

Vaccine Uptake in Children in Wales

COVER Annual Report 2017

Data for the year ending 31st March 2017



Key points

- In 2016/17 uptake of the '5 in 1' and pneumococcal conjugate vaccinations in 1 year old children in Wales was over 95% for the ninth consecutive year.
- Uptake of two doses of rotavirus vaccine was 94% at the first birthday representing uptake in the third annual cohort of children eligible for this vaccine.
- Uptake of two doses of MenB vaccine in those born during the eligible time period was 87%, reflecting a period of introduction and catch up.
- Uptake of the first dose of MMR at 2 years remains on target at 95%.
- Overall 85% of children were up to date with recommended immunisations by their fourth birthday, a decrease in this measure for the third year in a row.
- Uptake of the second dose of MMR by 5 years of age was 90% compared to 92% in 2015/16.
- Uptake of the pre-school '4 in 1' booster in five year old children was 93%.
- Uptake of one dose of Human Papillomavirus (HPV) vaccine in girls turning 14 years of age during the 2016/17 school year was 87%. Uptake of two doses in girls turning 15 years of age was 86%.
- Coverage of two doses of MMR vaccine in teenagers turning 15 and 16 years of age during the 2016/17 school year was 87% and 89%, respectively.
- Uptake of MenACWY vaccine in teenagers turning 15 years of age during the 2016/17 school year, the first School Year 9 cohort to be offered the vaccine, was 80%.

Vaccination uptake findings

1. These results are for children living in Wales in March 2017 and reaching their first, second, fourth and fifth birthdays between 01/04/2016 and 31/03/2017. For the first time in the annual COVER report, uptake of vaccinations in those reaching 15 and 16 years of age have been presented by school year where they have previously been presented by financial year. In addition HPV vaccination¹ in girls reaching 14 to 16 years of age in the 2016/17 school year are also presented.
2. Annual uptake of the completed course of '5 in 1'² vaccine, scheduled at 2, 3 and 4 months of age, in children reaching their first birthday remained stable at 96.3%. Uptake ranged by health board (HB) from 95.0% (Hywel Dda HB) to 97.8% (Cwm Taf University HB) and by local authority (LA) from 94.3% (Pembrokeshire) to 98.4% (Blaenau Gwent). Twenty of the 22 LAs achieved the 95% target (Figures 1, 2, 4, 6 and Tables 2, 3).
3. Annual uptake of a completed one dose course of MenC³ vaccine in children reaching their first birthday this year was 94.4%. From the 1st July 2016 infants were no longer offered the MenC vaccination at 12 weeks of age [1]. Uptake may appear lower than in previous annual COVER reports as this is the last group of children to be offered MenC vaccination at this age; and children who missed scheduled vaccinations may not have been caught-up after 1st July.

¹ HPV vaccination protects girls against cervical cancer associated with HPV types 16 and 18.

² DTaP/IPV/Hib vaccine protects against diphtheria, tetanus, pertussis (Whooping Cough), polio and Hib infection.

³ MenC vaccine protects against meningitis caused by meningococcus group C infection. Children reaching one year of age would have been offered one dose of MenC vaccine at 3 months of age. From the 1st July 2016 infants were no longer offered the MenC vaccination at 12 weeks of age.

4. Uptake of a complete two dose primary course of pneumococcal conjugate vaccination (PCV2⁴) in children at one year of age was 96.2%, ranging by HB from 94.8% (Cardiff and Vale University HB) to 97.9% (Cwm Taf University HB) and by LA from 94.3% (Pembrokeshire) to 99.0% (Blaenau Gwent) (Figures 1, 2 and Table 3).
5. Uptake of two doses of rotavirus vaccine in children reaching their first birthday was 94.1% compared to 93.4% in the previous year. Uptake ranged by HB from 92.6% (Cardiff and Vale University HB) to 96.3% (Cwm Taf University HB) and by LA from 91.1% (Ceredigion) to 97.2% (Merthyr Tydfil) (Figure 2, Tables 2, 3). This is the third group of children reported through the annual COVER scheme who would have been eligible to receive rotavirus vaccine.
6. Uptake of two doses of meningococcal serotype B vaccination (MenB⁵) in children at one year of age was 80.2%, ranging by HB from 78.6% (Hywel Dda University HB and Powys Teaching HB) to 81.5% (Abertawe Bro Morgannwg University HB) and by LA from 77.3% (Pembrokeshire) to 84.9% (Anglesey) (Table 3). MenB vaccination was introduced in September 2015 for those born 1st May 2015 onwards, therefore infants turning 1 year of age in April 2016 would not have been eligible [2]. Excluding those who were not eligible, uptake of two doses was 87.4%.
7. Uptake of one dose of MMR⁶ by two years of age remained stable this year at 95.1% compared to 95.3% in the previous year. Uptake ranged by HB from 93.8% (Hywel Dda University HB) to 96.1% (Cwm Taf University HB) and by LA from 93.4% (Pembrokeshire) to 97.1% (Monmouthshire). Four HBs achieved the target uptake of 95% for one dose of MMR by two years of age, and 15 out of 22 LAs exceeded the 95% target (Figures 1, 4 and 7 and Tables 2, 4).
8. Annual uptake of the final dose of Pneumococcal Conjugate Vaccine (PCVf) by two years of age was 95.4%. Uptake by HB ranged from 94.3% (Hywel Dda University HB) to 96.4% (Cwm Taf University HB) and by LA from 93.3% (Newport) to 97.0% (Anglesey) (Figure 2 and Tables 2, 4).
9. Annual uptake of the Hib/MenC⁷ booster by two years of age was 94.5%, ranging by HB from 93.3% (Cardiff and Vale University HB) to 96.0% (Cwm Taf University HB) and by LA from 91.8% (Newport) to 96.5% (Anglesey) (Figures 1, 2 and Tables 2, 4).
10. Coverage of the Hib/MenC booster in children by the time of their fourth birthday was 93.3% and ranged by HB from 91.0% (Cardiff and Vale University HB) to 95.2% (Cwm Taf University HB) (Table 5).
11. This year, coverage of the '4 in 1' DTaP/IPV⁸ pre-school booster in children by four years of age was 87.9%, this ranged by HB from 83.4% (Aneurin Bevan University HB) to 91.8% (Betsi Cadwaladr University HB) (Table 5).
12. Coverage of a complete two dose course of MMR vaccine in children by four years of age was 86.4%, this ranged by HB from 82.1% (Aneurin Bevan University HB) to 89.9% (Abertawe Bro Morgannwg University HB) (Table 5).
13. The proportion of children who were up to date with their Hib/MenC booster, '4 in 1' DTaP/IPV pre-school booster and MMR vaccines by four years of age was 84.6%, a 0.7% decrease from 85.3%, in 2015/16 (Figure 3 and Tables 1, 2 and 5). This ranged by HB from 80.7% (Aneurin Bevan University HB) to 88.3% (Betsi Cadwaladr University HB) and by LA from 77.6% (Newport) to 90.9% (Anglesey).

⁴ PCV protects against pneumococcal meningitis, bacteraemia, pneumonia and otitis media. Children reaching one year of age would have been offered one dose of PCV at 2 months of age and one dose at 4 months of age. Children reaching two years would have been offered their third and final PCV dose at 12-13 months of age.

⁵ MenB vaccination was introduced in July 2015 and all infants reaching 1 year of age from 1st May 2016 onwards would have been eligible. Three doses of MenB vaccine should be given at 2, 4 and 12-13 months of age.

⁶ MMR protects against measles, mumps and rubella infections.

⁷ Hib/MenC vaccine protects against Hib and MenC infections and a routine dose should be offered at 12-13 months of age

⁸ DTaP/IPV (and dTaP/IPV) vaccines boost protection against diphtheria, tetanus, pertussis and polio infection before school entry

14. Annual uptake of two doses of MMR in children at five years of age was 90.3% this year, compared to 91.6% last year (Figures 1, 5, 8, Tables 2, 6), ranging by HB from 87.7% (Powys Teaching HB) to 92.4% (Cwm Taf University HB). Coverage of one dose of MMR in children at five years of age was 96.7% and ranged by HB from 95.1% (Powys Teaching HB) to 97.8% (Cwm Taf University HB).
15. Uptake of the '4 in 1' DTaP/IPV pre-school booster in children reaching their fifth birthday this year was stable at 92.5%, compared to 92.1% in the previous year (Figures 5, 9, Tables 2, 6).
16. Coverage of one dose of HPV vaccine in girls in the 2016/17 School Year 9 (reaching their 14th birthday between 01/09/16 and 31/08/17) was 86.7%, ranging by HB from 75.6% (Powys Teaching HB) to 91.6% (Abertawe Bro Morgannwg University HB) and by LA from 75.6% (Powys) to 92.8% (Bridgend) (Table 7). This is the second School Year 9 group to be offered the two dose course and uptake of one dose is slightly lower compared to the uptake reported for the 2015/16 School Year 9 group in the previous annual COVER report (89.6%) [3]. Coverage of two doses of HPV vaccine in girls in the 2016/17 School Year 10 is currently 85.8%.
17. Coverage of two doses of MMR in teenagers turning 15 years of age between 01/09/16 and 31/08/17 was 87.4% (Table 8), ranging by HB from 82.3% (Powys Teaching HB) to 90.5% (Betsi Cadwaladr University HB) and by LA from 78.6% (Monmouthshire) to 93.5% (Wrexham). Coverage of one dose of MMR in 15 year olds was 92.6%, ranging by LA from 84.8% (Monmouthshire) to 96.2% (Caerphilly). A breakdown by sex indicates that 88.1% of girls had received a full (two MMR doses) course of immunisation against rubella this year and coverage of only one dose was 93.0%.
18. National uptake of the Td/IPV⁹ teenage booster in children reaching 15 years of age between 01/09/16 and 31/08/17 was 82.7% (Table 8). Uptake ranged by HB from 72.7% (Cardiff and Vale University HB) to 91.0% (Cwm Taf University HB) and by LA from 70.3% (Cardiff) to 91.3% (Rhondda Cynon Taff).
19. The routine teenage MenACWY vaccination was introduced at the start of the 2015/16 school year replacing the single antigen meningococcal C teenage booster that was previously given to children in School Year 9 [4]. Coverage in the in the 2016-17 School Year 10 group, the first Year 9 routine cohort to be offered the new vaccine is currently 80.0% (Table 8).
20. Coverage of two doses of MMR in teenagers turning 16 years of age between 01/09/16 and 31/08/17 was 88.9% (Table 9), ranging by HB from 84.0% (Powys Teaching HB) to 90.5% (Cwm Taf University HB) and by LA from 82.4% (Monmouthshire) to 92.5% (Caerphilly). Coverage of one dose of MMR in 16 year olds was 93.8%, ranging by LA from 87.8% (Monmouthshire) to 97.0% (Caerphilly). A breakdown by sex indicates that 89.5% of girls had received a full (two MMR doses) course of immunisation against rubella this year and coverage of only one dose was 94.1%.
21. National uptake of the Td/IPV teenage booster in children reaching 16 years of age between 01/09/16 and 31/08/17 was 84.2% (Table 9). Uptake ranged by HB from 77.9% (Powys Teaching HB) to 91.1% (Cwm Taf University HB) and by LA from 75.5% (Monmouthshire) to 92.0% (Merthyr Tydfil).
22. Uptake of hepatitis B immunisation, extracted from the Public Health Wales All Wales Neonatal Hepatitis B immunisation database, is presented in Table 11. The data show very high levels of immunisation in these infants at very high risk of hepatitis B infection. The database was developed to assist the Public Health Wales Health Protection Team in the monitoring and follow up of hepatitis B immunisation of babies born to hepatitis B positive mothers and to provide a source for statistics on uptake of hepatitis B immunisation in this

⁹ Td/IPV boosts protection against diphtheria, tetanus and polio infection before entering adulthood.

group. Uptake of three doses in children who were at risk of perinatal infection and reached their first birthday in the year ending 31st March 2017 was 94.3%. Uptake of four doses in children who were at risk of perinatal infection and reached their second birthday in the year ending 31st March 2017 was 89.7%. Uptake of four doses in children who were at risk of perinatal infection and reached their fifth birthday in the year ending 31st March 2017 was 100%.

Inequalities in uptake of routine vaccinations at four years of age

The relationship between deprivation and uptake was examined. The percentage of children who were up to date with their routine vaccinations by four years of age is presented broken down by Health Board and the national quintile of deprivation of the Lower Super Output Area (LSOA) in which the children reside (Figure 11 and Table 10). National quintiles of deprivation were calculated according to the LSOA rankings contained in the Welsh Index of Multiple Deprivation (WIMD 2014). For the data presented here, quintile five represents the most deprived quintile of LSOA and quintile one represents the least deprived quintile of LSOA. Deprivation rankings contained in the WIMD are relative, not absolute values and they refer to an overall composite measure of factors related to deprivation for all residents in the LSOA as a whole, not the circumstances of individual residents within the LSOA.

Nationally, the percentage of children up to date with their routine immunisations by four years of age ranged from 81.0% in the most deprived quintile of LSOAs to 87.0% in the least deprived quintile of LSOAs (Figure 11 and Table 10). The difference in uptake between the least deprived quintile and the most deprived quintile was 6.0%, a decrease from 7.2% in 2015/16 and 6.7% in 2014/15 (Figure 11).

Comment

During 2016/17 uptake of the '5 in 1' and pneumococcal conjugate vaccines remained above 95% in children aged one year of age and uptake of two doses of rotavirus vaccine increased to 94% from 93% in the previous year.

For the first time, this report contains MenB immunisation uptake figures for children reaching their first birthday, following the introduction of this vaccine on 1st September 2015 [2]. Uptake of two doses in eligible infants, born 1st May 2015 to 31st March 2016, which includes a period covering the introduction of the vaccine and a small catch up cohort receiving the vaccine slightly older than routinely scheduled, was 87%. In comparison uptake of routinely scheduled MenB vaccine in the first quarter of 2017 was 96.1% for two doses [4]. This is encouraging and suggests high levels of acceptability of this recent addition to the childhood vaccination schedule.

In 2016 it was announced that the infant MenC vaccine given at 3 months of age would be removed from the schedule following a successful MenC programme resulting in the virtual disappearance of invasive meningococcal group C disease in Wales [1]. The one year old children in this report were the last cohort to be offered the vaccine. The MenACWY vaccination for teenagers continues.

The proportion of children who are up to date with their routine immunisations by four years of age has decreased again this year, for the third year in a row. Only one local authority area achieved 90%. Of all the immunisations that are included in this composite measure, uptake of the second dose of MMR saw the largest decrease (1.3%) followed by the Hib/MenC booster (0.8%). Uptake of the '4 in 1' preschool booster remained stable.

The inequality gap in immunisation coverage between four year olds residing in the most and least deprived areas decreased compared to 2015/16, but remained higher than the 5% gap reported in 2013/14. Decreases in uptake by four years of age were seen in children living in the most deprived and the least deprived areas of Wales. The smaller inequality gap in uptake reported here is explained by the decrease in uptake in the least deprived quintile being larger than the decrease seen in the most deprived quintile.

Uptake of two doses of MMR in 5 year olds has decreased again this year, following a trend first seen in the previous annual COVER report. This is of concern, and increases the risk of outbreaks of measles. Coverage of one dose of MMR in 5 year olds is more stable.

This report provides complete uptake figures for the first routine group of girls to be offered a two dose course of HPV vaccination following the change in the HPV vaccination programme in September 2014 [3]. Uptake of two doses of HPV in this group was 86%, the same uptake as reported for three doses of vaccine in the last cohort to complete the three dose schedule in 2016.

During the 2015/16 financial year the single antigen MenC (meningococcal group C) vaccine was replaced with MenACWY vaccine in teenagers, with a phased catch-up campaign [5]. Uptake in the first routine cohort of teenagers receiving the Men ACWY vaccine (reaching 15 years of age in 2016/17) was 80%, whilst uptake in the first catch up cohort (reaching 17 years of age in 2016/17) was 78% [4]. Uptake in those vaccinated through General Practice (aged 18, 19 and 20), is lower at 27%, 37% and 39% as at 15/05/2017 [6]. Teenagers reaching 14 and 16 years age are being vaccinated during the current academic year, dates of vaccination session vary throughout the year by region and progress is reported in the quarterly COVER reports [4].

Uptake of one dose of MMR in 15 and 16 year olds was below the 95% target this year, and less than 90% of teenagers received the second dose of MMR. This is a cause for concern. During the summer of 2016 there was an outbreak of measles in the UK associated with attendance at music festivals [7]. There has also been an increase cases across Europe [8]. To ensure that future outbreaks are avoided, implementing existing policy guidance and checking and ensuring that children and teenagers in Wales have received two doses MMR remains a key priority.

[1] Welsh Government (2016). Removal of the infant dose of meningococcal serogroup C (MenC) conjugate vaccine given at three months from 1 July 2016, Welsh Health Circular. WHC(2016)027.

<http://gov.wales/docs/dhss/publications/160414whc027en.pdf>

[2] Welsh Government (2015). Introduction of MenB Immunisation for Infants, Welsh Health Circular.

WHC(2015)040. <http://gov.wales/docs/dhss/publications/150727whc040en.pdf>

[3] Welsh Government (2014). Changes to the Human Papillomavirus (HPV) vaccination programme from September 2014, CMO letter (2014)13. Available from:

<http://gov.wales/docs/phhs/publications/140707vaccinationen.pdf>

[4] Public Health Wales Health Protection Division. Vaccine uptake in Children in Wales, October to December 2016: COVER report 122, May 2017. Cardiff, Public Health Wales.

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

[5] Welsh Government (2015). Meningococcal ACWY conjugate vaccination (MenACWY) - Revision, Welsh Health Circular. WHC(2015)037. <http://gov.wales/docs/dhss/publications/150724whc037en.pdf>

[6] Public Health Wales (2016). MenACWY catch-up immunisation uptake data (collected through Audit+). Public Health Wales Vaccine Preventable Disease Programme and Communicable Disease Surveillance Centre.

<http://www.wales.nhs.uk/sitesplus/888/page/88528>

[7] O le Polain de Waroux et al. Summer music and arts festivals as hot spots for measles transmission: experience from England and Wales, June to October 2016. Eurosurveillance 2016; 21(44):pii30390. Available from:

<http://www.eurosurveillance.org/ViewArticle.aspx?ArticleId=22634>

[8] European Centre for Disease Prevention and Control. Epidemiological update: Measles - monitoring European outbreaks, May 2017. Sweden, ECDC.

http://ecdc.europa.eu/en/press/news/layouts/forms/News_DispatchForm.aspx?ID=1621&List=8db7286c-fe2d-476c-9133-18ff4cb1b568&Source=http%3A%2F%2Fecdc.europa.eu%2Fen%2FPages%2FHome%2Easpx

Report prepared by Public Health Wales Vaccine Preventable Disease Programme and Communicable Disease Surveillance Centre. Data for this report was provided by NHS Wales Informatics Service from the National Community Child Health Database (NCCHD). The data was sourced from Community Child Health databases maintained by local Child Health Office staff in Trusts throughout Wales based on regular returns from doctors and nurses who immunise or advise on immunisation. Uptake data presented throughout are for LHB resident population, not for LHB GP practice populations. The maps, graphs and Table 1 are best viewed in colour.

Figure 1. Percentage uptake of childhood immunisations in Wales, quarter 1 1997 to quarter 1 2017. Data are for children reaching 1 year of age each quarter for diphtheria, pertussis, Hib, MenC¹⁰ and pneumococcal conjugate vaccine, children reaching 2 years of age for MMR1 (first dose) and the Hib MenC booster, and 5 years of age for MMR2 (second dose).

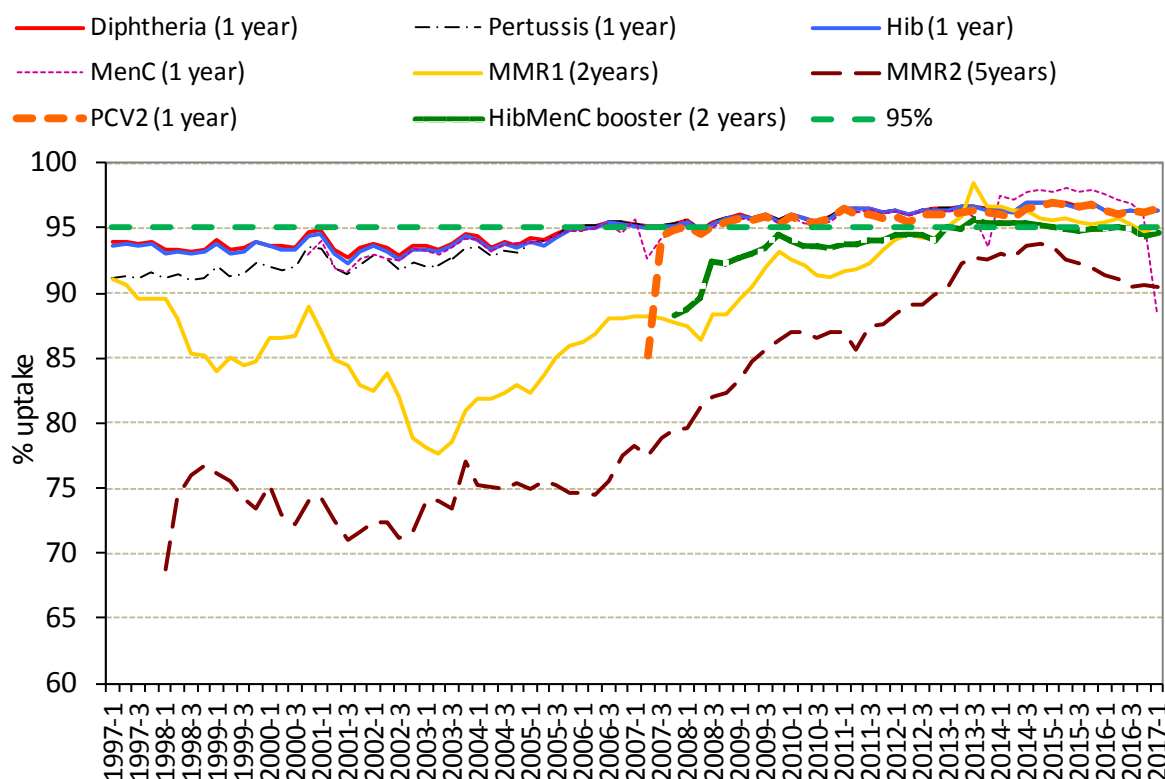
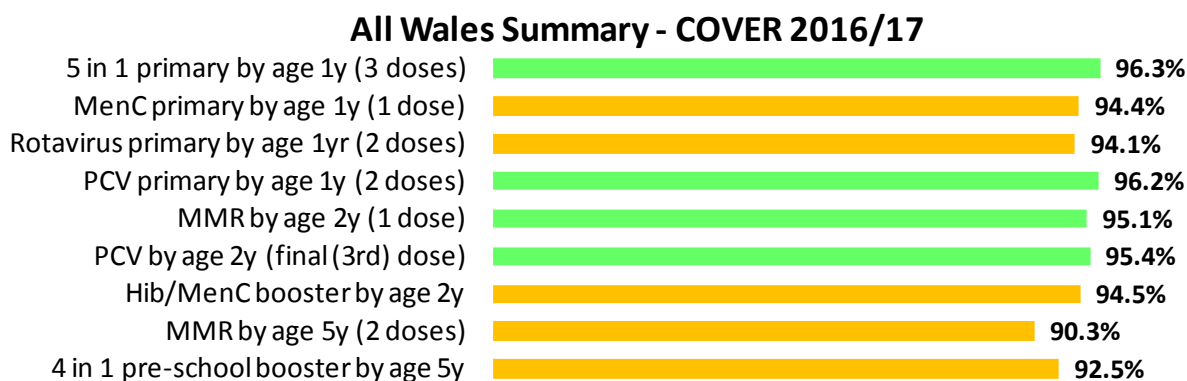


Figure 2. Summary of uptake rates for selected immunisations in resident children reaching their 1st, 2nd and 5th birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017.¹⁰



¹⁰ This cohort of children was the last to be offered the MenC vaccine at 12 weeks of age therefore uptake will be lower as there has been less time for catch-up.

Figure 3. Percentage uptake of resident children reaching their 4th birthday between 01/04/16 and 31/03/17 and are up to date with all scheduled vaccines¹¹ by Health Board.

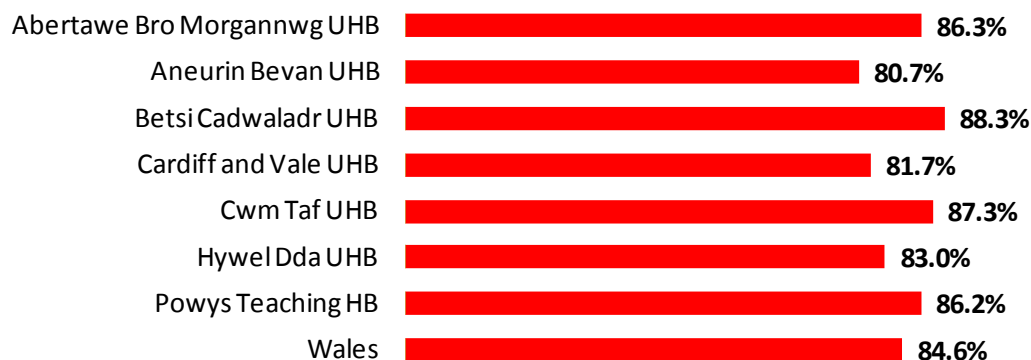


Table 1. Percentage uptake of resident children reaching their 4th birthday and are up to date with all scheduled vaccines¹¹ by Health Board, annually 2012/13 to 2016/17.

Area	Up to date in schedule			
	2013/14	2014/15	2015/16	2016/17
Abertawe Bro Morgannwg UHB	87.4	84.9	86.5	86.3
Aneurin Bevan UHB	86.6	83.2	80.0	80.7
Betsi Cadwaladr UHB	89.9	90.4	89.2	88.3
Cardiff and Vale UHB	85.6	83.8	82.7	81.7
Cwm Taf UHB	90.8	89.4	89.5	87.3
Hywel Dda UHB	88.5	85.5	85.3	83.0
Powys Teaching HB	87.0	87.7	84.9	86.2
Wales	87.9	86.2	85.3	84.6

¹¹ Completed 4 in 1 pre-school booster, the Hib/MenC booster and second MMR dose by four years of age. The calculation method for proportions of children up to date with routine immunisation by four years of age was revised during 2014 quarter 1, to remove the pneumococcal conjugate vaccine booster dose, as this is not clinically indicated after two years of age.

Table 2. Summary table with uptake of selected immunisations in resident children reaching their 1st, 2nd, 4th and 5th birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017.

Area	Age 1 year						Age 2 years				Age 4 years			Age 5 years								
	Resident children (n)	5 in 1 ¹		MenC ²		Rotavirus		Resident children (n)	MMR1		PCV ³		Hib/MenC booster (n)	Resident children (n)	Up to date in schedule ⁴		Resident children (n)	MMR2		4 in 1 ¹		
	(n)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(n)	(%)	(n)	(%)	(n)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(%)	
Abertawe Bro Morgannwg University LHB																						
Bridgend LA	1531	1482	96.8	1456	95.1	1467	95.8	1549	1486	95.9	1496	96.6	1483	95.7	1649	1446	87.7	1804	1663	92.2	1653	91.6
Neath Port Talbot LA	1533	1502	98.0	1478	96.4	1484	96.8	1532	1467	95.8	1479	96.5	1464	95.6	1529	1317	86.1	1646	1508	91.6	1527	92.8
Swansea LA	2583	2493	96.5	2419	93.7	2433	94.2	2577	2452	95.1	2456	95.3	2433	94.4	2692	2302	85.5	2851	2608	91.5	2636	92.5
Health Board Total	5647	5477	97.0	5353	94.8	5384	95.3	5658	5405	95.5	5431	96.0	5380	95.1	5870	5065	86.3	6301	5779	91.7	5816	92.3
Aneurin Bevan University LHB																						
Blaenau Gwent LA	701	690	98.4	679	96.9	650	92.7	740	713	96.4	714	96.5	712	96.2	798	663	83.1	754	686	91.0	698	92.6
Caerphilly LA	2097	2044	97.5	2005	95.6	2009	95.8	2084	2006	96.3	2010	96.4	1998	95.9	2156	1767	82.0	2144	1997	93.1	2007	93.6
Monmouthshire LA	798	763	95.6	756	94.7	741	92.9	827	803	97.1	795	96.1	789	95.4	944	779	82.5	931	797	85.6	824	88.5
Newport LA	2038	1933	94.8	1872	91.9	1874	92.0	2072	1938	93.5	1934	93.3	1902	91.8	2007	1558	77.6	2049	1748	85.3	1783	87.0
Torfaen LA	1058	1032	97.5	1018	96.2	1004	94.9	957	906	94.7	909	95.0	898	93.8	1134	910	80.2	1126	1018	90.4	1028	91.3
Health Board Total	6692	6462	96.6	6330	94.6	6278	93.8	6680	6366	95.3	6362	95.2	6299	94.3	7039	5677	80.7	7004	6246	89.2	6340	90.5
Betsi Cadwaladr University LHB																						
Anglesey LA	671	657	97.9	645	96.1	638	95.1	724	699	96.5	702	97.0	699	96.5	803	730	90.9	815	756	92.8	792	97.2
Conwy LA	1137	1086	95.5	1068	93.9	1057	93.0	1124	1075	95.6	1076	95.7	1060	94.3	1172	1027	87.6	1194	1077	90.2	1127	94.4
Denbighshire LA	1021	982	96.2	963	94.3	959	93.9	1064	1017	95.6	1019	95.8	1008	94.7	1062	918	86.4	1064	972	91.4	1000	94.0
Flintshire LA	1557	1508	96.9	1486	95.4	1474	94.7	1580	1515	95.9	1522	96.3	1502	95.1	1700	1512	88.9	1756	1630	92.8	1705	97.1
Gwynedd LA	1182	1137	96.2	1073	90.8	1118	94.6	1154	1096	95.0	1101	95.4	1093	94.7	1322	1147	86.8	1381	1259	91.2	1306	94.6
Wrexham LA	1503	1442	95.9	1428	95.0	1400	93.1	1573	1516	96.4	1523	96.8	1511	96.1	1677	1499	89.4	1643	1536	93.5	1580	96.2
Health Board Total	7071	6812	96.3	6663	94.2	6646	94.0	7219	6918	95.8	6943	96.2	6873	95.2	7736	6833	88.3	7853	7230	92.1	7510	95.6
Cardiff and Vale University LHB																						
Cardiff LA	4447	4237	95.3	4115	92.5	4095	92.1	4465	4193	93.9	4200	94.1	4140	92.7	4583	3681	80.3	4664	4068	87.2	4224	90.6
Vale of Glamorgan LA	1392	1334	95.8	1317	94.6	1310	94.1	1391	1325	95.3	1327	95.4	1323	95.1	1498	1289	86.0	1626	1467	90.2	1507	92.7
Health Board Total	5839	5571	95.4	5432	93.0	5405	92.6	5856	5518	94.2	5527	94.4	5463	93.3	6081	4970	81.7	6290	5535	88.0	5731	91.1
Cwm Taf University LHB																						
Merthyr Tydfil LA	756	740	97.9	736	97.4	735	97.2	776	742	95.6	744	95.9	741	95.5	749	670	89.5	783	728	93.0	744	95.0
Rhondda Cynon Taff LA	2742	2682	97.8	2651	96.7	2634	96.1	2707	2606	96.3	2615	96.6	2601	96.1	2875	2493	86.7	2939	2711	92.2	2750	93.6
Health Board Total	3498	3422	97.8	3387	96.8	3369	96.3	3483	3348	96.1	3359	96.4	3342	96.0	3624	3163	87.3	3722	3439	92.4	3494	93.9
Hywel Dda University LHB																						
Carmarthenshire LA	1888	1798	95.2	1788	94.7	1788	94.7	1848	1739	94.1	1745	94.4	1736	93.9	2013	1638	81.4	2088	1876	89.8	1911	91.5
Ceredigion LA	649	621	95.7	615	94.8	591	91.1	630	591	93.8	597	94.8	594	94.3	715	633	88.5	627	572	91.2	588	93.8
Pembrokeshire LA	1187	1119	94.3	1098	92.5	1091	91.9	1244	1162	93.4	1169	94.0	1163	93.5	1309	1081	82.6	1367	1187	86.8	1238	90.6
Health Board Total	3724	3538	95.0	3501	94.0	3470	93.2	3722	3492	93.8	3511	94.3	3493	93.8	4037	3352	83.0	4082	3635	89.0	3737	91.5
Powys Teaching LHB	1140	1098	96.3	1070	93.9	1066	93.5	1136	1068	94.0	1074	94.5	1062	93.5	1247	1075	86.2	1295	1136	87.7	1194	92.2
Unknown	11	11	100.0	10	90.9	9	81.8	24	22	91.7	21	87.5	21	87.5	76	68	89.5	62	50	80.6	52	83.9
Wales Total	33622	32391	96.3	31746	94.4	31627	94.1	33778	32137	95.1	32228	95.4	31933	94.5	35710	30203	84.6	36609	33050	90.3	33874	92.5

¹ Uptake of pertussis used as proxy

² This cohort of children was the last to be offered the MenC vaccine at 12 weeks of age therefore uptake will be lower as there has been less time for catch-up

³ Children receiving the final dose of PCV

⁴ Completed 4 in 1 preschool booster, the Hib/MenC booster and second MMR dose by four years of age

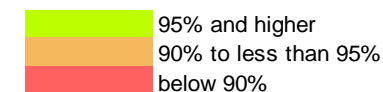


Figure 4. (a) Uptake of 5 in 1 vaccine in Welsh Local Authority areas in children reaching their 1st birthday between 01/04/16 and 31/03/17. **(b)** Uptake of at least 1 dose of MMR immunisation in Welsh Local Authority areas in children reaching their 2nd birthday between 01/04/16 and 31/03/17.

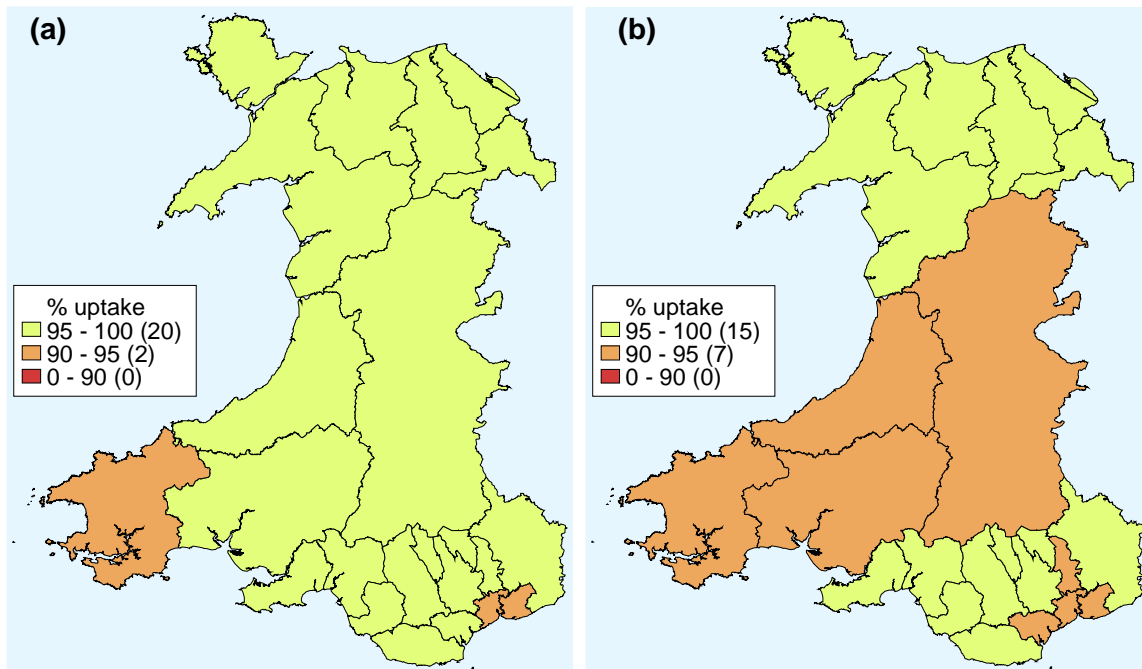


Figure 5. (a) Uptake of two doses of MMR vaccine in Welsh Local Authority areas in children reaching their 5th birthday between 01/04/16 and 31/03/17. **(b)** Uptake of 4 in 1 vaccine in Welsh Local Authority areas in children reaching their 5th birthday between 01/04/16 and 31/03/17.

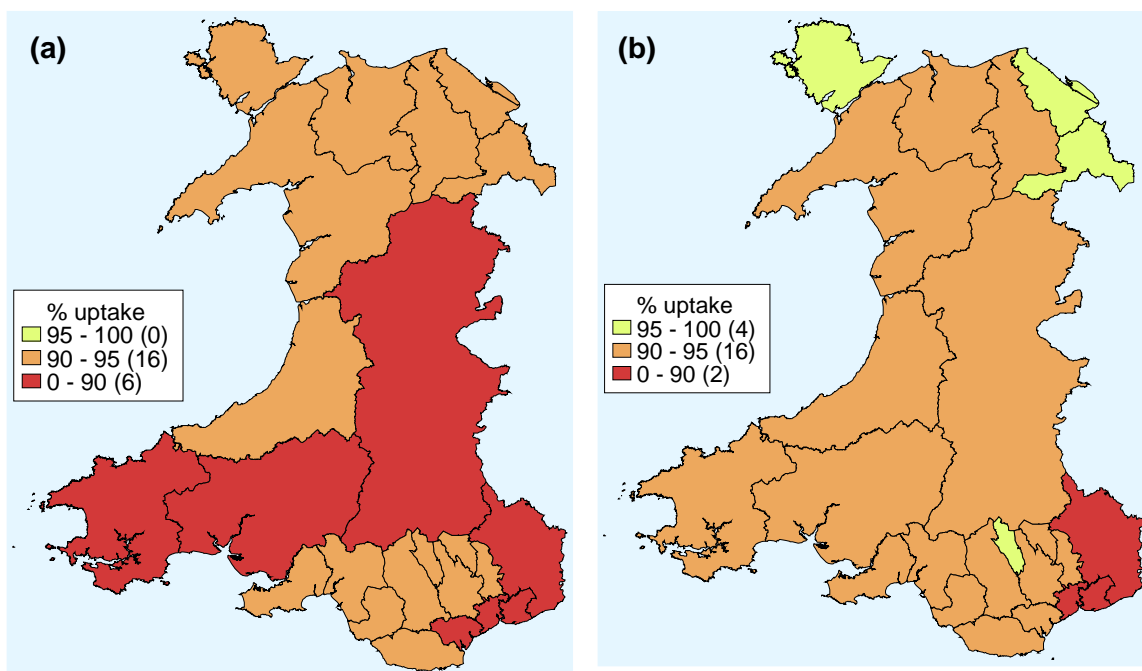


Figure 6. Annual uptake of 5 in 1 vaccine by 1 year of age (2013 – 2017 financial years, ranked by uptake in 2016/17).

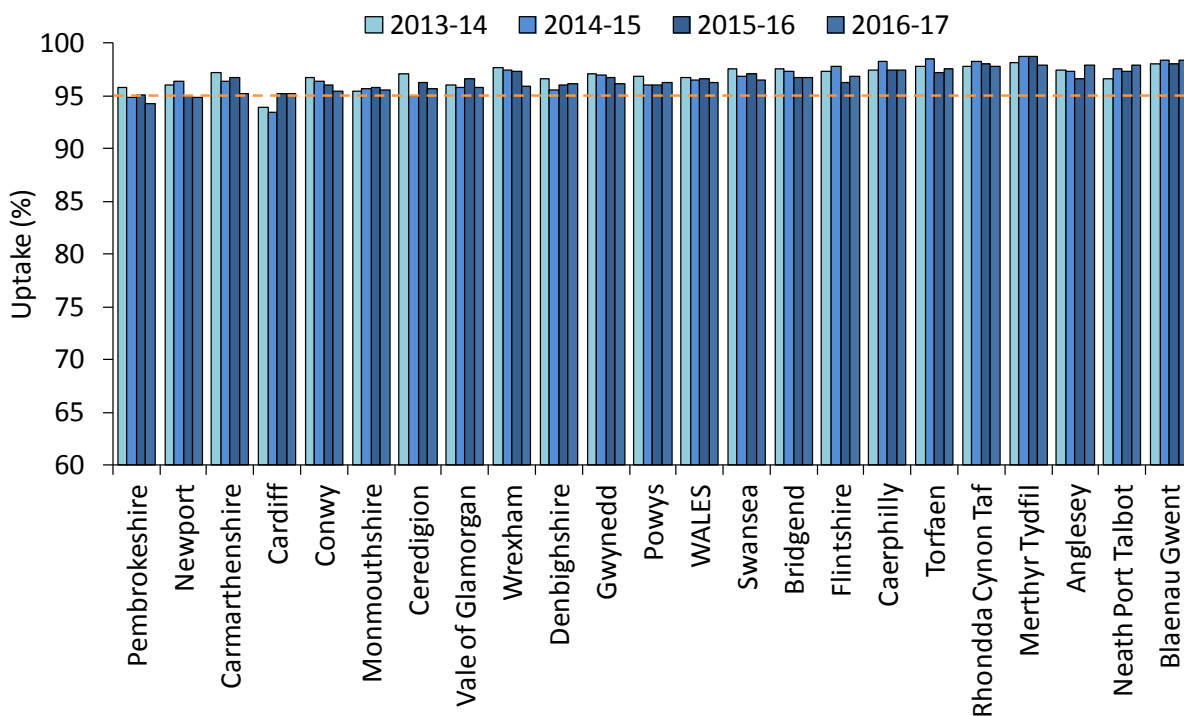


Figure 7. Annual uptake of 1 dose of MMR by 2 years of age (2013 – 2017 financial years, ranked by uptake in 2016/17).

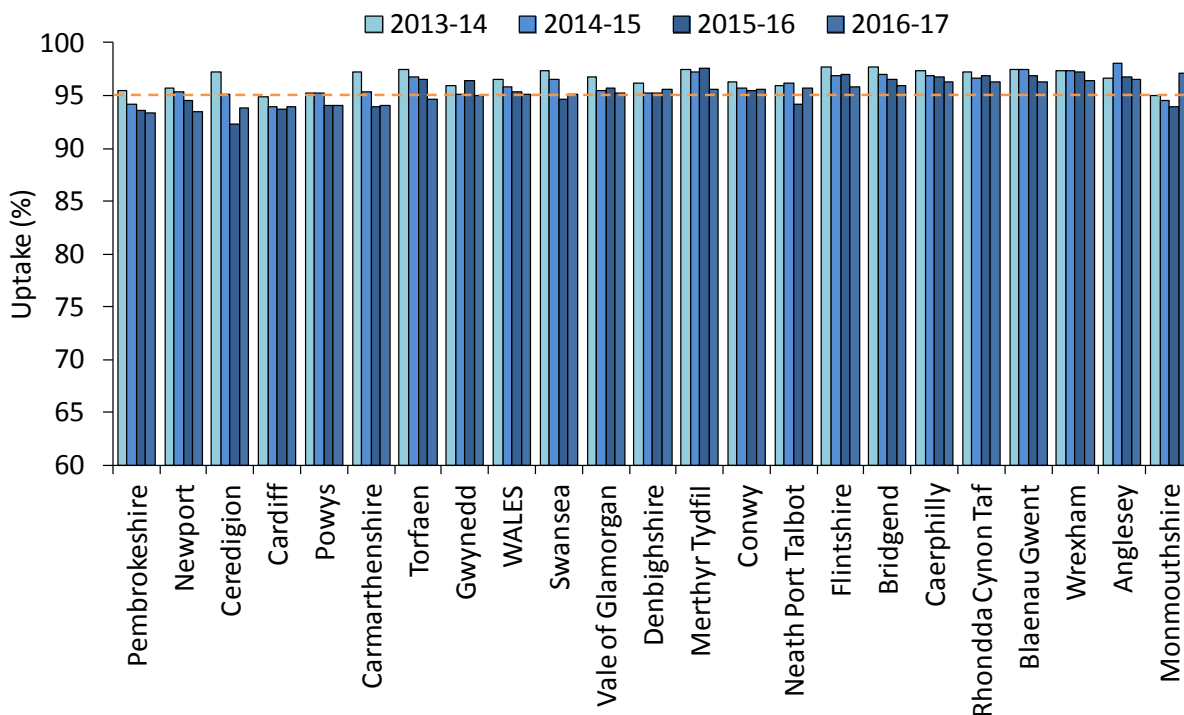


Figure 8. Annual uptake of 2 doses of MMR by 5 years of age (2013 – 2017 financial years, ranked by uptake in 2016/17).

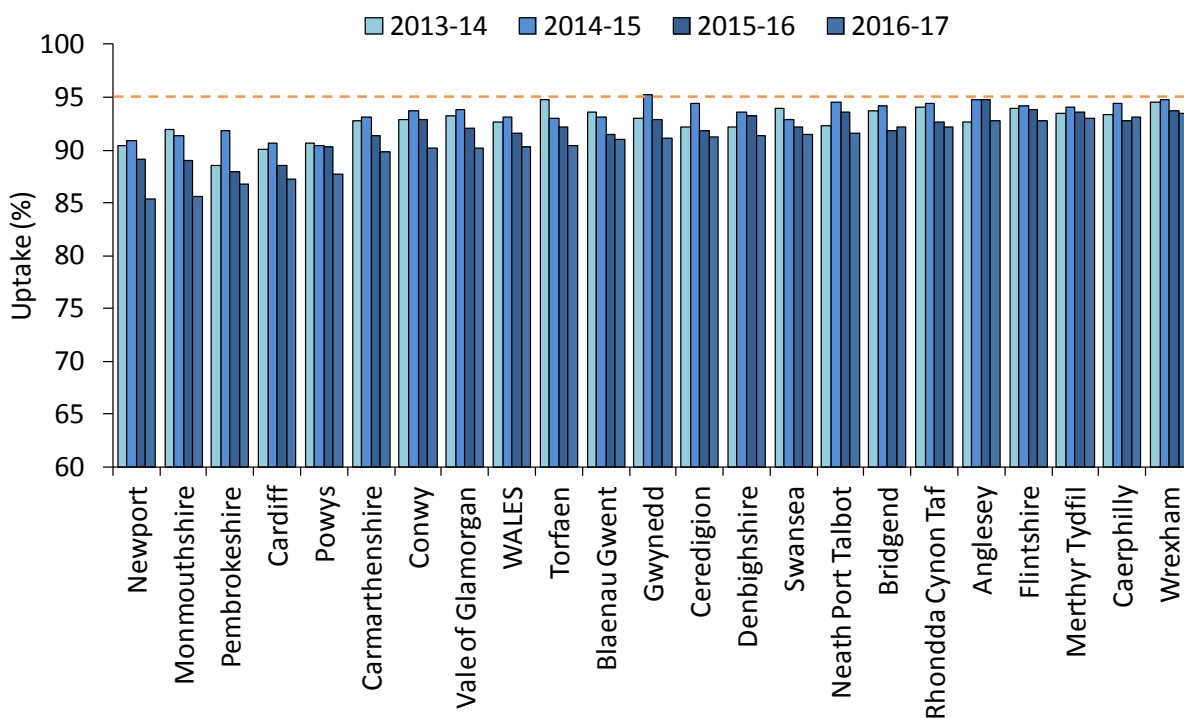


Figure 9. Annual uptake of the '4 in 1' pre-school booster by 5 years of age (2013 – 2017 financial years, ranked by uptake in 2016/17).

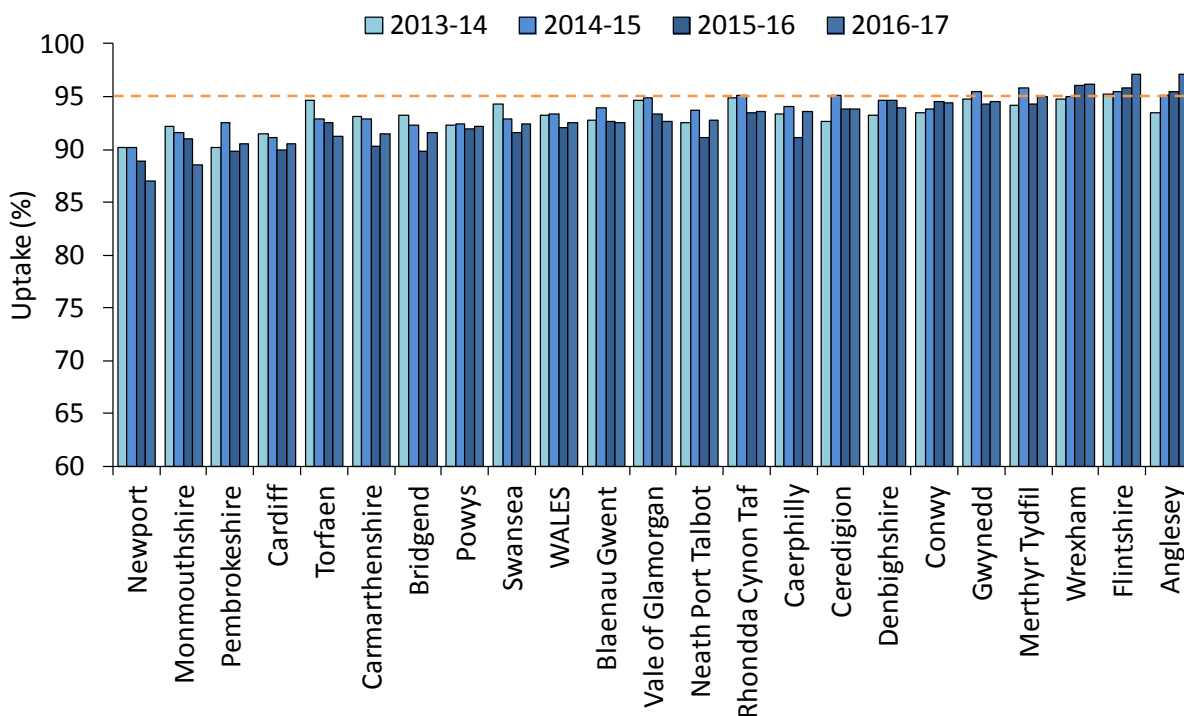


Figure 10. Percentage of children who are up to date with routine immunisations¹² by four years of age, by quintile of deprivation of the Lower Super Output Area in which they reside. Vaccine uptake is presented for children reaching their 4th birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017.

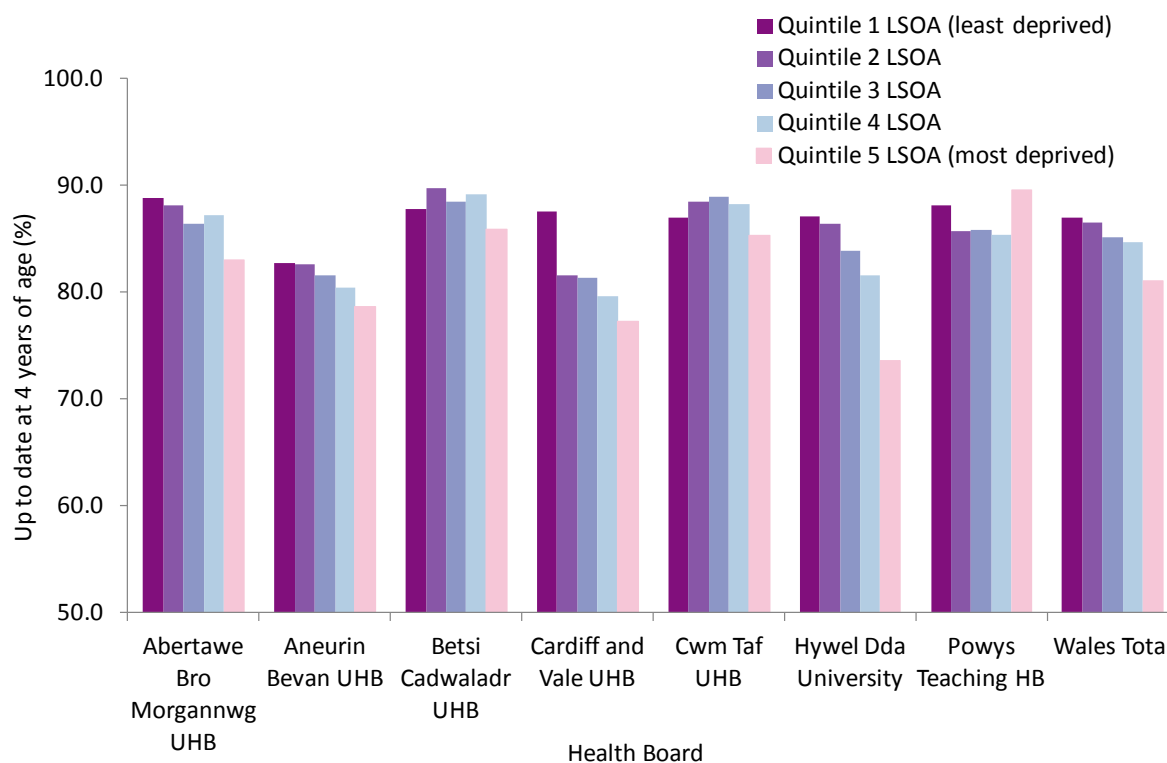
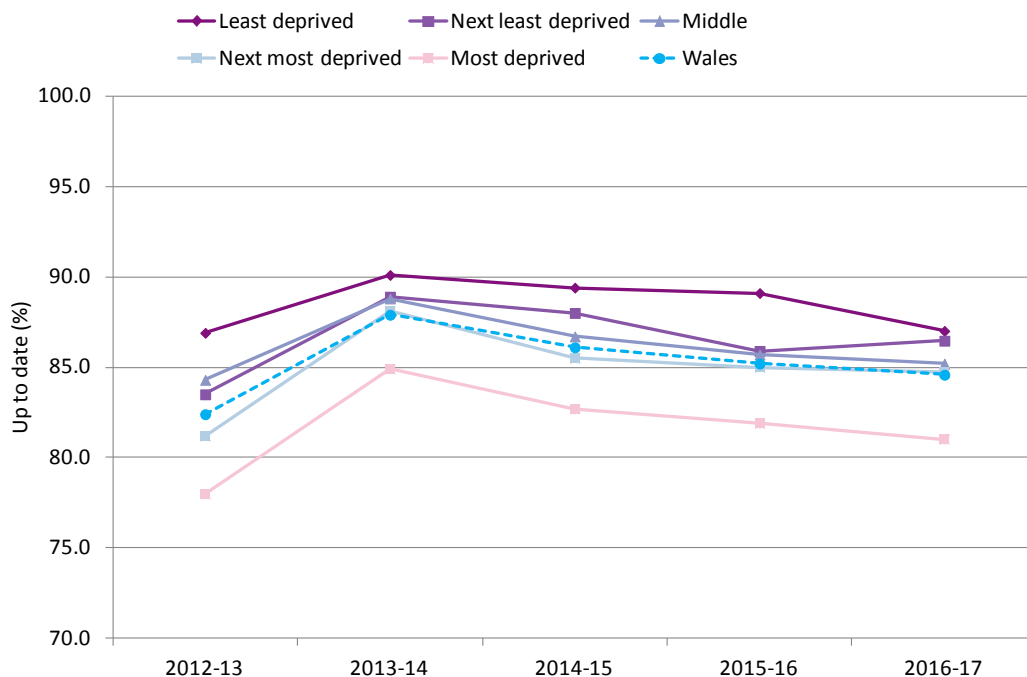


Figure 11. Percentage of children who are up to date with routine immunisations by four years of age during 2012-2017 financial years, by quintile of deprivation of the Lower Super Output Area in which they reside.



¹² Completed 4 in 1 pre-school booster, the Hib/MenC booster and second MMR dose by four years of age. The calculation method for proportions of children up to date with routine immunisation by four years of age was revised during 2014 quarter 1, to remove the pneumococcal conjugate vaccine booster dose, as this is not clinically indicated after two years of age.

Table 3. Vaccine uptake in children reaching their 1st birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017.

Area	Resident children	D3	T3	P3	Po3	Hib3	MMR1	MenC ¹	Rotavirus	PCV2 ²	HibMenCb	MenB ³
	(n)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)
Abertawe Bro Morgannwg University HB												
Bridgend LA	1531	1482 96.8	1482 96.8	1482 96.8	1481 96.7	1482 96.8	2 0.1	1456 95.1	1467 95.8	1481 96.7	1 0.1	1252 81.8
Neath Port Talbot LA	1533	1502 98.0	1502 98.0	1502 98.0	1502 98.0	1502 98.0	7 0.5	1478 96.4	1484 96.8	1500 97.8	6 0.4	1273 83.0
Swansea LA	2583	2493 96.5	2493 96.5	2493 96.5	2491 96.4	2493 96.5	15 0.6	2419 93.7	2433 94.2	2471 95.7	13 0.5	2076 80.4
Health Board Total	5647	5477 97.0	5477 97.0	5477 97.0	5474 96.9	5477 97.0	24 0.4	5353 94.8	5384 95.3	5452 96.5	20 0.4	4601 81.5
Aneurin Bevan University HB												
Blaenau Gwent LA	701	690 98.4	690 98.4	690 98.4	690 98.4	690 98.4	0 0.0	679 96.9	650 92.7	694 99.0	0 0.0	578 82.5
Caerphilly LA	2097	2044 97.5	2044 97.5	2044 97.5	2043 97.4	2044 97.5	3 0.1	2005 95.6	2009 95.8	2047 97.6	4 0.2	1718 81.9
Monmouthshire LA	798	763 95.6	763 95.6	763 95.6	763 95.6	763 95.6	2 0.3	756 94.7	741 92.9	765 95.9	3 0.4	626 78.4
Newport LA	2038	1933 94.8	1933 94.8	1933 94.8	1933 94.8	1930 94.7	3 0.1	1872 91.9	1874 92.0	1943 95.3	2 0.1	1622 79.6
Torfaen LA	1058	1032 97.5	1032 97.5	1032 97.5	1032 97.5	1031 97.4	0 0.0	1018 96.2	1004 94.9	1037 98.0	0 0.0	847 80.1
Health Board Total	6692	6462 96.6	6462 96.6	6462 96.6	6461 96.5	6458 96.5	8 0.1	6330 94.6	6278 93.8	6486 96.9	9 0.1	5391 80.6
Betsi Cadwaladr University HB												
Anglesey LA	671	657 97.9	657 97.9	657 97.9	657 97.9	657 97.9	2 0.3	645 96.1	638 95.1	655 97.6	3 0.4	570 84.9
Conwy LA	1137	1086 95.5	1086 95.5	1086 95.5	1085 95.4	1086 95.5	11 1.0	1068 93.9	1057 93.0	1087 95.6	10 0.9	920 80.9
Denbighshire LA	1021	982 96.2	982 96.2	982 96.2	982 96.2	982 96.2	7 0.7	963 94.3	959 93.9	981 96.1	6 0.6	796 78.0
Flintshire LA	1557	1508 96.9	1508 96.9	1508 96.9	1508 96.9	1507 96.8	10 0.6	1486 95.4	1474 94.7	1511 97.0	10 0.6	1261 81.0
Gwynedd LA	1182	1137 96.2	1137 96.2	1137 96.2	1137 96.2	1137 96.2	11 0.9	1073 90.8	1118 94.6	1135 96.0	12 1.0	975 82.5
Wrexham LA	1503	1442 95.9	1442 95.9	1442 95.9	1441 95.9	1442 95.9	7 0.5	1428 95.0	1400 93.1	1448 96.3	7 0.5	1175 78.2
Health Board Total	7071	6812 96.3	6812 96.3	6812 96.3	6810 96.3	6811 96.3	48 0.7	6663 94.2	6646 94.0	6817 96.4	48 0.7	5697 80.6
Cardiff and Vale University HB												
Cardiff LA	4447	4237 95.3	4237 95.3	4237 95.3	4237 95.3	4236 95.3	39 0.9	4115 92.5	4095 92.1	4204 94.5	24 0.5	3493 78.5
Vale of Glamorgan LA	1392	1334 95.8	1334 95.8	1334 95.8	1334 95.8	1334 95.8	8 0.6	1317 94.6	1310 94.1	1332 95.7	7 0.5	1111 79.8
Health Board Total	5839	5571 95.4	5571 95.4	5571 95.4	5571 95.4	5570 95.4	47 0.8	5432 93.0	5405 92.6	5536 94.8	31 0.5	4604 78.8
Cwm Taf University HB												
Merthyr Tydfil LA	756	740 97.9	740 97.9	740 97.9	740 97.9	740 97.9	3 0.4	736 97.4	735 97.2	739 97.8	3 0.4	606 80.2
Rhondda Cynon Taf LA	2742	2682 97.8	2683 97.8	2682 97.8	2683 97.8	2682 97.8	6 0.2	2651 96.7	2634 96.1	2685 97.9	3 0.1	2235 81.5
Health Board Total	3498	3422 97.8	3423 97.9	3422 97.8	3423 97.8	3422 97.8	9 0.3	3387 96.8	3369 96.3	3424 97.9	6 0.2	2841 81.2
Hywel Dda University HB												
Carmarthenshire LA	1888	1798 95.2	1798 95.2	1798 95.2	1798 95.2	1798 95.2	11 0.6	1788 94.7	1788 94.7	1797 95.2	9 0.5	1495 79.2
Ceredigion LA	649	621 95.7	621 95.7	621 95.7	621 95.7	621 95.7	4 0.6	615 94.8	591 91.1	620 95.5	4 0.6	515 79.4
Pembrokeshire LA	1187	1119 94.3	1119 94.3	1119 94.3	1119 94.3	1119 94.3	1 0.1	1098 92.5	1091 91.9	1119 94.3	1 0.1	918 77.3
Health Board Total	3724	3538 95.0	3538 95.0	3538 95.0	3538 95.0	3538 95.0	16 0.4	3501 94.0	3470 93.2	3536 95.0	14 0.4	2928 78.6
Powys Teaching HB	1140	1098 96.3	1098 96.3	1098 96.3	1098 96.3	1098 96.3	6 0.5	1070 93.9	1066 93.5	1094 96.0	4 0.4	896 78.6
Unknown	11	11 100.0	11 100.0	11 100.0	11 100.0	11 100.0	0 0.0	10 90.9	9 81.8	11 100.0	0 0.0	10 90.9
Wales Total	33622	32391 96.3	32392 96.3	32391 96.3	32386 96.3	32385 96.3	158 0.5	31746 94.4	31627 94.1	32356 96.2	132 0.4	26968 80.2

¹This cohort of children was the last to be offered the MenC vaccine at 12 weeks of age therefore uptake will be lower as there has been less time for catch-up.

² Full primary 2 dose course of pneumococcal conjugate vaccine.

³ Uptake of two doses of meningococcal serogroup B (MenB) vaccine, scheduled at two and four months of age. Infants turning 1 year of age from 1st May 2016 onwards would have been eligible for this vaccination.

Table 4. Vaccine uptake in children reaching their 2nd birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017.

Area	Resident children	D3	T3	P3	Po3	Hib3	MMR1	MenC	PCV2 ¹	PCVf ²	HibMenCb
	(n)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)
Abertawe Bro Morgannwg University LHB											
Bridgend LA	1549	1511 97.5	1511 97.5	1511 97.5	1511 97.5	1511 97.5	1486 95.9	1509 97.4	1492 96.3	1496 96.6	1483 95.7
Neath Port Talbot LA	1532	1507 98.4	1507 98.4	1507 98.4	1507 98.4	1507 98.4	1467 95.8	1503 98.1	1485 96.9	1479 96.5	1464 95.6
Swansea LA	2577	2502 97.1	2502 97.1	2502 97.1	2501 97.1	2499 97.0	2452 95.1	2479 96.2	2470 95.8	2456 95.3	2433 94.4
Health Board Total	5658	5520 97.6	5520 97.6	5520 97.6	5519 97.5	5517 97.5	5405 95.5	5491 97.0	5447 96.3	5431 96.0	5380 95.1
Aneurin Bevan University LHB											
Blaenau Gwent LA	740	724 97.8	724 97.8	724 97.8	724 97.8	724 97.8	713 96.4	725 98.0	723 97.7	714 96.5	712 96.2
Caerphilly LA	2084	2041 97.9	2041 97.9	2041 97.9	2041 97.9	2041 97.9	2006 96.3	2046 98.2	2022 97.0	2010 96.4	1998 95.9
Monmouthshire LA	827	791 95.6	791 95.6	791 95.6	790 95.5	791 95.6	803 97.1	780 94.3	781 94.4	795 96.1	789 95.4
Newport LA	2072	1985 95.8	1985 95.8	1985 95.8	1984 95.8	1982 95.7	1938 93.5	1964 94.8	1937 93.5	1934 93.3	1902 91.8
Torfaen LA	957	931 97.3	931 97.3	931 97.3	931 97.3	931 97.3	906 94.7	929 97.1	916 95.7	909 95.0	898 93.8
Health Board Total	6680	6472 96.9	6472 96.9	6472 96.9	6470 96.9	6469 96.8	6366 95.3	6444 96.5	6379 95.5	6362 95.2	6299 94.3
Betsi Cadwaladr University LHB											
Anglesey LA	724	708 97.8	708 97.8	708 97.8	708 97.8	708 97.8	699 96.5	705 97.4	702 97.0	702 97.0	699 96.5
Conwy LA	1124	1084 96.4	1084 96.4	1084 96.4	1084 96.4	1084 96.4	1075 95.6	1084 96.4	1065 94.8	1076 95.7	1060 94.3
Denbighshire LA	1064	1044 98.1	1044 98.1	1044 98.1	1044 98.1	1044 98.1	1017 95.6	1041 97.8	1019 95.8	1019 95.8	1008 94.7
Flintshire LA	1580	1527 96.6	1527 96.6	1527 96.6	1526 96.6	1527 96.6	1515 95.9	1514 95.8	1506 95.3	1522 96.3	1502 95.1
Gwynedd LA	1154	1122 97.2	1122 97.2	1121 97.1	1122 97.2	1121 97.1	1096 95.0	1105 95.8	1104 95.7	1101 95.4	1093 94.7
Wrexham LA	1573	1537 97.7	1537 97.7	1537 97.7	1535 97.6	1536 97.6	1516 96.4	1523 96.8	1516 96.4	1523 96.8	1511 96.1
Health Board Total	7219	7022 97.3	7022 97.3	7021 97.3	7019 97.2	7020 97.2	6918 95.8	6972 96.6	6912 95.7	6943 96.2	6873 95.2
Cardiff and Vale University LHB											
Cardiff LA	4465	4293 96.1	4293 96.1	4293 96.1	4293 96.1	4293 96.1	4284 95.9	4193 93.9	4219 94.5	4187 93.8	4200 94.1
Vale of Glamorgan LA	1391	1348 96.9	1348 96.9	1348 96.9	1348 96.9	1348 96.9	1347 96.8	1325 95.3	1347 96.8	1333 95.8	1323 95.1
Health Board Total	5856	5641 96.3	5641 96.3	5641 96.3	5641 96.3	5641 96.3	5631 96.2	5518 94.2	5566 95.0	5520 94.3	5527 94.4
Cwm Taf University LHB											
Merthyr Tydfil LA	776	755 97.3	755 97.3	755 97.3	755 97.3	755 97.3	742 95.6	753 97.0	751 96.8	744 95.9	741 95.5
Rhondda Cynon Taf LA	2707	2662 98.3	2662 98.3	2662 98.3	2661 98.3	2657 98.2	2606 96.3	2656 98.1	2642 97.6	2615 96.6	2601 96.1
Health Board Total	3483	3417 98.1	3417 98.1	3417 98.1	3416 98.1	3412 98.0	3348 96.1	3409 97.9	3393 97.4	3359 96.4	3342 96.0
Hywel Dda University LHB											
Cardiff LA	1848	1791 96.9	1791 96.9	1791 96.9	1789 96.8	1791 96.9	1739 94.1	1788 96.8	1759 95.2	1745 94.4	1736 93.9
Ceredigion LA	630	606 96.2	606 96.2	606 96.2	605 96.0	606 96.2	591 93.8	600 95.2	600 95.2	597 94.8	594 94.3
Pembrokeshire LA	1244	1194 96.0	1194 96.0	1194 96.0	1194 96.0	1194 96.0	1162 93.4	1193 95.9	1178 94.7	1169 94.0	1163 93.5
Health Board Total	3722	3591 96.5	3591 96.5	3591 96.5	3588 96.4	3591 96.5	3492 93.8	3581 96.2	3537 95.0	3511 94.3	3493 93.8
Powys Teaching LHB											
Unknown	24	22 91.7	22 91.7	22 91.7	22 91.7	22 91.7	22 91.7	22 91.7	21 87.5	20 83.3	21 87.5
Wales Total	33778	32771 97.0	32771 97.0	32770 97.0	32761 97.0	32748 97.0	32137 95.1	32565 96.4	32281 95.6	32228 95.4	31933 94.5

¹ Full primary 2 dose course of pneumococcal conjugate vaccine

² Final (booster) dose of pneumococcal conjugate vaccine

Table 5. Vaccine uptake in children reaching their 4th birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017.

Area	Resident Children	4 in 1 Preschool booster ¹		HibMenCb		MMR dose 2		Up to date in schedule ²	
		(n)	(n)	(%)	(n)	(%)	(n)	(%)	(n)
<u>Abertawe Bro Morgannwg University LHB</u>									
Bridgend LA	1649	1485	90.1	1569	95.1	1506	91.3	1446	87.7
Neath Port Talbot LA	1529	1353	88.5	1441	94.2	1374	89.9	1317	86.1
Swansea LA	2692	2383	88.5	2515	93.4	2395	89.0	2302	85.5
Health Board Total	5870	5221	88.9	5525	94.1	5275	89.9	5065	86.3
<u>Aneurin Bevan University LHB</u>									
Blaenau Gwent LA	798	670	84.0	768	96.2	669	83.8	663	83.1
Caerphilly LA	2156	1805	83.7	2072	96.1	1792	83.1	1767	82.0
Monmouthshire LA	944	825	87.4	857	90.8	792	83.9	779	82.5
Newport LA	2007	1635	81.5	1823	90.8	1602	79.8	1558	77.6
Torfaen LA	1134	934	82.4	1081	95.3	924	81.5	910	80.2
Health Board Total	7039	5869	83.4	6601	93.8	5779	82.1	5677	80.7
<u>Betsi Cadwaladr University LHB</u>									
Anglesey LA	803	754	93.9	771	96.0	736	91.7	730	90.9
Conwy LA	1172	1064	90.8	1104	94.2	1035	88.3	1027	87.6
Denbighshire LA	1062	952	89.6	994	93.6	925	87.1	918	86.4
Flintshire LA	1700	1591	93.6	1572	92.5	1525	89.7	1512	88.9
Gwynedd LA	1322	1192	90.2	1242	93.9	1155	87.4	1147	86.8
Wrexham LA	1677	1552	92.5	1590	94.8	1515	90.3	1499	89.4
Health Board Total	7736	7105	91.8	7273	94.0	6891	89.1	6833	88.3
<u>Cardiff and Vale University LHB</u>									
Cardiff LA	4583	3930	85.8	4120	89.9	3802	83.0	3681	80.3
Vale of Glamorgan LA	1498	1332	88.9	1416	94.5	1306	87.2	1289	86.0
Health Board Total	6081	5262	86.5	5536	91.0	5108	84.0	4970	81.7
<u>Cwm Taf University LHB</u>									
Merthyr Tydfil LA	749	687	91.7	714	95.3	678	90.5	670	89.5
Rhondda Cynon Taff LA	2875	2568	89.3	2737	95.2	2536	88.2	2493	86.7
Health Board Total	3624	3255	89.8	3451	95.2	3214	88.7	3163	87.3
<u>Hywel Dda University LHB</u>									
Carmarthenshire LA	2013	1692	84.1	1855	92.2	1700	84.5	1638	81.4
Ceredigion LA	715	656	91.7	667	93.3	638	89.2	633	88.5
Pembrokeshire LA	1309	1137	86.9	1203	91.9	1099	84.0	1081	82.6
Health Board Total	4037	3485	86.3	3725	92.3	3437	85.1	3352	83.0
Powys Teaching Health Board	1247	1135	91.0	1145	91.8	1095	87.8	1075	86.2
Unknown	76	69	90.8	73	96.1	69	90.8	68	89.5
Wales Total	35710	31401	87.9	33329	93.3	30868	86.4	30203	84.6

¹ Uptake of acellular pertussis used as proxy

² Completed 4 in 1 preschool booster, the Hib/MenC booster and second MMR dose by four years of age. The calculation method for proportions of children up to date with routine immunisation by four years of age was revised during 2014 quarter 1, to remove the pneumococcal conjugate vaccine booster dose, as this is not clinically indicated after two years of age.

Table 6. Vaccine uptake in children reaching their 5th birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017.

Area	Resident children	D3		T3		P3		Po3		Hib3		MenC		PCVf ¹		HibMenCb		MMR1		MMR2		D4		T4		aP		Po4	
	(n)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Abertawe Bro Morgannwg University LHB																													
Bridgend LA	1804	1728	95.8	1728	95.8	1727	95.7	1727	95.7	1726	95.7	1702	94.35	1700	94.2	1707	94.6	1750	97.0	1663	92.2	1653	91.6	1653	91.6	1653	91.6	1653	91.6
Neath Port Talbot LA	1646	1591	96.7	1591	96.7	1591	96.7	1591	96.7	1591	96.7	1560	94.78	1542	93.7	1551	94.2	1598	97.1	1508	91.6	1527	92.8	1527	92.8	1527	92.8	1527	92.8
Swansea LA	2851	2701	94.7	2701	94.7	2701	94.7	2698	94.6	2696	94.6	2644	92.74	2641	92.6	2663	93.4	2744	96.2	2608	91.5	2637	92.5	2637	92.5	2636	92.5	2636	92.5
Health Board Total	6301	6020	95.5	6020	95.5	6019	95.5	6016	95.5	6013	95.4	5906	93.7	5883	93.4	5921	94.0	6092	96.7	5779	91.7	5817	92.3	5817	92.3	5816	92.3	5816	92.3
Aneurin Bevan University LHB																													
Blaenau Gwent LA	754	733	97.2	733	97.2	733	97.2	732	97.1	732	97.1	723	95.9	722	95.8	720	95.5	733	97.2	686	91.0	698	92.6	698	92.6	698	92.6	697	92.4
Caerphilly LA	2144	2096	97.8	2096	97.8	2096	97.8	2096	97.8	2094	97.7	2068	96.5	2056	95.9	2050	95.6	2110	98.4	1997	93.1	2008	93.7	2008	93.7	2007	93.6	2006	93.6
Monmouthshire LA	931	848	91.1	848	91.1	848	91.1	848	91.1	848	91.1	837	89.9	842	90.4	833	89.5	876	94.1	797	85.6	824	88.5	824	88.5	824	88.5	824	88.5
Newport LA	2049	1900	92.7	1900	92.7	1899	92.7	1898	92.6	1839	89.8	1852	90.4	1834	89.5	1946	95.0	1748	85.3	1784	87.1	1783	87.1	1783	87.0	1785	87.1		
Torfaen LA	1126	1104	98.0	1104	98.0	1104	98.0	1104	98.0	1104	98.0	1092	97.0	1081	96.0	1079	95.8	1109	98.5	1018	90.4	1028	91.3	1028	91.3	1028	91.3	1028	91.3
Health Board Total	7004	6681	95.4	6681	95.4	6680	95.4	6678	95.3	6676	95.3	6559	93.6	6553	93.6	6516	93.0	6774	96.7	6246	89.2	6342	90.5	6342	90.5	6340	90.5	6340	90.5
Betsi Cadwaladr University LHB																													
Anglesey LA	815	773	94.8	773	94.8	773	94.8	774	95.0	773	94.8	766	94.0	761	93.4	764	93.7	796	97.7	756	92.8	792	97.2	792	97.2	792	97.2	792	97.2
Conwy LA	1194	1122	94.0	1122	94.0	1122	94.0	1122	94.0	1120	93.8	1107	92.7	1104	92.5	1113	93.2	1154	96.6	1077	90.2	1127	94.4	1127	94.4	1127	94.4	1127	94.4
Denbighshire LA	1064	1014	95.3	1014	95.3	1014	95.3	1014	95.3	1014	95.3	987	92.8	997	93.7	992	93.2	1033	97.1	972	91.4	1000	94.0	1000	94.0	1000	94.0	1000	94.0
Flintshire LA	1756	1656	94.3	1656	94.3	1657	94.4	1653	94.1	1654	94.2	1644	93.6	1638	93.3	1644	93.6	1719	97.9	1630	92.8	1705	97.1	1705	97.1	1705	97.1	1705	97.1
Gwynedd LA	1381	1293	93.6	1293	93.6	1293	93.6	1293	93.6	1294	93.7	1248	90.4	1276	92.4	1284	93.0	1327	96.1	1259	91.2	1306	94.6	1306	94.6	1306	94.6	1306	94.6
Wrexham LA	1643	1575	95.9	1575	95.9	1575	95.9	1573	95.7	1575	95.9	1546	94.1	1555	94.6	1552	94.5	1610	98.0	1536	93.5	1580	96.2	1580	96.2	1580	96.2	1580	96.2
Health Board Total	7853	7433	94.7	7433	94.7	7434	94.7	7429	94.6	7430	94.6	7298	92.9	7331	93.4	7349	93.6	7639	97.3	7230	92.1	7510	95.6	7510	95.6	7510	95.6	7510	95.6
Cardiff and Vale University LHB																													
Cardiff LA	4664	4336	93.0	4336	93.0	4336	93.0	4335	92.9	4328	92.8	4151	89.0	4185	89.7	4176	89.5	4473	95.9	4068	87.2	4224	90.6	4224	90.6	4224	90.6	4224	90.6
Vale of Glamorgan LA	1626	1550	95.3	1550	95.3	1550	95.3	1550	95.3	1550	95.3	1519	93.4	1524	93.7	1526	93.8	1583	97.4	1467	90.2	1507	92.7	1507	92.7	1507	92.7	1506	92.6
Health Board Total	6290	5886	93.6	5886	93.6	5886	93.6	5885	93.6	5878	93.4	5670	90.1	5709	90.8	5702	90.7	6056	96.3	5535	88.0	5731	91.1	5731	91.1	5731	91.1	5730	91.1
Cwm Taf University LHB																													
Merthyr Tydfil LA	783	752	96.0	752	96.0	752	96.0	751	95.9	751	95.9	741	94.6	750	95.8	747	95.4	769	98.2	728	93.0	744	95.0	744	95.0	744	95.0	744	95.0
Rhondda Cynon Taif LA	2939	2863	97.4	2863	97.4	2863	97.4	2862	97.4	2863	97.4	2836	96.5	2825	96.1	2809	95.6	2870	97.7	2711	92.2	2750	93.6	2750	93.6	2750	93.6	2750	93.6
Health Board Total	3722	3615	97.1	3615	97.1	3615	97.1	3613	97.1	3614	97.1	3577	96.1	3575	96.1	3556	95.5	3639	97.8	3439	92.4	3494	93.9	3494	93.9	3494	93.9	3494	93.9
Hywel Dda University LHB																													
Carmarthenshire LA	2088	1983	95.0	1983	95.0	1983	95.0	1982	94.9	1981	94.9	1944	93.1	1950	93.4	1941	93.0	2022	96.8	1876	89.8	1913	91.6	1913	91.6	1911	91.5	1911	91.5
Ceredigion LA	627	584	93.1	584	93.1	584	93.1	582	92.8	581	92.7	564	90.0	569	90.7	571	91.1	600	95.7	572	91.2	588	93.8	588	93.8	588	93.8	587	93.6
Pembrokeshire LA	1367	1263	92.4	1263	92.4	1263	92.4	1263	92.4	1263	92.4	1240	90.7	1239	90.6	1243	90.9	1302	95.2	1187	86.8	1238	90.6	1238	90.6	1238	90.6	1238	90.6
Health Board Total	4082	3830	93.8	3830	93.8	3830	93.8	3827	93.8	3825	93.7	3748	91.8	3758	92.1	3755	92.0	3924	96.1	3635	89.0	3739	91.6	3739	91.6	3737	91.5	3736	91.5
Powys Teaching LHB	1295	1201	92.7	1201	92.7	1201	92.7	1201	92.7	1200	92.7	1168	90.2	1167	90.1	1165	90.0	1232	95.1	1136	87.7	1194	92.2	1194	92.2	1194	92.2	1192	92.0
Unknown	62	52	83.9	52	83.9	52	83.9	52	83.9	52	83.9	52	83.9	52	83.9	52	83.9	53	85.5	50	80.6	52	83.9	52	83.9	52	83.9	52	83.9
Wales Total	36609	34718	94.8	34718	94.8	34717	94.8	34701	94.8	34688	94.8	33978	92.8	34028	92.9	34016	92.9	35409	96.7	33050	90.3	33879	92.5	33879	92.5	33874	92.5	33870	92.5

¹Final (booster) dose of pneumococcal conjugate vaccine

Table 7. HPV Vaccine uptake in girls reaching their 14th, 15th and 16th birthdays between 01/09/2016 and 31/08/2017 and resident on 31/03/2017 (School Year 9, 10 and 11 during 2016/17).

Area	14 years (2016-17 School Year 9)			15 years (2016-17 School Year 10) ¹				16 years (2016-17 School Year 11) ²							
	Resident girls	HPV 1 dose		Resident girls	HPV 1 dose		HPV 2 doses		Resident girls	HPV 1 dose		HPV 2 doses		HPV 3 doses	
		(n)	(%)		(n)	(%)	(n)	(%)		(n)	(%)	(n)	(%)	(n)	(%)
Abertawe Bro Morgannwg University LHB															
Bridgend LA	782	726	92.8	741	694	93.7	672	90.7	762	714	93.7	709	93.0	696	91.3
Neath Port Talbot LA	700	649	92.7	715	678	94.8	656	91.7	710	672	94.6	664	93.5	653	92.0
Swansea LA	1240	1119	90.2	1222	1150	94.1	1116	91.3	1268	1150	90.7	1142	90.1	1117	88.1
Health Board Total	2722	2494	91.6	2678	2522	94.2	2444	91.3	2740	2536	92.6	2515	91.8	2466	90.0
Aneurin Bevan University LHB															
Blaenau Gwent LA	322	284	88.2	372	352	94.6	336	90.3	389	365	93.8	356	91.5	345	88.7
Caerphilly LA	983	820	83.4	947	893	94.3	838	88.5	1000	911	91.1	903	90.3	892	89.2
Monmouthshire LA	535	435	81.3	509	409	80.4	385	75.6	586	468	79.9	460	78.5	452	77.1
Newport LA	900	736	81.8	929	801	86.2	741	79.8	899	781	86.9	768	85.4	746	83.0
Torfaen LA	475	414	87.2	491	449	91.4	424	86.4	478	429	89.7	426	89.1	407	85.1
Health Board Total	3215	2689	83.6	3248	2904	89.4	2724	83.9	3352	2954	88.1	2913	86.9	2842	84.8
Betsi Cadwaladr University LHB															
Anglesey LA	346	299	86.4	361	325	90.0	288	79.8	356	321	90.2	318	89.3	313	87.9
Conwy LA	550	466	84.7	539	492	91.3	451	83.7	613	557	90.9	555	90.5	546	89.1
Denbighshire LA	469	403	85.9	485	437	90.1	402	82.9	532	472	88.7	462	86.8	449	84.4
Flintshire LA	738	650	88.1	798	741	92.9	678	85.0	805	729	90.6	723	89.8	700	87.0
Gwynedd LA	557	493	88.5	555	492	88.6	479	86.3	602	549	91.2	543	90.2	538	89.4
Wrexham LA	681	573	84.1	651	581	89.2	543	83.4	748	662	88.5	658	88.0	644	86.1
Health Board Total	3341	2884	86.3	3389	3068	90.5	2841	83.8	3656	3290	90.0	3259	89.1	3190	87.3
Cardiff and Vale University LHB															
Cardiff LA	1872	1568	83.8	1729	1486	85.9	1401	81.0	1811	1581	87.3	1557	86.0	1465	80.9
Vale of Glamorgan LA	698	619	88.7	661	605	91.5	561	84.9	735	669	91.0	664	90.3	622	84.6
Health Board Total	2570	2187	85.1	2390	2091	87.5	1962	82.1	2546	2250	88.4	2221	87.2	2087	82.0
Cwm Taf University LHB															
Merthyr Tydfil LA	331	299	90.3	287	267	93.0	263	91.6	337	313	92.9	311	92.3	307	91.1
Rhondda Cynon Taff LA	1380	1267	91.8	1220	1164	95.4	1141	93.5	1308	1245	95.2	1238	94.6	1218	93.1
Health Board Total	1711	1566	91.5	1507	1431	95.0	1404	93.2	1645	1558	94.7	1549	94.2	1525	92.7
Hywel Dda University LHB															
Carmarthenshire LA	979	878	89.7	941	863	91.7	840	89.3	941	843	89.6	835	88.7	827	87.9
Ceredigion LA	314	263	83.8	308	271	88.0	266	86.4	331	291	87.9	287	86.7	283	85.5
Pembrokeshire LA	615	519	84.4	537	460	85.7	444	82.7	629	555	88.2	548	87.1	534	84.9
Health Board Total	1908	1660	87.0	1786	1594	89.2	1550	86.8	1901	1689	88.8	1670	87.8	1644	86.5
Powys Teaching LHB	655	495	75.6	628	533	84.9	495	78.8	679	556	81.9	542	79.8	526	77.5
Unknown	49	40	81.6	54	46	85.2	41	75.9	66	54	81.8	53	80.3	53	80.3
Wales Total	16171	14015	86.7	15680	14189	90.5	13461	85.8	16585	14887	89.8	14722	88.8	14333	86.4

¹ Represents the first School Year 8 group (2014/15) to receive the two dose HPV schedule.

² Represents the last School Year 8 group (2013/14) to receive the three dose HPV schedule. Some of these teenage girls would have been caught up on the two dose vaccination schedule, therefore three doses is not necessarily an indicator of a completed course.

Table 8. Vaccine uptake in children reaching their 15th birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017 (with breakdown of MMR1 and MMR2 coverage by sex).

Area	Resident children		Teenage 3 in 1						Resident girls				Resident boys			
	(n)	(n)	MMR1 (%)	MMR2 (%)	booster ¹ (n)	MenACWY ² (%)	(n)	(%)	(n)	(%)	MMR1 (girls) (n)	MMR2 (girls) (%)	HPV 2 doses ³ (n)	(%)	MMR1 (boys) (n)	MMR2 (boys) (%)
Abertawe Bro Morgannwg University LHB	(n)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(n)	(%)	(n)	(%)	(n)	(%)
Bridgend LA	1517	1422	93.7	1328	87.5	1363	89.8	1370	90.3	741	698	94.2	656	88.5	672	90.7
Neath Port Talbot LA	1460	1352	92.6	1248	85.5	1320	90.4	1339	91.7	715	676	94.5	625	87.4	656	91.7
Swansea LA	2497	2286	91.5	2129	85.3	2206	88.3	2217	88.8	1222	1129	92.4	1054	86.3	1116	91.3
Health Board Total	5474	5060	92.4	4705	86.0	4889	89.3	4926	90.0	2678	2503	93.5	2335	87.2	2444	91.3
Aneurin Bevan University LHB																
Blaenau Gwent LA	698	662	94.8	630	90.3	624	89.4	625	89.5	372	353	94.9	340	91.4	336	90.3
Caerphilly LA	2022	1946	96.2	1852	91.6	1746	86.4	1736	85.9	947	911	96.2	863	91.1	838	88.5
Monmouthshire LA	1034	877	84.8	813	78.6	791	76.5	786	76.0	509	429	84.3	404	79.4	385	75.6
Newport LA	1868	1689	90.4	1574	84.3	1482	79.3	1470	78.7	929	841	90.5	795	85.6	741	79.8
Torfaen LA	1016	954	93.9	905	89.1	881	86.7	881	86.7	491	460	93.7	438	89.2	424	86.4
Health Board Total	6638	6128	92.3	5774	87.0	5524	83.2	5498	82.8	3248	2994	92.2	2840	87.4	2724	83.9
Betsi Cadwaladr University LHB																
Anglesey LA	724	681	94.1	666	92.0	592	81.8	577	79.7	361	338	93.6	332	92.0	288	79.8
Conwy LA	1118	1046	93.6	1000	89.4	939	84.0	945	84.5	539	506	93.9	482	89.4	451	83.7
Denbighshire LA	1043	964	92.4	916	87.8	838	80.3	818	78.4	485	442	91.1	421	86.8	402	82.9
Flintshire LA	1584	1481	93.5	1416	89.4	1227	77.5	1209	76.3	798	743	93.1	715	89.6	678	85.0
Gwynedd LA	1172	1104	94.2	1065	90.9	914	78.0	921	78.6	555	525	94.6	506	91.2	479	86.3
Wrexham LA	1317	1256	95.4	1232	93.5	1049	79.7	1047	79.5	651	623	95.7	616	94.6	543	83.4
Health Board Total	6958	6532	93.9	6295	90.5	5559	79.9	5517	79.3	3389	3177	93.7	3072	90.6	2841	83.8
Cardiff and Vale University LHB																
Cardiff LA	3668	3329	90.8	3067	83.6	2577	70.3	1950	53.2	1729	1564	90.5	1445	83.6	1401	81.0
Vale of Glamorgan LA	1345	1252	93.1	1181	87.8	1069	79.5	837	62.2	661	627	94.9	597	90.3	561	84.9
Health Board Total	5013	4581	91.4	4248	84.7	3646	72.7	2787	55.6	2390	2191	91.7	2042	85.4	1962	82.1
Cwm Taf University LHB																
Merthyr Tydfil LA	625	594	95.0	549	87.8	561	89.8	563	90.1	287	276	96.2	256	89.2	263	91.6
Rhondda Cynon Taff LA	2522	2384	94.5	2245	89.0	2303	91.3	2313	91.7	1220	1166	95.6	1106	90.7	1141	93.5
Health Board Total	3147	2978	94.6	2794	88.8	2864	91.0	2876	91.4	1507	1442	95.7	1362	90.4	1404	93.2
Hywel Dda University LHB																
Carmarthenshire LA	2019	1859	92.1	1814	89.8	1780	88.2	1777	88.0	941	867	92.1	844	89.7	840	89.3
Ceredigion LA	612	566	92.5	540	88.2	529	86.4	526	85.9	308	287	93.2	277	89.9	266	86.4
Pembrokeshire LA	1180	1084	91.9	1016	86.1	915	77.5	897	76.0	537	498	92.7	468	87.2	444	82.7
Health Board Total	3811	3509	92.1	3370	88.4	3224	84.6	3200	84.0	1786	1652	92.5	1589	89.0	1550	86.8
Powys Teaching LHB	1300	1168	89.8	1070	82.3	1063	81.8	1073	82.5	628	572	91.1	529	84.2	495	78.8
Unknown	104	95	91.3	91	87.5	78	75.0	82	78.8	54	49	90.7	47	87.0	41	75.9
Wales Total	32445	30051	92.6	28347	87.4	26847	82.7	25959	80.0	15680	14580	93.0	13816	88.1	13461	85.8

¹ Teenage booster dose of diphtheria, tetanus and polio (diphtheria used as proxy)

² Represents the first School Year 9 group (2015/16) to receive the MenACWY vaccine.

³ Represents the first School Year 8 group (2014/15) to receive the two dose HPV schedule.

Table 9. Vaccine uptake in children reaching their 16th birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017 (with breakdown of MMR1 and MMR2 coverage by sex).

Area	Resident children		Teenage 3 in 1 booster ¹				Resident girls		MMR1 (girls)		MMR2 (girls)		HPV complete course ²		Resident boys		MMR1 (boys)		MMR2 (boys)	
	(n)	(n) (%)	(n)	(%)	(n)	(%)	(n)	(n) (%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(n) (%)	(n)	(%)	(n)	(%)
Abertawe Bro Morgannwg University LHB	(n)	(n) (%)	(n)	(%)	(n)	(%)	(n)	(n) (%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(n) (%)	(n)	(%)	(n)	(%)
Bridgend LA	1545	1483 96.0	1404	90.9	1326	85.8	762	727 95.4	689	90.4	704	92.4	783	756 96.6	715	91.3	803	758 94.4	712	88.7
Neath Port Talbot LA	1513	1437 95.0	1357	89.7	1289	85.2	710	679 95.6	645	90.8	656	92.4	803	758 94.4	712	88.7	1381	1283 92.9	1205	87.3
Swansea LA	2649	2463 93.0	2314	87.4	2317	87.5	1268	1180 93.1	1109	87.5	1126	88.8	1381	1283 92.9	1205	87.3				
Health Board Total	5707	5383 94.3	5075 88.9	4932 86.4	2740	2586 94.4	2443 89.2	2486 90.7	2967	2797 94.3	2632 88.7									
Aneurin Bevan University LHB																				
Blaenau Gwent LA	768	738 96.1	699	91.0	667	86.8	389	371 95.4	354	91.0	346	88.9	379	367 96.8	345	91.0	1123	1097 97.7	1045	93.1
Caerphilly LA	2123	2059 97.0	1963	92.5	1789	84.3	1000	962 96.2	918	91.8	895	89.5	1123	1097 97.7	1045	93.1	569	489 85.9	445	78.2
Monmouthshire LA	1155	1014 87.8	952	82.4	872	75.5	586	525 89.6	507	86.5	453	77.3	569	489 85.9	445	78.2	1021	950 93.0	880	86.2
Newport LA	1922	1782 92.7	1651	85.9	1512	78.7	899	831 92.4	770	85.7	750	83.4	1021	950 93.0	880	86.2	528	509 96.4	486	92.0
Torfaen LA	1006	973 96.7	929	92.3	849	84.4	478	464 97.1	443	92.7	414	86.6	528	509 96.4	486	92.0				
Health Board Total	6974	6566 94.1	6194 88.8	5689 81.6	3352	3153 94.1	2992 89.3	2858 85.3	3620	3412 94.3	3201 88.4									
Betsi Cadwaladr University LHB																				
Anglesey LA	699	658 94.1	634	90.7	586	83.8	356	334 93.8	322	90.4	316	88.8	343	324 94.5	312	91.0	689	630 91.4	604	87.7
Conwy LA	1302	1203 92.4	1149	88.2	1159	89.0	613	573 93.5	545	88.9	549	89.6	689	630 91.4	604	87.7	562	500 89.0	465	82.7
Denbighshire LA	1094	986 90.1	926	84.6	920	84.1	532	486 91.4	461	86.7	458	86.1	562	500 89.0	465	82.7	830	790 95.2	758	91.3
Flintshire LA	1635	1556 95.2	1501	91.8	1446	88.4	805	766 95.2	743	92.3	711	88.3	830	790 95.2	758	91.3	651	611 93.9	594	91.2
Gwynedd LA	1253	1188 94.8	1154	92.1	1113	88.8	602	577 95.8	560	93.0	541	89.9	651	611 93.9	594	91.2	792	747 94.3	724	91.4
Wrexham LA	1540	1464 95.1	1421	92.3	1332	86.5	748	717 95.9	697	93.2	651	87.0	792	747 94.3	724	91.4				
Health Board Total	7523	7055 93.8	6785 90.2	6556 87.1	3656	3453 94.4	3328 91.0	3226 88.2	3867	3602 93.1	3457 89.4									
Cardiff and Vale University LHB																				
Cardiff LA	3690	3389 91.8	3194	86.6	2825	76.6	1811	1677 92.6	1581	87.3	1498	82.7	1879	1712 91.1	1613	85.8	746	705 94.5	672	90.1
Vale of Glamorgan LA	1481	1403 94.7	1342	90.6	1220	82.4	735	698 95.0	670	91.2	631	85.9	746	705 94.5	672	90.1				
Health Board Total	5171	4792 92.7	4536 87.7	4045 78.2	2546	2375 93.3	2251 88.4	2129 83.6	2625	2417 92.1	2285 87.0									
Cwm Taf University LHB																				
Merthyr Tydfil LA	713	682 95.7	644	90.3	656	92.0	337	323 95.8	306	90.8	307	91.1	376	359 95.5	338	89.9	1331	1273 95.6	1186	89.1
Rhondda Cynon Taff LA	2639	2535 96.1	2391	90.6	2396	90.8	1308	1262 96.5	1205	92.1	1225	93.7	1331	1273 95.6	1186	89.1				
Health Board Total	3352	3217 96.0	3035 90.5	3052 91.1	1645	1585 96.4	1511 91.9	1532 93.1	1707	1632 95.6	1524 89.3									
Hywel Dda University LHB																				
Carmarthenshire LA	1989	1835 92.3	1726	86.8	1647	82.8	941	876 93.1	826	87.8	830	88.2	1048	959 91.5	900	85.9	685	655 95.6	626	91.4
Ceredigion LA	685	655 95.6	626	91.4	601	87.7	331	319 96.4	307	92.7	285	86.1	354	336 94.9	319	90.1	1273	1190 93.5	1134	89.1
Pembrokeshire LA	1273	1190 93.5	1134	89.1	1086	85.3	629	583 92.7	553	87.9	539	85.7	644	607 94.3	581	90.2				
Health Board Total	3947	3680 93.2	3486 88.3	3334 84.5	1901	1778 93.5	1686 88.7	1654 87.0	2046	1902 93.0	1800 88.0									
Powys Teaching LHB	1402	1272 90.7	1178 84.0	1092 77.9	679	613 90.3	572 84.2	533 78.5	722	659 91.3	606 83.9									
Unknown	167	148 88.6	140	83.8	129	77.2	66	61 92.4	58	87.9	53	80.3	100	87 87.0	82	82.0				
Wales Total	34243	32113 93.8	30429 88.9	28829 84.2	16585	15604 94.1	14841 89.5	14471 87.3	17654	16508 93.5	15587 88.3									

¹ Teenage booster dose of diphtheria, tetanus and polio (diphtheria used as proxy).

² Represents the last School Year 8 group (2013/14) to receive the three dose HPV schedule. Some of these teenage girls would have been caught up on the two dose vaccination schedule.

Table 10. Percentages of children who are up to date with routine immunisations* by four years of age, by quintile of deprivation of the Lower Super Output Area in which they reside. Vaccine uptake is presented for children reaching their 4th birthday between 01/04/2016 and 31/03/2017 and resident on 31/03/2017.

Health Board	Lower Super Output Areas in Deprivation Quintile 1			Lower Super Output Areas in Deprivation Quintile 2			Lower Super Output Areas in Deprivation Quintile 3			Lower Super Output Areas in Deprivation Quintile 4			Lower Super Output Areas in Deprivation Quintile 5		
	Resident children	Up to date by 4y		Resident children	Up to date by 4y		Resident children	Up to date by 4y		Resident children	Up to date by 4y		Resident children	Up to date by 4y	
	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)
Abertawe Bro Morgannwg	1170	1039	88.8	726	640	88.2	909	785	86.4	1340	1169	87.2	1715	1423	83.0
Aneurin Bevan	1004	831	82.8	902	745	82.6	1316	1074	81.6	1641	1320	80.4	2152	1693	78.7
Betsi Cadwalladr	1265	1110	87.7	1799	1615	89.8	1780	1574	88.4	1535	1369	89.2	1348	1158	85.9
Cardiff and Vale	1844	1615	87.6	797	650	81.6	647	526	81.3	844	672	79.6	1937	1497	77.3
Cwm Taf	345	300	87.0	372	329	88.4	603	536	88.9	1092	964	88.3	1206	1029	85.3
Hywel Dda	248	216	87.1	984	850	86.4	1465	1228	83.8	873	712	81.6	459	338	73.6
Powys Teaching	135	119	88.1	589	505	85.7	317	272	85.8	137	117	85.4	67	60	89.6
Wales Total	6011	5230	87.0	6169	5334	86.5	7037	5995	85.2	7462	6323	84.7	8884	7198	81.0

*Completed 4 in 1 preschool booster, the Hib/MenC booster and second MMR dose by four years of age. The calculation method for proportions of children up to date with routine immunisation by four years of age was revised during 2014 quarter 1, to remove the pneumococcal conjugate vaccine booster dose, as this is not clinically indicated after two years of age.

Table 11. Uptake of hepatitis B immunisation in children born to hepatitis B positive mothers reaching their 1st, 2nd and 5th birthdays during 01/04/2016 and 31/03/2017 and resident on 31/03/2017.

Area	1yr					2yrs						5yrs					
	Resident children	Babies at risk of perinatal infection	1 dose (%)	2 doses (%)	3 doses (%)	Resident children	Babies at risk of perinatal infection	1 dose (%)	2 doses (%)	3 doses (%)	4 doses (%)	Resident children	Babies at risk of perinatal infection	1 dose (%)	2 dose (%)	3 doses (%)	4 doses (%)
	(n)	(n)	(%)	(%)	(%)	(n)	(n)	(%)	(%)	(%)	(%)	(n)	(n)	(%)	(%)	(%)	(%)
Abertawe Bro Morgannwg UHB	5647	8	100.0	100.0	100.0	5658	10	100.0	100.0	100.0	100.0	6301	8	100.0	100.0	100.0	100.0
Aneurin Bevan UHB	6692	6	100.0	83.3	50.0	6680	6	100.0	100.0	100.0	83.3	7004	7	100.0	100.0	100.0	100.0
Betsi Cadwaladr UHB	7071	6	100.0	100.0	100.0	7219	14	100.0	100.0	100.0	100.0	7853	10	100.0	100.0	100.0	100.0
Cardiff and Vale UHB	5839	26	100.0	100.0	100.0	5856	27	100.0	100.0	100.0	81.5	6290	24	100.0	100.0	100.0	100.0
Cwm Taf UHB	3498	4	100.0	100.0	100.0	3483	0	0.0	0.0	0.0	0.0	3722	0	0.0	0.0	0.0	0.0
Hywel Dda UHB	3724	1	100.0	100.0	100.0	3722	1	100.0	100.0	100.0	100.0	4082	6	100.0	100.0	100.0	100.0
Powys Teaching HB	1140	1	100.0	100.0	100.0	1136	0	0.0	0.0	0.0	0.0	1295	0	0.0	0.0	0.0	0.0
Unknown	11	1	100.0	100.0	100.0	24	0	0.0	0.0	0.0	0.0	62	0	0.0	0.0	0.0	0.0
Wales Total	33622	53	100.0	98.1	94.3	33778	58	100.0	100.0	100.0	89.7	36609	55	100.0	100.0	100.0	100.0

¹Data reflects immunisations given and recorded on the Public Health Wales All Wales Neonatal Hepatitis B database of babies born to hepatitis B positive mothers.

Links

Public Health Wales Vaccination and Immunisation intranet (NHS Wales only):
<http://howis.wales.nhs.uk/sites3/home.cfm?orgid=474>

Public Health Wales Health Protection internet:
<http://www.wales.nhs.uk/sites3/home.cfm?orgid=457>

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Acknowledgments

Immunisation data for this report is provided by Health Board Child Health Administration Offices, via the National Community Child Health Database. The authors would like to thank Child Health Office Administration Managers and Immunisation Coordinators for their continuing advice and support in the COVER scheme.

Suggested citation

Public Health Wales Vaccine Preventable Disease Programme. Vaccine uptake in children in Wales; COVER Annual report 2017, May 2017. Cardiff: Public Health Wales.