

Vaccine Uptake in Children in Wales

Annual report 2009

Data for the year ending 31st March 2009



National Public Health

Service for Wales

Gwasanaeth Iechyd Cyhoeddus

Cenedlaethol Cymru

Key points

- Annual uptake all routine immunisations in one year old children for Wales as a whole now exceed the 95% target and seventeen of the 22 LHB areas have exceeded the 95% uptake target for the 5 in 1 immunisation in one year olds this year.
- Uptake of the first dose of MMR at 2 years has continued to increase and the annual uptake for 2008-9 was 88.2%
- Uptake of the second dose of MMR by 5 years of age increased to 82.1%, 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 87.3%
- Uptake of 1 dose of Human Papilloma Virus (HPV) vaccine in girls in the current school year 8 was 88% and uptake of two doses was 86%.
- Approximately one child out of every five children currently in school in Wales have incomplete MMR status and approximately one out of every ten have not had any doses of MMR.

Findings

1. These results are for children living in Wales in May 2009 and reaching their first, second, fifth, 15th and 16th birthdays in the year ending March 31st 2009, and girls in the current school year 8.
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 was 95.7%. This is an increase of 0.3% on the previous annual uptake. Uptake ranged by NHS Region from 95.3% to 96.0% and by Local Health Board (LHB) from 93.1% (Pembrokeshire) to 97.6% (Blaenau Gwent). Seventeen of the twenty-two LHBs achieved the 95% target, this is an increase of four LHB areas from last year. (See: Figures 1, 2 and Tables 1, 2).
3. Annual uptake of a completed course of MenC² vaccine in children reaching their first birthday this year increased from 93.5% to 95.2%, ranging from 92.5% (Pembrokeshire) to 97.5% (Blaenau Gwent) (See: Tables 1, 2).
4. Uptake of a complete two dose primary course of pneumococcal conjugate vaccination (PCV2³) in children at one year of age increased from 92.2% to 95.2%, ranging by LHB from 92.6% (Pembrokeshire) to 97.5% (Blaenau Gwent) (See Table 2).
5. Uptake of one dose of MMR⁴ by two years of age continues to improve on previous years. This year annual uptake increased by 0.3% to 88.2%. Uptake shows considerable regional variation, ranging by NHS Region from 86.2% to 89.2% and by LHB from 84.4% (Carmarthenshire) to 92.1% (Blaenau Gwent). No LHB achieved an annual uptake of 95% for one dose of MMR by 2 years of age.
6. Annual uptake of the final dose of Pneumococcal Conjugate Vaccine (PCVf) at 2 years of age was 86.2%. These children would have been offered their final dose of PCV at around 13 months of age. Uptake by LHB ranged from 80.0% (Carmarthenshire) to 91.1% (Monmouthshire) (See: Tables 1,3).
7. At five years of age annual uptake of two doses of MMR has increased 3.3% to 82.1%. This is the highest ever annual uptake of MMR2 at five years of age (See Figure 1). Uptake of the second dose of MMR by five years of age ranged from 75.2% (Bridgend) to 88.4% (Wrexham) by LHB. No LHB achieved the 95% target for this immunisation.

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 final PCV dose at around 13 month.

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

8. Uptake of the “4 in 1” DTaP/IPV⁵ pre-school booster in children reaching their fifth birthday this year was 87.3%, ranging by LHB from 80.3% (Bridgend) to 92.7% (Anglesey) (Tables 1, 4).
9. Current uptake of the first dose of HPV vaccine in girls in the current School Year 8 (reaching their 13th birthday between 01/09/08 and 31/08/09) is 87.6%, ranging by LHB from 80.0% (Monmouthshire) to 96.1% (Blaenau Gwent) (Table 7). Uptake of the second dose of HPV vaccine stands at 85.7%, ranging by LHB from 75.9% (Cardiff) to 94.2% (Blaenau Gwent). Immunisation sessions for the third dose are currently underway, provisional figures will be reported in the next quarterly COVER report.
10. At 15 years of age annual uptake of two doses of MMR was 83.5% (Table 5), ranging by LHB from 72.4% (Monmouthshire) to 90.3% (Blaenau Gwent). Annual uptake of one dose of MMR in 15 year olds was 92.5%, ranging by LHB from 86.4% (Monmouthshire) to 96.7% (Blaenau Gwent). A breakdown by sex indicates that 84.2% of girls had received a full (2 MMR doses) course of immunisation against rubella this year and uptake of only 1 dose was 93.0%.
11. At 16 years of age annual uptake of two doses of MMR was 78.4% (Table 6), ranging by LHB from 66.0% (Monmouthshire) to 87.0% (Merthyr Tydfil). Annual uptake of one dose of MMR in 15 year olds was 92.7%, ranging by LHB from 84.8% (Monmouthshire) to 96.0% (Rhondda Cynon Taff). A breakdown by sex indicates that 79.1% of girls had received a full (2 MMR doses) course of immunisation against rubella this year and uptake of only 1 dose was 93.0%.
12. National uptake of the Td/IPV⁶ teenage booster in children reaching 16 years of age in the year ending 31st March 2009 was 59.1% (Table 6), ranging by NHS Region from 45.3% to 77.0% and by LHB from 5.3% to 80.2%.

Comment

National trends for scheduled childhood immunisation in Wales remain positive and are very encouraging. Uptake of the 5 in 1 primary immunisation now exceeds 95% in 17 LHB areas, compared to 13 LHBs in 2007-8. Uptake of one dose of MMR in two year olds and two doses in five year olds have shown continuous improvement, annually, for the last three years. There are still marked variations in uptake by LHB. However, this year the majority of LHB areas have improved on uptake of the 5 in 1 primary, MMR dose one, MMR dose two and the 4 in 1 pre-school booster. Although trends for routine uptake of MMR remain positive, there are large numbers of children in Wales, currently in school, who have not started or not completed the full two dose course required to protect them from measles, mumps and rubella. Analysis of immunisation data from the National Community Child Health Database indicate that there are nearly 23,000 children in primary school years (reception year to year six) who have not received any doses of MMR and further, almost 21,000 children that have started but not completed their course of MMR. Similar numbers are seen in children in comprehensive school years seven to 11 (Table 8). In the LHBs with lowest MMR uptake the proportion of school children who have no protection against measles is more than double that in the LHBs with the highest uptake. In summary, approximately one pupil in every ten in Wales have not received any MMR doses and approximately one in five have not completed the recommended two doses. During 2008 there were 39 laboratory confirmed measles cases in Wales, already during 2009 this number has almost doubled (75 confirmed cases as at 2nd June 2009). Currently, there is a large ongoing outbreak of measles in Wales, with four large clusters in South West and North Wales and as at 4th June 2009, NPHS Wales Health Protection Teams have investigated a total of 264 probable measles cases with 32 of these cases requiring hospitalisation. The majority of cases in Wales during 2009 have been in children aged one to 14 years. Follow up of children who have missed one or both scheduled MMR doses is vital in reducing measles transmission in Wales and averting future outbreaks. Guidance on routine follow up procedures, including MMR status checks at primary and comprehensive school entry, which should now be normal practice in Trusts, can be found in [WHD\(2005\)081](#).

Figure 1. Percentage uptake of childhood immunisations in Wales, quarter 4 1990 to quarter 1 2009. Data are for: children reaching 1 year of age each quarter for diphtheria, pertussis, Hib and pneumococcal conjugate vaccine, children reaching 2 years of age for MMR1 (first dose), and 5 years of age for MMR2 (second dose).

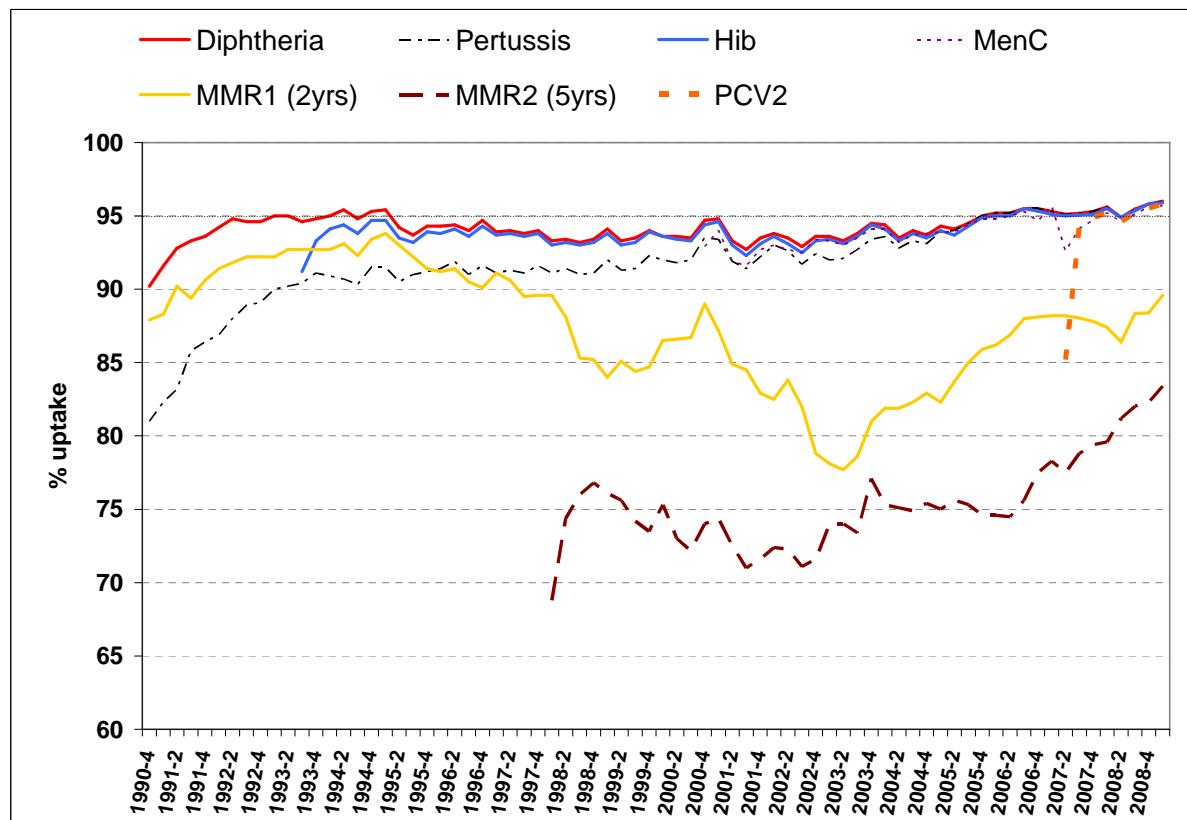


Figure 2. Uptake of 5 in 1 vaccine in Welsh Local Health Board areas in children reaching their 1st birthday between 01/04/08 and 31/03/09 (see table 1 for map references).

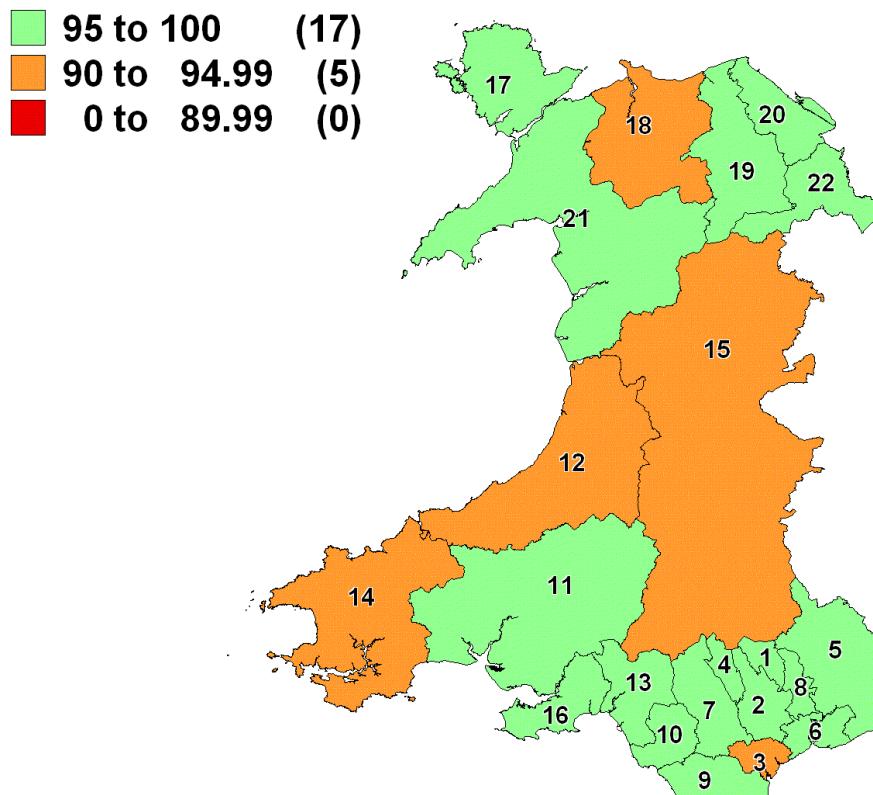


Figure 3. Uptake of at least 1 dose of MMR immunisation in Welsh Local Health Board areas in children reaching their 2nd birthday between 01/04/08 and 31/03/09 (see table 1 for map references).

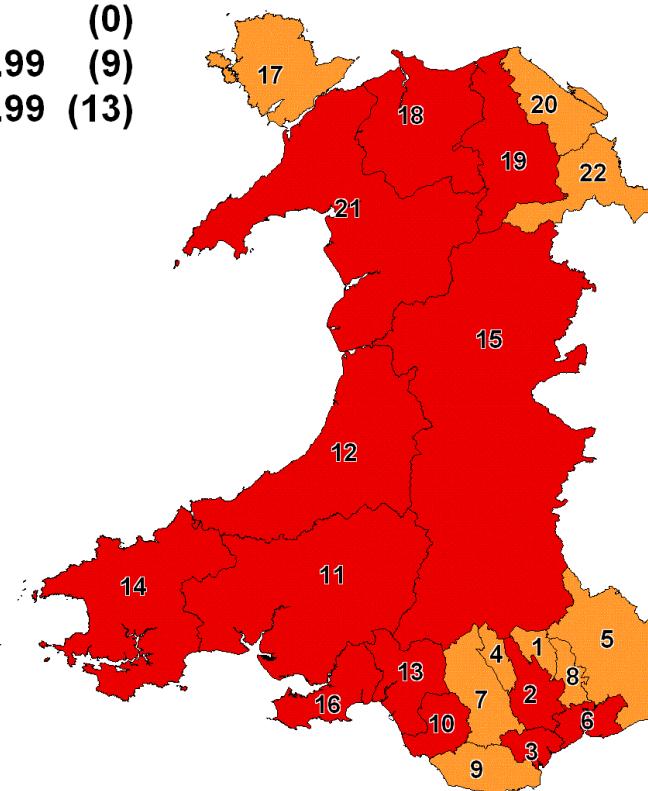
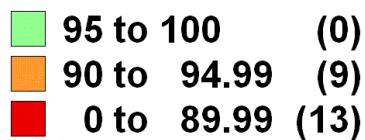


Figure 4. Uptake of 4 in 1 vaccine in Welsh Local Health Board areas in children reaching their 5th birthday between 01/04/08 and 31/03/09 (see table 1 for map references).

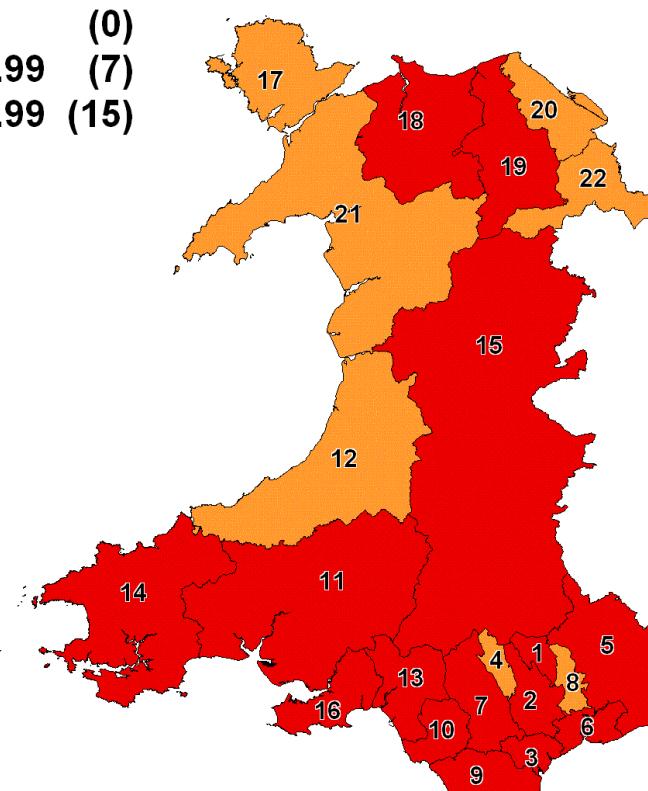
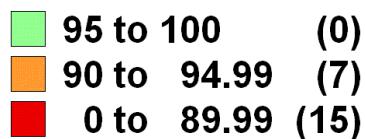


Figure 5. Annual uptake of 5 in 1 vaccine by 1 year of age (2004 – 2009 financial years, ranked by uptake in 2008-9).

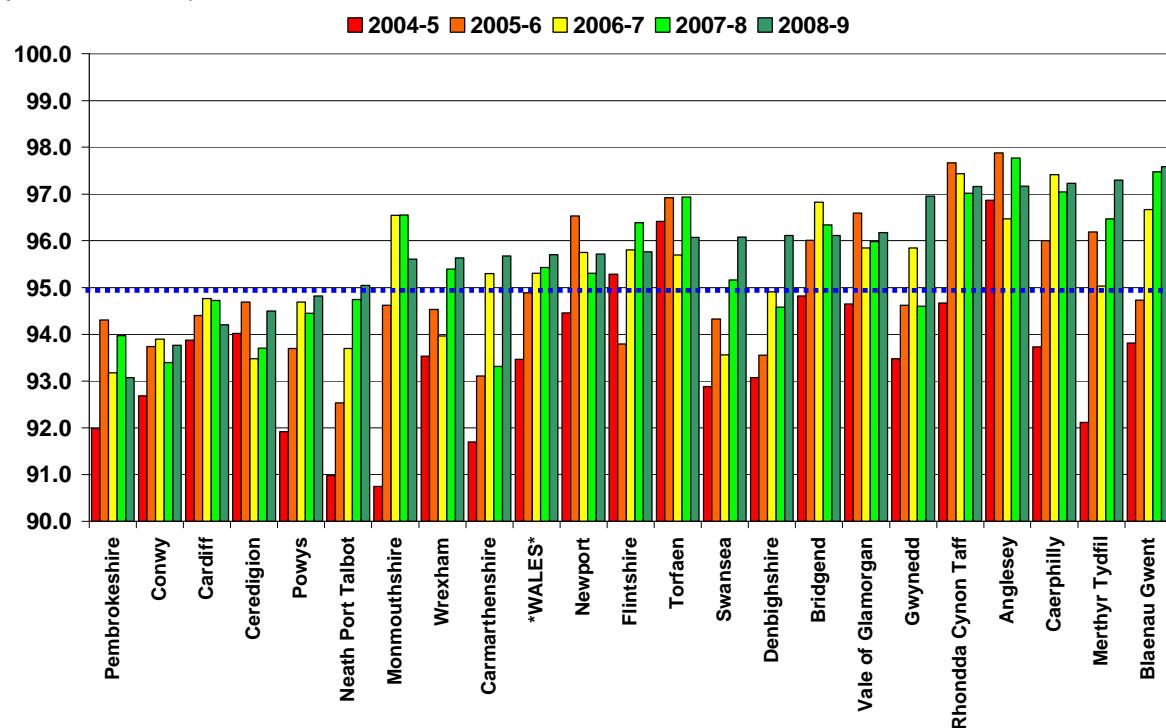


Figure 6. Annual uptake of 1 dose of MMR by 2 years of age (2004 – 2009 financial years, ranked by uptake in 2008-9).

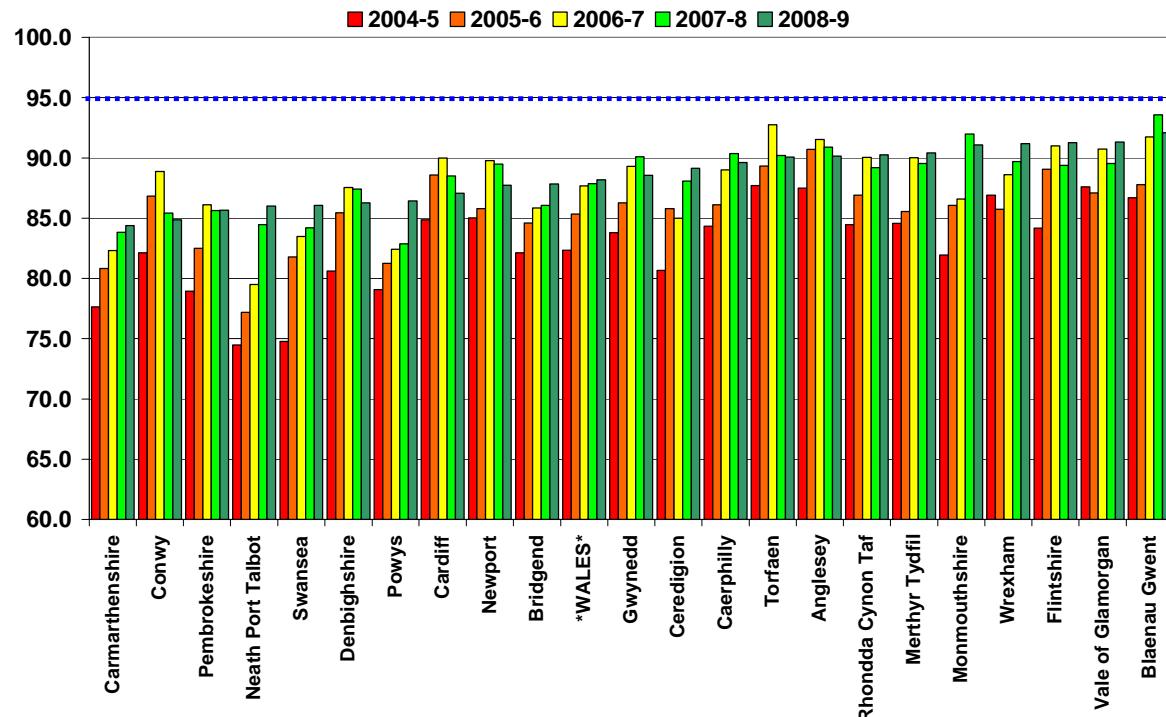


Figure 7. Annual uptake of 2 doses of MMR by 5 years of age (2004 – 2009 financial years, ranked by uptake in 2008-9).

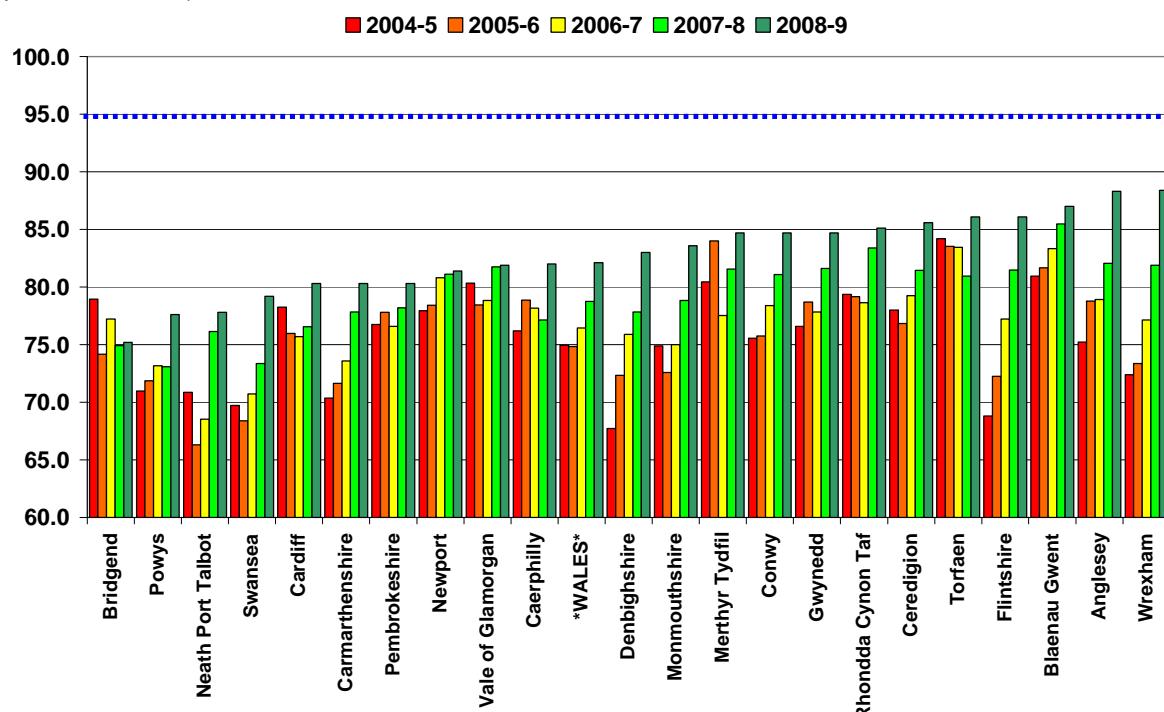


Figure 8. Annual uptake of the 4 in 1 pre-school booster by 5 years of age (2004 – 2009 financial years, ranked by uptake in 2008-9).

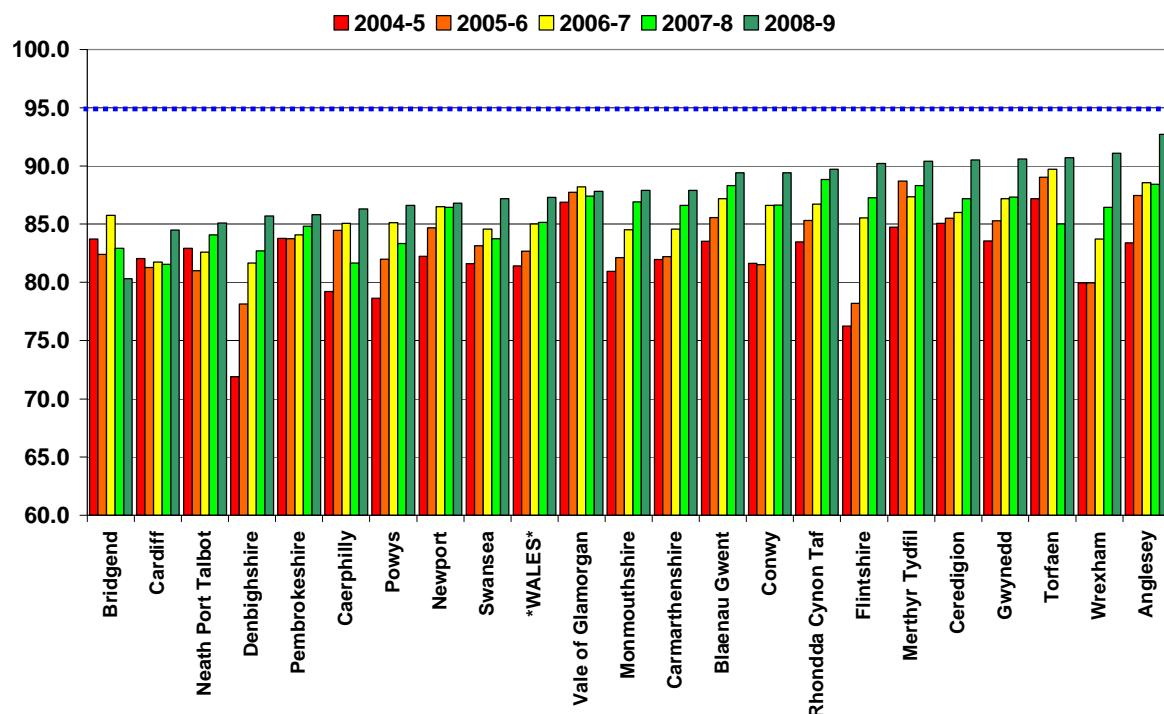


Table1. Summary table with uptake of selected immunisations in resident children reaching their 1st, 2nd, 5th and 15th birthday between 01/04/08 and 31/03/09.

Map ref	LHB	Age 1 year				Age 2 years						Age 5 years				Age 16 years					
		Resident children	5 in 1*	MenC	Resident children	MMR1	PCVf‡	Hib/MenC booster	Resident children	MMR2	4 in 1*	Resident children	MMR1	MMR2	3 in 1 Teenage booster**	(n)	(n) (%)	(n) (%)	(n)	(n) (%)	
1	Blaenau Gwent	787	768 97.6	767 97.5	745	686 92.1	670 89.9	700 94.0	709	617 87.0	634 89.4	961	918 95.5	764 79.5	51 5.3						
2	Caerphilly	2055	1998 97.2	1998 97.2	2107	1888 89.6	1861 88.3	1967 93.4	1926	1580 82.0	1663 86.3	2213	2059 93.0	1685 76.1	156 7.0						
3	Cardiff	4450	4192 94.2	4134 92.9	4206	3662 87.1	3481 82.8	3728 88.6	3810	3058 80.3	3218 84.5	4417	4033 91.3	3527 79.9	2821 63.9						
4	Merthyr Tydfil	702	683 97.3	681 97.0	679	614 90.4	602 88.7	637 93.8	615	521 84.7	556 90.4	709	673 94.9	617 87.0	545 76.9						
5	Monmouthshire	842	805 95.6	800 95.0	850	774 91.1	774 91.1	791 93.1	940	786 83.6	826 87.9	1210	1026 84.8	798 66.0	418 34.5						
6	Newport	1892	1811 95.7	1803 95.3	1696	1488 87.7	1485 87.6	1568 92.5	1719	1400 81.4	1492 86.8	1990	1823 91.6	1409 70.8	275 13.8						
7	Rhondda Cynon Taff	2780	2701 97.2	2698 97.1	2698	2435 90.3	2409 89.3	2532 93.8	2610	2220 85.1	2341 89.7	2863	2749 96.0	2442 85.3	2218 77.5						
8	Torfaen	1043	1002 96.1	998 95.7	1057	952 90.1	936 88.6	982 92.9	952	820 86.1	863 90.7	1272	1214 95.4	1011 79.5	164 12.9						
9	Vale of Glamorgan	1516	1458 96.2	1453 95.8	1407	1285 91.3	1258 89.4	1313 93.3	1391	1139 81.9	1221 87.8	1769	1649 93.2	1446 81.7	1238 70.0						
	South East Wales	16067	15418 96.0	15332 95.4	15445	13784 89.2	13476 87.3	14218 92.1	14672	12141 82.7	12814 87.3	17404	16144 92.8	13699 78.7	7886 45.3						
10	Bridgend	1569	1508 96.1	1509 96.2	1505	1322 87.8	1256 83.5	1378 91.6	1485	1116 75.2	1192 80.3	1645	1515 92.1	1263 76.8	1188 72.2						
11	Carmarthenshire	1988	1902 95.7	1891 95.1	1904	1607 84.4	1523 80.0	1689 88.7	1806	1450 80.3	1587 87.9	2086	1912 91.7	1517 72.7	1448 69.4						
12	Ceredigion	654	618 94.5	612 93.6	654	583 89.1	575 87.9	596 91.1	609	521 85.6	551 90.5	787	740 94.0	639 81.2	590 75.0						
13	Neath Port Talbot	1554	1477 95.0	1473 94.8	1535	1320 86.0	1307 85.1	1398 91.1	1376	1070 77.8	1171 85.1	1782	1697 95.2	1498 84.1	1370 76.9						
14	Pembrokeshire	1285	1196 93.1	1189 92.5	1304	1117 85.7	1093 83.8	1160 89.0	1208	970 80.3	1037 85.8	1558	1431 91.8	1199 77.0	307 19.7						
15	Powys	1254	1189 94.8	1183 94.3	1201	1038 86.4	1042 86.8	1099 91.5	1243	964 77.6	1076 86.6	1454	1352 93.0	1050 72.2	1105 76.0						
16	Swansea	2676	2571 96.1	2549 95.3	2517	2166 86.1	2121 84.3	2290 91.0	2514	1990 79.2	2191 87.2	2770	2594 93.6	2184 78.8	2146 77.5						
	Mid and West Wales	10980	10461 95.3	10406 94.8	10620	9153 86.2	8917 84.0	9610 90.5	10241	8081 78.9	8805 86.0	12082	11241 93.0	9350 77.4	8154 67.5						
17	Anglesey	742	721 97.2	720 97.0	690	622 90.1	606 87.8	649 94.1	727	642 88.3	674 92.7	813	769 94.6	687 84.5	619 76.1						
18	Conwy	1091	1023 93.8	1017 93.2	1130	959 84.9	946 83.7	998 88.3	1065	902 84.7	952 89.4	1301	1182 90.9	954 73.3	1011 77.7						
19	Denbighshire	1054	1013 96.1	1007 95.5	977	843 86.3	822 84.1	872 89.3	946	785 83.0	811 85.7	1305	1207 92.5	1048 80.3	1047 80.2						
20	Flintshire	1795	1719 95.8	1711 95.3	1660	1515 91.3	1458 87.8	1533 92.3	1619	1394 86.1	1460 90.2	1841	1750 95.1	1493 81.1	1383 75.1						
21	Gwynedd	1216	1179 97.0	1173 96.5	1291	1143 88.5	1138 88.1	1199 92.9	1154	977 84.7	1045 90.6	1369	1304 95.3	1185 86.6	1034 75.5						
22	Wrexham	1626	1555 95.6	1548 95.2	1541	1405 91.2	1394 90.5	1438 93.3	1421	1256 88.4	1295 91.1	1539	1461 94.9	1281 83.2	1192 77.5						
	North Wales	7524	7210 95.8	7176 95.4	7289	6487 89.0	6364 87.3	6689 91.8	6932	5956 85.9	6237 90.0	8168	7673 93.9	6648 81.4	6286 77.0						
	Unknown	362	342 94.5	341 94.2	343	292 85.1	283 82.5	298 86.9	342	237 69.3	255 74.6	689	467 67.8	349 50.7	323 46.9						
	Total	34933	33431 95.7	33255 95.2	33697	29716 88.2	29040 86.2	30815 91.4	32187	26415 82.1	28111 87.3	38343	35525 92.7	30046 78.4	22649 59.1						

* Uptake of pertussis used as proxy.

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

‡ Children receiving the final (booster) dose of PCV.

Table 2. Vaccine uptake in children reaching their 1st birthday between 01/04/08 and 31/03/09 and resident on 14/05/2009.

LHB	Resident children		D3		T3		P3		Po3		Hib3		MMR1		MenC		PCV2*		HibMenCb	
	(n)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)									
Blaenau Gwent	787	768	97.6	768	97.6	768	97.6	768	97.6	768	97.6	0	0.0	767	97.5	767	97.5	57	7.2	
Caerphilly	2055	1998	97.2	1998	97.2	1998	97.2	1998	97.2	1998	97.2	6	0.3	1998	97.2	1997	97.2	134	6.5	
Cardiff	4450	4193	94.2	4193	94.2	4192	94.2	4191	94.2	4185	94.0	15	0.3	4134	92.9	4141	93.1	245	5.5	
Merthyr Tydfil	702	683	97.3	683	97.3	683	97.3	682	97.2	683	97.3	0	0.0	681	97.0	679	96.7	3	0.4	
Monmouthshire	842	805	95.6	805	95.6	805	95.6	805	95.6	805	95.6	5	0.6	800	95.0	800	95.0	65	7.7	
Newport	1892	1811	95.7	1811	95.7	1811	95.7	1809	95.6	1806	95.5	0	0.0	1803	95.3	1803	95.3	114	6.0	
Rhondda Cynon Taff	2780	2701	97.2	2701	97.2	2701	97.2	2701	97.2	2700	97.1	0	0.0	2698	97.1	2698	97.1	148	5.3	
Torfaen	1043	1002	96.1	1002	96.1	1002	96.1	1002	96.1	1001	96.0	1	0.1	998	95.7	996	95.5	79	7.6	
Vale of Glamorgan	1516	1458	96.2	1458	96.2	1458	96.2	1457	96.1	1455	96.0	2	0.1	1453	95.8	1456	96.0	118	7.8	
South East Wales	16067	15419	96.0	15419	96.0	15418	96.0	15413	95.9	15401	95.9	29	0.2	15332	95.4	15337	95.5	963	6.0	
Bridgend	1569	1509	96.2	1509	96.2	1508	96.1	1507	96.0	1509	96.2	0	0.0	1509	96.2	1508	96.1	134	8.5	
Carmarthenshire	1988	1902	95.7	1902	95.7	1902	95.7	1898	95.5	1896	95.4	4	0.2	1891	95.1	1884	94.8	86	4.3	
Ceredigion	654	618	94.5	618	94.5	618	94.5	618	94.5	617	94.3	3	0.5	612	93.6	610	93.3	29	4.4	
Neath Port Talbot	1554	1477	95.0	1477	95.0	1477	95.0	1477	95.0	1476	95.0	0	0.0	1473	94.8	1471	94.7	86	5.5	
Pembrokeshire	1285	1196	93.1	1196	93.1	1196	93.1	1195	93.0	1193	92.8	0	0.0	1189	92.5	1190	92.6	79	6.1	
Powys	1254	1189	94.8	1189	94.8	1189	94.8	1188	94.7	1188	94.7	1	0.1	1183	94.3	1182	94.3	69	5.5	
Swansea	2676	2571	96.1	2571	96.1	2571	96.1	2571	96.1	2565	95.9	5	0.2	2549	95.3	2555	95.5	106	4.0	
Mid and West Wales	10980	10462	95.3	10462	95.3	10461	95.3	10454	95.2	10444	95.1	13	0.1	10406	94.8	10400	94.7	589	5.4	
Anglesey	742	721	97.2	721	97.2	721	97.2	721	97.2	721	97.2	2	0.3	720	97.0	718	96.8	41	5.5	
Conwy	1091	1023	93.8	1023	93.8	1023	93.8	1023	93.8	1023	93.8	2	0.2	1017	93.2	1023	93.8	54	4.9	
Denbighshire	1054	1013	96.1	1013	96.1	1013	96.1	1011	95.9	1010	95.8	1	0.1	1007	95.5	1008	95.6	24	2.3	
Flintshire	1795	1719	95.8	1719	95.8	1719	95.8	1719	95.8	1719	95.8	7	0.4	1711	95.3	1712	95.4	74	4.1	
Gwynedd	1216	1179	97.0	1179	97.0	1179	97.0	1178	96.9	1176	96.7	3	0.2	1173	96.5	1169	96.1	81	6.7	
Wrexham	1626	1555	95.6	1555	95.6	1555	95.6	1554	95.6	1554	95.6	7	0.4	1548	95.2	1551	95.4	105	6.5	
North Wales	7524	7210	95.8	7210	95.8	7210	95.8	7206	95.8	7203	95.7	22	0.3	7176	95.4	7181	95.4	379	5.0	
Unknown	362	342	94.5	342	94.5	342	94.5	342	94.5	341	94.2	0	0.0	341	94.2	339	93.6	21	5.8	
Wales total	34933	33433	95.7	33433	95.7	33431	95.7	33415	95.7	33389	95.6	64	0.2	33255	95.2	33257	95.2	1952	5.6	

* Full primary 2 dose course of pneumococcal conjugate vaccine

Table 3. Vaccine uptake in children reaching their 2nd birthday between 01/04/08 and 31/03/09 and resident on 14/05/2009.

LHB	Resident children	D3		T3		P3		Po3		Hib3		MMR1		MenC*		PCV2**		PCVf***		Hib/MenCb	
		(n)	(n)	(%)	(n)																
Blaenau Gwent	745	734	98.5	734	98.5	734	98.5	734	98.5	733	98.4	686	92.1	728	97.7	720	96.6	670	89.9	700	94.0
Caerphilly	2107	2070	98.2	2070	98.2	2070	98.2	2069	98.2	2069	98.2	1888	89.6	2048	97.2	2005	95.2	1861	88.3	1967	93.4
Cardiff	4206	4047	96.2	4047	96.2	4047	96.2	4037	96.0	4014	95.4	3662	87.1	3900	92.7	3802	90.4	3481	82.8	3728	88.6
Merthyr Tydfil	679	656	96.6	656	96.6	656	96.6	656	96.6	655	96.5	614	90.4	652	96.0	641	94.4	602	88.7	637	93.8
Monmouthshire	850	825	97.1	825	97.1	825	97.1	824	96.9	824	96.9	774	91.1	817	96.1	808	95.1	774	91.1	791	93.1
Newport	1696	1636	96.5	1636	96.5	1636	96.5	1633	96.3	1633	96.3	1488	87.7	1606	94.7	1588	93.6	1485	87.6	1568	92.5
Rhondda Cynon Taff	2698	2655	98.4	2655	98.4	2655	98.4	2652	98.3	2650	98.2	2435	90.3	2631	97.5	2581	95.7	2409	89.3	2532	93.8
Torfaen	1057	1032	97.6	1032	97.6	1032	97.6	1032	97.6	1031	97.5	952	90.1	1022	96.7	996	94.2	936	88.6	982	92.9
Vale of Glamorgan	1407	1376	97.8	1376	97.8	1376	97.8	1377	97.9	1373	97.6	1285	91.3	1353	96.2	1341	95.3	1258	89.4	1313	93.3
South East Wales	15445	15031	97.3	15031	97.3	15031	97.3	15014	97.2	14982	97.0	13784	89.2	14757	95.5	14482	93.8	13476	87.3	14218	92.1
Bridgend	1505	1470	97.7	1470	97.7	1470	97.7	1469	97.6	1469	97.6	1322	87.8	1453	96.5	1420	94.4	1256	83.5	1378	91.6
Carmarthenshire	1904	1840	96.6	1840	96.6	1840	96.6	1832	96.2	1828	96.0	1607	84.4	1802	94.6	1741	91.4	1523	80.0	1689	88.7
Ceredigion	654	617	94.3	617	94.3	615	94.0	616	94.2	615	94.0	583	89.1	609	93.1	597	91.3	575	87.9	596	91.1
Neath Port Talbot	1535	1485	96.7	1485	96.7	1485	96.7	1484	96.7	1482	96.5	1320	86.0	1475	96.1	1443	94.0	1307	85.1	1398	91.1
Pembrokeshire	1304	1251	95.9	1251	95.9	1251	95.9	1250	95.9	1249	95.8	1117	85.7	1238	94.9	1189	91.2	1093	83.8	1160	89.0
Powys	1201	1156	96.3	1156	96.3	1156	96.3	1155	96.2	1154	96.1	1038	86.4	1145	95.3	1115	92.8	1042	86.8	1099	91.5
Swansea	2517	2445	97.1	2445	97.1	2445	97.1	2442	97.0	2438	96.9	2166	86.1	2401	95.4	2354	93.5	2121	84.3	2290	91.0
Mid and West Wales	10620	10264	96.6	10264	96.6	10262	96.6	10248	96.5	10235	96.4	9153	86.2	10123	95.3	9859	92.8	8917	84.0	9610	90.5
Anglesey	690	683	99.0	683	99.0	683	99.0	683	99.0	682	98.8	622	90.1	668	96.8	651	94.3	606	87.8	649	94.1
Conwy	1130	1074	95.0	1074	95.0	1074	95.0	1073	95.0	1072	94.9	959	84.9	1052	93.1	1003	88.8	946	83.7	998	88.3
Denbighshire	977	942	96.4	942	96.4	942	96.4	941	96.3	942	96.4	843	86.3	929	95.1	892	91.3	822	84.1	872	89.3
Flintshire	1660	1632	98.3	1632	98.3	1632	98.3	1631	98.3	1631	98.3	1515	91.3	1616	97.3	1545	93.1	1458	87.8	1533	92.3
Gwynedd	1291	1242	96.2	1242	96.2	1242	96.2	1239	96.0	1236	95.7	1143	88.5	1200	93.0	1145	88.7	1138	88.1	1199	92.9
Wrexham	1541	1497	97.1	1497	97.1	1497	97.1	1495	97.0	1492	96.8	1405	91.2	1472	95.5	1389	90.1	1394	90.5	1438	93.3
North Wales	7289	7070	97.0	7070	97.0	7070	97.0	7062	96.9	7055	96.8	6487	89.0	6937	95.2	6625	90.9	6364	87.3	6689	91.8
Unknown	343	316	92.1	316	92.1	316	92.1	315	91.8	314	91.5	292	85.1	309	90.1	299	87.2	283	82.5	298	86.9
Wales total	33697	32681	97.0	32681	97.0	32679	97.0	32639	96.9	32586	96.7	29716	88.2	32126	95.3	31265	92.8	29040	86.2	30815	91.4

* 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

Table 4. Vaccine uptake in children reaching their 5th birthday between 01/04/08 and 31/03/09 and resident on 14/05/2009.

LHB	Resident children	D3		T3		P3		Po3		Hib3		MenC*		MMR1		MMR2		D4		T4		aP		Po4	
		(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)
Blaenau Gwent	709	680	95.9	680	95.9	676	95.3	680	95.9	673	94.9	672	94.8	660	93.1	617	87.0	634	89.4	634	89.4	634	89.4	634	89.4
Caerphilly	1926	1873	97.2	1873	97.2	1857	96.4	1874	97.3	1870	97.1	1856	96.4	1785	92.7	1580	82.0	1663	86.3	1663	86.3	1663	86.3	1663	86.3
Cardiff	3810	3640	95.5	3641	95.6	3627	95.2	3624	95.1	3560	93.4	3398	89.2	3504	92.0	3058	80.3	3220	84.5	3220	84.5	3218	84.5	3215	84.4
Merthyr Tydfil	615	582	94.6	582	94.6	574	93.3	582	94.6	574	93.3	572	93.0	554	90.1	521	84.7	561	91.2	561	91.2	556	90.4	559	90.9
Monmouthshire	940	875	93.1	875	93.1	868	92.3	876	93.2	871	92.7	864	91.9	848	90.2	786	83.6	830	88.3	830	88.3	826	87.9	829	88.2
Newport	1719	1637	95.2	1637	95.2	1628	94.7	1631	94.9	1618	94.1	1584	92.1	1562	90.9	1400	81.4	1492	86.8	1492	86.8	1492	86.8	1490	86.7
Rhondda Cynon Taff	2610	2539	97.3	2539	97.3	2516	96.4	2542	97.4	2526	96.8	2501	95.8	2407	92.2	2220	85.1	2341	89.7	2341	89.7	2341	89.7	2341	89.7
Torfaen	952	937	98.4	937	98.4	930	97.7	937	98.4	931	97.8	926	97.3	901	94.6	820	86.1	864	90.8	863	90.7	863	90.7	863	90.7
Vale of Glamorgan	1391	1345	96.7	1345	96.7	1336	96.0	1338	96.2	1331	95.7	1296	93.2	1270	91.3	1139	81.9	1223	87.9	1223	87.9	1221	87.8	1222	87.9
South East Wales	14672	14108	96.2	14109	96.2	14012	95.5	14084	96.0	13954	95.1	13669	93.2	13491	92.0	12141	82.7	12828	87.4	12827	87.4	12814	87.3	12816	87.4
Bridgend	1485	1413	95.2	1413	95.2	1400	94.3	1408	94.8	1397	94.1	1387	93.4	1337	90.0	1116	75.2	1193	80.3	1193	80.3	1192	80.3	1191	80.2
Carmarthenshire	1806	1718	95.1	1716	95.0	1705	94.4	1716	95.0	1708	94.6	1685	93.3	1605	88.9	1450	80.3	1588	87.9	1588	87.9	1587	87.9	1586	87.8
Ceredigion	609	578	94.9	578	94.9	570	93.6	578	94.9	571	93.8	553	90.8	549	90.1	521	85.6	553	90.8	553	90.8	551	90.5	552	90.6
Neath Port Talbot	1376	1324	96.2	1324	96.2	1318	95.8	1320	95.9	1317	95.7	1302	94.6	1190	86.5	1070	77.8	1171	85.1	1171	85.1	1171	85.1	1171	85.1
Pembrokeshire	1208	1141	94.5	1140	94.4	1134	93.9	1141	94.5	1134	93.9	1115	92.3	1073	88.8	970	80.3	1041	86.2	1041	86.2	1037	85.8	1040	86.1
Powys	1243	1162	93.5	1162	93.5	1152	92.7	1162	93.5	1155	92.9	1135	91.3	1076	86.6	964	77.6	1079	86.8	1079	86.8	1076	86.6	1076	86.6
Swansea	2514	2404	95.6	2405	95.7	2393	95.2	2406	95.7	2397	95.3	2349	93.4	2235	88.9	1990	79.2	2191	87.2	2191	87.2	2191	87.2	2190	87.1
Mid and West Wales	10241	9740	95.1	9738	95.1	9672	94.4	9731	95.0	9679	94.5	9526	93.0	9065	88.5	8081	78.9	8816	86.1	8816	86.1	8805	86.0	8806	86.0
Anglesey	727	704	96.8	703	96.7	698	96.0	702	96.6	702	96.6	689	94.8	681	93.7	642	88.3	674	92.7	674	92.7	674	92.7	673	92.6
Conwy	1065	1021	95.9	1021	95.9	1014	95.2	1020	95.8	1020	95.8	1008	94.6	988	92.8	902	84.7	952	89.4	952	89.4	951	89.3		
Denbighshire	946	897	94.8	897	94.8	896	94.7	896	94.7	893	94.4	880	93.0	875	92.5	785	83.0	813	85.9	813	85.9	811	85.7	813	85.9
Flintshire	1619	1575	97.3	1577	97.4	1569	96.9	1576	97.3	1569	96.9	1551	95.8	1509	93.2	1394	86.1	1462	90.3	1462	90.3	1460	90.2	1464	90.4
Gwynedd	1154	1111	96.3	1112	96.4	1107	95.9	1110	96.2	1108	96.0	1094	94.8	1069	92.6	977	84.7	1047	90.7	1046	90.6	1045	90.6	1044	90.5
Wrexham	1421	1368	96.3	1368	96.3	1364	96.0	1364	96.0	1347	94.8	1334	93.9	1335	93.9	1256	88.4	1297	91.3	1297	91.3	1295	91.1	1297	91.3
North Wales	6932	6676	96.3	6678	96.3	6648	95.9	6668	96.2	6639	95.8	6556	94.6	6457	93.1	5956	85.9	6245	90.1	6244	90.1	6237	90.0	6242	90.0
Unknown	342	292	85.4	292	85.4	291	85.1	291	85.1	289	84.5	279	81.6	276	80.7	237	69.3	259	75.7	259	75.7	255	74.6	259	75.7
Wales total	32187	30816	95.7	30817	95.7	30623	95.1	30774	95.6	30561	94.9	30030	93.3	29289	91.0	26415	82.1	28148	87.5	28146	87.4	28111	87.3	28123	87.4

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

Table 5. Vaccine uptake in children reaching their 15th birthday between 01/04/08 and 31/03/09 and resident on 14/05/2009 (with breakdown of MMR1 and MMR2 coverage by sex).

LHB	Resident children	Teenage 3 in 1 booster*						Resident girls				Resident boys					
		MMR1		MMR2		booster*		MMR1 (girls)		MMR2 (girls)		MMR1 (boys)		MMR2 (boys)			
		(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	
Blaenau Gwent	946	915	96.7	854	90.3	15	1.6	476	464	97.5	432	90.8	470	451	96.0	422	89.8
Caerphilly	2189	2066	94.4	1840	84.1	89	4.1	1097	1034	94.3	925	84.3	1092	1032	94.5	915	83.8
Cardiff	4263	3848	90.3	3508	82.3	2609	61.2	1999	1832	91.6	1682	84.1	2264	2016	89.0	1826	80.7
Merthyr Tydfil	769	729	94.8	690	89.7	336	43.7	346	331	95.7	312	90.2	423	398	94.1	378	89.4
Monmouthshire	1142	987	86.4	827	72.4	217	19.0	555	475	85.6	402	72.4	587	512	87.2	425	72.4
Newport	1963	1818	92.6	1614	82.2	152	7.7	945	883	93.4	786	83.2	1015	935	92.1	828	81.6
Rhondda Cynon Taff	2837	2721	95.9	2526	89.0	1096	38.6	1407	1351	96.0	1255	89.2	1430	1370	95.8	1271	88.9
Torfaen	1284	1229	95.7	1122	87.4	80	6.2	632	609	96.4	557	88.1	649	617	95.1	563	86.7
Vale of Glamorgan	1725	1595	92.5	1465	84.9	1235	71.6	819	762	93.0	692	84.5	906	833	91.9	773	85.3
South East Wales	17118	15908	92.9	14446	84.4	5829	34.1	8276	7741	93.5	7043	85.1	8836	8164	92.4	7401	83.8
Bridgend	1558	1432	91.9	1280	82.2	610	39.2	766	701	91.5	627	81.9	790	731	92.5	653	82.7
Carmarthenshire	2029	1835	90.4	1627	80.2	1069	52.7	991	890	89.8	796	80.3	1038	945	91.0	831	80.1
Ceredigion	757	713	94.2	654	86.4	260	34.3	382	360	94.2	332	86.9	375	353	94.1	322	85.9
Neath Port Talbot	1743	1647	94.5	1515	86.9	744	42.7	804	766	95.3	705	87.7	939	881	93.8	810	86.3
Pembrokeshire	1510	1383	91.6	1242	82.3	301	19.9	768	711	92.6	638	83.1	742	672	90.6	604	81.4
Powys	1606	1463	91.1	1311	81.6	750	46.7	792	735	92.8	652	82.3	814	728	89.4	659	81.0
Swansea	2717	2539	93.4	2262	83.3	1167	43.0	1286	1205	93.7	1086	84.4	1431	1334	93.2	1176	82.2
Mid and West Wales	11920	11012	92.4	9891	83.0	4901	41.1	5789	5368	92.7	4836	83.5	6129	5644	92.1	5055	82.5
Anglesey	844	790	93.6	722	85.5	527	62.4	377	348	92.3	321	85.1	467	442	94.6	401	85.9
Conwy	1292	1176	91.0	1024	79.3	741	57.4	645	600	93.0	518	80.3	646	575	89.0	506	78.3
Denbighshire	1212	1116	92.1	1008	83.2	580	47.9	612	569	93.0	518	84.6	599	547	91.3	490	81.8
Flintshire	1854	1765	95.2	1570	84.7	691	37.3	893	846	94.7	763	85.4	961	919	95.6	807	84.0
Gwynedd	1370	1303	95.1	1217	88.8	631	46.1	672	639	95.1	598	89.0	698	664	95.1	619	88.7
Wrexham	1487	1402	94.3	1280	86.1	645	43.4	733	694	94.7	635	86.6	754	708	93.9	645	85.5
North Wales	8059	7552	93.7	6821	84.6	3815	47.3	3932	3696	94.0	3353	85.3	4125	3855	93.5	3468	84.1
Unknown	597	412	69.0	323	54.1	188	31.5	317	223	70.3	182	57.4	278	189	68.0	141	50.7
Wales total	37694	34884	92.5	31481	83.5	14733	39.1	18314	17028	93.0	15414	84.2	19368	17852	92.2	16065	82.9

* teenage booster doses of diphtheria, tetanus and polio immunisations

Table 6. Vaccine uptake in children reaching their 16th birthday between 01/04/08 and 31/03/09 and resident on 14/05/2009 (with breakdown of MMR1 and MMR2 coverage by sex).

LHB	Resident children	Teenage 3 in 1 booster*						Resident						Resident					
		MMR1		MMR2		booster*		girls		MMR1 (girls)		MMR2 (girls)		boys		MMR1 (boys)		MMR2 (boys)	
		(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)	(n)	(n)	(%)
Blaenau Gwent	961	918	95.5	764	79.5	51	5.3	483	461	95.4	384	79.5	478	457	95.6	380	79.5		
Caerphilly	2213	2059	93.0	1685	76.1	156	7.0	1093	1020	93.3	837	76.6	1120	1039	92.8	848	75.7		
Cardiff	4417	4033	91.3	3527	79.9	2821	63.9	2138	1972	92.2	1744	81.6	2278	2060	90.4	1783	78.3		
Merthyr Tydfil	709	673	94.9	617	87.0	545	76.9	357	338	94.7	306	85.7	352	335	95.2	311	88.4		
Monmouthshire	1210	1026	84.8	798	66.0	418	34.5	593	502	84.7	394	66.4	611	522	85.4	402	65.8		
Newport	1990	1823	91.6	1409	70.8	275	13.8	981	896	91.3	695	70.8	1009	927	91.9	714	70.8		
Rhondda Cynon Taff	2863	2749	96.0	2442	85.3	2218	77.5	1367	1326	97.0	1189	87.0	1496	1423	95.1	1253	83.8		
Torfaen	1272	1214	95.4	1011	79.5	164	12.9	638	606	95.0	520	81.5	634	608	95.9	491	77.4		
Vale of Glamorgan	1769	1649	93.2	1446	81.7	1238	70.0	871	810	93.0	711	81.6	898	839	93.4	735	81.8		
South East Wales	17404	16144	92.8	13699	78.7	7886	45.3	8521	7931	93.1	6780	79.6	8876	8210	92.5	6917	77.9		
Bridgend	1645	1515	92.1	1263	76.8	1188	72.2	789	724	91.8	603	76.4	856	791	92.4	660	77.1		
Carmarthenshire	2086	1912	91.7	1517	72.7	1448	69.4	1016	934	91.9	741	72.9	1070	978	91.4	776	72.5		
Ceredigion	787	740	94.0	639	81.2	590	75.0	375	356	94.9	296	78.9	412	384	93.2	343	83.3		
Neath Port Talbot	1782	1697	95.2	1498	84.1	1370	76.9	866	829	95.7	727	83.9	916	868	94.8	771	84.2		
Pembrokeshire	1558	1431	91.8	1199	77.0	307	19.7	797	734	92.1	615	77.2	761	697	91.6	584	76.7		
Powys	1454	1352	93.0	1050	72.2	1105	76.0	725	677	93.4	528	72.8	729	675	92.6	522	71.6		
Swansea	2770	2594	93.6	2184	78.8	2146	77.5	1348	1259	93.4	1081	80.2	1422	1335	93.9	1103	77.6		
Mid and West Wales	12082	11241	93.0	9350	77.4	8154	67.5	5916	5513	93.2	4591	77.6	6166	5728	92.9	4759	77.2		
Anglesey	813	769	94.6	687	84.5	619	76.1	419	396	94.5	355	84.7	394	373	94.7	332	84.3		
Conwy	1301	1182	90.9	954	73.3	1011	77.7	621	571	91.9	448	72.1	676	611	90.4	506	74.9		
Denbighshire	1305	1207	92.5	1048	80.3	1047	80.2	627	583	93.0	511	81.5	678	624	92.0	537	79.2		
Flintshire	1841	1750	95.1	1493	81.1	1383	75.1	892	850	95.3	728	81.6	949	900	94.8	765	80.6		
Gwynedd	1369	1304	95.3	1185	86.6	1034	75.5	653	624	95.6	577	88.4	716	680	95.0	608	84.9		
Wrexham	1539	1461	94.9	1281	83.2	1192	77.5	776	743	95.7	663	85.4	763	718	94.1	618	81.0		
North Wales	8168	7673	93.9	6648	81.4	6286	77.0	3988	3767	94.5	3282	82.3	4176	3906	93.5	3366	80.6		
Unknown	689	467	67.8	349	50.7	323	46.9	335	227	67.8	177	52.8	354	240	67.8	172	48.6		
Wales total	38343	35525	92.7	30046	78.4	22649	59.1	18760	17438	93.0	14830	79.1	19572	18084	92.4	15214	77.7		

* teenage booster doses of diphtheria, tetanus and polio immunisations

Table 7. Uptake of HPV doses 1 and 2 in girls reaching their 13th birthday during 01/01/09 to 31/03/09 (current school year 8) and resident in Wales in 14/05/09.

LHB	Resident girls (n)	HPV1 (n)	HPV1 (%)	HPV2 (n)	HPV2 (%)	HPV3* (n)	HPV3* (%)
Blaenau Gwent	412	396	96.1	388	94.2	222	53.9
Caerphilly	1036	952	91.9	935	90.3	678	65.4
Cardiff	2029	1629	80.3	1539	75.9	0	0.0
Merthyr Tydfil	366	347	94.8	342	93.4	314	85.8
Monmouthshire	516	413	80.0	410	79.5	205	39.7
Newport	909	763	83.9	736	81.0	436	48.0
Rhondda Cynon Taff	1290	1187	92.0	1165	90.3	982	76.1
Torfaen	550	521	94.7	518	94.2	297	54.0
Vale of Glamorgan	796	692	86.9	654	82.2	0	0.0
South East Wales	7904	6900	87.3	6687	84.6	3134	39.7
Bridgend	737	634	86.0	626	84.9	2	0.3
Carmarthenshire	992	887	89.4	865	87.2	10	1.0
Ceredigion	324	274	84.6	273	84.3	195	60.2
Neath Port Talbot	786	717	91.2	700	89.1	15	1.9
Pembrokeshire	678	578	85.3	574	84.7	0	0.0
Powys	698	588	84.2	580	83.1	0	0.0
Swansea	1266	1165	92.0	1154	91.2	992	78.4
Mid and West Wales	5481	4843	88.4	4772	87.1	1214	22.1
Anglesey	380	334	87.9	324	85.3	70	18.4
Conwy	584	510	87.3	496	84.9	0	0.0
Denbighshire	507	453	89.3	441	87.0	3	0.6
Flintshire	881	817	92.7	812	92.2	624	70.8
Gwynedd	628	539	85.8	535	85.2	30	4.8
Wrexham	732	645	88.1	640	87.4	28	3.8
North Wales	3712	3298	88.8	3248	87.5	755	20.3
Unknown	240	150	62.5	147	61.3	39	16.3
Total	17337	15191	87.6	14854	85.7	5142	29.7

* Immunisation sessions for dose 3 are currently underway, this figure is provisional and expected to increase in future reports.

Table 8. MMR coverage school aged children (Current school years, Sep 2008 – Aug 2009), immunised at any time before May 2009 and resident in Wales on 14/05/2009.

LHB	Primary school (years 0 - 6)					Secondary school (years 7 - 11)				
	Children* (n)	Started but not completed MMR course (n)	Started but not completed MMR course (%)	Not started MMR course (n)	Not started MMR course (%)	Children* (n)	Started but not completed MMR course (n)	Started but not completed MMR course (%)	Not started MMR course (n)	Not started MMR course (%)
Blaenau Gwent	5102	353	6.9	314	6.2	4269	347	8.1	229	5.4
Caerphilly	13738	1125	8.2	1034	7.5	10728	1135	10.6	886	8.3
Cardiff	26370	2612	9.9	2674	10.1	20770	2043	9.8	2351	11.3
Merthyr Tydfil	4406	338	7.7	397	9.0	3663	322	8.8	266	7.3
Monmouthshire	6493	555	8.5	774	11.9	5618	722	12.9	831	14.8
Newport	12259	964	7.9	1029	8.4	9667	1003	10.4	934	9.7
Rhondda Cynon Taff	17980	1426	7.9	1352	7.5	13922	1149	8.3	758	5.4
Torfaen	7037	524	7.4	441	6.3	6197	533	8.6	355	5.7
Vale of Glamorgan	9904	825	8.3	862	8.7	8434	674	8.0	765	9.1
South East Wales	103289	8722	8.4	8877	8.6	83268	7928	9.5	7375	8.9
Bridgend	10320	1073	10.4	992	9.6	7803	756	9.7	700	9.0
Carmarthenshire	12787	1249	9.8	1510	11.8	10117	1432	14.2	1124	11.1
Ceredigion	4534	284	6.3	482	10.6	3599	391	10.9	279	7.8
Neath Port Talbot	10002	942	9.4	1354	13.5	8352	792	9.5	717	8.6
Pembrokeshire	8796	729	8.3	973	11.1	7172	768	10.7	722	10.1
Powys	9406	972	10.3	1401	14.9	7492	916	12.2	861	11.5
Swansea	17223	1742	10.1	2477	14.4	13265	1715	12.9	1297	9.8
Mid and West Wales	73068	6991	9.6	9189	12.6	57800	6770	11.7	5700	9.9
Anglesey	5037	407	8.1	424	8.4	4011	413	10.3	318	7.9
Conwy	7745	763	9.9	643	8.3	6128	820	13.4	602	9.8
Denbighshire	7066	750	10.6	689	9.8	5715	604	10.6	526	9.2
Flintshire	11687	1269	10.9	951	8.1	8982	1182	13.2	653	7.3
Gwynedd	8613	823	9.6	724	8.4	6707	597	8.9	448	6.7
Wrexham	10224	877	8.6	652	6.4	7310	802	11.0	501	6.9
North Wales	50372	4889	9.7	4083	8.1	38853	4418	11.4	3048	7.8
Unknown	2939	353	12.0	708	24.1	2977	441	14.8	965	32.4
Total	229668	20955	9.1	22857	10.0	182898	19557	10.7	17088	9.3

* Children reaching appropriate birthdays (5 - 16) during the current school years (Sep 08 - Aug 09) and resident in Wales, with MMR status (immunisations given up to May 2009)
Data reflects children NHS Trust Child Health Office registered children resident in Wales and numbers of vaccinations given and notified to NHS Trust Child Health Offices.

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