

Pneumococcal polysaccharide vaccination (PPV) uptake in Wales in 2019/20

Annual Report September 2020

Key Points

- Uptake of pneumococcal vaccine in people aged two to 64 years in a clinical risk group was 32.8% during 2019/20. Uptake ranged by health board, from 41.5% in Betsi Cadwaladr UHB to 25.6% in Cwm Taf Morgannwg UHB.
- Uptake of pneumococcal vaccine in people aged 65 years and over was 60.2%. Uptake ranged by health board, from 64.3% in Betsi Cadwaladr UHB to 55.5% in Hywel Dda UHB.
- Uptake increases steadily from age 65 (25.2%) to 74 (65.0%) years. Uptake was 73.7% in those aged 75 years and above.
- Uptake among patients aged two to 64 years in a clinical risk group was highest in patients with a cochlear implant (72.0%, n=149/207) and patients with chronic respiratory disease (41.5%, n=13649/32881). Uptake was lowest in patients with a cerebrospinal fluid leak (22.9%, n=274/1197).
- There are notable variations in uptake between and within health boards, especially in those under 65 years of age in clinical risk groups

Background

The pneumococcal polysaccharide vaccination (PPV) is currently offered to those aged 65 years and over and people aged two to 64 years in select clinical risk groups. PPV protects against 23 serotypes of *Streptococcus pneumoniae* that can cause pneumonia or serious invasive infections.

Report prepared by Public Health Wales Vaccine Preventable Disease Programme and Communicable Disease Surveillance Centre. Data in this report is from Audit+ as at 31st March 2020 supplied by NWIS Primary Care Team. Data are presented by Local Authority/Health Board of GP and are based on all general practices in Wales. All ages in this report are as at 31st March 2020.

Figure 1: Pneumococcal vaccine coverage, by age group, data as at 31st March 2020

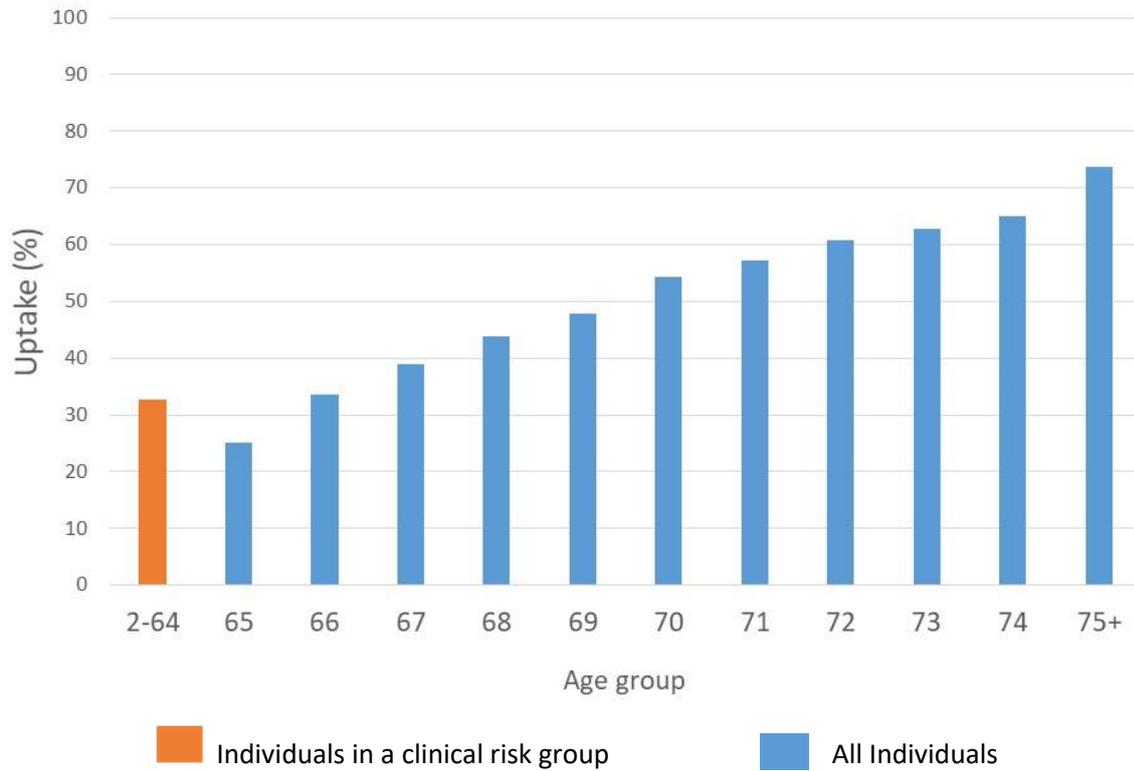
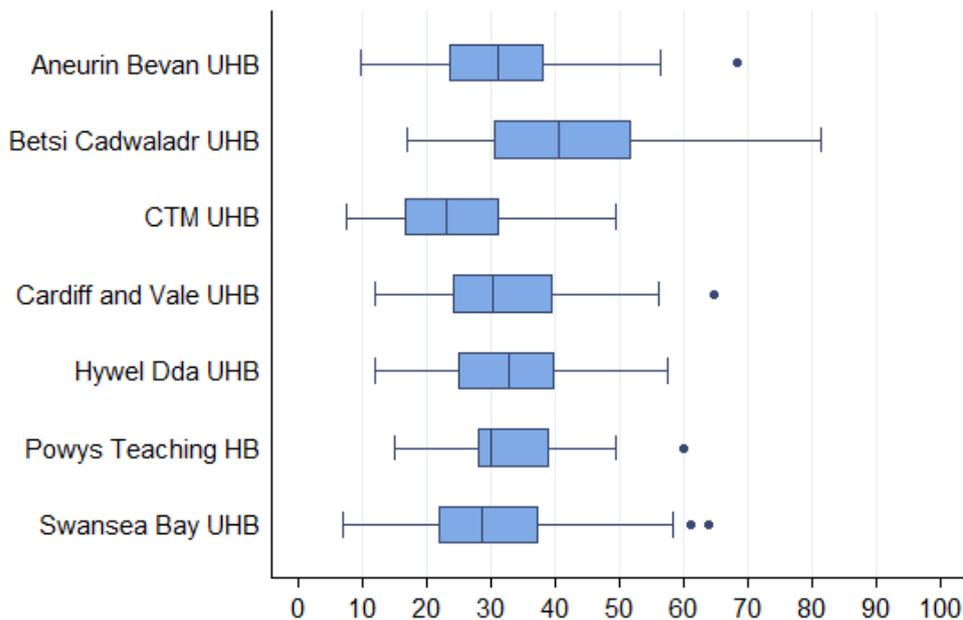


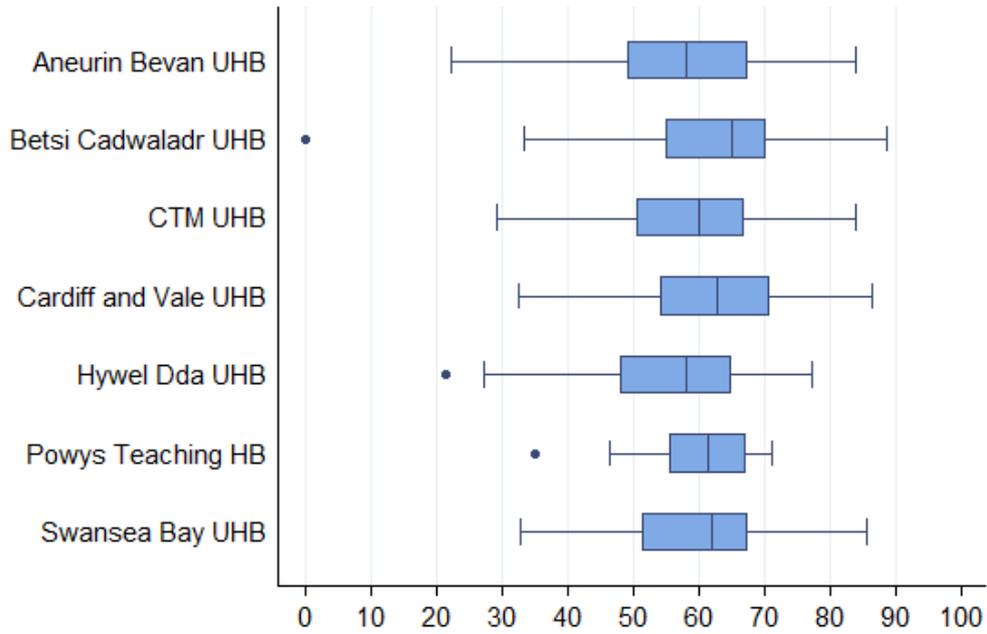
Figure 2. Box and whisker plot showing distribution of practice pneumococcal immunisation uptake (%) in patients aged 2-64 in a clinical risk group, by health board; Wales



Source: Audit+ as at 31 Mar 2020



Figure 3. Box and whisker plot showing distribution of practice pneumococcal immunisation uptake (%) in patients aged 65 and over, by health board; Wales



Source: Audit+ as at 31 Mar 2020



Table 1: Pneumococcal vaccine coverage, by health board and local authority, data as at 31st March 2020

Local Authority	Patients aged 65+			Patients in clinical at-risk group aged 2-64y		
	n	d	%	n	d	%
Aneurin Bevan UHB	73526	125431	58.6	13336	43376	30.7
Blaenau Gwent	8169	14350	56.9	1731	5489	31.5
Caerphilly	21298	37540	56.7	4024	12459	32.3
Monmouthshire	16313	25227	64.7	2162	6061	35.7
Newport	15537	27602	56.3	2932	10274	28.5
Torfaen	12209	20712	58.9	2487	9093	27.4
Betsi Cadwaladr UHB	104875	163081	64.3	18152	43788	41.5
Anglesey	11135	17064	65.3	1786	4061	44.0
Conwy	18294	31133	58.8	2663	6887	38.7
Denbighshire	15395	24650	62.5	2734	6878	39.7
Flintshire	22656	32257	70.2	4412	9518	46.4
Gwynedd	17031	28070	60.7	2589	7136	36.3
Wrexham	20364	29907	68.1	3968	9308	42.6
Cardiff and Vale UHB	52362	83472	62.7	9796	30087	32.6
Cardiff	34653	56086	61.8	7389	22606	32.7
Vale of Glamorgan	17709	27386	64.7	2407	7481	32.2
Cwm Taf Morgannwg UHB	56140	94612	59.3	8192	32030	25.6
Merthyr Tydfil	6533	11311	57.8	931	4311	21.6
Rhondda Cynon Taf	29969	50687	59.1	4279	16849	25.4
Hywel Dda UHB	54114	97424	55.5	8017	24858	32.3
Carmarthenshire	22915	42507	53.9	3256	11496	28.3
Ceredigion	11710	23076	50.7	1696	5266	32.2
Pembrokeshire	19489	31841	61.2	3065	8096	37.9
Powys Teaching HB	22431	37581	59.7	2797	8218	34.0
Powys	22431	37581	59.7	2797	8218	34.0
Swansea Bay UHB	47040	80172	58.7	7481	24557	30.5
Bridgend	19638	32614	60.2	2982	10870	27.4
Neath Port Talbot	17660	29694	59.5	2772	9359	29.6
Swansea	29380	50478	58.2	4709	15198	31.0
Wales	410488	681773	60.2	67771	206914	32.8

Table 2a: Pneumococcal vaccine coverage for those at risk, by health board and local authority, as at 31st March 2020

Local Authority	Patients in asplenia at risk group			Patients in cerebrospinal fluid leak at-risk group			Patients in chronic heart disease at-risk group		
	n	d	%	n	d	%	n	d	%
Aneurin Bevan UHB	767	2411	31.8	37	188	19.7	3611	13537	26.7
Blaenau Gwent	68	259	26.3	3	21	14.3	494	1728	28.6
Caerphilly	218	687	31.7	17	69	24.6	1117	4140	27.0
Monmouthshire	155	439	35.3	6	32	18.8	568	2138	26.6
Newport	172	566	30.4	3	28	10.7	770	3062	25.1
Torfaen	154	460	33.5	8	38	21.1	662	2469	26.8
Betsi Cadwaladr UHB	1080	2691	40.1	88	286	30.8	5175	14022	36.9
Anglesey	104	229	45.4	9	30	30.0	449	1191	37.7
Conwy	169	463	36.5	16	48	33.3	796	2305	34.5
Denbighshire	157	408	38.5	12	46	26.1	791	2253	35.1
Flintshire	291	583	49.9	21	63	33.3	1265	3106	40.7
Gwynedd	143	434	32.9	10	38	26.3	673	2115	31.8
Wrexham	216	574	37.6	20	61	32.8	1201	3052	39.4
Cardiff and Vale UHB	780	2175	35.9	32	172	18.6	2398	9487	25.3
Cardiff	527	1640	32.1	24	123	19.5	1760	6947	25.3
Vale of Glamorgan	253	535	47.3	8	49	16.3	638	2540	25.1
Cwm Taf Morgannwg UHB	490	1601	30.6	34	179	19.0	2415	11047	21.9
Merthyr Tydfil	61	181	33.7	5	22	22.7	277	1471	18.8
Rhondda Cynon Taf	263	852	30.9	14	87	16.1	1214	5548	21.9
Hywel Dda UHB	542	1416	38.3	26	147	17.7	2411	8619	28.0
Carmarthenshire	202	582	34.7	16	72	22.2	1041	4082	25.5
Ceredigion	118	344	34.3	0	17	0.0	527	1863	28.3
Pembrokeshire	222	490	45.3	10	58	17.2	843	2674	31.5
Powys Teaching HB	217	555	39.1	12	59	20.3	816	2994	27.3
Powys	217	555	39.1	12	59	20.3	816	2994	27.3
Swansea Bay UHB	489	1306	37.4	45	166	27.1	2239	8471	26.4
Bridgend	166	568	29.2	15	70	21.4	924	4028	22.9
Neath Port Talbot	160	436	36.7	12	60	20.0	828	3293	25.1
Swansea	329	870	37.8	33	106	31.1	1411	5178	27.2
Wales	4365	12155	35.9	274	1197	22.9	19065	68177	28.0

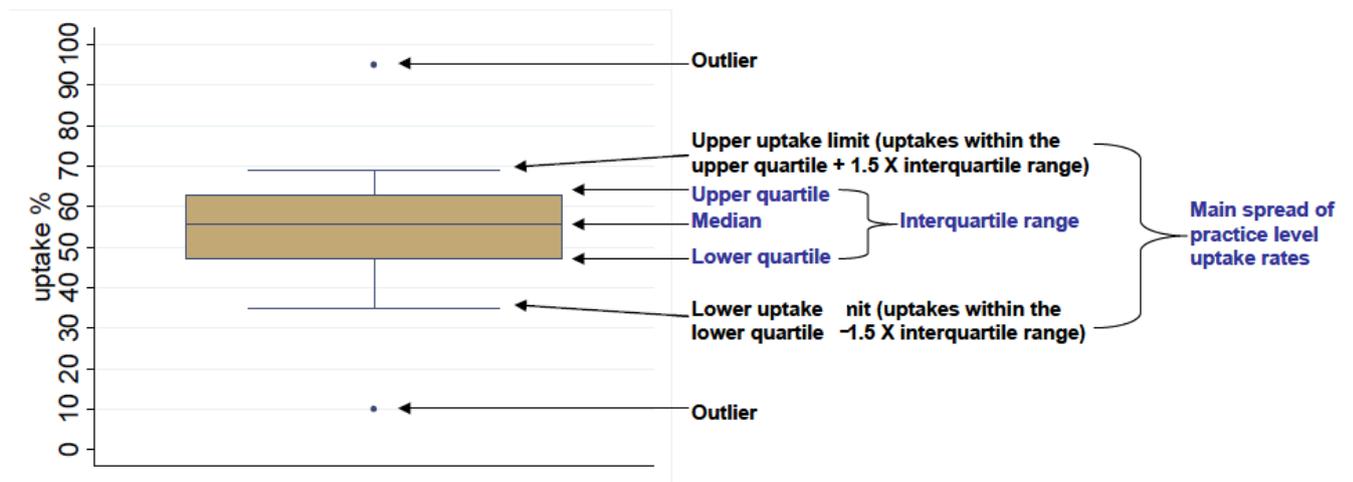
Table 2b: Pneumococcal vaccine coverage for those at risk, by health board and local authority, as at 31st March 2020

Local Authority	Patients in chronic kidney disease at-risk group			Patients in chronic liver disease at-risk group			Patients in chronic respiratory disease at-risk group		
	n	d	%	n	d	%	n	d	%
Aneurin Bevan UHB	398	989	40.2	485	2075	23.4	2854	7944	35.9
Blaenau Gwent	52	131	39.7	63	304	20.7	414	947	43.7
Caerphilly	116	307	37.8	131	602	21.8	774	1718	45.1
Monmouthshire	77	145	53.1	87	280	31.1	344	705	48.8
Newport	85	245	34.7	103	513	20.1	558	1439	38.8
Torfaen	68	161	42.2	101	376	26.9	764	3135	24.4
Betsi Cadwaladr UHB	555	1093	50.8	753	2404	31.3	3579	7273	49.2
Anglesey	47	94	50.0	71	206	34.5	366	711	51.5
Conwy	92	178	51.7	136	414	32.9	553	1104	50.1
Denbighshire	69	147	46.9	129	359	35.9	598	1286	46.5
Flintshire	126	228	55.3	180	521	34.5	764	1409	54.2
Gwynedd	79	177	44.6	98	378	25.9	585	1308	44.7
Wrexham	142	269	52.8	139	526	26.4	713	1455	49.0
Cardiff and Vale UHB	286	807	35.4	330	1394	23.7	1708	3927	43.5
Cardiff	205	606	33.8	257	1089	23.6	1317	2923	45.1
Vale of Glamorgan	81	201	40.3	73	305	23.9	391	1004	38.9
Cwm Taf Morgannwg UHB	301	835	36.0	329	1725	19.1	1763	5123	34.4
Merthyr Tydfil	34	113	30.1	30	233	12.9	231	734	31.5
Rhondda Cynon Taf	169	455	37.1	183	988	18.5	916	2789	32.8
Hywel Dda UHB	241	635	38.0	334	1322	25.3	1656	3774	43.9
Carmarthenshire	93	294	31.6	106	522	20.3	633	1632	38.8
Ceredigion	60	132	45.5	67	269	24.9	349	805	43.4
Pembrokeshire	88	209	42.1	161	531	30.3	674	1337	50.4
Powys Teaching HB	77	204	37.7	102	332	30.7	534	1176	45.4
Powys	77	204	37.7	102	332	30.7	534	1176	45.4
Swansea Bay UHB	204	585	34.9	349	1425	24.5	1555	3664	42.4
Bridgend	98	267	36.7	116	504	23.0	616	1600	38.5
Neath Port Talbot	88	240	36.7	105	487	21.6	580	1477	39.3
Swansea	116	345	33.6	244	938	26.0	975	2187	44.6
Wales	2062	5148	40.1	2682	10677	25.1	13649	32881	41.5

Table 2c: Pneumococcal vaccine coverage for those at risk, by health board and local authority, as at 31st March 2020

Local Authority	Patients in diabetes at-risk group			Patients in immunosuppression at-risk group			Patients in cochlear implant at-risk group		
	n	d	%	n	d	%	n	d	%
Aneurin Bevan UHB	6387	16917	37.8	2045	5851	35.0	22	35	62.9
Blaenau Gwent	787	2266	34.7	280	729	38.4	6	8	75.0
Caerphilly	2122	5293	40.1	532	1570	33.9	4	6	66.7
Monmouthshire	1024	2122	48.3	391	1039	37.6	4	8	50.0
Newport	1474	4485	32.9	420	1398	30.0	4	7	57.1
Torfaen	980	2751	35.6	422	1115	37.8	4	6	66.7
Betsi Cadwaladr UHB	7863	15812	49.7	3009	6688	45.0	30	49	61.2
Anglesey	774	1497	51.7	346	694	49.9	3	5	60.0
Conwy	1097	2421	45.3	437	998	43.8	5	7	71.4
Denbighshire	1131	2439	46.4	466	1018	45.8	6	10	60.0
Flintshire	1951	3507	55.6	732	1490	49.1	4	6	66.7
Gwynedd	1064	2506	42.5	479	1187	40.4	6	9	66.7
Wrexham	1846	3442	53.6	549	1301	42.2	6	12	50.0
Cardiff and Vale UHB	5010	12102	41.4	1426	4088	34.9	27	34	79.4
Cardiff	3873	9275	41.8	1050	3051	34.4	24	30	80.0
Vale of Glamorgan	1137	2827	40.2	376	1037	36.3	3	4	75.0
Cwm Taf Morgannwg UHB	3910	12989	30.1	986	3462	28.5	18	23	78.3
Merthyr Tydfil	439	1791	24.5	105	454	23.1	0	1	0.0
Rhondda Cynon Taf	2092	6901	30.3	556	1917	29.0	3	5	60.0
Hywel Dda UHB	3435	9331	36.8	1239	3353	37.0	21	29	72.4
Carmarthenshire	1463	4552	32.1	430	1440	29.9	14	19	73.7
Ceredigion	737	1891	39.0	226	702	32.2	3	3	100.0
Pembrokeshire	1235	2888	42.8	583	1211	48.1	4	7	57.1
Powys Teaching HB	1158	2732	42.4	511	1304	39.2	11	13	84.6
Powys	1158	2732	42.4	511	1304	39.2	11	13	84.6
Swansea Bay UHB	3442	9825	35.0	833	2656	31.4	20	24	83.3
Bridgend	1379	4297	32.1	325	1091	29.8	15	17	88.2
Neath Port Talbot	1330	3821	34.8	308	928	33.2	8	10	80.0
Swansea	2112	6004	35.2	525	1728	30.4	12	14	85.7
Wales	31205	79708	39.1	10049	27402	36.7	149	207	72.0

Appendix 1. Notes on interpretation - Diagram of a box and whisker plot.



The figure above provides an illustration as to how the box and whisker plots are constructed.

The box and whisker plots above show the spread of uptake rates of practices within health board areas. The line inside the shaded box represents the median practice uptake rate (half of the health board practices have an uptake higher than the median value and half have an uptake lower than the median value). The shaded box represents the spread in uptake rates of the central 50% of practices, this is called the interquartile range (IQR). The whiskers extending above and below the shaded box represent the spread in practice uptake rates for the majority of practices within the health board. Any practices with uptake rates that are very different from the majority of practices within the health board are termed 'outliers' and appear as dots outside the whiskers.