

Protecting and improving the nation's health

Quarterly vaccination coverage statistics for children aged up to five years in the UK (COVER programme): October to December 2018

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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. England level analyses are presented including and excluding London, at NHS England local team (April 2018 configuration) level within England.

Key points for the third quarterly report for 2018/19

- Improvements have been observed in London data quality this quarter although underestimation of coverage estimates for some local authorities continues
- ➤ In England, vaccine coverage evaluated at the first birthday increased by 0.4-0.9% for all antigens compared with the previous quarter. Coverage for all antigens in England excluding London increased by 0.1-0.8%, suggesting the increase was not solely due to improved data quality in London
- Scotland, Wales and Northern Ireland also experienced small increases in coverage for most antigens when measured at 12 months
- ➤ Scotland and Wales continue to achieve above 95% coverage for DTaP/IPV/Hib3, PCV2 and MenB2 at 12 months, and Northern Ireland achieved above 94% for each of these vaccines. Within England, only one of the 13 local teams, Cumbria and North East, achieved 95% coverage for these three vaccines
- ➤ In England, vaccine coverage evaluated at five years of age was above or close to 95% for DTaP/IPV/Hib3 (95.3%) and MMR1 (94.6%). Although coverage at 24 months and 5 years was relatively stable compare with the previous quarter, coverage at 24 months and five years for England excluding London (primarily reflecting vaccines administered in previous years) decreased for seven of the 10 antigens, suggesting that improving data quality in London has likely offset decreasing trends in coverage in these age groups

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1. Cohort definitions for October to December 2018

Children who reached their first birthday in the quarter (born October to December 2017) were all scheduled for three doses of combined diphtheria, tetanus, acellular pertussis, polio, *Haemophilus influenzae* type b, hepatitis B vaccine (known as DTaP/IPV/Hib/HepB or hexavalent vaccine) which replaced DTaP/IPV/Hib (pentavalent) vaccine from autumn 2017 [1]. The third dose of priming vaccine would have been scheduled between February and April 2018. Children born to hepatitis B surface antigen (HBsAg) positive mothers who reached their first birthday in this quarter should also have received monovalent hepatitis B vaccine at birth and four weeks of age.

Children born October to December 2017 will also have been scheduled for two doses of pneumococcal conjugate vaccine (PCV), Meningococcal B vaccine (MenB), and rotavirus vaccine [2].

Children who reached their second birthday in the quarter (born October to December 2016) were scheduled to receive their third DTaP/IPV/Hib, second PCV, MenB and rotavirus vaccinations between February and April 2017, and their first measles, mumps, and rubella (MMR) vaccination, a booster dose of Hib and MenC (given as a combined Hib/MenC vaccine), MenB and PCV vaccines at the same visit at 12 months of age, between November 2017 and January 2018.

Children who reached their fifth birthday in the quarter (born October to December 2013) were scheduled to receive their third dose DTaP/IPV/Hib and second PCV and one MenC vaccination between February and April 2014. They were also scheduled to receive their first MMR, Hib/MenC booster and PCV booster after their first birthday (October to December 2014) between November 2014 and January 2015, and their pre-school diphtheria, tetanus, acellular pertussis, inactivated polio booster (DTaP/IPV) and second dose MMR from January 2017.

Those who reached their second birthday in this quarter (born October to December 2016) were scheduled to receive a fourth dose at one year of age.

Children born in areas where there is a universal neonatal BCG programme (i.e. TB incidence ≥40/100,000) who reach their first birthday in this quarter (born October to December 2017) were scheduled to receive BCG at birth.

Coverage evaluated at the first, second and fifth birthdays by country and new NHS England local teams (configuration as at 1 April 2018) are described in the appendix.

2. Participation and data quality

Data were received from all Health Boards (HBs) in Scotland, Northern Ireland and Wales. In England, Local Teams (LTs) and Child Health Record Departments (CHRDs) provided data for all upper tier local authorities (LAs). Individual LA data including numerators, denominators, coverage and relevant caveats where applicable are available here.

Since April 2017, four CHIS Hubs provide COVER data for the whole of London and the data submitted from these newly established Hubs reflects a system in transition (see 3.1). Issues

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relating to complexities in data flows between providers and child health information systems (CHISs), and inconsistencies in data coding resulted in decreases in London-level coverage estimates for the 12 and 24 month and 5 year evaluations being first reported six months ago [3]. Due to the impact London data has on national figures, no national or UK level data were published in the April to June 2018 quarter. However, data quality improved for the July to September 2018 quarter [4], in particular for legacy data (figure 3) and, to assess trends in coverage accounting for the data quality issues, England (all) and UK level data were published alongside England (excluding London) figures.

In the current quarter, October to December 2018, further improvements have been observed in London data quality and are presented in tables 1-3. Additionally, a representative vaccine evaluated at 12 months, 24 months and five years is displayed graphically in figures 1-3 for the current and previous three quarters representing data from January through to December 2018.

Detailed caveats regarding any data quality issues for individual English LA data, including changes in denominators due to the NHS England CHIS data validation exercise conducted from the second quarter of 2018-19, are available here.

In the October to December 2017 UK COVER report data the DTaP/IPV/Hib3 coverage at five years of age for Wales was considerably lower than expected and a caveat was published indicating that the figure was an under-estimate and that local investigations were on-going [5]. The latest Public Health Wales COVER report reports on a recently conducted COVER data quality assurance project which has resulted in improvements in completeness of vaccination data in the national Welsh dataset, particularly in children aged four years and older.

3. Developments in immunisation data

3.1 NHS Digital Child Health Strategy

The new NHS England Healthy Children: Transforming Child Health Iinformation strategy [6] aims to transform child health information services by making these systems interoperable, reducing the administrative burden of information recording and sharing. Part of this programme includes merging CHIS systems into local hubs that can provide COVER data for several LAs in one submission. Since April 2017 four CHIS Hubs are providing COVER data for all London boroughs. In England, the number of CHIS systems has decreased from over 100 in 2015 to around 70 by mid-2017. As different phases of the digital strategy are implemented across the country it is anticipated that there may be further temporary local data quality issues associated with transition (also see section 2 above).

3.2 NHS England South Reconfiguration – 1 April 2018

The COVER report uses the new NHS England configurations that came into effect from 1 April 2018, and has ceased to provide former Area Team tabulations for historical comparisons.

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The South of England Commissioning Region (Y57) split into two new Commissioning Regions with each having two new NHS England Local Teams:

South West Commissioning Region (Y58)

NHS England South West (South West South) (Q85)

NHS England South West (South West North) (Q86)

South East Commissioning Region (Y59)

NHS England South East (Hampshire, Isle of Wight and Thames Valley) (Q87)

NHS England South East (Kent, Surrey and Sussex) (Q88)

Full details can be found here.

3.3 Changes to COVER programme scope and reporting methodology

Vaccine coverage data for the routine childhood immunisation programme are extracted quarterly and annually at Local Authority level from local CHISs by staff in Child Health Record Departments (CHRDs) and submitted to the PHE national COVER surveillance team. COVER collects information on the proportion of children aged 12 months, 24 months and 5 years who have completed courses of each routine childhood immunisations. This information is promptly fed back to the local level via the COVER report and associated tables, creating the opportunity to improve coverage and to detect changes in vaccine coverage quickly.

It is anticipated that, contingent on a successful pilot due to start in April 2019 (relating to January to March 2019 data), from 2019/20 the collection of COVER data will be transferred from PHE to NHS Digital's Strategic Data Collection Service (SDCS) and merged with the current SDCS practice level vaccine coverage collection, formally collected via the Child Immunisation Unify2 data collection. The analysis and reporting of the quarterly COVER report remains with PHE, and the annual vaccine coverage report is anticipated to be published as a joint PHE/NHS Digital report. From 2019/20 it is therefore anticipated that the COVER collection will include both LA and GP level coverage. Practice-level data will not be badged as official or national statistics.

4. Results

Due to ongoing data quality issues in London reported in the previous two quarters, that resulted in some under-estimation of coverage locally and nationally, the current quarter has also been analysed for England – excluding London (see section 2 above). Data quality has improved however and, unless there are further concerns, the next report will not include a presentation of England data excluding London.

4.1 Coverage at 12 months

Further increases in London coverage for all the antigens evaluated at 12 months have been observed this quarter compared to the previous quarter suggesting the data quality issues are being resolved: DTaP/IPV/Hib/HepB3 increased 2.1% to 87.6% and PCV2, MenB2 and Rota2 increased between 1.3-1.6% to 88.3%, 87.4% and 85.7% respectively (table 1) [4].

Trend data for the last four quarters for vaccines evaluated at 12 months in England – irrespective of whether or not London data were excluded – show small increases in coverage in October to December 2018.

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In England (excluding London), vaccine coverage evaluated at the first birthday increased by 0.1- 0.8% for all antigens compared with the previous quarter (table 1). Figure 1 shows coverage in England (including and excluding London) for DTaP/IPV/Hib3 at 12 months of age.

Scotland and Wales continue to achieve above 95% coverage for DTaP/IPV/Hib(HepB)3, PCV2 and MenB2 at 12 months, and Northern Ireland achieved above 94% for each of these vaccines. In England, only one of the 13 local teams, Cumbria and North East, achieved 95% coverage for these three vaccines (table 1). However, Northern Ireland, experienced small decreases in coverage for all antigens, whereas Scotland and Wales experienced small increases compared with the previous quarter when measured at 12 months.

4.2 Coverage at 24 months

London data quality issues have largely been resolved and, compared with the previous quarter, England vaccine coverage for most antigens is relatively stable (between -0.2 and +0.1%). The exception is MenB booster which has increased by 0.7%. However, when London was excluded, coverage decreased by 0.4% to 95% for DTaP/IPV/Hib3, decreased between 0.1 and 0.2% for PCV booster, Hib/MenC booster and MMR1, and increased by 0.4% for the MenB booster (table 2), suggesting that the improved data quality in London has offset a slight decrease in the national trend. Figure 2 shows MMR1 in England (including and excluding London) measured at 24 months for the period January to December 2018.

The devolved administrations reported decreased coverage for all vaccines evaluated at 24 months of age, compared to the previous quarter [4]. Quarterly coverage for DTaP/IPV/Hib3 evaluated at two years of age in Scotland was 97%, with PCV, Hib/MenC boosters, MMR1 and MenB booster all exceeding 93% in Scotland and Wales, and exceeding 92% in Northern Ireland (table 2). In England, eight of 13 local teams achieved above 95% for DTaP/IPV/Hib3, and three exceeded 93% coverage for PCV, Hib/MenC and MMR1.

MenB booster coverage, reported for the fifth time, ranged from 88.4% in England to 93.8% in Wales. In England, MenB booster coverage achieved at least 90% in eight of 13 local teams.

4.3 Coverage at five years

Analysis of coverage trends for five year olds in England over the most recent four quarters (January through to December 2018) show that after excluding London, coverage for most antigens has slightly decreased, except for MMR2 which has increased compared with previous quarter (table 3). Figure 3 shows MMR1 coverage for England (including and excluding London) measured at 5 years.

Coverage for the three devolved administrations continued to exceed the 95% WHO target for MMR1 and was over 97% for DTaP/IPV/Hib3. In England, even with known under-estimation of coverage resulting from London data quality issues, coverage for these antigens was above or close to 95% (95.3% for DTaP/IPV/Hib3 and 94.6% for MMR1). Coverage at five years for these vaccines primarily reflects children vaccinated four years ago.

Both MMR2 and pre-school booster (DTaP/IPV) coverage exceeded 90% in the devolved administrations, but only two English local teams reached this level for both (table 3).

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4.4 Neonatal hepatitis B vaccine coverage in England

This is the first quarter where neonatal HepB vaccine coverage data in England evaluates five doses of hepatitis B vaccine (two monovalent and three hexavalent doses) 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 October to December 2017). National coverage was 79% compared to 69% in the previous quarter [4].

Coverage of four doses of monovalent vaccine in infants continues to be reported for children who reached two years of age in the quarter (i.e. those born between October to December 2016) and was 76% this quarter.

These data are presented by local team in table 4. The quality of these data is variable and coverage by former local team can be based 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.

5. 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: https://digital.nhs.uk/data-and-information/publications/statistical/nhs-immunisation-statistics

Quarterly Northern Ireland: http://www.publichealthagency.org/directorate-publichealth/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

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6. References

- Public Health England. Hexavalent combination vaccine: routine programme guidance. https://www.gov.uk/government/publications/hexavalent-combination-vaccine-programme-guidance
- 2. Public Health England. The complete routine immunisation schedule. https://www.gov.uk/government/publications/the-complete-routine-immunisation-schedule
- Public Health England (2018). Vaccination coverage statistics for children up to the age of five years in the United Kingdom, April to June 2018. HPR 12(35): https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-coverprogramme-2018-to-2019-guarterly-data
- Public Health England (2018). Vaccination coverage statistics for children up to the age of five years in the United Kingdom, July to September 2018. HPR 12(45): https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-coverprogramme-2018-to-2019-guarterly-data
- 5. Public Health England (2018). Quarterly vaccination coverage statistics for children aged up to five years in the UK (COVER programme): October to December 2017. *HPR* **12**(11). Available at https://www.gov.uk/government/statistics/cover-of-vaccination-evaluated-rapidly-cover-programme-2017-to-2018-quarterly-data
- 6. NHS England. Digital Child Health Transformation Programme. https://www.england.nhs.uk/digital technology/child-health/

Appendix: Tables

Table 1. Completed UK primary immunisations at 12 months by country and England local team: October to December 2018 (*July to September 2018*)

Table 2. Completed UK primary immunisations at 24 months by country and NHS England local team October to December 2018 (*July to September 2018*)

Table 3. Completed UK primary immunisations and boosters at five years by country and NHS England local team: October to December 2018 (*July to September 2018*)

Table 4. Neonatal hepatitis B coverage at 12 and 24 months in England by NHS England Area Team : October to December 2018 (*July to September 2018*)

Table 5. BCG vaccine coverage at 12 months in English local authorities with TB incidence ≥40 per 100,000 and offering a universal programme: October to December 2018 (*July to September 2018*)

Table 1. Completed UK primary immunisations at 12 months by country and English Local Teams¹: October to December 2018 (*July to September 2018*)

	Country	No. of LAs/HBs [†]	DTaP/IPV/Hib(HepB)3%	PCV2%	Rota2%	MenB2%
	United Kingdom ²	177	92.6 (92.1)	93.2 (92.6)	90.5 (89.7)	92.8 (92.4)
	Wales	7	95.7 (95.3)	95.9 (95.6)	93.9 (93.7)	95.6 (95.4)
	Northern Ireland	4	94.0 (94.5)	94.4 (94.9)	92.2 (92.3)	94.1 (94.7)
	Scotland	14	95.9 (95.7)	96.4 (96.2)	92.7 (92.4)	95.8 (<i>95.5</i>)
	England ²	152	92.1 (91.6)	92.8 (92.1)	90.0 (89.1)	92.3 (91.9)
	England (excluding London)	119	93.2 (93.0)	93.8 (93.3)	91.1 (90.3)	93.5 (93.4)
LT code	NHS England Local Teams ¹					
Q71	London	33	87.6 (85.5)	88.3 (87.0)	85.7 (84.1)	87.4 (86.0)
Q72	North (Yorkshire & Humber)	15	93.9 (94.2)	94.3 (94.5)	91.8 (91.7)	94.1 (94.3)
Q73	North (Lancashire & Grt. Manchester)	13	90.9 (91.1)	92.1 (89.8)	88.7 (87.9)	91.6 (92.4)
Q74	North (Cumbria & North East)	13	95.8 (96.0)	96.0 (96.0)	94.6 (94.2)	95.8 (95.7)
Q75	North (Cheshire & Merseyside)	9	92.8 (91.8)	93.2 (93.4)	90.9 (88.7)	93.5 (94.3)
Q76	Midlands & East (North Midlands)	8	93.8 (93.4)	94.2 (93.9)	92.0 (91.7)	94.0 (93.7)
Q77	Midlands & East (West Midlands)	10	91.3 (90.9)	92.0 (92.0)	87.5 (86.8)	91.6 (91.3)
Q78	Midlands & East (Central Midlands)	10	92.8 (92.9)	94.0 (93.8)	90.9 (90.9)	93.6 (93.6)
Q79	Midlands & East (East)	7	93.6 (93.5)	94.1 (94.1)	91.9 (<i>91.6</i>)	93.7 (93.8)
Q85	South West (South West South)	9	95.0 (93.8)	95.3 (94.4)	92.6 (90.9)	94.9 (94.1)
Q86	South West (South West North)	7	93.8 (93.2)	94.3 (93.9)	91.5 (<i>91.5</i>)	94.0 (93.5)
Q87	South East (Hampshire, Isle of Wight and Thames Valley)	12	94.7 (93.3)	94.8 (94.0)	91.9 (91.1)	94.1 (93.2)
Q88	South East (Kent, Surrey and Sussex)	6	92.5 (93.3)	93.3 (92.0)	91.0 (88.6)	93.0 (91.9)

[†] Local Authorities /Health Boards.

¹ April 2018 configuration of NHS England Local Teams

² Data quality issues associated with complexities in data flows between providers and child health information systems, and inconsistencies in data coding affected some LAs in London significantly under-estimating coverage in the previous two quarters.

Table 2. Completed UK primary immunisations at 24 months by country and NHS England local team¹: October to December 2018 (*July to September 2018*)

Country	No. of LAs/ HBs [†]	DTaP/IPV/Hib3%	PCV booster%	Hib/MenC booster%	MMR1%	MenB booster%
United Kingdom ²	177	94.6 (94.9)	90.6 (<i>90.7</i>)	90.8 (90.8)	90.5 (90.5)	89.1 (88.7)
Wales	7	96.8 (96.9)	94.5 (95.0)	94.1 (<i>94.4</i>)	94.3 (<i>94.5</i>)	93.8 (94.1)
Northern Ireland	4	96.9 (97.4)	92.5 (94.1)	92.5 (93.9)	92.3 (93.6)	92.2 (93.7)
Scotland	14	97.0 (<i>97.6</i>)	94.0 (95.0)	94.1 (<i>95.0</i>)	93.6 (94.3)	93.5 (94.2)
England ²	152	94.2 (94.4)	90.1 (<i>90.0</i>)	90.3 (90.2)	90.0 (89.9)	88.4 (87.7)
England (excl. London)	119	95.0 <i>(95.4)</i>	91.8 (92.0)	92.0 (92.2)	91.8 (91.9)	90.3 (89.9)
NHS England local teams *						
Q71	33	90.9 (90.5)	82.6 (81.3)	82.9 (81.8)	82.3 (81.2)	80.1 (78.4)
Q72	15	95.7 (<i>95.7</i>)	93.1 (93. <i>4</i>)	93.2 (93.3)	92.9 (<i>93.0</i>)	91.8 (91.9)
Q73	13	92.7 (94.4)	91.1 (91.3)	91.8 (92.0)	91.5 (91.8)	87.7 (87.6)
Q74	12	96.4 (96.3)	94.4 (94.1)	94.5 (94.1)	94.2 (93.9)	93.3 (91.5)
Q75	9	95.8 (<i>95.9</i>)	92.4 (92.2)	92.3 (92.3)	92.0 (92.1)	93.1 (91.7)
Q76	8	96.0 (96.3)	92.0 (93.0)	92.0 (92.8)	91.9 (92.8)	90.4 (91.2)
Q77	10	94.0 (93.9)	89.7 (<i>89.7</i>)	90.0 (89.5)	89.9 (89.6)	88.3 (87.7)
Q78	10	94.7 (95.3)	90.7 (92.0)	91.2 (92.4)	90.6 (91.8)	89.0 (90.2)
Q79	7	95.3 (<i>95.4</i>)	91.7 (92.2)	91.8 (92.2)	91.4 (91.7)	90.0 (90.3)
Q85	9	95.8 (<i>96.0</i>)	93.5 (92.6)	93.5 (92.7)	93.2 (92.7)	92.8 (91.8)
Q86	7	96.3 (96.0)	93.1 (93.3)	93.2 (93.2)	93.1 (93.0)	92.1 (92.3)
Q87	12	95.7 (<i>97.0</i>)	92.4 (91.8)	92.7 (92.0)	92.6 (91.8)	91.4 (88.5)
Q88	6	93.6 (93.8)	90.2 (90.4)	90.3 (90.6)	90.1 (90.4)	88.2 (87.8)

[†] Local Authorities/Health Boards

^{*} See table 1 for key to local team organisational code

¹ April 2018 configuration

² Data quality issues associated with complexities in data flows between providers and child health information systems, and inconsistencies in data coding affected some LAs in London significantly under-estimating coverage in the previous two quarters.

Table 3. Completed UK primary immunisations and boosters at five years by country and NHS England local team¹: October to December 2018 (*July to September 2018*)

	Number of LAs/HBs [†]	Primary		Booster		
Country		DTaP/IPV/ Hib3%	MMR1%	MMR2%	DTaP/IPV%	Hib/MenC%
United Kingdom ²	177	95.6 (95.6)	94.9 (95.0)	87.4 (87.1)	86.3 (86.1)	93.0 (93.1)
Wales	7	97.3 (93.3)	96.7 (<i>96.6</i>)	92.3 (89.5)	92.7 (92.5)	94.8 (93.0)
N. Ireland	4	97.4 (97.3)	96.7 (<i>96.7</i>)	91.7 (91.5)	92.3 (92.2)	96.2 (95.9)
Scotland	14	97.9 (97.9)	97.0 (<i>97.0</i>)	91.8 (91.7)	92.2 (92.1)	96.2 (<i>96.2</i>)
England ²	152	95.3 (95.5)	94.6 (<i>94.7</i>)	86.6 (<i>86.4</i>)	85.3 (<i>85.0</i>)	92.6 (92.7)
England (excl. London)	119	96.0 (96.2)	95.5 (95.7)	89.0 (88.9)	87.9 (87.9)	93.5 (93.8)
English Local teams *						
Q71	33	92.0 (92.0)	90.1 (90.2)	75.7 (74.8)	73.1 (71.8)	87.9 (<i>87.7</i>)
Q72	15	96.1 (<i>96.5</i>)	95.2 (96.1)	89.9 (<i>90.4</i>)	89.1 (89.2)	93.4 (93.6)
Q73	13	94.7 (94.9)	95.3 (<i>95.3</i>)	88.5 (<i>88.0</i>)	87.3 (<i>87.5</i>)	93.9 (93.9)
Q74	13	97.6 (97. <i>4</i>)	97.4 (<i>97.0</i>)	92.6 (92.2)	91.3 (91.1)	95.8 (<i>95.5)</i>
Q75	9	96.4 (<i>96.4</i>)	95.8 (<i>96.0</i>)	88.7 (89.4)	89.2 (90.0)	93.8 (<i>94.1)</i>
Q76	8	97.1 (97. <i>4</i>)	96.4 (96.8)	89.2 (<i>89.0</i>)	88.1 (88.1)	94.7 (94.9)
Q77	10	95.5 (96.3)	94.9 (<i>95.9</i>)	85.9 (86.8)	85.0 (<i>85.5</i>)	93.5 (94.5)
Q78	10	96.3 (96.5)	95.6 (<i>96.0</i>)	89.1 (<i>89.4</i>)	87.4 (87.4)	93.3 (94.0)
Q79	7	96.4 (96.2)	95.8 (95.3)	88.6 (<i>87.8</i>)	87.5 (<i>86.7</i>)	93.5 (93.1)
Q85	9	97.4 (97.2)	96.6 (96.3)	92.4 (90.8)	90.5 (89.6)	95.7 (94.8)
Q86	7	97.4 (97.1)	96.7 (96.2)	90.8 (89.6)	89.7 (88.8)	95.8 (95.2)
Q87	12	96.0 (96.6)	94.7 (95.3)	88.9 (88.8)	86.6 (86.0)	93.0 (93.4)
Q88	6	93.3 (93.8)	93.8 (93.4)	86.5 (<i>87.4</i>)	87.1 (<i>87.6</i>)	89.4 (90.4)

^{*} See table 1 for key to NHS England local team organisational code.

¹ April 2018 configuration

² Data quality issues associated with complexities in data flows between providers and child health information systems, and inconsistencies in data coding affected some LAs in London significantly under-estimating coverage in the previous two quarters.

Table 4. Neonatal hepatitis B coverage at 12 and 24 months in England by NHS England Local Team: October to December 2018 (July to September 2018)

NHS England Local Team Code*	LA returns with 12 month data	12 month deno- minator	% Coverage at 12 months (5 doses) ¹	LA returns with 24 month data	24 month deno- minator	% Coverage at 24 months (4 doses) ²
Q71	32 of 33	193	84 (82)	32 of 33	166	87 (<i>n/a</i>)
Q72	15 of 15	41	85 (83)	15 of 15	41	87 (81)
Q73	10 of 13	64	30 (27)	10 of 13	21	23 (28)
Q74	12 of 13	5	100 (67)	12 of 13	2	100 (89)
Q75	6 of 9	4	75 (100)	6 of 9	3	33 (71)
Q76	8 of 8	21	90 (95)	8 of 8	13	81 (93)
Q77	10 of 10	50	92 (94)	10 of 10	49	94 (98)
Q78	10 of 10	52	98 (75)	9 of 10	48	75 (90)
Q79	7 of 7	21	71 (71)	7 of 7	21	72 (81)
Q85	9 of 9	10	80 (89)	9 of 9	15	94 (91)
Q86	7 of 7	20	70 (95)	7 of 7	15	94 (100)
Q87	12 of 12	34	85 (96)	12 of 12	32	97 (<i>94</i>)
Q88	6 of 6	14	86 (71)	6 of 6	31	76 (<i>94</i>)
England ¹	144 of 152	529	79 (69)	143 of 152	573	76 (<i>n/a</i>)

^{*} See table 1 for key to NHS England Local Team organisational code

Table 5. BCG vaccine coverage at 12 months in English local authorities with TB incidence ≥40 per 100,000 and offering a universal programme: October to December 2018 (*July to September 2018*)

Upper tier Local Authority	Three-year average (2014-16) annualTB rate per 100,000	Number of eligible children (1st birthday in Oct to Dec 2018)	Universal BCG coverage% (previous quarterly estimate)
Newham	69.0	1489	66.0 (72.1)
Brent	57.8	1196	36.6 (<i>37.4</i>)
Hounslow	47.5	1069	22.6 (49.6)
Ealing	47.3	1349	33.7 (43.9)
Slough	41.8		No universal programme
Redbridge	41.5	1198	66.9 (<i>66.4</i>)

¹ Babies offered two monovalent HepB vaccines (at birth and one month) and three hexavalent vaccines (at two, three and four months)

² Babies offered four doses of monovalent HepB vaccine (at birth, one, two and 12 months)

Figure 1. DTaPIPVHib3 coverage at 12 months for England (including and excluding London): Q4 (Jan to Mar 2018), Q1 (Apr to Jun 2018), Q2 (Jul to Sep 2018) and Q3 (Oct to Dec 2018)

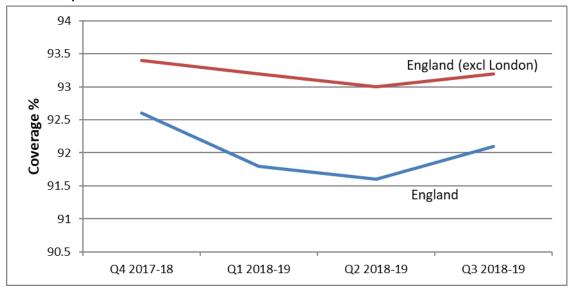


Figure 2. MMR1 coverage at 24 months for England (including and excluding London): Q4 (Jan to Mar 2018), Q1 (Apr to Jun 2018), Q2 (Jul to Sep 2018) and Q3 (Oct to Dec 2018)

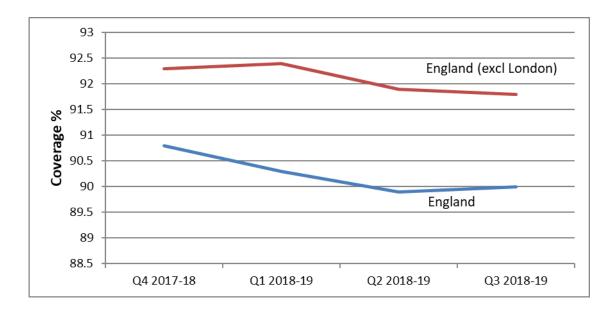
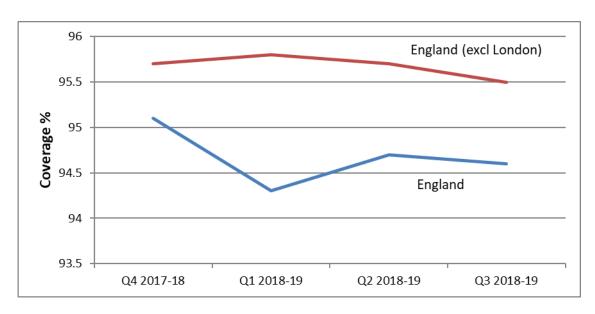


Figure 3. MMR1 coverage at 5 years for England (including and excluding London): Q4 (Jan to Mar 2018), Q1 (Apr to Jun 2018), Q2 (Jul to Sep 2018) and Q3 (Oct to Dec 2018)



About Public Health England

Public Health England exists to protect and improve the nation's health and wellbeing, and reduce health inequalities. We do this through world-class science, knowledge and intelligence, advocacy, partnerships and the delivery of specialist public health services. We are an executive agency of the Department of Health and Social Care, and are a distinct delivery organisation with operational autonomy to advise and support government, local authorities and the NHS in a professionally independent manner.

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Public Health England, Wellington House, 133-155 Waterloo Road, London SE1 8UG Tel: 020 7654 8000 www.gov.uk/phe

Twitter: @PHE_uk Facebook: www.facebook.com/PublicHealthEngland

Queries relating to this document should be directed to: Immunisation and Countermeasures,
National Infection Service, PHE Colindale,
61 Colindale Avenue, London NW9 5EQ.
COVER@phe.gov.uk



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