

Vaccine Uptake in Children in Wales

COVER Annual report 2013

Data for the year ending 31st March 2013



Key points

- Annual uptake of all routine immunisations in one year old children for Wales as a whole exceeded the 95% target, and 21 of the 22 Local Authority areas have exceeded the 95% uptake target for the 5 in 1 immunisation in one year olds for 2012/13.
- Annual uptake of the first dose of MMR at 2 years increased to 94.6%, its highest ever level.
- During the period April 2012 to March 2013, 82.4% of children had completed all recommended immunisations by their fourth birthday.
- Uptake of the second dose of MMR by 5 years of age increased to 89.6%, the highest ever annual uptake of MMR2 at five years of age.
- Uptake of pre-school 4 in 1 booster in five year old children has increased to 91.3%.
- Uptake of a complete three dose course of Human Papilloma Virus (HPV) vaccine in girls in the routine campaign (2011/12 School Year 8) was 86.6%, an increase of 1.2% compared to the previous year.

Findings

1. These results are for children living in Wales in May 2013 and reaching their first, second, fourth, fifth, 15th and 16th birthdays in the year ending March 31st 2013, and girls in school year 8 in 2011/2012.
2. Annual uptake of the completed course of '5 in 1'¹ vaccine, scheduled at 2, 3 and 4 months of age, in children reaching their first birthday increased to 96.5%. Uptake ranged by Health Board (HB) from 94.8% (Cardiff and Vale University HB) to 97.4% (Cwm Taf HB) and by Local Authority (LA) from 94.4% (Cardiff) to 99.1% (Torfaen). Twenty-one of the 22 LAs achieved the 95% target (Figures 1, 2, 4 and Tables 1, 2).
3. Annual uptake of a completed course of MenC² vaccine in children reaching their first birthday this year was 96.1% ranging by HB from 93.8 % (Cardiff and Vale University HB) to 97.2 % (Cwm Taf HB) and by LA from 93.3 % (Cardiff) to 99.0 % (Torfaen) (Figure 1 and Tables 1, 2).
4. Uptake of a complete two dose primary course of pneumococcal conjugate vaccination (PCV³) in children at one year of age was 95.9%, ranging by HB from 93.7% (Cardiff and Vale University HB) to 97.2% (Cwm Taf HB) and by LA from 93.2% (Cardiff) to 98.4% (Torfaen) (Figure 1 and Table 2).
5. Uptake of one dose of MMR⁴ by two years of age increased this year by 1.9% to 94.6%. Uptake ranged by HB from 93.4% (Powys HB) to 95.8% (Betsi Cadwaladr University HB) and by LA from 91.8% (Merthyr Tydfil) to 97.1% (Wrexham). Two HBs achieved the target uptake of 95% for one dose of MMR by 2 years of age (Betsi Cadwaladr University HB, Cwm Taf HB) (Figures 1, 2 and 5 and Tables 1, 3), and 9 out of 22 LAs exceeded the 95% target.
6. Annual uptake of the final dose of Pneumococcal Conjugate Vaccine (PCV³) by 2 years of age was 95.2%. Uptake by HB ranged from 94.1% (Cardiff and Vale University HB) to 96.3% (Betsi Cadwaladr University HB) and by LA from 92.5% (Merthyr Tydfil) to 97.5% (Wrexham) (Tables 1, 3).

¹ DTaP/IPV/Hib vaccine protects against diphtheria, tetanus, pertussis (Whooping Cough), polio and Hib infection.

² Men C vaccine protects against meningitis caused by meningococcus group C infection. Children reaching 1yr of age would have been offered one dose of MenC vaccine at 3 months of age and one dose at 4 months of age.

³ PCV protects against pneumococcal meningitis, bacteraemia, pneumonia and otitis media. Children reaching 1yr 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 2yrs would have been offered their third and final PCV dose at around 13 months of age.

⁴ MMR protects against measles, mumps and rubella infections.

⁵ DTaP/IPV (and dTaP/IPV) vaccines boost protection against diphtheria, tetanus, pertussis and polio infection before school entry

⁶ Td/IPV boosts protection against Diphtheria, Tetanus and Polio infection before entering adulthood

7. Annual uptake of the Hib/MenC booster scheduled by 2 years of age was 94.4%, ranging by HB from 92.9% (Cardiff and Vale University HB) to 95.6% (Betsi Cadwaladr University HB) and by LA from 92.1% (Cardiff) to 96.5% (Wrexham) (Tables 1, 3).
8. In children reaching their fourth birthday, coverage of the 4 in 1 preschool booster was 87.3%, coverage of a complete course of pneumococcal conjugate vaccine was 92.1%, coverage of the Hib/MenC booster was 94.1% and uptake of two doses of MMR was 85.8%. The proportion of children who were up to date with all of these immunisations by four years of age was 82.4% (Table 4). This ranged by HB from 79.2% (Cardiff and Vale University HB) to 85.1% (Betsi Cadwaladr University HB) and by LA from 77.4% (Cardiff) to 86.6% (Wrexham and Gwynedd).
9. Annual uptake of two doses of MMR in children at five years of age increased this year by 2.5% to 89.6%. This is the highest ever annual uptake of MMR2 at five years of age (Figures 1, 3, 6, Tables 1, 5). Uptake of the second dose of MMR by five years of age ranged by HB from 87.5% (Powys Teaching HB) to 92% (Betsi Cadwaladr University HB) and by LA from 85.4% (Pembrokeshire) to 93.8% (Wrexham). No LHB achieved the 95% target for this immunisation.
10. Uptake of the "4 in 1" DTaP/IPV⁵ pre-school booster in children reaching their fifth birthday this year was 91.3% (an increase of 1.7% on the previous year), ranging by HB from 90% (Powys & Hywel Dda HBs) to 93.1% (Betsi Cadwaladr University HB) and by LA from 86.6% (Pembrokeshire) to 94.7% (Wrexham) (Figures 3, 7, Tables 1, 5).
11. Uptake of all three doses of HPV vaccine, in girls in the 2011/12 School Year 8 (reaching their 14th birthday between 01/09/12 and 31/08/13) was 86.6%, ranging by HB from 82.4% (Powys teaching HB) to 92.1% (Cwm Taf HB) and by LA from 76.5% (Monmouthshire) to 92.5% (Merthyr Tydfil) (Table 6). Immunisation sessions for the current (2012/13) School Year 8 are in progress and uptakes for one and two HPV doses in this group are reported in COVER Report 106.
12. Annual coverage of two doses of MMR in teenagers at 15 years of age was 82.8% (Table 7), ranging by HB from 75.9% (Powys Teaching HB) to 89.9% (Betsi Cadwaladr University HB) and by LA from 73.7% (Monmouthshire) to 91.3% (Anglesey). Coverage of one dose of MMR in 15 year olds was 91.3%, ranging by HB from 86% (Powys Teaching HB) to 95.4% (Betsi Cadwaladr University HB) and by LA from 85.7% (Monmouthshire) to 95.8% (Flintshire). A breakdown by sex indicates that 83.2% of girls had received a full (2 MMR doses) course of immunisation against rubella this year and coverage of only 1 dose was 91.3%.
13. Annual coverage of two doses of MMR in teenagers at 16 years of age was 82.6% (Tables 1, 8), ranging by HB from 75.3% (Powys Teaching HB) to 90.2% (Betsi Cadwaladr University HB) and by LA from 69.8% (Monmouthshire) to 91.8% (Conwy). Annual coverage of one dose of MMR in 16 year olds was 91.1%, ranging by LA from 81.8% (Monmouthshire) to 97% (Flintshire). A breakdown by sex indicates that 83% of girls had received a full (2 MMR doses) course of immunisation against rubella this year and coverage of only 1 dose was 91.2%.
14. National uptake of the Td/IPV⁶ teenage booster in children reaching 16 years of age in the year ending 31st March 2013 was 77.6% (Tables 1, 8), ranging by HB from 63.3% (Hywel Dda HB) to 83% (Abertawe Bro Morgannwg University HB) and by LA from 31.3% (Pembrokeshire) to 84.5% (Ceredigion).
15. For the first time, this year 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. National quintiles of deprivation were calculated according to the LSOA rankings contained in the Welsh Index of Multiple Deprivation (WIMD). 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 the LSOA as a whole, not the individual circumstances of

residents within the LSOA. Nationally, the percentage of children up to date with their routine immunisations by four years of age ranged from 86.9% in the least deprived quintile of LSOA to 78.0% in the most deprived quintile of LSOA. The LSOA of residence was unknown for 206 of Wales resident children reaching their fourth birthday between 01/04/2012 and 31/03/2013.

Comment

Overall annual trends in immunisation uptake in Wales remain positive (Figure 1). Coverage of routine immunisations in one year olds exceeded 95% in nearly all Local Authority (LA) areas (Table 1). Coverage of the first dose of MMR in two year olds exceeded 95% in nine LA areas, compared to none last year. Trends in uptake of routine immunisation in older children remain generally positive, although uptake is lower than it is in babies. Although uptake of scheduled immunisation at routine ages has seen marked improvement this year, 17% of 16 year olds had not received a full two dose course of MMR and 9% had not received any.

There has been a recent upsurge of measles cases in Wales, with more than 1,400 cases reported nationally since November 2012. The majority of these cases have been associated with an outbreak mainly affecting Mid and West Wales. The main burden of confirmed cases has been in older children and teenagers, where coverage of MMR vaccine is lower than the levels seen in children currently attending for their routine MMR vaccinations. In a national effort to bring the outbreak under control and reduce the potential for future outbreaks, more than 71,000 MMR vaccinations have been administered to individuals at non-routine ages since March 2013. Some of these vaccinations were early doses, given to babies within the areas most affected by the outbreak, but the majority have been catch-up doses, given to people who had previously missed out on MMR vaccination; more than 20,000 of the catch-up doses were given to children and teenagers aged 10 to 18 years. Although coverage of MMR vaccination has improved, the herd immunity target of 95% coverage of two doses has not been reached yet. This means that there is still potential for transmission of measles virus within Wales. In order to reduced the risk of future outbreaks, immunisation status of children should be checked routinely on entry to school, in line with national guidance (Welsh Health Circular (2005) 081) and children and teenagers who have missed out on MMR vaccination previously should be offered catch-up doses at every opportunity.

This report presents, for the first time, immunisation coverage in four year olds, by quintile of deprivation. Figures presented here highlight that although national trends in immunisation coverage are positive, coverage in those residing in the more deprived areas of Wales is lower than in those residing in the least deprived areas.

Report prepared by Public Health Wales Vaccine Preventable Disease Programme and Communicable Disease Surveillance Centre. *Data for this report was provided by Health Solutions Wales 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 2013. Data are for: children reaching 1 year of age each quarter for diphtheria, pertussis, Hib, MenC 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).

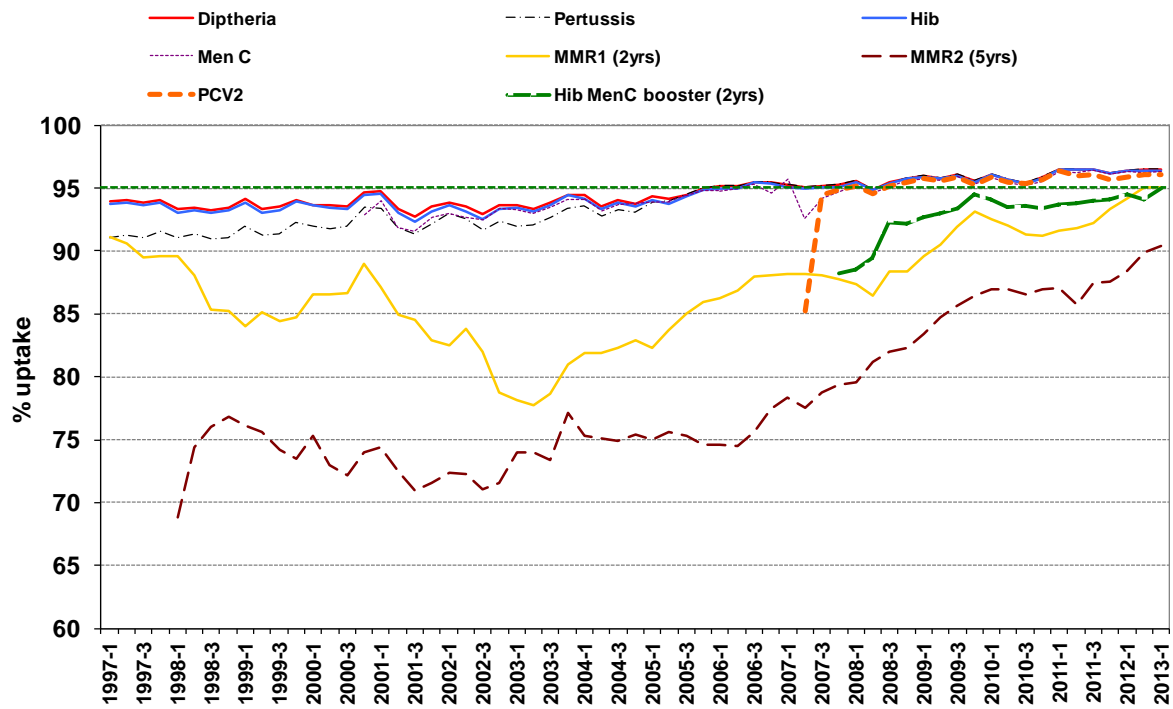


Figure 2. (a) Uptake of 5 in 1 vaccine in Welsh Local Authority areas in children reaching their 1st birthday between 01/04/12 and 31/03/13. **(b)** Uptake of at least 1 dose of MMR immunisation in Welsh Local Authority areas in children reaching their 2nd birthday between 01/04/12 and 31/03/13.

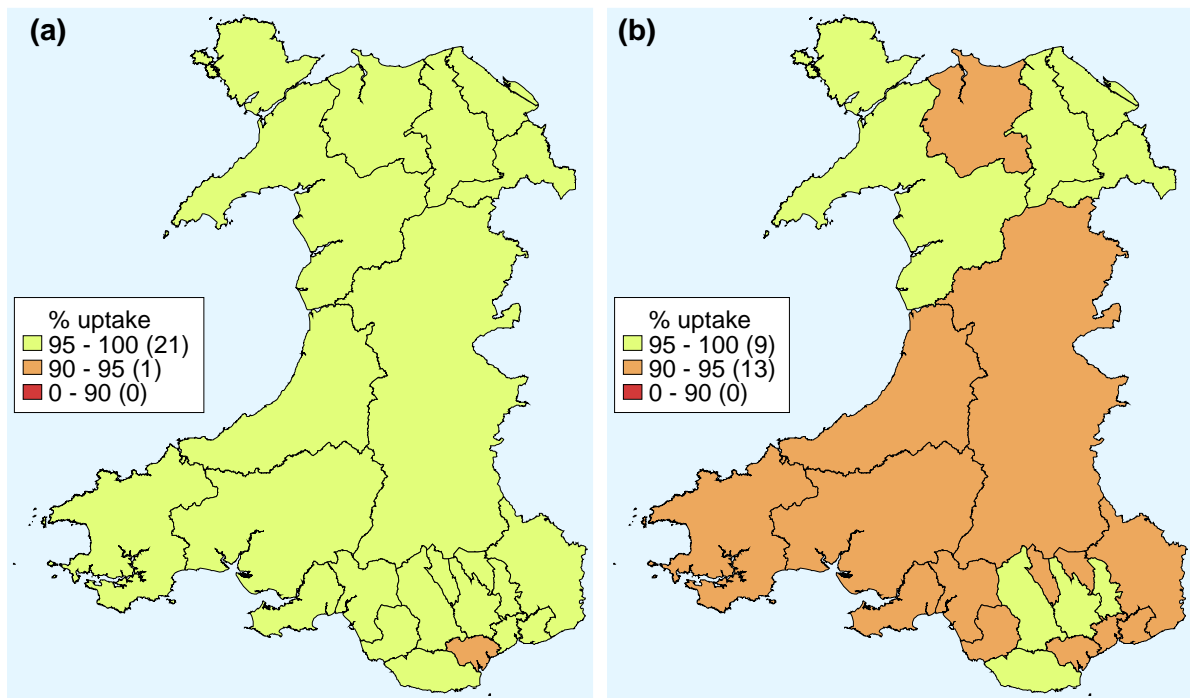


Figure 3. (a) Uptake of two doses of MMR vaccine in Welsh Local Authority areas in children reaching their 5th birthday between 01/04/12 and 31/03/13. **(b)** Uptake of 4 in 1 vaccine in Welsh Local Authority areas in children reaching their 5th birthday between 01/04/12 and 31/03/13.

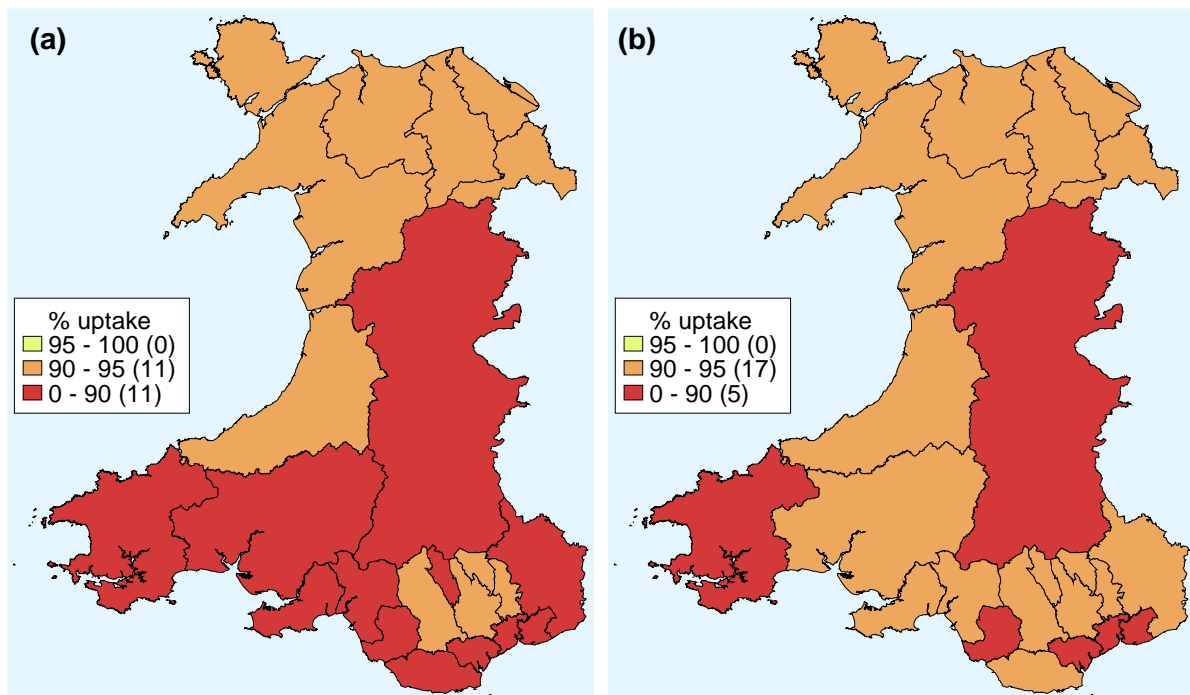


Figure 4. Annual uptake of 5 in 1 vaccine by 1 year of age (2009 – 2013 financial years, ranked by uptake in 2012-2013).

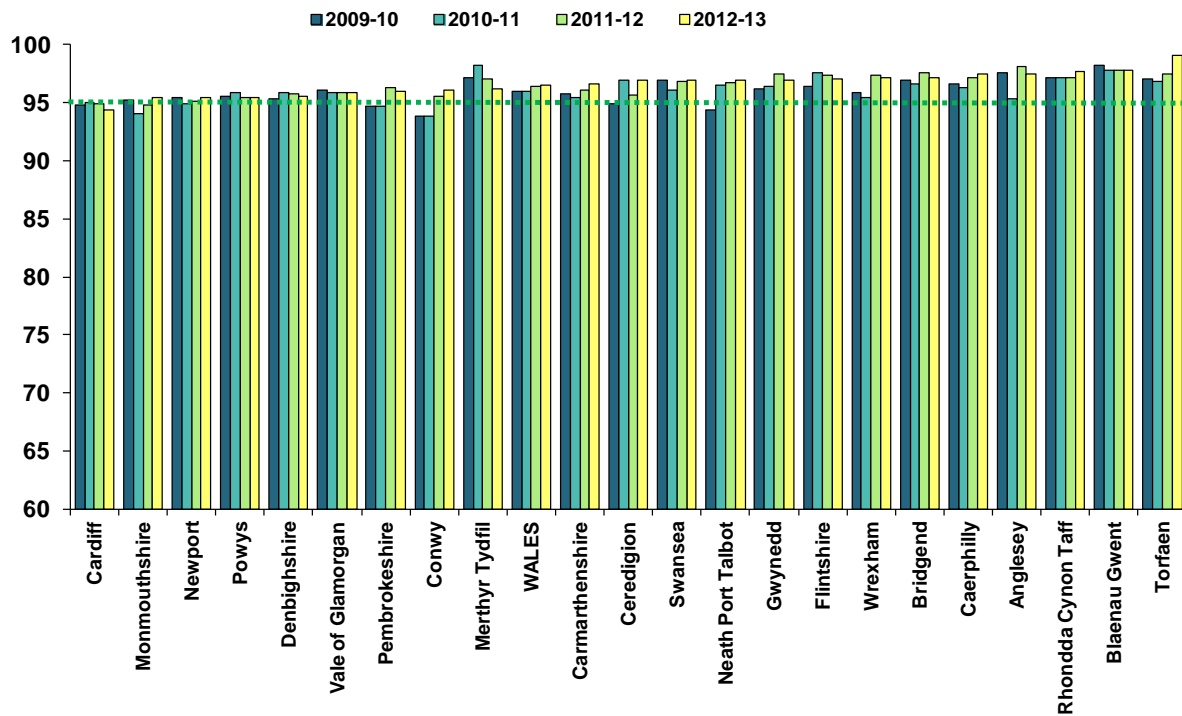
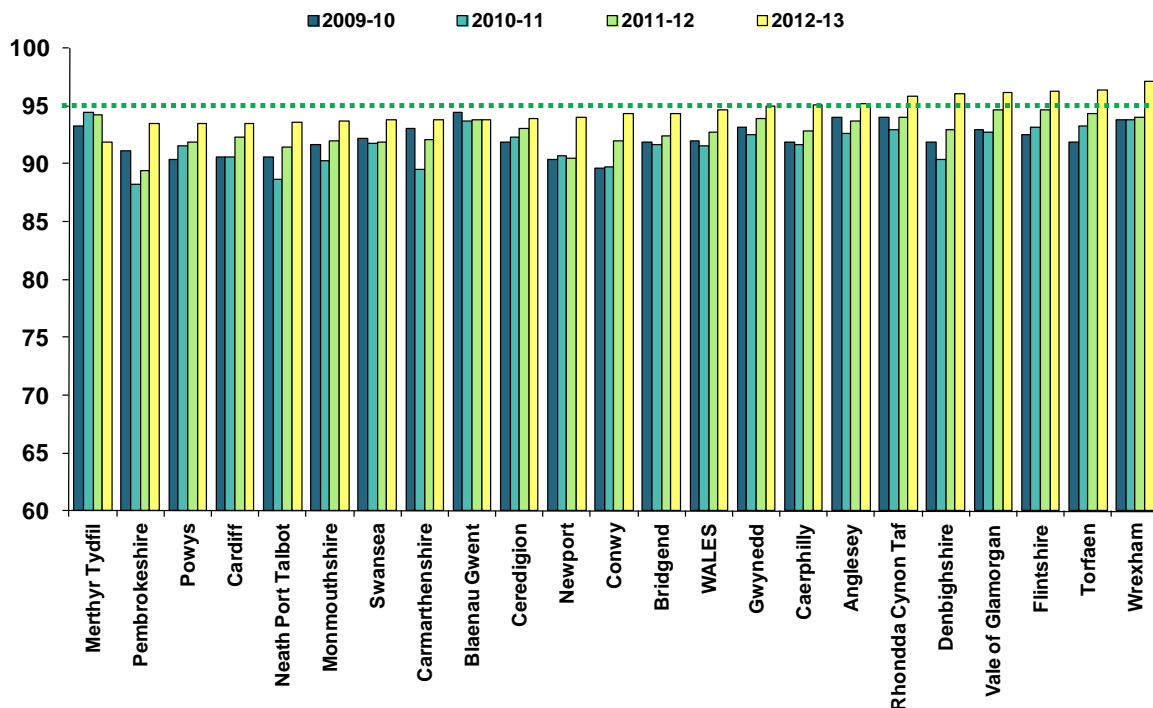


Figure 5. Annual uptake of 1 dose of MMR by 2 years of age (2009 – 2013 financial years, ranked by uptake in 2012-2013).



Cwm Taf Health Board has informed Public Health Wales of a technical issue affecting MMR coding in the local child health database for Merthyr Tydfil resident children. As a result of this, the actual numbers of children resident in Merthyr Tydfil LA who have received MMR vaccine by their second birthday, for the year 2012/13, is likely to be higher than the figure presented here. Subsequent analyses carried out by Cwm Taf Health Board suggest that actual coverage for children reaching their second birthday this year was higher. This technical issue has now been resolved.

Figure 6. Annual uptake of 2 doses of MMR by 5 years of age (2009 – 2013 financial years, ranked by uptake in 2012-2013).

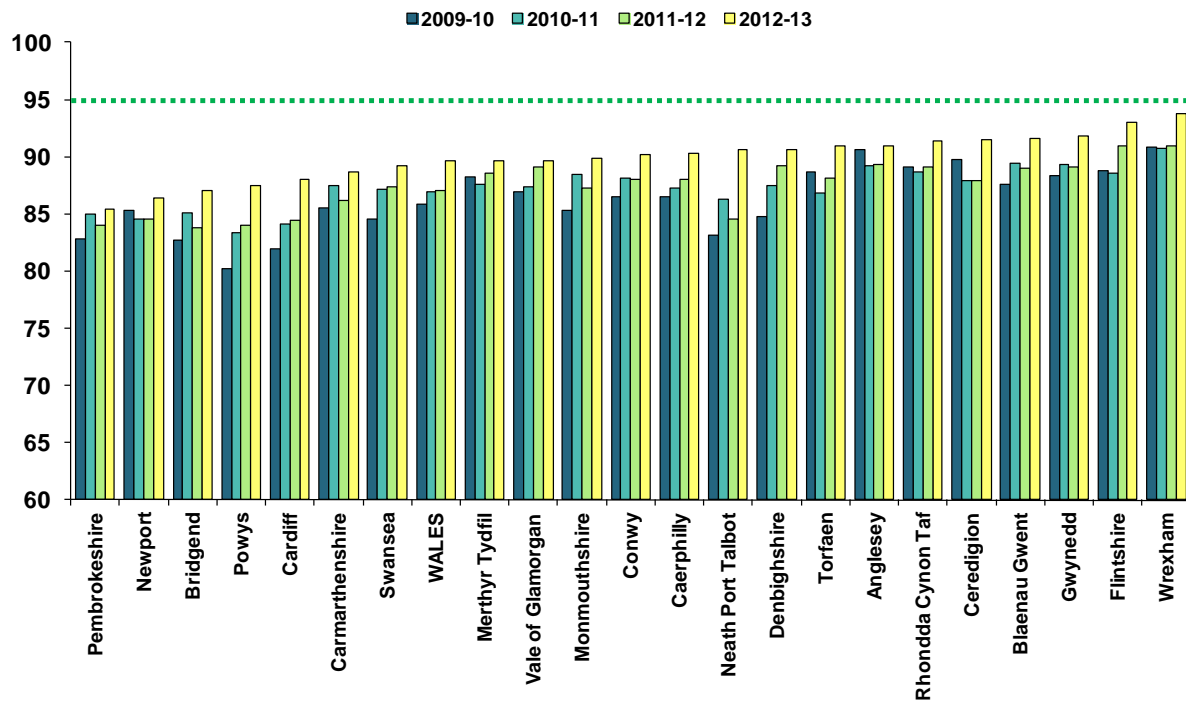


Figure 7. Annual uptake of the 4 in 1 pre-school booster by 5 years of age (2009 – 2013 financial years, ranked by uptake in 2012-2013).

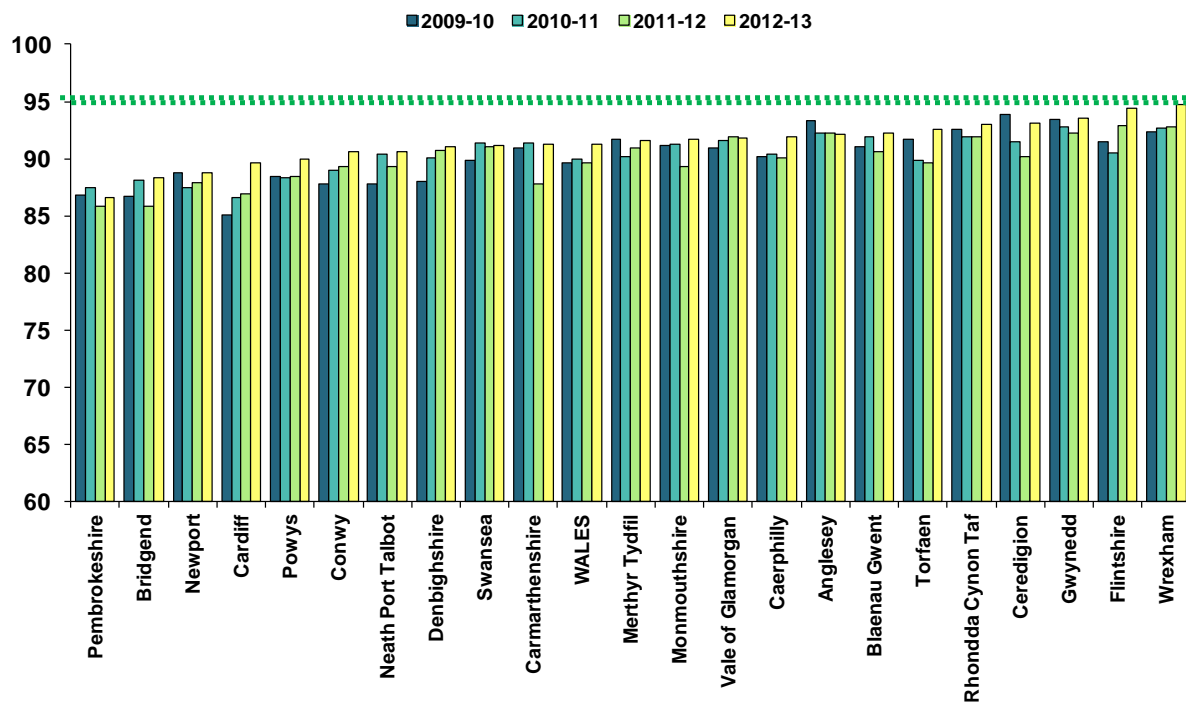


Figure 8. Percentages of children who are up to date with routine immunisations by four years of age, by quintile of deprivation of the Lower Super Output Area in which they reside. Vaccine uptake is presented for children reaching their 4th birthday between 01/04/2012 and 31/03/2013 and resident on 01/05/2013.

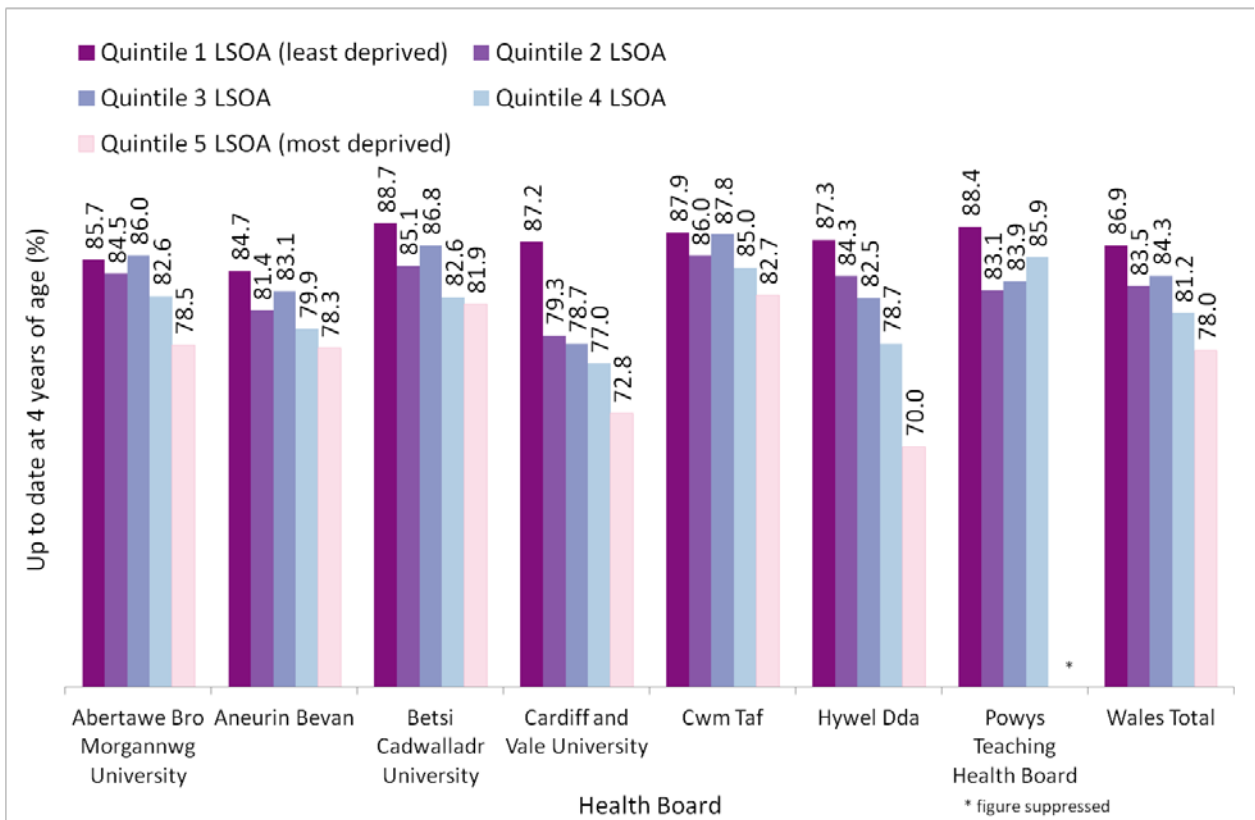


Table1. Summary table with uptake of selected immunisations in resident children reaching their 1st, 2nd, 5th and 16th birthday between 01/04/2012 and 31/03/2013 and resident on 01/05/2013.

Area	Age 1 year				Age 2 years				Age 5 years				Age 16 years			
	Resident children (n)	5 in 1* (n) (%)	MenC (n) (%)	Resident children (n)	MMR1 (n) (%)	PCV† (n) (%)	Hib/MenC booster (n) (%)	Resident children (n)	MMR2 (n) (%)	4 in 1* (n) (%)	Resident children (n)	MMR1 (n) (%)	MMR2 (n) (%)	3 in 1 Teenage booster** (n) (%)		
Abertawe Bro Morgannwg University LHB																
Bridgend LA	1714	1666 97.2	1659 96.8	1614	1522 94.3	1538 95.3	1534 95.0	1570	1366 87.0	1387 88.3	1652	1536 93.0	1429 86.5	1378 83.4		
Neath Port Talbot LA	1554	1507 97.0	1506 96.9	1616	1513 93.6	1541 95.4	1535 95.0	1529	1357 88.8	1385 90.6	1611	1473 91.4	1339 83.1	1319 81.9		
Swansea LA	2741	2658 97.0	2646 96.5	2680	2515 93.8	2545 95.0	2517 93.9	2731	2435 89.2	2492 91.2	2654	2366 89.1	2088 78.7	2215 83.5		
Health Board Total	6009	5831 97.0	5811 96.7	5910	5550 93.9	5624 95.2	5586 94.5	5830	5158 88.5	5264 90.3	5917	5375 90.8	4856 82.1	4912 83.0		
Aneurin Bevan LHB																
Blaenau Gwent LA	766	749 97.8	748 97.7	772	724 93.8	731 94.7	729 94.4	759	695 91.6	700 92.2	810	743 91.7	663 81.9	682 84.2		
Caerphilly LA	2060	2008 97.5	2004 97.3	2171	2065 95.1	2075 95.6	2070 95.3	2072	1870 90.3	1905 91.9	2240	2009 89.7	1760 78.6	1796 80.2		
Monmouthshire LA	835	797 95.4	793 95.0	861	807 93.7	815 94.7	808 93.8	875	787 89.9	802 91.7	1216	995 81.8	849 69.8	905 74.4		
Newport LA	1906	1818 95.4	1811 95.0	1975	1856 94.0	1859 94.1	1827 92.5	1925	1664 86.4	1710 88.8	1972	1729 87.7	1542 78.2	1436 72.8		
Torfaen LA	1091	1081 99.1	1080 99.0	1094	1054 96.3	1056 96.5	1047 95.7	1061	966 91.0	983 92.6	1229	1142 92.9	1034 84.1	973 79.2		
Health Board Total	6658	6453 96.9	6436 96.7	6873	6506 94.7	6536 95.1	6481 94.3	6692	5982 89.4	6100 91.2	7467	6618 88.6	5848 78.3	5792 77.6		
Betsi Cadwaladr University LHB																
Anglesey LA	788	769 97.6	768 97.5	790	752 95.2	757 95.8	755 95.6	774	704 91.0	713 92.1	822	789 96.0	740 90.0	636 77.4		
Conwy LA	1133	1089 96.1	1089 96.1	1141	1076 94.3	1078 94.5	1069 93.7	1112	1003 90.2	1007 90.6	1286	1238 96.3	1181 91.8	1065 82.8		
Denbighshire LA	1049	1002 95.5	999 95.2	1065	1022 96.0	1031 96.8	1020 95.8	1056	957 90.6	962 91.1	1142	1096 96.0	1001 87.7	946 82.8		
Flintshire LA	1668	1619 97.1	1615 96.8	1684	1620 96.2	1629 96.7	1624 96.4	1790	1664 93.0	1690 94.4	1766	1713 97.0	1604 90.8	1489 84.3		
Gwynedd LA	1318	1279 97.0	1274 96.7	1212	1152 95.0	1155 95.3	1152 95.0	1242	1140 91.8	1161 93.5	1374	1300 94.6	1241 90.3	1108 80.6		
Wrexham LA	1674	1625 97.1	1619 96.7	1700	1650 97.1	1658 97.5	1640 96.5	1627	1526 93.8	1541 94.7	1396	1336 95.7	1264 90.5	1145 82.0		
Health Board Total	7630	7383 96.8	7364 96.5	7592	7272 95.8	7308 96.3	7260 95.6	7601	6994 92.0	7074 93.1	7786	7472 96.0	7031 90.3	6389 82.1		
Cardiff and Vale University LHB																
Cardiff LA	4733	4468 94.4	4415 93.3	4649	4345 93.5	4342 93.4	4283 92.1	4440	3908 88.0	3983 89.7	3861	3471 89.9	3152 81.6	2734 70.8		
Vale of Glamorgan LA	1519	1457 95.9	1452 95.6	1410	1355 96.1	1359 96.4	1344 95.3	1508	1352 89.7	1384 91.8	1630	1463 89.8	1370 84.0	1295 79.4		
Health Board Total	6252	5925 94.8	5867 93.8	6059	5700 94.1	5701 94.1	5627 92.9	5948	5260 88.4	5367 90.2	5491	4934 89.9	4522 82.4	4029 73.4		
Cwm Taf LHB																
Merthyr Tydfil LA	762	732 96.1	731 95.9	695	638 91.8	643 92.5	644 92.7	694	622 89.6	636 91.6	755	688 91.1	610 80.8	586 77.6		
Rhondda Cynon Taff LA	2839	2774 97.7	2769 97.5	2888	2767 95.8	2798 96.9	2772 96.0	2713	2481 91.4	2524 93.0	2743	2563 93.4	2331 85.0	2291 83.5		
Health Board Total	3601	3506 97.4	3500 97.2	3583	3405 95.0	3441 96.0	3416 95.3	3407	3103 91.1	3160 92.8	3498	3251 92.9	2941 84.1	2877 82.2		
Hywel Dda LHB																
Carmarthenshire LA	1977	1908 96.5	1897 96.0	1990	1866 93.8	1881 94.5	1870 94.0	1958	1736 88.7	1788 91.3	2064	1846 89.4	1618 78.4	1592 77.1		
Ceredigion LA	612	593 96.9	588 96.1	709	666 93.9	675 95.2	668 94.2	620	567 91.5	577 93.1	679	623 91.8	557 82.0	574 84.5		
Pembrokeshire LA	1313	1261 96.0	1257 95.7	1309	1223 93.4	1238 94.6	1227 93.7	1293	1104 85.4	1120 86.6	1348	1212 89.9	1079 80.0	422 31.3		
Health Board Total	3902	3762 96.4	3742 95.9	4008	3755 93.7	3794 94.7	3765 93.9	3871	3407 88.0	3485 90.0	4091	3681 90.0	3254 79.5	2588 63.3		
Powys Teaching LHB	1221	1165 95.4	1166 95.5	1195	1116 93.4	1135 95.0	1124 94.1	1289	1128 87.5	1160 90.0	1491	1288 86.4	1122 75.3	1176 78.9		
Unknown	118	113 95.8	113 95.8	115	109 94.8	110 95.7	108 93.9	164	142 86.6	148 90.2	261	191 73.2	173 66.3	166 63.6		
Wales Total	35391	34138 96.5	33999 96.1	35335	33413 94.6	33649 95.2	33367 94.4	34802	31174 89.6	31758 91.3	36002	32810 91.1	29747 82.6	27929 77.6		

* Uptake of pertussis used as proxy

** Uptake of diphtheria (reinforcing booster dose) used as proxy

‡ Children receiving the final dose of PCV

	95% and higher
	90% to 95%
	below 90%

Cwm Taf Health Board has informed Public Health Wales of a technical issue affecting MMR coding in the local child health database for Merthyr Tydfil resident children. As a result of this, the actual numbers of children resident in Merthyr Tydfil LA who have received MMR vaccine by their second birthday, for the year 2012/13, is likely to be higher than the figure presented here. Subsequent analyses carried out by Cwm Taf Health Board suggest that actual coverage for children reaching their second birthday this year was higher. This technical issue has now been resolved.

Table 2. Vaccine uptake in children reaching their 1st birthday between 01/04/2012 and 31/03/2013 and resident on 01/05/2013

Area	Resident children	D3	T3	P3	Po3	Hib3	MMR1	MenC	PCV2*	HibMenCb
	(n)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)
Abertawe Bro Morgannwg University LHB										
Bridgend LA	1714	1667 97.3	1667 97.3	1666 97.2	1666 97.2	1666 97.2	7 0.4	1659 96.8	1663 97.0	6 0.4
Neath Port Talbot LA	1554	1507 97.0	1507 97.0	1507 97.0	1507 97.0	1507 97.0	9 0.6	1506 96.9	1502 96.7	10 0.6
Swansea LA	2741	2657 96.9	2657 96.9	2657 96.9	2658 97.0	2657 96.9	7 0.3	2646 96.5	2643 96.4	4 0.1
Health Board Total	6009	5831 97.0	5831 97.0	5830 97.0	5831 97.0	5830 97.0	23 0.4	5811 96.7	5808 96.7	20 0.3
Aneurin Bevan LHB										
Blaenau Gwent LA	766	749 97.8	749 97.8	749 97.8	749 97.8	749 97.8	1 0.1	748 97.7	749 97.8	2 0.3
Caerphilly LA	2060	2008 97.5	2008 97.5	2008 97.5	2008 97.5	2007 97.4	18 0.9	2004 97.3	1999 97.0	7 0.3
Monmouthshire LA	835	797 95.4	797 95.4	797 95.4	797 95.4	797 95.4	6 0.7	793 95.0	793 95.0	3 0.4
Newport LA	1906	1819 95.4	1819 95.4	1819 95.4	1818 95.4	1817 95.3	3 0.2	1811 95.0	1806 94.8	2 0.1
Torfaen LA	1091	1081 99.1	1081 99.1	1081 99.1	1081 99.1	1081 99.1	3 0.3	1080 99.0	1073 98.4	3 0.3
Health Board Total	6658	6454 96.9	6454 96.9	6454 96.9	6453 96.9	6451 96.9	31 0.5	6436 96.7	6420 96.4	17 0.3
Betsi Cadwaladr University LHB										
Anglesey LA	788	768 97.5	768 97.5	768 97.5	769 97.6	768 97.5	4 0.5	768 97.5	765 97.1	3 0.4
Conwy LA	1133	1089 96.1	1089 96.1	1089 96.1	1089 96.1	1088 96.0	14 1.2	1089 96.1	1085 95.8	12 1.1
Denbighshire LA	1049	1003 95.6	1003 95.6	1003 95.6	1002 95.5	1002 95.5	10 1.0	999 95.2	996 94.9	8 0.8
Flintshire LA	1668	1620 97.1	1620 97.1	1620 97.1	1619 97.1	1620 97.1	5 0.3	1615 96.8	1611 96.6	6 0.4
Gwynedd LA	1318	1279 97.0	1279 97.0	1279 97.0	1279 97.0	1279 97.0	13 1.0	1274 96.7	1268 96.2	8 0.6
Wrexham LA	1674	1627 97.2	1627 97.2	1627 97.2	1625 97.1	1626 97.1	5 0.3	1619 96.7	1615 96.5	4 0.2
Health Board Total	7630	7386 96.8	7386 96.8	7386 96.8	7383 96.8	7383 96.8	51 0.7	7364 96.5	7340 96.2	41 0.5
Cardiff and Vale University LHB										
Cardiff LA	4733	4468 94.4	4468 94.4	4468 94.4	4468 94.4	4462 94.3	31 0.7	4415 93.3	4411 93.2	28 0.6
Vale of Glamorgan LA	1519	1457 95.9	1457 95.9	1457 95.9	1457 95.9	1458 96.0	6 0.4	1452 95.6	1447 95.3	6 0.4
Health Board Total	6252	5925 94.8	5925 94.8	5925 94.8	5925 94.8	5920 94.7	37 0.6	5867 93.8	5858 93.7	34 0.5
Cwm Taf LHB										
Merthyr Tydfil LA	762	733 96.2	733 96.2	733 96.2	732 96.1	732 96.1	22 2.9	731 95.9	731 95.9	21 2.8
Rhondda Cynon Taf LA	2839	2774 97.7	2774 97.7	2774 97.7	2774 97.7	2774 97.7	23 0.8	2769 97.5	2769 97.5	10 0.4
Health Board Total	3601	3507 97.4	3507 97.4	3507 97.4	3506 97.4	3506 97.4	45 1.2	3500 97.2	3500 97.2	31 0.9
Hywel Dda LHB										
Carmarthenshire LA	1977	1909 96.6	1909 96.6	1909 96.6	1908 96.5	1906 96.4	9 0.5	1897 96.0	1890 95.6	7 0.4
Ceredigion LA	612	593 96.9	593 96.9	593 96.9	593 96.9	592 96.7	8 1.3	588 96.1	592 96.7	9 1.5
Pembrokeshire LA	1313	1261 96.0	1261 96.0	1261 96.0	1261 96.0	1261 96.0	1 0.1	1257 95.7	1251 95.3	2 0.2
Health Board Total	3902	3763 96.4	3763 96.4	3763 96.4	3762 96.4	3759 96.3	18 0.5	3742 95.9	3733 95.7	18 0.5
Powys Teaching LHB	1221	1165 95.4	1165 95.4	1165 95.4	1165 95.4	1165 95.4	34 3.6	1166 95.5	1159 94.9	34 2.8
Unknown	118	113 95.8	113 95.8	113 95.8	113 95.8	113 95.8	0 0.0	113 95.8	113 95.8	0 0.0
Wales Total	35391	34144 96.5	34144 96.5	34143 96.5	34138 96.5	34127 96.4	239 0.7	33999 96.1	33931 95.9	195 0.6

* Full primary 2 dose course of pneumococcal conjugate vaccine

Table 3. Vaccine uptake in children reaching their 2nd birthday between 01/04/2012 and 31/03/2013 and resident on 01/05/2013.

Area	Resident children	D3	T3	P3	Po3	Hib3	MMR1	MenC*	PCV2**	PCVf***	HibMenCb	
	(n)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	
Abertawe Bro Morgannwg University LHE												
Bridgend LA	1614	1587 98.3	1587 98.3	1587 98.3	1587 98.3	1586 98.3	1585 98.2	1522 94.3	1578 97.8	1563 96.8	1538 95.3	1534 95.0
Neath Port Talbot LA	1616	1585 98.1	1585 98.1	1585 98.1	1585 98.1	1585 98.1	1585 98.1	1513 93.6	1576 97.5	1560 96.5	1541 95.4	1535 95.0
Swansea LA	2680	2615 97.6	2615 97.6	2615 97.6	2615 97.6	2615 97.6	2609 97.4	2515 93.8	2582 96.3	2574 96.0	2545 95.0	2517 93.9
Health Board Total	5910	5787 97.9	5787 97.9	5787 97.9	5787 97.9	5786 97.9	5779 97.8	5550 93.9	5736 97.1	5697 96.4	5624 95.2	5586 94.5
Aneurin Bevan LHB												
Blaenau Gwent LA	772	761 98.6	761 98.6	761 98.6	761 98.6	761 98.6	761 98.6	724 93.8	759 98.3	758 98.2	731 94.7	729 94.4
Caerphilly LA	2171	2135 98.3	2135 98.3	2135 98.3	2135 98.3	2134 98.3	2134 98.3	2065 95.1	2127 98.0	2104 96.9	2075 95.6	2070 95.3
Monmouthshire LA	861	826 95.9	826 95.9	826 95.9	826 95.9	826 95.9	826 95.9	807 93.7	819 95.1	815 94.7	815 94.7	808 93.8
Newport LA	1975	1923 97.4	1923 97.4	1923 97.4	1923 97.4	1920 97.2	1919 97.2	1856 94.0	1882 95.3	1861 94.2	1859 94.1	1827 92.5
Torfaen LA	1094	1077 98.4	1077 98.4	1077 98.4	1077 98.4	1076 98.4	1076 98.4	1054 96.3	1064 97.3	1056 96.5	1056 96.5	1047 95.7
Health Board Total	6873	6722 97.8	6722 97.8	6722 97.8	6722 97.8	6717 97.7	6716 97.7	6506 94.7	6651 96.8	6594 95.9	6536 95.1	6481 94.3
Betsi Cadwaladr University LHB												
Anglesey LA	790	777 98.4	777 98.4	777 98.4	777 98.4	777 98.4	777 98.4	752 95.2	774 98.0	774 98.0	757 95.8	755 95.6
Conwy LA	1141	1118 98.0	1118 98.0	1118 98.0	1118 98.0	1117 97.9	1117 97.9	1076 94.3	1106 96.9	1082 94.8	1078 94.5	1069 93.7
Denbighshire LA	1065	1040 97.7	1040 97.7	1040 97.7	1040 97.7	1040 97.7	1039 97.6	1022 96.0	1031 96.8	1016 95.4	1031 96.8	1020 95.8
Flintshire LA	1684	1663 98.8	1663 98.8	1663 98.8	1663 98.8	1663 98.8	1663 98.8	1620 96.2	1651 98.0	1632 96.9	1629 96.7	1624 96.4
Gwynedd LA	1212	1186 97.9	1186 97.9	1186 97.9	1186 97.9	1186 97.9	1185 97.9	1152 95.0	1170 96.5	1165 96.1	1155 95.3	1152 95.0
Wrexham LA	1700	1680 98.8	1680 98.8	1680 98.8	1680 98.8	1677 98.6	1676 98.6	1650 97.1	1652 97.2	1643 96.6	1658 97.5	1640 96.5
Health Board Total	7592	7464 98.3	7464 98.3	7464 98.3	7464 98.3	7460 98.3	7457 98.2	7272 95.8	7384 97.3	7312 96.3	7308 96.3	7260 95.6
Cardiff and Vale University LHB												
Cardiff LA	4649	4478 96.3	4478 96.3	4476 96.3	4476 96.3	4475 96.3	4467 96.1	4345 93.5	4383 94.3	4307 92.6	4342 93.4	4283 92.1
Vale of Glamorgan LA	1410	1381 97.9	1381 97.9	1380 97.9	1380 97.9	1381 97.9	1380 97.9	1355 96.1	1365 96.8	1352 95.9	1359 96.4	1344 95.3
Health Board Total	6059	5859 96.7	5859 96.7	5856 96.6	5856 96.6	5856 96.6	5847 96.5	5700 94.1	5748 94.9	5659 93.4	5701 94.1	5627 92.9
Cwm Taf LHB												
Merthyr Tydfil LA	695	672 96.7	672 96.7	672 96.7	672 96.7	671 96.5	671 96.5	638 91.8	670 96.4	669 96.3	643 92.5	644 92.7
Rhondda Cynon Taf LA	2888	2841 98.4	2841 98.4	2841 98.4	2841 98.4	2841 98.4	2841 98.4	2767 95.8	2834 98.1	2785 96.4	2798 96.9	2772 96.0
Health Board Total	3583	3513 98.0	3513 98.0	3513 98.0	3513 98.0	3512 98.0	3512 98.0	3405 98.0	3504 97.8	3454 96.4	3441 96.0	3416 95.3
Hywel Dda LHB												
Carmarthenshire LA	1990	1940 97.5	1940 97.5	1940 97.5	1940 97.5	1939 97.4	1938 97.4	1866 93.8	1920 96.5	1892 95.1	1881 94.5	1870 94.0
Ceredigion LA	709	685 96.6	685 96.6	685 96.6	685 96.6	685 96.6	684 96.5	666 93.9	677 95.5	671 94.6	675 95.2	668 94.2
Pembrokeshire LA	1309	1275 97.4	1275 97.4	1275 97.4	1275 97.4	1274 97.3	1273 97.2	1223 93.4	1258 96.1	1252 95.6	1238 94.6	1227 93.7
Health Board Total	4008	3900 97.3	3900 97.3	3900 97.3	3900 97.3	3898 97.3	3895 97.2	3755 93.7	3855 96.2	3815 95.2	3794 94.7	3765 93.9
Powys Teaching LHB	1195	1162 97.2	1162 97.2	1162 97.2	1162 97.2	1161 97.2	1161 97.2	1116 93.4	1145 95.8	1139 95.3	1135 95.0	1124 94.1
Unknown	115	111 96.5	111 96.5	111 96.5	111 96.5	111 96.5	111 96.5	109 94.8	109 94.8	110 95.7	110 95.7	108 93.9
Wales Total	35335	34518 97.7	34518 97.7	34515 97.7	34515 97.7	34501 97.6	34478 97.6	33413 94.6	34132 96.6	33780 95.6	33649 95.2	33367 94.4

* Reflects uptake of the completed primary course in this age group

** Full primary 2 dose course of pneumococcal conjugate vaccine

*** Final (booster) dose of pneumococcal conjugate vaccine

Cwm Taf Health Board has informed Public Health Wales of a technical issue affecting MMR coding in the local child health database for Merthyr Tydfil resident children. As a result of this, the actual numbers of children resident in Merthyr Tydfil LA who have received MMR vaccine by their second birthday, for the year 2012/13, is likely to be higher than the figure presented here. Subsequent analyses carried out by Cwm Taf Health Board suggest that actual coverage for children reaching their second birthday this year was higher. This technical issue has now been resolved.

Table 4. Vaccine uptake in children reaching their 4th birthday between 01/04/2012 and 31/03/2013 and resident on 01/05/2013

Area	Resident Children	4 in 1 Preschool booster*	PCV**	HibMenCb	MMR dose 2	Up to date in schedule***
	(n)	(n) (%)	(n) (%)	(n) (%)	(n) (%)	(n) (%)
Abertawe Bro Morgannwg University						
Bridgend LA	1557	1342 86.2	1434 92.1	1476 94.8	1322 84.9	1285 82.5
Neath Port Talbot LA	1516	1322 87.2	1403 92.5	1436 94.7	1287 84.9	1241 81.9
Swansea LA	2665	2344 88.0	2485 93.2	2538 95.2	2291 86.0	2212 83.0
Health Board Total	5738	5008 87.3	5322 92.8	5450 95.0	4900 85.4	4738 82.6
Aneurin Bevan						
Blaenau Gwent LA	811	695 85.7	762 94.0	774 95.4	686 84.6	669 82.5
Caerphilly LA	2113	1786 84.5	1964 92.9	2013 95.3	1762 83.4	1700 80.5
Monmouthshire LA	938	827 88.2	863 92.0	877 93.5	819 87.3	792 84.4
Newport LA	1995	1691 84.8	1811 90.8	1841 92.3	1658 83.1	1565 78.4
Torfaen LA	1100	958 87.1	1018 92.5	1054 95.8	940 85.5	905 82.3
Health Board Total	6957	5957 85.6	6418 92.3	6559 94.3	5865 84.3	5631 80.9
Betsi Cadwaladr University						
Anglesey LA	775	683 88.1	719 92.8	734 94.7	677 87.4	648 83.6
Conwy LA	1169	1009 86.3	1078 92.2	1103 94.4	993 84.9	958 82.0
Denbighshire LA	1056	925 87.6	982 93.0	993 94.0	908 86.0	886 83.9
Flintshire LA	1715	1543 90.0	1596 93.1	1637 95.5	1524 88.9	1475 86.0
Gwynedd LA	1261	1157 91.8	1168 92.6	1191 94.4	1127 89.4	1092 86.6
Wrexham LA	1711	1544 90.2	1610 94.1	1630 95.3	1535 89.7	1482 86.6
Health Board Total	7687	6861 89.3	7153 93.1	7288 94.8	6764 88.0	6541 85.1
Cardiff and Vale University						
Cardiff LA	4440	3771 84.9	3963 89.3	4052 91.3	3715 83.7	3436 77.4
Vale of Glamorgan LA	1533	1376 89.8	1455 94.9	1455 94.9	1354 88.3	1294 84.4
Health Board Total	5973	5147 86.2	5418 90.7	5507 92.2	5069 84.9	4730 79.2
Cwm Taf						
Merthyr Tydfil LA	716	622 86.9	664 92.7	676 94.4	617 86.2	596 83.2
Rhondda Cynon Taff LA	2804	2503 89.3	2621 93.5	2680 95.6	2473 88.2	2395 85.4
Health Board Total	3520	3125 88.8	3285 93.3	3356 95.3	3090 87.8	2991 85.0
Hywel Dda						
Carmarthenshire LA	1939	1679 86.6	1758 90.7	1804 93.0	1640 84.6	1577 81.3
Ceredigion LA	615	554 90.1	555 90.2	575 93.5	544 88.5	517 84.1
Pembrokeshire LA	1268	1062 83.8	1121 88.4	1175 92.7	1035 81.6	994 78.4
Health Board Total	3822	3295 86.2	3434 89.8	3554 93.0	3219 84.2	3088 80.8
Powys Teaching Health Board	1272	1139 89.5	1171 92.1	1188 93.4	1109 87.2	1078 84.7
Unknown	146	130 89.0	131 89.7	135 92.5	129 88.4	123 84.2
Wales Total	35115	30662 87.3	32332 92.1	33037 94.1	30145 85.8	28920 82.4

* Uptake of acellular pertussis used as proxy

** Full primary 2 dose course of pneumococcal conjugate vaccine

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

Table 5. Vaccine uptake in children reaching their 5th birthday between 01/04/2012 and 31/03/2013 and resident on 01/05/2013.

Area	Resident children	D3	T3	P3	Po3	Hib3	MenC*	PCV***	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	1570	1542 98.2	1542 98.2	1540 98.1	1538 98.0	1540 98.1	1530 97.5	1471 93.7	1488 94.8	1497 95.4	1366 87.0	1387 88.3	1387 88.3	1387 88.3	1387 88.3	
Neath Port Talbot LA	1529	1483 97.0	1483 97.0	1483 97.0	1482 96.9	1481 96.9	1457 95.3	1404 91.8	1449 94.8	1463 95.7	1357 88.8	1385 90.6	1385 90.6	1385 90.6	1385 90.6	
Swansea LA	2731	2651 97.1	2651 97.1	2651 97.1	2649 97.0	2639 96.6	2573 94.2	2491 91.2	2576 94.3	2607 95.5	2435 89.2	2493 91.3	2493 91.3	2492 91.2	2490 91.2	
Health Board Total	5830	5676 97.4	5676 97.4	5674 97.3	5669 97.2	5660 97.1	5560 95.4	5366 92.0	5513 94.6	5567 95.5	5158 88.5	5265 90.3	5265 90.3	5264 90.3	5262 90.3	
Aneurin Bevan LHB																
Blaenau Gwent LA	759	743 97.9	743 97.9	743 97.9	743 97.9	743 97.9	736 97.0	701 92.4	728 95.9	731 96.3	695 91.6	700 92.2	700 92.2	700 92.2	700 92.2	
Caerphilly LA	2072	2043 98.6	2043 98.6	2043 98.6	2043 98.6	2043 98.6	2029 97.9	1925 92.9	1981 95.6	2013 97.2	1870 90.3	1906 92.0	1906 92.0	1905 91.9	1905 91.9	
Monmouthshire LA	875	836 95.5	836 95.5	836 95.5	835 95.4	835 95.4	822 93.9	796 91.0	819 93.6	826 94.4	787 89.9	804 91.9	804 91.9	802 91.7	802 91.7	
Newport LA	1925	1842 95.7	1842 95.7	1842 95.7	1834 95.3	1831 95.1	1784 92.7	1701 88.4	1765 91.7	1813 94.2	1664 86.4	1710 88.8	1711 88.9	1710 88.8	1710 88.8	
Torfaen LA	1061	1046 98.6	1046 98.6	1046 98.6	1046 98.6	1045 98.5	1027 96.8	982 92.6	1009 95.1	1030 97.1	966 91.0	983 92.6	983 92.6	983 92.6	983 92.6	
Health Board Total	6692	6510 97.3	6510 97.3	6510 97.3	6501 97.1	6497 97.1	6398 95.6	6105 91.2	6302 94.2	6413 95.8	5982 89.4	6103 91.2	6104 91.2	6100 91.2	6100 91.2	
Betsi Cadwaladr University LHB																
Anglesey LA	774	748 96.6	748 96.6	748 96.6	749 96.8	746 96.4	739 95.5	712 92.0	730 94.3	742 95.9	704 91.0	713 92.1	713 92.1	713 92.1	713 92.1	
Conwy LA	1112	1077 96.9	1077 96.9	1077 96.9	1076 96.8	1072 96.4	1046 94.1	1030 92.6	1043 93.8	1066 95.9	1003 90.2	1007 90.6	1007 90.6	1007 90.6	1007 90.6	
Denbighshire LA	1056	1028 97.3	1028 97.3	1028 97.3	1026 97.2	1024 97.0	1005 95.2	970 91.9	1002 94.9	1019 96.5	957 90.6	962 91.1	962 91.1	962 91.1	962 91.1	
Flintshire LA	1790	1748 97.7	1748 97.7	1748 97.7	1746 97.5	1746 97.5	1711 95.6	1646 92.0	1704 95.2	1726 96.4	1664 93.0	1690 94.4	1690 94.4	1690 94.4	1690 94.4	
Gwynedd LA	1242	1213 97.7	1212 97.6	1213 97.7	1211 97.5	1209 97.3	1186 95.5	1154 92.9	1182 95.2	1201 96.7	1140 91.8	1161 93.5	1161 93.5	1161 93.5	1161 93.5	
Wrexham LA	1627	1591 97.8	1591 97.8	1591 97.8	1587 97.5	1587 97.5	1551 95.3	1510 92.8	1541 94.7	1583 97.3	1526 93.8	1541 94.7	1541 94.7	1541 94.7	1540 94.7	
Health Board Total	7601	7405 97.4	7404 97.4	7405 97.4	7395 97.3	7384 97.1	7238 95.2	7022 92.4	7202 94.8	7337 96.5	6994 92.0	7074 93.1	7074 93.1	7074 93.1	7073 93.1	
Cardiff and Vale University LHB																
Cardiff LA	4440	4308 97.0	4308 97.0	4307 97.0	4301 96.9	4283 96.5	4054 91.3	3912 88.1	4019 90.5	4257 95.9	3908 88.0	3989 89.8	3989 89.8	3983 89.7	3988 89.8	
Vale of Glamorgan LA	1508	1485 98.5	1485 98.5	1485 98.5	1484 98.4	1481 98.2	1453 96.4	1407 93.3	1434 95.1	1460 96.8	1352 89.7	1384 91.8	1384 91.8	1384 91.8	1384 91.8	
Health Board Total	5948	5793 97.4	5793 97.4	5792 97.4	5785 97.3	5764 96.9	5507 92.6	5319 89.4	5453 91.7	5717 96.1	5260 88.4	5373 90.3	5373 90.3	5367 90.2	5372 90.3	
Cwm Taf LHB																
Merthyr Tydfil LA	694	675 97.3	675 97.3	675 97.3	674 97.1	675 97.3	663 95.5	650 93.7	658 94.8	663 95.5	622 89.6	636 91.6	636 91.6	636 91.6	636 91.6	
Rhondda Cynon Taff LA	2713	2665 98.2	2665 98.2	2665 98.2	2665 98.2	2663 98.2	2643 97.4	2552 94.1	2591 95.5	2619 96.5	2481 91.4	2524 93.0	2524 93.0	2524 93.0	2524 93.0	
Health Board Total	3407	3340 98.0	3340 98.0	3340 98.0	3339 98.0	3338 98.0	3306 97.0	3202 94.0	3249 95.4	3282 96.3	3103 91.1	3160 92.8	3160 92.8	3160 92.8	3160 92.8	
Hywel Dda LHB																
Carmarthenshire LA	1958	1888 96.4	1888 96.4	1888 96.4	1880 96.0	1882 96.1	1845 94.2	1773 90.6	1817 92.8	1866 95.3	1736 88.7	1788 91.3	1788 91.3	1788 91.3	1787 91.3	
Ceredigion LA	620	592 95.5	592 95.5	591 95.3	592 95.5	591 95.3	576 92.9	568 91.6	580 93.5	586 94.5	567 91.5	578 93.2	578 93.2	577 93.1	578 93.2	
Pembrokeshire LA	1293	1231 95.2	1231 95.2	1231 95.2	1230 95.1	1226 94.8	1190 92.0	1147 88.7	1184 91.6	1216 94.0	1104 85.4	1120 86.6	1120 86.6	1120 86.6	1120 86.6	
Health Board Total	3871	3711 95.9	3711 95.9	3710 95.8	3702 95.6	3699 95.6	3611 93.3	3488 90.1	3581 92.5	3668 94.8	3407 88.0	3486 90.1	3486 90.1	3485 90.0	3485 90.0	
Powys Teaching LHB																
Unknown	164	155 94.5	155 94.5	155 94.5	155 94.5	155 94.5	154 93.9	150 91.5	152 92.7	151 92.1	142 86.6	148 90.2	148 90.2	148 90.2	148 90.2	
Wales Total	34802	33810 97.1	33809 97.1	33806 97.1	33766 97.0	33713 96.9	32973 94.7	31808 91.4	32637 93.8	33329 95.8	31174 89.6	31769 91.3	31770 91.3	31758 91.3	31760 91.3	

* refers to full completed courses of MenC (before the 2006 schedule change)

Table 6. HPV Vaccine uptake in girls reaching their 14th birthday between 01/09/2012 and 31/08/2013 and resident on 01/05/2013 (School Year 8 during 2011-12).

Area	Resident girls	HPV 1 dose		HPV 2 doses		HPV 3 doses	
		(n)	(%)	(n)	(%)	(n)	(%)
Abertawe Bro Morgannwg University LHB							
Bridgend LA	778	703	90.4	698	89.7	686	88.2
Neath Port Talbot LA	719	654	91.0	647	90.0	639	88.9
Swansea LA	1166	1057	90.7	1042	89.4	1025	87.9
Health Board Total	2663	2414	90.6	2387	89.6	2350	88.2
Aneurin Bevan LHB							
Blaenau Gwent LA	381	361	94.8	360	94.5	352	92.4
Caerphilly LA	999	922	92.3	914	91.5	908	90.9
Monmouthshire LA	523	411	78.6	409	78.2	400	76.5
Newport LA	928	799	86.1	787	84.8	771	83.1
Torfaen LA	539	493	91.5	491	91.1	477	88.5
Health Board Total	3370	2986	88.6	2961	87.9	2908	86.3
Betsi Cadwaladr University LHB							
Anglesey LA	364	324	89.0	320	87.9	309	84.9
Conwy LA	601	546	90.8	544	90.5	529	88.0
Denbighshire LA	548	483	88.1	482	88.0	475	86.7
Flintshire LA	785	722	92.0	714	91.0	703	89.6
Gwynedd LA	646	570	88.2	564	87.3	558	86.4
Wrexham LA	671	603	89.9	601	89.6	595	88.7
Health Board Total	3615	3248	89.8	3225	89.2	3169	87.7
Cardiff and Vale University LHB							
Cardiff LA	1792	1594	89.0	1556	86.8	1460	81.5
Vale of Glamorgan LA	710	659	92.8	654	92.1	629	88.6
Health Board Total	2502	2253	90.0	2210	88.3	2089	83.5
Cwm Taf LHB							
Merthyr Tydfil LA	305	285	93.4	283	92.8	282	92.5
Rhondda Cynon Taff LA	1247	1184	94.9	1176	94.3	1148	92.1
Health Board Total	1552	1469	94.7	1459	94.0	1430	92.1
Hywel Dda LHB							
Carmarthenshire LA	940	843	89.7	840	89.4	835	88.8
Ceredigion LA	302	256	84.8	252	83.4	251	83.1
Pembrokeshire LA	650	566	87.1	556	85.5	531	81.7
Health Board Total	1892	1665	88.0	1648	87.1	1617	85.5
Powys Teaching LHB							
Health Board Total	692	586	84.7	581	84.0	570	82.4
Unknown	86	58	67.4	58	67.4	59	68.6
Wales Total	16421	14705	89.5	14556	88.6	14217	86.6

Table 7. Vaccine uptake in children reaching their 15th birthday between 01/04/2012 and 31/03/2013 and resident on 01/05/2013 (with breakdown of MMR1 and MMR2 coverage by sex).

Area	Resident children		MMR1		MMR2		Teenage 3 in 1 booster*		Resident girls		MMR1 (girls)		MMR2 (girls)		Resident boys		MMR1 (boys)		MMR2 (boys)	
	(n)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(n)	(n)	(%)	(n)	(%)	(n)	(n)	(n)	(%)	(n)	(%)	
<u>Abertawe Bro Morgannwg University LHB</u>																				
Bridgend LA	1672	1550	92.7	1427	85.3	813	48.6	814	746	91.6	696	85.5	858	804	93.7	731	85.2			
Neath Port Talbot LA	1549	1378	89.0	1218	78.6	716	46.2	783	698	89.1	616	78.7	766	680	88.8	602	78.6			
Swansea LA	2601	2325	89.4	2023	77.8	1206	46.4	1276	1134	88.9	981	76.9	1325	1191	89.9	1042	78.6			
Health Board Total	5822	5253	90.2	4668	80.2	2735	47.0	2873	2578	89.7	2293	79.8	2949	2675	90.7	2375	80.5			
<u>Aneurin Bevan LHB</u>																				
Blaenau Gwent LA	808	737	91.2	667	82.5	590	73.0	409	374	91.4	339	82.9	399	363	91.0	328	82.2			
Caerphilly LA	2101	1938	92.2	1752	83.4	1425	67.8	1027	942	91.7	860	83.7	1074	996	92.7	892	83.1			
Monmouthshire LA	1122	961	85.7	827	73.7	709	63.2	553	468	84.6	397	71.8	567	492	86.8	429	75.7			
Newport LA	1989	1771	89.0	1591	80.0	1239	62.3	987	876	88.8	793	80.3	999	895	89.6	798	79.9			
Torfaen LA	1217	1130	92.9	1022	84.0	799	65.7	609	566	92.9	506	83.1	607	564	92.9	516	85.0			
Health Board Total	7237	6537	90.3	5859	81.0	4762	65.8	3585	3226	90.0	2895	80.8	3646	3310	90.8	2963	81.3			
<u>Betsi Cadwaladr University LHB</u>																				
Anglesey LA	734	700	95.4	670	91.3	599	81.6	383	375	97.9	362	94.5	351	325	92.6	308	87.7			
Conwy LA	1244	1174	94.4	1104	88.7	982	78.9	570	539	94.6	514	90.2	672	633	94.2	588	87.5			
Denbighshire LA	1102	1054	95.6	993	90.1	882	80.0	530	501	94.5	478	90.2	570	551	96.7	515	90.4			
Flintshire LA	1714	1642	95.8	1535	89.6	1359	79.3	837	800	95.6	749	89.5	877	842	96.0	786	89.6			
Gwynedd LA	1290	1231	95.4	1171	90.8	1063	82.4	620	595	96.0	566	91.3	670	636	94.9	605	90.3			
Wrexham LA	1427	1366	95.7	1282	89.8	1041	73.0	717	688	96.0	647	90.2	710	678	95.5	635	89.4			
Health Board Total	7511	7167	95.4	6755	89.9	5926	78.9	3657	3498	95.7	3316	90.7	3850	3665	95.2	3437	89.3			
<u>Cardiff and Vale University LHB</u>																				
Cardiff LA	3777	3386	89.6	3084	81.7	2681	71.0	1840	1660	90.2	1536	83.5	1935	1726	89.2	1548	80.0			
Vale of Glamorgan LA	1541	1439	93.4	1348	87.5	1241	80.5	779	731	93.8	689	88.4	762	708	92.9	659	86.5			
Health Board Total	5318	4825	90.7	4432	83.3	3922	73.7	2619	2391	91.3	2225	85.0	2697	2434	90.2	2207	81.8			
<u>Cwm Taf LHB</u>																				
Merthyr Tydfil LA	676	612	90.5	548	81.1	272	40.2	337	302	89.6	265	78.6	339	310	91.4	283	83.5			
Rhondda Cynon Taff LA	2692	2504	93.0	2262	84.0	1224	45.5	1303	1216	93.3	1105	84.8	1389	1288	92.7	1157	83.3			
Health Board Total	3368	3116	92.5	2810	83.4	1496	44.4	1640	1518	92.6	1370	83.5	1728	1598	92.5	1440	83.3			
<u>Hywel Dda LHB</u>																				
Carmarthenshire LA	1961	1759	89.7	1545	78.8	1087	55.4	958	867	90.5	766	80.0	1003	892	88.9	779	77.7			
Ceredigion LA	670	617	92.1	549	81.9	289	43.1	334	304	91.0	268	80.2	336	313	93.2	281	83.6			
Pembrokeshire LA	1351	1196	88.5	1063	78.7	367	27.2	604	531	87.9	476	78.8	747	665	89.0	587	78.6			
Health Board Total	3982	3572	89.7	3157	79.3	1743	43.8	1896	1702	89.8	1510	79.6	2086	1870	89.6	1647	79.0			
<u>Powys Teaching LHB</u>																				
Unknown	1520	1307	86.0	1154	75.9	623	41.0	726	626	86.2	554	76.3	794	681	85.8	600	75.6			
Wales Total	35014	31967	91.3	28998	82.8	21332	60.9	17104	15624	91.3	14233	83.2	17897	16338	91.3	14762	82.5			

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

Table 8. Vaccine uptake in children reaching their 16th birthday between 01/04/2012 and 31/03/2013 and resident on 01/05/2013 (with breakdown of MMR1 and MMR2 coverage by sex).

Area	Resident children		MMR1		MMR2		Teenage 3 in 1 booster*		Resident girls		MMR1 (girls)		MMR2 (girls)		Resident boys		MMR1 (boys)		MMR2 (boys)	
	(n)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(n)	(n)	(%)	(n)	(%)	(n)	(n)	(%)	(n)	(%)		
Abertawe Bro Morgannwg University LHB																				
Bridgend LA	1652	1536	93.0	1429	86.5	1378	83.4	793	741	93.4	696	87.8	859	795	92.5	733	85.3			
Neath Port Talbot LA	1611	1473	91.4	1339	83.1	1319	81.9	784	710	90.6	647	82.5	827	763	92.3	692	83.7			
Swansea LA	2654	2366	89.1	2088	78.7	2215	83.5	1267	1133	89.4	1003	79.2	1387	1233	88.9	1085	78.2			
Health Board Total	5917	5375	90.8	4856	82.1	4912	83.0	2844	2584	90.9	2346	82.5	3073	2791	90.8	2510	81.7			
Aneurin Bevan LHB																				
Blaenau Gwent LA	810	743	91.7	663	81.9	682	84.2	399	360	90.2	323	81.0	411	383	93.2	340	82.7			
Caerphilly LA	2240	2009	89.7	1760	78.6	1796	80.2	1101	980	89.0	842	76.5	1139	1029	90.3	918	80.6			
Monmouthshire LA	1216	995	81.8	849	69.8	905	74.4	593	486	82.0	411	69.3	623	509	81.7	438	70.3			
Newport LA	1972	1729	87.7	1542	78.2	1436	72.8	945	815	86.2	727	76.9	1025	914	89.2	815	79.5			
Torfaen LA	1229	1142	92.9	1034	84.1	973	79.2	583	540	92.6	494	84.7	646	602	93.2	540	83.6			
Health Board Total	7467	6618	88.6	5848	78.3	5792	77.6	3621	3181	87.8	2797	77.2	3844	3437	89.4	3051	79.4			
Betsi Cadwaladr University LHB																				
Anglesey LA	822	789	96.0	740	90.0	636	77.4	404	388	96.0	365	90.3	418	401	95.9	375	89.7			
Conwy LA	1286	1238	96.3	1181	91.8	1065	82.8	628	608	96.8	581	92.5	657	629	95.7	599	91.2			
Denbighshire LA	1142	1096	96.0	1001	87.7	946	82.8	553	530	95.8	481	87.0	589	566	96.1	520	88.3			
Flintshire LA	1766	1713	97.0	1604	90.8	1489	84.3	872	845	96.9	799	91.6	894	868	97.1	805	90.0			
Gwynedd LA	1374	1300	94.6	1241	90.3	1108	80.6	684	649	94.9	622	90.9	690	651	94.3	619	89.7			
Wrexham LA	1396	1336	95.7	1264	90.5	1145	82.0	671	640	95.4	613	91.4	725	696	96.0	651	89.8			
Health Board Total	7786	7472	96.0	7031	90.3	6389	82.1	3812	3660	96.0	3461	90.8	3973	3811	95.9	3569	89.8			
Cardiff and Vale University LHB																				
Cardiff LA	3861	3471	89.9	3152	81.6	2734	70.8	1838	1667	90.7	1526	83.0	2022	1804	89.2	1626	80.4			
Vale of Glamorgan LA	1630	1463	89.8	1370	84.0	1295	79.4	838	750	89.5	706	84.2	792	713	90.0	664	83.8			
Health Board Total	5491	4934	89.9	4522	82.4	4029	73.4	2676	2417	90.3	2232	83.4	2814	2517	89.4	2290	81.4			
Cwm Taf LHB																				
Merthyr Tydfil LA	755	688	91.1	610	80.8	586	77.6	397	364	91.7	320	80.6	357	324	90.8	290	81.2			
Rhondda Cynon Taff LA	2743	2563	93.4	2331	85.0	2291	83.5	1326	1240	93.5	1141	86.0	1417	1323	93.4	1190	84.0			
Health Board Total	3498	3251	92.9	2941	84.1	2877	82.2	1723	1604	93.1	1461	84.8	1774	1647	92.8	1480	83.4			
Hywel Dda LHB																				
Carmarthenshire LA	2064	1846	89.4	1618	78.4	1592	77.1	978	883	90.3	774	79.1	1086	963	88.7	844	77.7			
Ceredigion LA	679	623	91.8	557	82.0	574	84.5	325	302	92.9	269	82.8	354	321	90.7	288	81.4			
Pembrokeshire LA	1348	1212	89.9	1079	80.0	422	31.3	668	606	90.7	553	82.8	680	606	89.1	526	77.4			
Health Board Total	4091	3681	90.0	3254	79.5	2588	63.3	1971	1791	90.9	1596	81.0	2120	1890	89.2	1658	78.2			
Powys Teaching LHB																				
Unknown	1491	1288	86.4	1122	75.3	1176	78.9	697	602	86.4	530	76.0	794	686	86.4	592	74.6			
Wales Total	261	191	73.2	173	66.3	166	63.6	121	86	71.1	80	66.1	139	105	75.5	93	66.9			
Wales Total	36002	32810	91.1	29747	82.6	27929	77.6	17465	15925	91.2	14503	83.0	18531	16884	91.1	15243	82.3			

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

Table 9. 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 01/04/2012 and 31/03/2013 and resident on 01/05/2013.

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 University	1089	933	85.7	820	693	84.5	773	665	86.0	1169	966	82.6	1882	1478	78.5
Aneurin Bevan	1088	922	84.7	910	741	81.4	1180	980	83.1	1806	1443	79.9	1955	1531	78.3
Betsi Cadwalladr University	1249	1108	88.7	1790	1524	85.1	1801	1564	86.8	1526	1260	82.6	1307	1071	81.9
Cardiff and Vale University	1809	1577	87.2	760	603	79.3	656	516	78.7	869	669	77.0	1870	1362	72.8
Cwm Taf	373	328	87.9	250	215	86.0	597	524	87.8	935	795	85.0	1361	1126	82.7
Hywel Dda	134	117	87.3	993	837	84.3	1331	1098	82.5	923	726	78.7	434	304	70.0
Powys Teaching Health Board	164	145	88.4	574	477	83.1	254	213	83.9	262	225	85.9	suppressed*		
Wales Total	5906	5130	86.9	6097	5090	83.5	6592	5560	84.3	7490	6084	81.2	-	-	78.0

LSOA of residence was unknown for 206 Welsh Health Board resident children reaching their 4th birthday between 01/04/12 and 31/03/13 and resident on 01/05/2013.

*Suppressed due to small numbers.

Links

HPV catch-up for young women born between 1 September 1990 and 31 August 1991:
<http://wales.gov.uk/topics/health/publications/health/ministerial/hpvvaccination/?lang=en>

Welsh Health Circular (2005) 081 – MMR immunisation catch-up:
http://www.wales.nhs.uk/documents/WHC_2005_081.pdf

Accelerated HPV catch-up for young women born between 1 September 1991 and 31 August 1995 (intranet): <http://howis.wales.nhs.uk/sites3/page.cfm?orgid=474&pid=21255>

Public Health Wales Vaccination and Immunisation intranet site HPV pages:
<http://howis.wales.nhs.uk/sites3/page.cfm?orgid=474&pid=21297>

Link to guidance on follow up of children who have missed scheduled MMR doses (WHC (2005)81):
http://www.wales.nhs.uk/documents/WHC_2005_081.pdf

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>

Report Team

Report prepared by Public Health Wales Vaccine Preventable Disease Programme (VPDP) and Communicable Disease Surveillance Centre (CDSC), in collaboration with NHS Wales Informatics Service Community Applications Team.

Simon Cottrell	Public Health Wales VPDP/ CDSC
Julie Arnott	Public Health Wales VPDP/ CDSC
Hannah Evans	Public Health Wales CDSC
Richard Lewis	Public Health Wales VPDP
Richard Roberts	Public Health Wales VPDP
Daniel Thomas	Public Health Wales CDSC

Louise Richards	NWIS Business Intelligence Team
Ceri Rees	NWIS Community Applications Team

Comment and queries relating to this report should be addressed to Public Health Wales VPDP and CDSC:

Tel: 02920402474

Email: surveillance.requests@wales.nhs.uk

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