programme for England, update to the end of August 2016. Available at <https://www.gov.uk/government/publications/meningococcal-b-immunisation-programme-vaccine-coverage-estimates>
  5. Public Health England (2016). Vaccination coverage statistics for children up to the age of five years in the United Kingdom, January to March 2016. HPR 10 (20). Available at <https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-cover-programme-2015-to-2016-quarterly-data>
  6. 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 <https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-cover-programme-2015-to-2016-quarterly-data>
  7. Public Health England (2016). Tuberculosis in England 2016 report: presenting data to end of 2015. Available at <https://www.gov.uk/government/publications/tuberculosis-in-england-annual-report>
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## Appendix: Tables

**Table 1a. Completed UK primary immunisations at 12 months by country and English Local Teams: April to June 2016 (*January to March 2016*<sup>^</sup>)**

|                | Country                              | No. of LAs/HBs <sup>†</sup> | DTaP/IPV/Hi b3 % | MenC%       | PCV2%       | Rota2%      |
|----------------|--------------------------------------|-----------------------------|------------------|-------------|-------------|-------------|
|                | United Kingdom                       | 177                         | 93.6 (93.7)      | 95.5 (95.5) | 93.7 (93.9) | 90.1 (90.4) |
|                | Wales                                | 7                           | 96.2 (96.3)      | 97.2 (97.6) | 96.1 (96.3) | 93.8 (93.9) |
|                | Northern Ireland                     | 4                           | 96.7 (97.1)      | 97.8 (98.4) | 96.7 (97.1) | 94.2 (94.8) |
|                | Scotland                             | 14                          | 97.1 (97.0)      | 97.8 (97.7) | 97.1 (97.1) | 93.2 (93.4) |
|                | England (Total)                      | 152                         | 93.0 (93.2)      | 95.2 (95.1) | 93.1 (93.4) | 89.5 (89.7) |
| <b>LT code</b> | <b>NHS England Local Teams</b>       |                             |                  |             |             |             |
| Q70            | Wessex                               | 7                           | 95.4 (95.7)      | 96.3 (96.8) | 95.1 (95.3) | 93.7 (94.3) |
| Q71            | London                               | 33                          | 88.8 (88.4)      | 90.5 (91.0) | 89.0 (88.6) | 86.6 (85.1) |
| Q72            | North (Yorkshire & Humber)           | 15                          | 95.4 (95.3)      | 97.3 (96.9) | 95.3 (95.5) | 92.6 (92.6) |
| Q73            | North (Lancashire & Grt. Manchester) | 13                          | 93.8 (93.6)      | 96.4 (94.6) | 93.9 (93.6) | 82.6 (80.3) |
| Q74            | North (Cumbria & North East)         | 13                          | 94.6 (96.4)      | 96.9 (97.2) | 94.6 (96.9) | 92.6 (94.0) |
| Q75            | North (Cheshire & Merseyside)        | 9                           | 94.8 (95.1)      | 96.7 (97.4) | 94.8 (95.1) | 91.1 (91.6) |
| Q76            | Midlands & East (North Midlands)     | 8                           | 94.7 (95.6)      | 96.5 (97.6) | 94.8 (95.6) | 92.3 (93.8) |
| Q77            | Midlands & East (West Midlands)      | 10                          | 92.4 (93.1)      | 95.5 (95.2) | 92.6 (93.3) | 89.0 (89.8) |
| Q78            | Midlands & East (Central Midlands)   | 10                          | 95.7 (96.3)      | 97.3 (97.4) | 95.8 (96.3) | 93.2 (94.0) |
| Q79            | Midlands & East (East)               | 7                           | 95.0 (95.3)      | 97.2 (97.1) | 95.3 (95.4) | 91.8 (92.3) |
| Q80            | South (South West)                   | 9                           | 93.7 (94.2)      | 96.0 (96.2) | 93.9 (94.5) | 87.8 (88.5) |
| Q81            | South (South East)                   | 6                           | 88.8 (88.9)      | 93.1 (92.9) | 89.5 (89.4) | 85.9 (85.1) |
| Q82            | South (South Central)                | 12                          | 95.2 (94.7)      | 96.3 (95.7) | 94.9 (94.6) | 92.2 (91.3) |

<sup>†</sup> Local Authorities /health boards.

<sup>^</sup> Former area team and local team aggregates are based on former PCT data

**Table 1b. Completed UK primary immunisations at 12 months NHS England Area Teams: April to June 2016 (January to March 2016<sup>^</sup>)**

| NHS England Local team code* | English Area Team (AT code)                               | No. of former LA's | DTaP/IPV/Hib 3% | MenC%       | PCV2%       | Rota2% <sup>1</sup>      |
|------------------------------|---|--------------------|-----------------|-------------|-------------|--------------------------|
| Q70                          | Wessex (Q70)  | 7                  | 95.4 (95.7)     | 96.3 (96.8) | 95.1 (95.3) | 93.7 (94.3)              |
| Q71                          | London (Q71)  | 33                 | 88.8 (88.4)     | 90.5 (91.0) | 89.0 (88.6) | 86.6 (85.1)              |
| Q72                          | N. Yorkshire and Humber (Q50)                             | 6                  | 95.9 (94.7)     | 97.6 (96.5) | 96.0 (95.1) | 94.4 (92.6)              |
|                              | S. Yorkshire and Bassetlaw (Q51)                          | 4                  | 95.2 (95.7)     | 97.0 (96.6) | 95.0 (96.1) | 93.3 (93.6)              |
|                              | W. Yorkshire (Q52)  | 5                  | 95.2 (95.4)     | 97.3 (97.2) | 95.0 (95.3) | 91.7 (92.2)              |
| Q73                          | Greater Manchester (Q46)                                  | 10                 | 94.3 (94.1)     | 96.8 (96.5) | 94.3 (94.0) | 83.8 (80.3)              |
|                              | Lancashire (Q47)  | 3                  | 92.5 (92.0)     | 95.5 (91.1) | 93.0 (92.5) | 79.9 (n/a <sup>2</sup> ) |
| Q74                          | Durham, Darlington and Tees (Q45)                         | 6                  | 96.4 (96.9)     | 98.0 (98.0) | 96.4 (96.9) | 95.2 (97.1)              |
|                              | Cumbria, Northumberland, Tyne and Wear (Q49)              | 7                  | 93.4 (96.0)     | 96.1 (96.7) | 93.5 (96.8) | 91.7 (93.0)              |
| Q75                          | Cheshire, Warrington and Wirral (Q44)                     | 4                  | 96.4 (96.2)     | 97.1 (98.1) | 96.4 (96.2) | 93.9 (93.8)              |
|                              | Merseyside (Q48)  | 5                  | 93.2 (94.2)     | 96.3 (96.8) | 93.1 (94.0) | 88.3 (89.6)              |
| Q76                          | Derbyshire and Nottinghamshire (Q55)                      | 4                  | 93.9 (95.1)     | 95.7 (97.4) | 94.2 (95.1) | 91.5 (93.2)              |
|                              | Shropshire and Staffordshire (Q60)                        | 4                  | 95.7 (96.4)     | 97.5 (97.8) | 95.8 (96.2) | 93.5 (94.4)              |
| Q77                          | Arden, Herefordshire and Worcestershire (Q53)             | 4                  | 96.0 (96.7)     | 97.6 (98.0) | 95.8 (96.6) | 92.5 (93.7)              |
|                              | Birmingham and the Black Country (Q54)                    | 6                  | 90.6 (91.2)     | 94.4 (93.5) | 91.0 (91.5) | 87.2 (87.5)              |
| Q78                          | Hertfordshire and the S Midlands (Q58)                    | 6                  | 95.6 (96.6)     | 97.2 (97.4) | 95.7 (96.6) | 93.3 (94.2)              |
|                              | Leicestershire and Lincolnshire (Q59)                     | 4                  | 96.0 (95.7)     | 97.5 (97.3) | 95.9 (95.8) | 93.1 (93.6)              |
| Q79                          | East Anglia (Q56)   | 4                  | 95.0 (95.5)     | 97.2 (97.2) | 95.3 (95.6) | 91.6 (92.5)              |
|                              | Essex (Q57)   | 3                  | 95.0 (94.9)     | 97.2 (97.1) | 95.2 (95.2) | 92.0 (92.1)              |
| Q80                          | Bristol, N Somerset, Somerset and S Gloucestershire (Q65) | 4                  | 94.6 (95.3)     | 96.4 (96.8) | 94.5 (95.6) | 89.8 (90.1)              |
|                              | Devon, Cornwall, Isles of Scilly (Q66)                    | 5                  | 92.8 (93.1)     | 95.7 (95.6) | 93.2 (93.4) | 85.9 (86.8)              |
| Q81                          | Kent and Medway (Q67)                                     | 2                  | 86.9 (89.4)     | 92.2 (93.0) | 87.6 (89.7) | 83.4 (84.5)              |
|                              | Surrey and Sussex (Q68)                                   | 4                  | 90.1 (88.6)     | 93.7 (92.8) | 90.8 (89.2) | 87.5 (85.7)              |
| Q82                          | Bath, Gloucestershire, Swindon and Wiltshire (Q64)        | 4                  | 94.7 (94.2)     | 96.5 (95.8) | 94.8 (94.4) | 92.1 (91.6)              |
|                              | Thames Valley (Q69)                                       | 8                  | 95.5 (95.0)     | 96.2 (95.7) | 94.9 (94.8) | 92.3 (91.1)              |

n/a accurate estimate not available

<sup>1</sup>based on coverage data from 150/152 LAs, see full tables [here](#)

<sup>2</sup>data quality issues reported

\* See table 1a for key to local team organisational code

<sup>^</sup> Former area team and local team aggregates are based on former PCT data

**Table 2a. Completed UK primary immunisations at 24 months by country and NHS England local team: April to June 2016 (January to March 2016<sup>^</sup>)**

| Country                         | No. of former LAs/ HBs <sup>†</sup> | DTaP/IPV/Hib3 % | PCV booster % | Hib/MenC %  | MMR1 %      |
|---------------------------------|-------------------------------------|-----------------|---------------|-------------|-------------|
| United Kingdom                  | 177                                 | 95.5 (95.7)     | 92.0 (92.0)   | 92.1 (92.1) | 92.0 (92.1) |
| Wales                           | 7                                   | 97.9 (97.7)     | 96.0 (95.9)   | 95.1 (95.0) | 95.7 (95.5) |
| Northern Ireland                | 4                                   | 97.9 (98.3)     | 95.5 (96.3)   | 95.3 (95.9) | 95.0 (95.9) |
| Scotland                        | 14                                  | 97.9 (97.8)     | 95.4 (95.2)   | 95.6 (95.4) | 95.1 (95.0) |
| England (Total)                 | 152                                 | 95.1 (95.3)     | 91.4 (91.3)   | 91.5 (91.5) | 91.4 (91.5) |
| <b>NHS England local teams*</b> |                                     |                 |               |             |             |
| Q70                             | 7                                   | 95.9 (96.3)     | 93.3 (93.9)   | 93.2 (93.8) | 93.1 (93.8) |
| Q71                             | 33                                  | 92.2 (92.1)     | 83.7 (84.8)   | 84.8 (85.1) | 84.4 (85.3) |
| Q72                             | 15                                  | 96.0 (96.6)     | 94.4 (94.3)   | 94.2 (94.2) | 94.1 (94.0) |
| Q73                             | 13                                  | 95.0 (94.5)     | 92.5 (91.0)   | 92.3 (90.9) | 92.7 (91.2) |
| Q74                             | 13                                  | 97.6 (97.7)     | 95.0 (94.4)   | 94.8 (95.5) | 94.8 (95.3) |
| Q75                             | 9                                   | 96.9 (97.1)     | 93.7 (92.8)   | 92.4 (94.0) | 93.6 (93.8) |
| Q76                             | 8                                   | 96.8 (97.6)     | 93.8 (94.8)   | 93.7 (94.9) | 93.6 (94.7) |
| Q77                             | 10                                  | 95.9 (96.3)     | 92.6 (92.9)   | 92.6 (93.0) | 92.5 (93.0) |
| Q78                             | 10                                  | 97.5 (97.2)     | 95.2 (94.7)   | 95.3 (94.8) | 94.9 (94.5) |
| Q79                             | 7                                   | 96.3 (96.3)     | 93.7 (93.6)   | 93.6 (93.6) | 93.3 (93.3) |
| Q80                             | 9                                   | 96.4 (96.1)     | 93.0 (92.6)   | 92.7 (92.6) | 92.8 (92.4) |
| Q81                             | 6                                   | 90.7 (92.0)     | 88.3 (87.1)   | 88.3 (87.6) | 88.0 (87.6) |
| Q82                             | 12                                  | 96.0 (96.5)     | 92.8 (92.9)   | 93.1 (93.3) | 93.3 (93.1) |

\* See table 1a for key to local team organisational code.

<sup>†</sup> Local Authorities/health boards

<sup>^</sup> Former area team and local team aggregates are based on former PCT data



**Table 2b. Completed primary immunisations at 24 months by NHS England Area Teams: April to June 2016 (*January to March 2016*<sup>^</sup>)**

| NHS England Local Team Code* | Area Team code* | No. of LAs † | DTaP/IPV/Hib3 % | PCV booster % | Hib/MenC %  | MMR1 %      |
|------------------------------|-----------------|--------------|-----------------|---------------|-------------|-------------|
| Q70                          | Q70             | 7            | 95.9 (96.3)     | 93.3 (93.9)   | 93.2 (93.8) | 93.1 (93.8) |
| Q71                          | Q71             | 33           | 92.2 (92.1)     | 83.7 (84.8)   | 84.8 (85.1) | 84.4 (85.3) |
| Q72                          | Q50             | 6            | 94.2 (95.9)     | 94.4 (94.4)   | 93.9 (94.1) | 93.9 (93.9) |
|                              | Q51             | 4            | 96.7 (96.4)     | 94.0 (92.0)   | 93.8 (92.6) | 93.8 (92.6) |
|                              | Q52             | 5            | 96.7 (97.2)     | 94.6 (95.3)   | 94.7 (95.2) | 94.3 (95.0) |
| Q73                          | Q46             | 10           | 96.1 (96.2)     | 92.5 (92.5)   | 92.3 (92.2) | 93.0 (93.0) |
|                              | Q47             | 3            | 92.7 (90.9)     | 92.4 (87.7)   | 92.4 (87.9) | 92.2 (87.5) |
| Q74                          | Q45             | 6            | 97.3 (97.9)     | 95.3 (93.1)   | 95.7 (95.8) | 95.2 (95.0) |
|                              | Q49             | 7            | 97.8 (97.7)     | 94.8 (95.2)   | 94.3 (95.4) | 94.4 (95.4) |
| Q75                          | Q44             | 4            | 97.1 (97.3)     | 94.3 (92.8)   | 92.1 (94.7) | 95.0 (94.9) |
|                              | Q48             | 5            | 96.8 (96.8)     | 93.2 (92.9)   | 92.7 (93.3) | 92.3 (92.6) |
| Q76                          | Q55             | 4            | 96.1 (97.6)     | 92.8 (94.0)   | 92.8 (94.1) | 92.7 (93.9) |
|                              | Q60             | 4            | 97.8 (97.8)     | 95.1 (95.9)   | 95.0 (95.9) | 94.8 (95.7) |
| Q77                          | Q53             | 4            | 97.4 (98.1)     | 95.8 (95.4)   | 96.1 (95.8) | 96.3 (96.3) |
|                              | Q54             | 6            | 95.1 (95.4)     | 91.1 (91.7)   | 90.8 (91.5) | 90.6 (91.4) |
| Q78                          | Q58             | 6            | 97.7 (97.3)     | 95.8 (95.2)   | 96.0 (95.3) | 95.4 (95.0) |
|                              | Q59             | 4            | 97.3 (97.1)     | 94.1 (93.8)   | 93.9 (94.0) | 94.1 (93.8) |
| Q79                          | Q56             | 4            | 96.1 (96.0)     | 92.9 (93.3)   | 92.8 (93.3) | 92.7 (93.4) |
|                              | Q57             | 3            | 96.6 (96.6)     | 94.7 (93.9)   | 94.5 (94.0) | 94.0 (93.1) |
| Q80                          | Q65             | 4            | 97.0 (96.6)     | 93.5 (92.8)   | 93.5 (93.0) | 93.0 (92.4) |
|                              | Q66             | 5            | 95.7 (95.7)     | 92.5 (92.5)   | 91.9 (92.3) | 92.6 (92.4) |
| Q81                          | Q67             | 2            | 91.3 (94.5)     | 87.8 (88.3)   | 87.4 (88.4) | 86.6 (88.1) |
|                              | Q68             | 4            | 90.4 (90.3)     | 88.7 (86.1)   | 88.9 (87.0) | 89.0 (87.2) |
| Q82                          | Q64             | 4            | 96.1 (96.5)     | 92.9 (92.7)   | 92.7 (92.8) | 92.8 (92.5) |
|                              | Q69             | 8            | 96.0 (96.6)     | 92.7 (93.0)   | 93.3 (93.6) | 93.6 (93.4) |

\* See table 1a and 1b for keys to NHS England local team/Area Team organisational code.

† Local Authorities

<sup>^</sup> Former area team and local team aggregates are based on former PCT data

**Table 3a. Completed UK primary immunisations and boosters at five years by country and NHS England local team: April to June 2016 (January to March 2016<sup>^</sup>)**

| Country                    | Number of LAs/HBs† | Primary        |             | Booster     |                          |             |
|----------------------------|--------------------|----------------|-------------|-------------|--------------------------|-------------|
|                            |                    | DTaP/IPV Hib3% | MMR1%       | MMR2%       | DTaP/IPV%                | Hib/MenC%   |
| United Kingdom             | 177                | 96.2 (96.0)    | 95.4 (95.2) | 88.2 (88.8) | 87.0 (87.6) <sup>§</sup> | 93.1 (93.2) |
| Wales                      | 7                  | 95.9 (96.2)    | 97.0 (97.0) | 91.0 (91.4) | 92.3 (92.4)              | 93.5 (94.1) |
| N. Ireland                 | 4                  | 98.4 (97.9)    | 98.0 (97.4) | 92.6 (93.4) | 93.6 (94.1)              | 96.9 (96.7) |
| Scotland                   | 14                 | 98.3 (98.3)    | 97.2 (97.3) | 92.8 (92.9) | 93.4 (93.5)              | 96.5 (96.4) |
| England (Total)            | 152                | 96.0 (95.7)    | 95.0 (94.9) | 87.5 (88.2) | 85.9 (86.7) <sup>§</sup> | 92.6 (92.8) |
| <i>English Local Teams</i> |                    |                |             |             |                          |             |
| Q70                        | 7                  | 96.1 (96.4)    | 95.4 (95.3) | 89.5 (90.3) | 87.9 (88.9)              | 93.2 (94.1) |
| Q71                        | 33                 | 92.6 (92.3)    | 91.0 (90.6) | 80.2 (80.4) | 77.0 (77.4)              | 88.1 (88.2) |
| Q72                        | 15                 | 97.3 (97.2)    | 96.7 (96.8) | 90.2 (91.6) | 90.0 (90.5)              | 94.1 (94.3) |
| Q73                        | 13                 | 96.4 (96.2)    | 96.3 (96.2) | 88.3 (87.7) | 86.1 (86.6)              | 93.1 (93.3) |
| Q74                        | 13                 | 97.7 (98.3)    | 97.4 (97.6) | 91.6 (94.5) | 92.2 (93.6)              | 96.0 (96.5) |
| Q75                        | 9                  | 97.6 (97.0)    | 97.5 (96.8) | 92.1 (91.0) | 91.9 (91.5)              | 95.8 (94.9) |
| Q76                        | 8                  | 96.5 (96.9)    | 96.2 (97.2) | 89.3 (91.1) | 87.5 (89.4)              | 94.1 (95.4) |
| Q77                        | 10                 | 96.0 (96.7)    | 96.0 (96.2) | 88.5 (88.9) | 87.1 (88.1)              | 93.1 (93.3) |
| Q78                        | 10                 | 97.6 (97.1)    | 96.8 (96.1) | 91.1 (91.2) | 89.6 (91.3)              | 94.1 (93.7) |
| Q79                        | 7                  | 96.7 (96.5)    | 95.9 (95.6) | 88.9 (90.6) | 88.8 (89.8)              | 92.8 (93.6) |
| Q80                        | 9                  | 97.5 (97.3)    | 96.2 (96.0) | 90.2 (90.5) | 89.2 (89.5)              | 95.7 (95.4) |
| Q81                        | 6                  | 95.0 (92.3)    | 91.8 (91.9) | 82.7 (83.0) | 79.2 (79.7)              | 89.2 (89.0) |
| Q82                        | 12                 | 96.4 (96.7)    | 95.7 (95.8) | 89.6 (90.5) | 88.4 (88.9)              | 94.9 (94.4) |

\* 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

<sup>^</sup> Former area team and local team aggregates are based on former PCT data

### 3b. Completed primary immunisations and boosters at five years by NHS England Area Team, April to June 2016 (January to March 2016<sup>^</sup>)

| NHS England local team Code* | Area Team (AT) code* | No. of LAs <sup>†</sup> in AT | Primary         |             | Booster     |                          |             |
|------------------------------|----------------------|-------------------------------|-----------------|-------------|-------------|--------------------------|-------------|
|                              |                      |                               | DTaP/IPV Hib3 % | MMR1 %      | MMR2 %      | DTaP/ IPV % <sup>§</sup> | Hib/ MenC   |
| Q70                          | Q70                  | 7                             | 96.1 (96.4)     | 95.4 (95.3) | 89.5 (90.3) | 87.9 (88.9)              | 93.2 (94.1) |
| Q71                          | Q71                  | 33                            | 92.6 (92.3)     | 91.0 (90.6) | 80.2 (80.4) | 77.0 (77.4)              | 88.1 (88.2) |
| Q72                          | Q50                  | 6                             | 97.9 (97.2)     | 96.1 (96.6) | 91.1 (91.4) | 91.5 (91.7)              | 94.4 (94.7) |
|                              | Q51                  | 4                             | 96.9 (96.9)     | 96.9 (96.5) | 88.7 (91.8) | 89.3 (88.8)              | 92.7 (93.2) |
|                              | Q52                  | 5                             | 97.2 (97.4)     | 97.0 (97.1) | 90.5 (91.6) | 89.4 (90.8)              | 94.7 (94.8) |
| Q73                          | Q46                  | 10                            | 96.6 (96.8)     | 96.5 (96.5) | 89.8 (90.0) | 87.3 (89.1)              | 93.8 (93.8) |
|                              | Q47                  | 3                             | 96.0 (95.1)     | 96.0 (95.6) | 85.2 (83.1) | 83.6 (81.4)              | 91.7 (92.3) |
| Q74                          | Q45                  | 6                             | 98.1 (98.5)     | 97.7 (97.4) | 93.0 (95.4) | 93.4 (95.3)              | 96.8 (97.4) |
|                              | Q49                  | 7                             | 97.5 (98.2)     | 97.2 (97.7) | 90.7 (94.0) | 91.4 (92.5)              | 95.4 (95.9) |
| Q75                          | Q44                  | 4                             | 98.0 (97.2)     | 97.6 (97.0) | 93.2 (91.9) | 93.4 (92.6)              | 95.6 (94.6) |
|                              | Q48                  | 5                             | 97.2 (96.7)     | 97.4 (96.7) | 90.9 (90.1) | 90.3 (90.4)              | 96.1 (95.1) |
| Q76                          | Q55                  | 4                             | 95.7 (97.9)     | 95.6 (97.6) | 87.2 (90.0) | 86.5 (88.7)              | 92.4 (94.8) |
|                              | Q60                  | 4                             | 97.6 (95.6)     | 96.9 (96.7) | 92.3 (92.4) | 89.0 (90.3)              | 96.6 (96.2) |
| Q77                          | Q53                  | 4                             | 97.2 (98.4)     | 97.3 (98.3) | 92.9 (93.8) | 92.2 (94.7)              | 95.1 (95.8) |
|                              | Q54                  | 6                             | 95.4 (95.7)     | 95.3 (95.0) | 86.1 (86.2) | 84.4 (84.6)              | 92.0 (91.9) |
| Q78                          | Q58                  | 6                             | 97.5 (97.1)     | 96.7 (96.1) | 91.0 (91.5) | 89.1 (91.9)              | 94.5 (94.3) |
|                              | Q59                  | 4                             | 97.6 (97.0)     | 97.0 (96.2) | 91.3 (90.5) | 90.3 (90.2)              | 93.3 (92.6) |
| Q79                          | Q56                  | 4                             | 96 (96.2)       | 95.4 (95.2) | 88.2 (90.8) | 87.6 (89.0)              | 91.2 (92.2) |
|                              | Q57                  | 3                             | 97.4 (96.9)     | 96.5 (96.1) | 89.7 (90.3) | 90.3 (91.0)              | 94.7 (95.5) |
| Q80                          | Q65                  | 4                             | 97.5 (97.6)     | 96.0 (96.1) | 89.2 (89.4) | 92.1 (91.8)              | 95.9 (95.9) |
|                              | Q66                  | 5                             | 97.4 (97.1)     | 96.4 (95.9) | 91.1 (91.4) | 86.4 (87.4)              | 95.5 (95.0) |
| Q81                          | Q67                  | 2                             | 95.2 (95.4)     | 95.3 (94.7) | 86.4 (85.4) | 83.1 (82.4)              | 92.7 (92.4) |
|                              | Q68                  | 4                             | 94.8 (90.2)     | 89.3 (89.9) | 80.1 (81.4) | 76.6 (77.9)              | 86.8 (86.8) |
| Q82                          | Q64                  | 4                             | 96.2 (96.9)     | 95.8 (96.4) | 88.6 (90.7) | 85.9 (87.6)              | 94.2 (94.1) |
|                              | Q69                  | 8                             | 96.5 (96.6)     | 95.7 (95.4) | 90.2 (90.4) | 89.9 (89.8)              | 95.3 (94.6) |

\* See table 1a and 1b for keys to NHS England local team/Area Team organisational code.

<sup>†</sup> Local Authorities

<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

<sup>^</sup> Former area team and local team aggregates are based on former PCT data

**Table 4. Neonatal hepatitis B coverage at 12 and 24 months in England by NHS England Area Team April to June 2016 (January to March 2016<sup>^</sup>)**

| Area Team (AT code)* | LA returns with 12 month data | 12 month denominator | % Coverage at 12 months | LA returns with 24 month data | 24 month denominator | % Coverage at 24 months |
|----------------------|-------------------------------|----------------------|-------------------------|-------------------------------|----------------------|-------------------------|
| Q44                  | 2 of 4                        | 3                    | 100 (-)                 | 2 of 4                        | 4                    | 75 (100)                |
| Q45                  | 6 of 6                        | 4                    | 100 (100)               | 6 of 6                        | 3                    | 33 (0)                  |
| Q46                  | 9 of 10                       | 49                   | 61 (78)                 | 9 of 10                       | 93                   | 30 (39)                 |
| Q47                  | 0 of 3                        | -                    | - (-)                   | 0 of 3                        | -                    | - (-)                   |
| Q48                  | 2 of 5                        | 8                    | 88 (-)                  | 3 of 5                        | 7                    | 71 (-)                  |
| Q49                  | 7 of 7                        | 12                   | 92 (67)                 | 7 of 7                        | 7                    | 100 (100)               |
| Q50                  | 5 of 6                        | 5                    | 100 (83)                | 5 of 6                        | 5                    | 60 (29)                 |
| Q51                  | 4 of 4                        | 13                   | 100 (100)               | 4 of 4                        | 7                    | 100 (100)               |
| Q52                  | 5 of 5                        | 25                   | 100 (95)                | 5 of 5                        | 22                   | 91 (100)                |
| Q53                  | 4 of 4                        | 12                   | 100 (100)               | 4 of 4                        | 6                    | 100 (100)               |
| Q54                  | 6 of 6                        | 50                   | 100 (97)                | 2 of 6                        | 4                    | 25 (46)                 |
| Q55                  | 4 of 4                        | 12                   | 100 (100)               | 4 of 4                        | 8                    | 100 (83)                |
| Q56                  | 4 of 4                        | 13                   | 85 (83)                 | 4 of 4                        | 7                    | 86(100)                 |
| Q57                  | 1 of 3                        | 8                    | 75(100)                 | 2 of 3                        | 7                    | 71 (75)                 |
| Q58                  | 6 of 6                        | 31                   | 94 (100)                | 6 of 6                        | 23                   | 96 (97)                 |
| Q59                  | 3 of 4                        | 5                    | 100 (92)                | 3 of 4                        | 18                   | 72 (86)                 |
| Q60                  | 4 of 4                        | 5                    | 100 (100)               | 4 of 4                        | 4                    | 100 (83)                |
| Q64                  | 4 of 4                        | 6                    | 100 (100)               | 4 of 4                        | 4                    | 100 (88)                |
| Q65                  | 4 of 4                        | 13                   | 92 (100)                | 4 of 4                        | 10                   | 90(100)                 |
| Q66                  | 5 of 5                        | 5                    | 80 (100)                | 5 of 5                        | 2                    | 100 (-)                 |
| Q67                  | 2 of 2                        | 7                    | 100 (100)               | 2 of 2                        | 12                   | 100 (100)               |
| Q68                  | 4 of 4                        | 8                    | 88 (100)                | 4 of 4                        | 9                    | 89 (83)                 |
| Q69                  | 8 of 8                        | 26                   | 100 (88)                | 8 of 8                        | 16                   | 76 (83)                 |
| Q70                  | 6 of 7                        | 34                   | 100 (100)               | 6 of 7                        | 4                    | 100 (71)                |
| Q71                  | 27 of 33                      | 206                  | 78 (85)                 | 28 of 33                      | 215                  | 56 (69)                 |
| <b>England</b>       | <b>132 of 152</b>             | <b>560</b>           | <b>87 (91)</b>          | <b>131 of 152</b>             | <b>502</b>           | <b>63 (69)</b>          |

\* 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.

<sup>^</sup> Former area team and local team aggregates are based on former PCT data

**Table 5. BCG vaccine coverage at 12 months in England by NHS England Area Team April to June 2016 (April 2015 to March 2016)**

| Upper tier Local Authority   | TB rate (per 100,000) 2014 estimates | Number of eligible children (1st birthday during April to June 2015) | Universal BCG coverage (%) |
|--|--------------------------------------|--|----------------------------|
| <b>(a) TB incidence <math>\geq 40/100,00</math> and universal BCG vaccination policy</b> |                                      |  |                            |
| Newham   | 100                                  | 1291   | 92.6 (91.2)                |
| Brent  | 82.9                                 | 1271   | 22.3 (32.3)                |
| Ealing   | 65.3                                 | 1282   | 57.6 (59.3)                |
| Hounslow   | 64                                   | 1015   | 62.2 (87.4)                |
| Harrow   | 60.4                                 | 845  | 27.2 (40.1)                |
| Slough   | 51.5                                 | <i>not available</i>   | <i>not available</i>       |
| Redbridge  | 50.5                                 | 1209   | 52.2 (81.7)                |
| Greenwich  | 42                                   | 1232   | 81 (82.1)                  |
| Hillingdon   | 41.9                                 | 1028   | 67.6 (73.2)                |
| Waltham Forest   | 41.3                                 | 1037   | 71.7 (87.4)                |
| <b>(b) TB incidence <math>\geq 40/100,00</math> and selective BCG vaccination policy</b> |                                      |  |                            |
| Leicester  | 48                                   | <i>selective programme</i>   |                            |
| <b>(c) TB Incidence <math>&lt; 40/100,000</math> and universal BCG policy</b>            |                                      |  |                            |
| Tower Hamlets  | 38.3                                 | 921  | 85 (91.6)                  |
| Luton  | 35.1                                 | 695  | 81.5 (89.8)                |
| Barking and Dagenham   | 35                                   | 344  | 37.7 (70.1)                |
| Haringey   | 33.2                                 | 67   | 6.6 (15.2)                 |
| Hackney  | 32.4                                 | 673  | 62 (68.3)                  |
| Southwark  | 31.7                                 | <i>not available</i>   | <i>not available</i>       |
| Merton   | 29.6                                 | 197  | 27.1 (28.7)                |
| Islington  | 29.3                                 | 464  | 81.8 (77.2)                |
| Croydon  | 27.6                                 | <i>n.a.</i>  | <i>n.a.</i>                |
| Lambeth  | 26.6                                 | <i>n.a.</i>  | <i>n.a.</i>                |
| Lewisham   | 25.9                                 | 582  | 50.1 (69.6)                |
| Hammersmith and Fulham   | 24.2                                 | 288  | 49 (39.2)                  |
| Westminster  | 24                                   | 198  | 34.8 (41.9)                |
| Barnet   | 23.2                                 | <i>not available</i>   | <i>not available</i>       |
| Enfield  | 22.5                                 | 43   | 3.9 (2.4)                  |
| Kensington and Chelsea   | 22.2                                 | 197  | 34.9 (42)                  |
| Camden   | 21.8                                 | 299  | 48.5 (77.7)                |
| Wandsworth   | 21.7                                 | 311  | 24.8 (50.8)                |
| Kingston upon Thames   | 15.8                                 | 108  | 16 (21.7)                  |
| Sutton   | 13.3                                 | 183  | 27 (28.7)                  |
| City of London   | 12.9                                 | 8  | 57.1 (37.3)                |
| Havering   | 10.9                                 | 70   | 7.9 (26.5)                 |
| Bexley   | 10.7                                 | 592  | 77.9 (61.8)                |
| Bromley  | 8.1                                  | 242  | 21.7 (24.1)                |
| Richmond upon Thames   | 5.9                                  | 134  | 21.4 (34)                  |