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Seasonal influenza in Wales 2021/22

Annual Report

Summary

The season

Influenza activity during the 2021/22 winter period was increased compared to 2020/21 but occurred later and remained low compared to pre-pandemic levels. This is similar to what was seen in the rest of the UK and across Europe. Although lockdown restrictions were relaxed in early 2021, social movement, activities and travel had not resumed to normal levels and this likely contributed to the continued low incidence of influenza. An out of season respiratory syncytial virus (RSV) season was seen during the summer of 2021, with incidence in under 5 year olds peaking at very high intensity levels. Some of this increased RSV activity may have been due to increased testing of respiratory viruses overall during the past two years. However, this out of season activity was noted elsewhere in the northern hemisphere as well as during the southern hemisphere 2020/21 summer.

Vaccination uptake

More individuals in at-risk and recommended groups received influenza vaccination last season than ever before. In total, 1,117,184 people were recorded in general practice as being vaccinated, representing 35% of the population of Wales. The true number is likely to be higher as occupational and school-based vaccinations as well as vaccinations given in pharmacy may not be included in this figure. In those aged 65 years and older, 78.0% were vaccinated, the highest ever uptake in this group. For the first time this season, all those aged 50 to 64 years of age were also eligible for vaccination from the start of the vaccine rollout, uptake in this group was 42.4%. Uptake for those in clinical risk groups aged 6 months to 64 years was 48.2%, a decrease compared to 2020/21. Uptake was highest in those with diabetes (61.2%) and lowest in those who are morbidly obese (43.1%).

For the first time this year, all children aged two to 15 years were eligible for influenza vaccination, 298,893 of whom were vaccinated. Uptake in two and three year olds decreased to 47.6% and in four to 10 year olds decreased to 68.7%. Coverage in 11 to 15 year olds was 58.2%. Coverage of influenza vaccination in pregnant women was slightly lower than the previous year at 78.5% (95% CI 74.1%-82.5%), as estimated in an annual point of delivery (post-natal) survey. In front-line NHS staff uptake also decreased slightly to 57.2%, following the highest ever uptake in 2020/21.

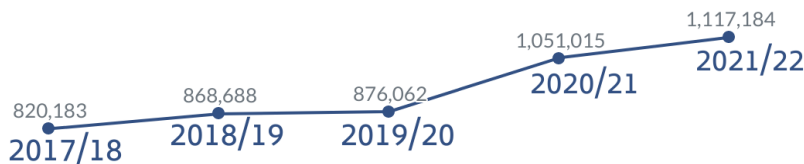
Vaccine effectiveness

The end of season estimate for overall effectiveness in adults aged 50 years and over was 26% (95% CI 5% to 43%). At 76% (95% CI 30% to 92%) effectiveness was estimated to be higher against influenza A(H1N1)pdm09 compared to A(H3), 28% (95% CI -3% to 50%). The overall adjusted vaccine effectiveness for LAIV in children was 72% (95% CI 50% to 85%).

INFLUENZA SEASON IN WALES 2021/22

Surveillance data suggests influenza did not circulate in Wales during 2021/22 winter. This is despite increased testing levels in many sectors.

Influenza vaccine uptake



The total number of people immunised against influenza is increasing each year



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Key Findings

- During 2021/22 there was no detectable influenza season in Wales, although there were slightly more patients testing positive for influenza viruses compared to the previous year.
- Of the hospital patients tested, 0.3% were confirmed with influenza, of whom 50% were positive for influenza A(H3N2) and 39% were positive for influenza A untyped. A small number of individuals tested positive for influenza B.
- The end of season estimate for overall effectiveness in adults aged 50 years and over was 26% (95% CI 5% to 43%). At 76% (95% CI 30% to 92%) effectiveness was estimated to be higher against influenza A(H1N1)pdm09 compared to A(H3), 28% (95% CI -3% to 50%). The overall adjusted vaccine effectiveness for LAIV in children was 72% (95% CI 50% to 85%).
- During 2021/22 uptake of influenza vaccine in the eligible population increased in all groups compared to last season.
 - Influenza vaccine uptake in those aged 65 years and older in Wales was 78.0%, compared to 76.5% last season and is the highest ever uptake in this age group.
 - All patients aged 50-64 years of age (not in a clinical risk group) were eligible for influenza vaccination from the start of the roll-out in 2021/22. Vaccine uptake in this group was 42.4%.
 - Uptake of influenza vaccine in people aged six months to 64 years in a clinical risk group was 48.2%, which is a decrease compared to 51.0% last season. Uptake among clinical risk groups was highest in patients with diabetes (61.2%) and lowest in the morbidly obese (43.1%).
 - Uptake of influenza vaccine in pregnant women was 78.5% (95% CI 74.1%-82.5%) (measured in an annual survey of women in major maternity units who gave birth during January 2022), an decrease compared to 81.5% (95% CI 77.2%-85.4%) last year and below the new 90% vaccination ambition set by Welsh Government [1].
 - Uptake of influenza vaccine in people younger than 65 years and recorded as being a carer (including carers who are also in a clinical risk group) was 54.9%.
 - Uptake of influenza vaccine in children aged two and three years, mainly immunised in general practices, was 47.6% compared to 56.3% in 2020/21.
 - Uptake of influenza vaccine in children aged four to 10 years, immunised in schools, was 68.7%, which is a decrease compared to 71.5% in 2020/21.
 - Uptake of influenza vaccine in children aged 11 to 15 years, also immunised in schools, was 58.2%.
 - Uptake in NHS Wales staff with direct patient contact was 57.2%, compared to 65.2% last season. Uptake in all NHS staff was 55.7% during 2021/22, a decrease compared to 63.4% during 2020/21.
- The total number of individuals in Wales who were immunised against influenza was 1,117,184 for 2021/22, compared to an estimated 1,051,015 last season, based on Read codes in their general practice record. This represents 35% of the estimated total population of Wales.

- Community pharmacies across Wales administered 166,445 influenza vaccinations through the NHS community pharmacy influenza service in 2021/22, an increase from 81,613 in 2020/21.

1. Background

1.1 Influenza and influenza-like illness surveillance indicators

Public Health Wales monitors and reports on influenza activity in Wales throughout the year using a number of indicators. Historically, the main indicator of influenza activity in Wales and in other UK countries has been the weekly rate of consultations in general practices for influenza-like illness (ILI), per 100,000 practice population. The general practice (GP) consultation rate for ILI in Wales is calculated using data provided from a network of sentinel practices, through Audit+ GP software. The sentinel GP network in Wales has provided data used for monitoring influenza activity since 1986, firstly using a paper based system and since 2009 using Audit+, an automated computer based data collection tool. The threshold at which the sentinel GP ILI consultation rate suggests that the influenza season has started is calculated using the Moving Epidemic Method (MEM). This method also produces thresholds to indicate medium, high and very high intensities of activity. In Wales, all influenza seasons from 2010/11 onwards are used to provide a historical comparison for MEM analysis. Due to unusual activity during the COVID-19 pandemic, 2020/21 season data was not included in the calculation for 2021/22 MEM thresholds.

More recently, a range of indicators from both primary and secondary care have been used in order to provide a wider picture of the burden of influenza and other seasonal respiratory illnesses. These indicators have also been used to monitor activity throughout the COVID-19 pandemic. During 2021/22, the following influenza surveillance indicators were monitored each week in Wales:

Primary care and community indicators

- GP consultations for ILI and ARI
- Sentinel GP virological surveillance to confirm influenza virus infection
- Respiratory related consultations with Out of Hours primary care doctors
- Influenza related calls to NHS Direct Wales

Secondary care indicators

- Respiratory diagnostic test data for all hospital and non-sentinel GP patients
- Respiratory diagnostic data for patients attending an A&E, medical assessment, or urgent care unit
- Respiratory diagnostic test data for patients in intensive care units
- Rapid respiratory diagnostic test data for influenza and RSV across hospital settings

Indicators from other settings

- Outbreaks of ILI and other ARI in institutional settings e.g. hospitals, care homes, schools and nurseries, reported to Public Health Wales Health Protection Teams.

In addition, genetic characterisation of influenza viruses from sentinel GP samples and a proportion of hospital patients is carried out throughout the season using Whole Genome Sequencing (WGS).

Due to COVID-19 control measures that have been implemented throughout the past two years and changes to the way individuals have engaged with health care services data may not be comparable to previous seasons. Individuals with suspected symptoms of COVID-19, including symptoms common to other respiratory infections were advised not to contact general practices and instead directed to call dedicated telephone response lines to arrange testing. As a result, the GP consultation rate for influenza-like illnesses was impacted and potentially became an unreliable indicator of influenza activity for the duration of the pandemic in Wales; although virological testing data confirmed that influenza circulation was genuinely at very low levels.

1.2 Influenza immunisation

The aim of annual immunisation against influenza is to protect individuals at increased risk, prevent spread within family, care and community settings and minimise the health impact of influenza on the population of Wales, and contribute to the reduction of antimicrobial resistance by preventing secondary bacterial infections [1].

In Wales in 2021/22, influenza immunisation was offered free of charge to all people aged 50 years and older, people aged between six months and 49 years in clinical risk groups (chronic respiratory disease, chronic heart disease, chronic renal disease, chronic liver disease, chronic neurological conditions, diabetes mellitus, immunosuppression, asplenia/ dysfunction of the spleen, and adults (aged 16 years and over) who are category III obese (have a BMI of 40 or greater), all pregnant women, and residents of long-stay care homes. Vaccination was also offered to those who were a main carer for an elderly or disabled person whose welfare may be at risk if the carer fell ill, third sector carers, staff working in all adult residential care homes and nursing care homes, domiciliary carers, members of voluntary organisations providing planned emergency first aid and community first responder scheme members. Again, all people with a learning disability were eligible for vaccination this year [1].

As with the 2020/21 season, an extended vaccination programme was offered during 2021/22, including household contacts of those on the NHS COVID-19 shielded patient list and adults in prisons who did not fall in to another eligible category [1].

In addition, influenza immunisation was also recommended for all other health and social care workers who are in direct contact with patients or service users. Care home staff with regular client contact and domiciliary carers may access free NHS flu vaccination via a community pharmacy but employing organisations are responsible for arranging immunisation of frontline health and social care workers in other settings.

The childhood influenza vaccination programme using live attenuated influenza vaccine (LAIV) nasal spray (Fluenz Tetra®) once again included children aged two to 10 years old (age on 31 August 2021) [1]. This is the fourth year that all primary school aged children have been eligible for LAIV following a five year roll out of the programme, completed one year ahead of schedule. For the first time this year, all

secondary school aged children aged 11 to 15 years old (age on 31 August 2022) were also eligible for LAIV.

In most health boards influenza immunisations were delivered to the two and three year old age groups through general practices. Since the 2016/17 influenza season, three year olds in nursery classes attached to primary schools in Cwm Taf Morgannwg University Health Board (UHB) have been offered LAIV immunisation through school nursing services, in addition to being able to receive the vaccine through general practice. Vaccination for the primary school year groups (four to 10 year olds) and secondary (11 to 15 year olds) school year groups was delivered by the school nursing services across Wales.

Public Health Wales monitor influenza immunisation uptake rates in general practices and report them weekly to GPs and health boards throughout the seasonal campaign and produce end of season influenza immunisation coverage statistics at a national, health board and local authority level. Immunisation statistics contained in this report record coverage in Welsh residents who are registered with a GP in Wales as at 29th April 2022 and therefore are not a measure of all those who have been immunised during the course of the immunisation campaign, excluding those no longer registered.

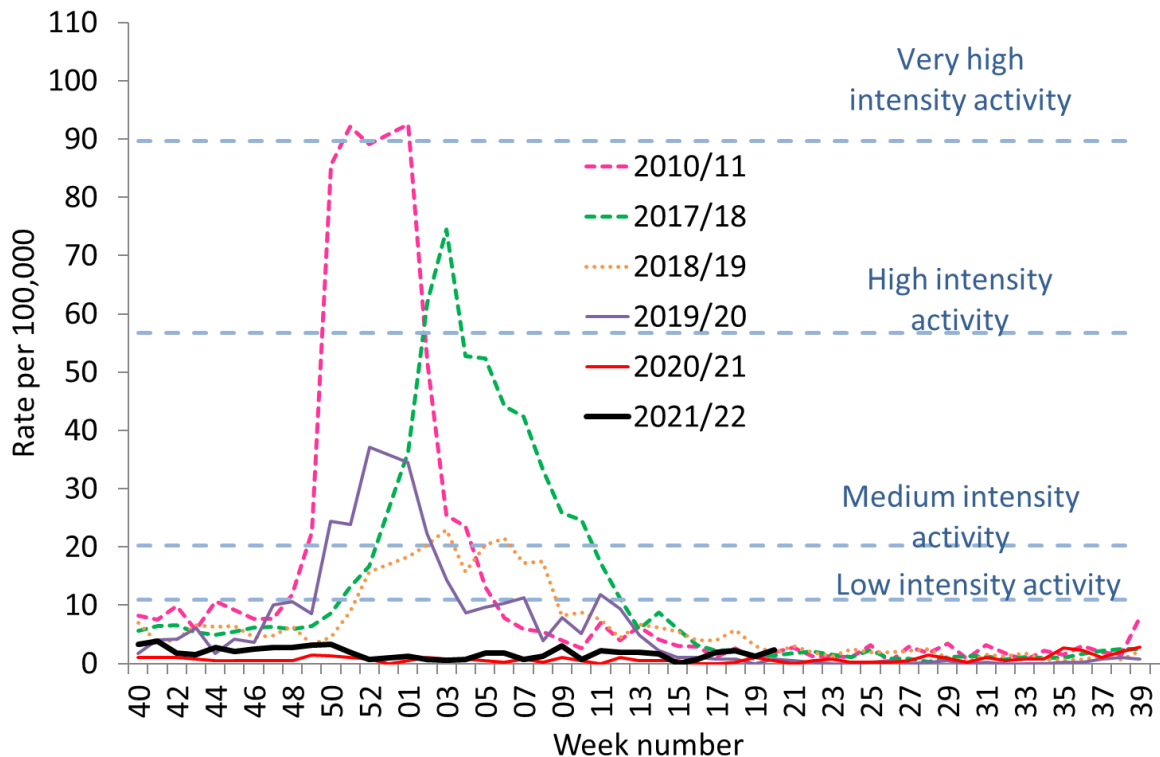
2. Influenza Surveillance in 2021/22

2.1 Community indicators - GP consultations for influenza-like illness (ILI)

A low intensity (or baseline) threshold level of 11.0 ILI consultations per 100,000 population was used as one of the indicators that influenza may be circulating in the community at low levels calculated using the Moving Epidemic Method (MEM) [2]. The sentinel GP ILI thresholds, for medium, high and very high intensity activity in the community were 20.2, 56.7 and 89.6 per 100,000 consultations respectively.

The peak sentinel GP ILI consultation rate was 3.8, during week 41 2021 and did not go above the threshold for baseline activity (Figure 2.1,1). The cumulative consultation rate for ILI was highest in patients aged 15 to 24 years (81 per 100,000 for the period 2021 week 40 to 2022 week 20 (Figure 2.1.4)).

Figure 2.1.1. Public Health Wales sentinel GP weekly consultation rate for influenza-like illness 2021/22¹

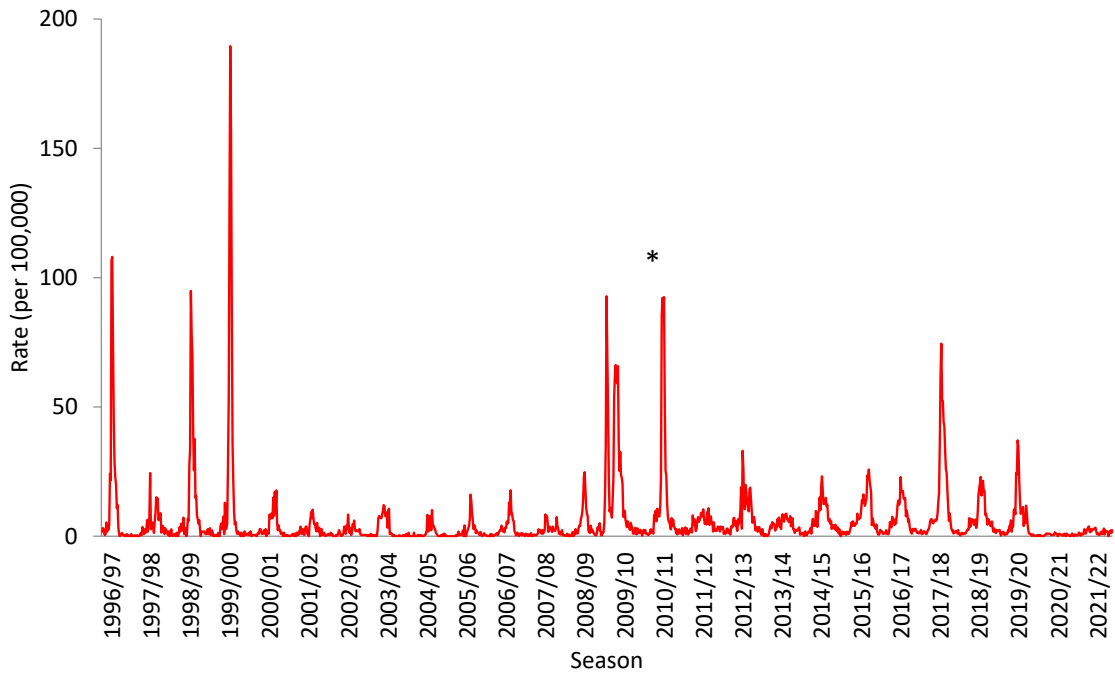


¹Due to a technical issue affecting data submitted from sentinel practices utilising a specific brand of GP software, consultation rates for ILI were calculated using a subset of data from 20 practices during week 47 2019 to week 03 2020.

Table 2.1.1. Comparison of sentinel GP consultation rates from 2014/15 to 2021/22

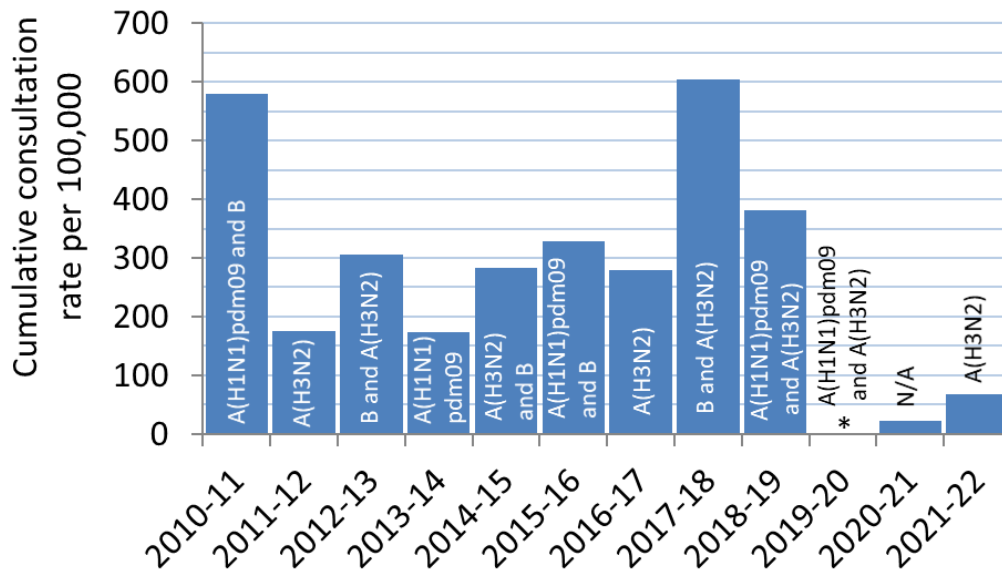
	Influenza Season						2020/21	2021/22
	2014/15	2015/16	2016/17	2017/18	2018/19	2019/20		
Start of season (week of year)	50	1	49	51	52	50	Threshold to indicate low level activity not exceeded	Threshold to indicate low level activity not exceeded
Weeks sentinel GP ILI consultation rate above baseline threshold (n)	13	14	11	14	9	8	0	0
Weeks sentinel GP ILI consultation rate above medium activity levels (n)	2	7	4	12	4	5	0	0
Weeks sentinel GP ILI consultation rate above high activity levels (n)	0	0	0	4	0	0	0	0
Peak sentinel GP ILI consultation rate	23.2	25.8	22.8	74.5	22.9	37.1	1.5	3.8

Figure 2.1.2. Public Health Wales sentinel GP weekly consultation rate for influenza-like illness 1996 to 2022



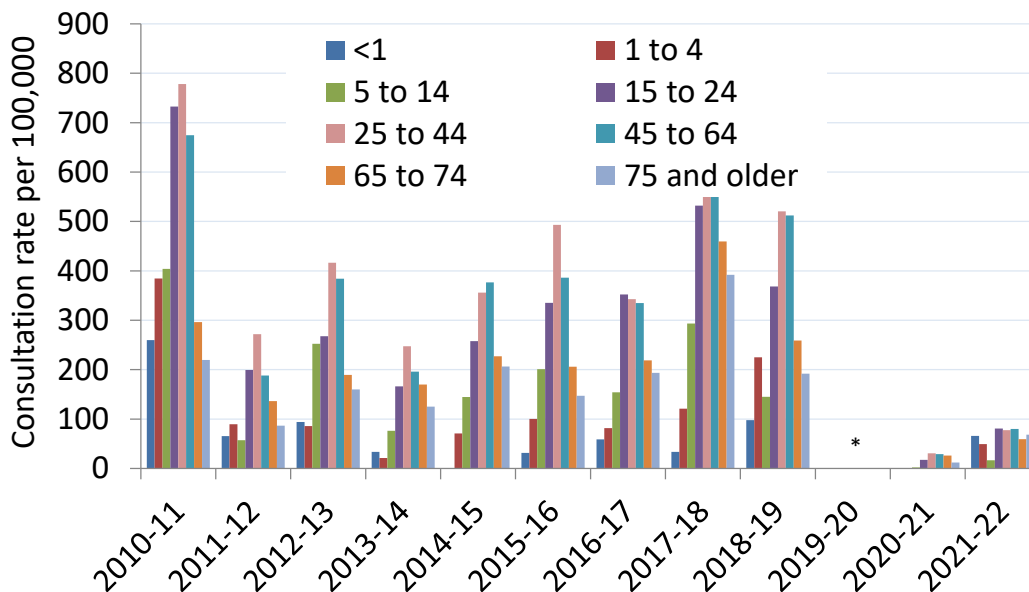
* Data collection through Audit+ began in 2010 (week 40)

Figure 2.1.3. Cumulative consultation rates for influenza-like illness, per season (from week 40 to week 20), in sentinel GP patients 2010/11 to 2021/22. Dominant circulating types of influenza are indicated for each season.



*Due to a technical issue it was not possible to calculate the cumulative sentinel GP ILI rate for the 2019/20 season

Figure 2.1.4. Age-group specific cumulative consultation rates for influenza-like illness, per season (from week 40 to week 20), in sentinel GP patients 2010/11 to 2021/22



*Due to a technical issue it was not possible to calculate the cumulative sentinel GP ILI rate by age group for the 2019/20 season

2.2 Community indicators - Virological surveillance in the community

Between 2021 week 40 and 2022 week 15 (4th October 2021 to 11th April 2022), there were 4,176 samples collected for virological testing by general practices in Wales. From this total, 211 samples were submitted by 15 sentinel GPs, a mean of 14 samples per participating practice. This is the fifth year that all sentinel GPs were asked to collect surveillance samples for an expanded number of clinical conditions, which include ARI (as well as SARS-CoV2), acute bronchitis, and bronchiolitis, in addition to ILI. Of the samples collected, 76 were clinically diagnosed with ILI (36.0%), 83 with ARI (39.3%), 24 with acute bronchitis (11.4%) and five with bronchiolitis (2.4%). Information was missing for 23 samples (10.9%).

Of the 211 patient samples submitted, all were tested. Of these, five were positive for influenza.

Surveillance samples are routinely tested for: influenza, SARS-CoV2, RSV, adenovirus, *Mycoplasma pneumoniae*, rhinovirus, parainfluenza, human metapneumovirus, human bocavirus, seasonal coronaviruses, enterovirus D-68 and other enteroviruses. One or more other causes of seasonal respiratory infection were detected in 39.8% (n=84) of samples, and 57.8% (n=122) were negative for all routinely tested pathogens.

Sample submissions by sentinel GPs peaked in week 48 of 2021 (week ending 5th December, 20 patient samples)(Figure 2.2.1).

Figure 2.2.1. Results from Public Health Wales GP sentinel virological surveillance for influenza and other seasonal causes of respiratory illness by Week, 2021/22. The sentinel GP ILI consultation rate per 100,000 is also included.

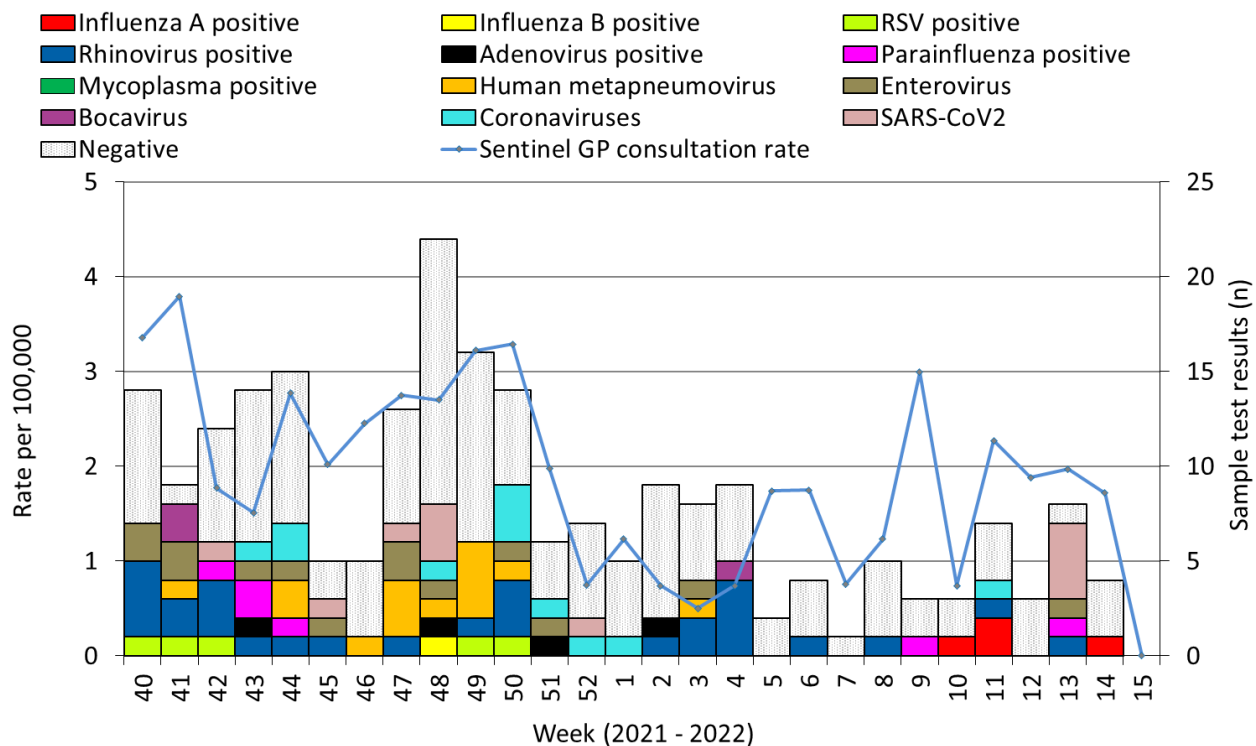


Table 2.2.1. Samples from sentinel GP patients with influenza-like symptoms testing positive for influenza and other respiratory pathogens between 2021 week 40 and 2022 week 15 by age group^{1,2}

Age Group	Samples Tested		All Influenza		Other		Negative	
	n	%	n	%	n	%	n	%
Under 1	7	3.4%	0	0.0%	6	7.0%	1	0.9%
1 to 4	23	11.2%	1	20.0%	19	22.1%	4	3.4%
5 to 9	9	4.4%	0	0.0%	4	4.7%	5	4.3%
10 to 14	8	3.9%	1	20.0%	6	7.0%	2	1.7%
15 to 24	22	10.7%	1	20.0%	5	5.8%	16	13.7%
25 to 34	26	12.6%	1	20.0%	9	10.5%	16	13.7%
35 to 44	28	13.6%	0	0.0%	9	10.5%	19	16.2%
45 to 64	55	26.7%	1	20.0%	19	22.1%	35	29.9%
65 to 74	20	9.7%	0	0.0%	6	7.0%	14	12.0%
75 and older	8	3.9%	0	0.0%	3	3.5%	5	4.3%
Total	206	100%	5	100%	86	100%	117	100%

¹ There was one sample from a sentinel GP patient which tested positive for three respiratory pathogens, 10 samples which tested positive for two respiratory pathogens and five samples from patients where age was missing.

² Surveillance samples are routinely tested for: influenza, SARS-CoV2, RSV, adenovirus, *Mycoplasma pneumoniae*, rhinovirus, parainfluenza, human metapneumovirus, human bocavirus, seasonal coronaviruses, enterovirus D-68 and other enteroviruses.

Of all symptomatic patients who visited a sentinel practice and were tested for seasonal respiratory pathogens between week 40 2021 and week 15 2022, 26.7% were aged 45 to 64 years (Table 2.2.1), the median age of patients tested was 37 years.

2.3 Hospital indicators - Virological surveillance

From 2021 week 40 to 2022 week 15, there were 192,595 samples collected and tested by Public Health Wales Microbiology services out of which 128,051 samples were from hospital patients presenting with symptoms of respiratory infection (Table 2.3.1). During 2018-19 a rapid test service for influenza was rolled in addition to existing PCR diagnostic services in most health boards. In the 2020-21 season, this service was expanded and was available across all health boards. The rapid service is intended to help guide patient pathways and improve timeliness of decisions on continuation of antiviral treatments. Samples collected can be tested using one of three systems, differing in their abilities to provide influenza sub-type information and to detect non-influenza pathogens.

Two of the systems used are PCR screens for influenza, RSV, adenovirus, *Mycoplasma pneumoniae*, rhinovirus, enterovirus, parainfluenza, human metapneumovirus, seasonal coronavirus, SARS-CoV2 and where possible, influenza A results are subtyped. The third system in use only screens for influenza A, influenza B, RSV and SARS-CoV2; and influenza A results are not subtyped. Patients may have more than one sample collected for an episode of respiratory illness and these samples could be tested using different test systems; patients who only had one sample collected and tested using the third platform are not included in the denominator for the number of patients screened for other pathogens included in respiratory surveillance.

Of the 128,051 testing episodes in hospital patients that had a sample collected from a hospital setting, all were tested for influenza and RSV, with 35.7% (45,734/128,051) tested for all respiratory pathogens and 64.3% (n=82,317/128,051) tested for influenza, RSV and SARS-CoV2 only.

The weekly number of patients tested for seasonal respiratory illness peaked during week 40 of 2021 (week ending 10th October 2021, n=9,641). Of the samples from patients in hospital, 38.6% (n=49,433) were collected from patients attending A&E or urgent care wards, 40.4% (n=51,687) and 7.9% (n=10,148) were collected from general inpatients wards and outpatient departments respectively, 1.9% (n=2,376) were collected from patients admitted to an intensive care and 11.3% (n=14,407) of samples were from unknown hospital locations.

Of the hospital patients tested, 0.32% (n=404) were confirmed with influenza, of whom 91.8% (n=371) had influenza A only, 24 patients had influenza B only and nine had dual infections of both influenza A and influenza B (Table 2.3.1). Of the samples testing positive for influenza A, 52.9% (n=201) were influenza A(H3N2), 5.8% (n=22) were influenza A(H1N1)pdm09 and 41.3% (n=157) were untyped.

The most commonly detected non-influenza respiratory pathogens were SARS-CoV2 (9.4%, 12,024/128,051) and rhinovirus (12.1%, 5,549/45,734).

Other detected causes of respiratory infection included: adenovirus (3.5%, 1,606/45,734), human metapneumovirus (3.4%, 1,556/45,734), seasonal coronavirus (3.2%, 1,467/45,734), enterovirus (3.1%, 1,402/45,734), parainfluenza (1.9%, 851/45,734), RSV (1.6%, 1,982/128,051), and *Mycoplasma pneumoniae* (0.01%, 3/45,734). Sixty-five percent (29,832/45,734) of patients tested for all nine routinely screened pathogens were negative, and from the patients that were only tested for influenza, RSV and SARS-CoV2, 90.3% (74,340/82,317) were negative for all three pathogens.

Table 2.3.1. Results from patients tested for influenza and RSV in Wales between 2021 week 40 and 2022 week 15, by sample location^{2,3}

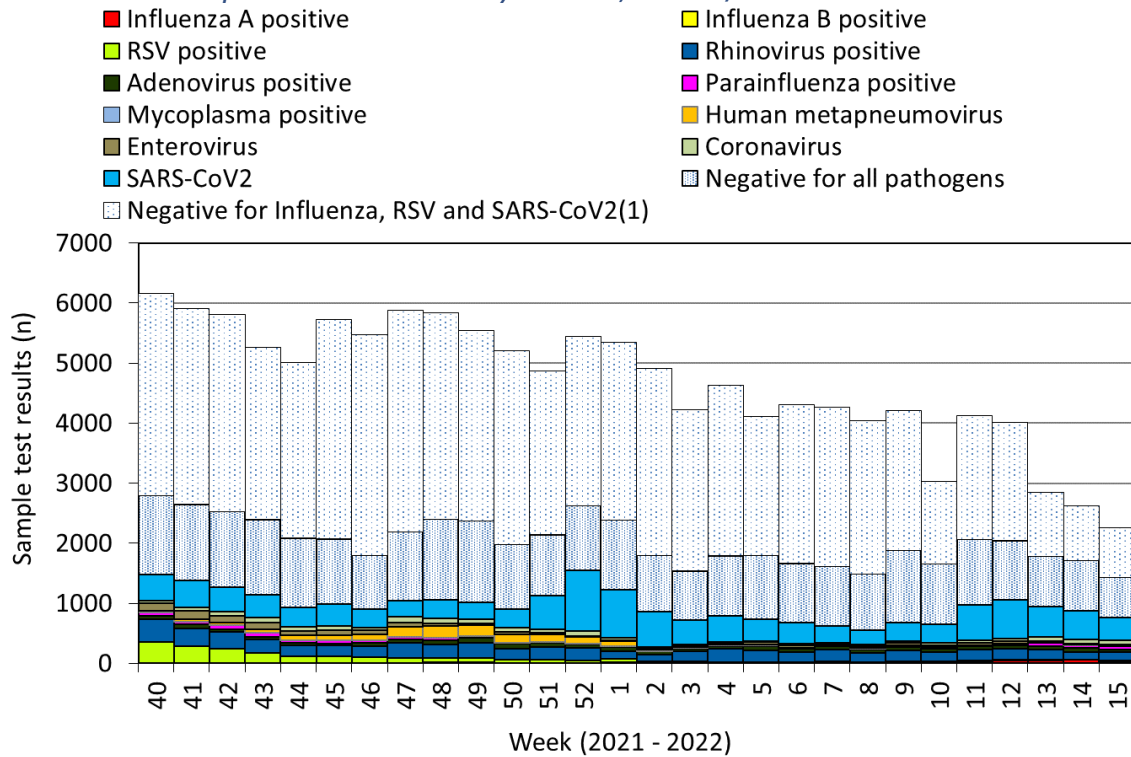
Sample Location	Samples tested		Influenza A		Influenza B		RSV		Negative ¹	
	n	%	n	%	n	%	n	%	n	%
Sentinel Practice	211	0.1%	4	0.8%	1	2.1%	5	0.2%	122	0.1%
Non-sentinel Practice	3965	2.1%	13	2.7%	1	2.1%	30	1.2%	3311	2.1%
Total Community Samples	4176	2.2%	17	3.5%	2	4.2%	35	1.4%	3433	2.1%
Hospital - General	76242	39.5%	171	35.6%	28	58.3%	1223	49.8%	62416	39.0%
Hospital - A&E	49433	25.6%	205	42.6%	5	10.4%	738	30.0%	39808	24.9%
Hospital - ITU	2376	1.2%	4	0.8%	0	0.0%	21	0.9%	1948	1.2%
Total Hospital Samples	128051	66.4%	380	79.0%	33	68.8%	1982	80.7%	104172	65.2%
Other / Unknown locations	60579	31.4%	84	17.5%	13	27.1%	440	17.9%	52243	32.7%
Total	192806	100%	481	100%	48	100%	2457	100%	159848	100%

¹This measure represents the number of samples negative for all pathogens routinely tested for. A proportion of samples included have only been tested for influenza, RSV and SARS-CoV2.

²Samples positive and negative will not add up to total screens as some individuals tested positive for more than one pathogen.

³Surveillance samples tested using a full PCR test are routinely tested for: influenza, RSV, adenovirus, *Mycoplasma pneumoniae*, rhinovirus, enterovirus, parainfluenza, human metapneumovirus and SARS-CoV2.

Figure 2.3.1. Results from respiratory tests carried out on samples from patients in hospitals in Wales by Week, 2021/22



¹ A proportion of samples have only been tested for influenza, RSV and SARS-CoV2.

Sporadic low numbers of influenza cases were confirmed between week 40 2021 to week 15 2022 (Figure 2.3.1). Influenza positivity in hospital samples did not exceed the threshold suggestive of seasonal circulation. Proportion of samples testing positive for influenza peaked in week 14 (n=55/2,520, 2.2% positivity). The peak week for sample test positivity for RSV during this period was week 40 of 2021 (week ending 10 October 2021, 355/5,968, 5.9%). This was the end of a peak in out of season RSV activity that was seen during the summer of 2021 from week 26 2021 to week 01 2022 [3].

Table 2.3.2. Patient samples from all hospital locations testing positive for influenza and RSV between 2021 week 40 and 2022 week 15 by age group^{2,3}

Age Group	Samples tested		All Influenza		RSV		Negative ¹	
	n	%	n	%	n	%	n	%
Under 1	3952	3.1%	12	3.0%	475	24.0%	1725	1.7%
1 to 4	5770	4.5%	35	8.7%	513	25.9%	1873	1.8%
5 to 9	2872	2.2%	14	3.5%	105	5.3%	1647	1.6%
10 to 14	2298	1.8%	8	2.0%	23	1.2%	1654	1.6%
15 to 24	7414	5.8%	75	18.6%	90	4.5%	6060	5.8%
25 to 34	12823	10.0%	39	9.7%	92	4.6%	11029	10.6%
35 to 44	10169	7.9%	22	5.4%	64	3.2%	8657	8.3%
45 to 64	25121	19.6%	52	12.9%	170	8.6%	21735	20.9%
65 to 74	18765	14.7%	46	11.4%	126	6.4%	16519	15.9%
75 and older	38867	30.4%	101	25.0%	324	16.3%	33273	31.9%
Total	128051	100%	404	100%	1982	100%	104172	100%

¹This measure represents the number of samples negative for all pathogens routinely tested for. A proportion of samples included have only been tested for influenza, RSV and SARS-CoV2.

²Samples positive and negative will not add up to total screens as some individuals tested positive for more than one pathogen.

³Samples are routinely tested for: influenza, RSV, adenovirus, *Mycoplasma pneumoniae*, rhinovirus, enterovirus, parainfluenza, human metapneumovirus and SARS-CoV2.

Table 2.3.3a. Patients testing positive for influenza in Wales, between 2021 week 40 and 2022 week 15, by hospital location and age group

Age Group	General In & Out Patient Wards		Urgent Care & A/E Wards		ICU Wards	
	n	%	n	%	n	%
Under 1	10	5.2%	2	1.0%	0	0.0%
1 to 4	23	12.0%	12	5.8%	0	0.0%
5 to 9	12	6.3%	2	1.0%	0	0.0%
10 to 14	6	3.1%	2	1.0%	0	0.0%
15 to 24	22	11.5%	53	25.5%	0	0.0%
25 to 34	13	6.8%	26	12.5%	0	0.0%
35 to 44	8	4.2%	13	6.3%	1	25.0%
45 to 64	21	10.9%	30	14.4%	1	25.0%
65 to 74	20	10.4%	24	11.5%	2	50.0%
75 and older	57	29.7%	44	21.2%	0	0.0%
Total	192	100%	208	100%	4	100%

Table 2.3.3b. Patients testing positive for RSV in Wales, between 2021 week 40 and 2022 week 15, by hospital location and age group

Age Group	General In & Out		Urgent Care &		ICU Wards	
	Patient Wards		A/E Wards			
	n	%	n	%	n	%
Under 1	311	25.4%	160	21.7%	4	0.0%
1 to 4	336	27.5%	172	23.3%	5	0.0%
5 to 9	81	6.6%	24	3.3%	0	0.0%
10 to 14	18	1.5%	5	0.7%	0	0.0%
15 to 24	43	3.5%	43	5.8%	4	0.0%
25 to 34	48	3.9%	43	5.8%	1	0.0%
35 to 44	37	3.0%	26	3.5%	1	0.0%
45 to 64	84	6.9%	83	11.2%	3	0.0%
65 to 74	64	5.2%	61	8.3%	1	0.0%
75 and older	201	16.4%	121	16.4%	2	0.0%
Total	1223	100%	738	100%	21	0%

Of all the symptomatic patients in hospitals who were tested for seasonal respiratory pathogens between 2021 week 40 and 2022 week 15, 30.4% were aged 75 or older and 19.6% were 45 to 64 years (Table 2.3.2), the median age of patients tested was 60 years.

For those testing positive for influenza (n=404), 25.0% were aged 75 years and over and 18.6% were aged 15 to 24 years; the median patient age was 41 years. The median age of patients testing positive for RSV (n=1,982) was 5 years, 25.9% of all these patients were aged 1 to 4 years and 24.0% were aged under 1 years old (Table 2.3.2).

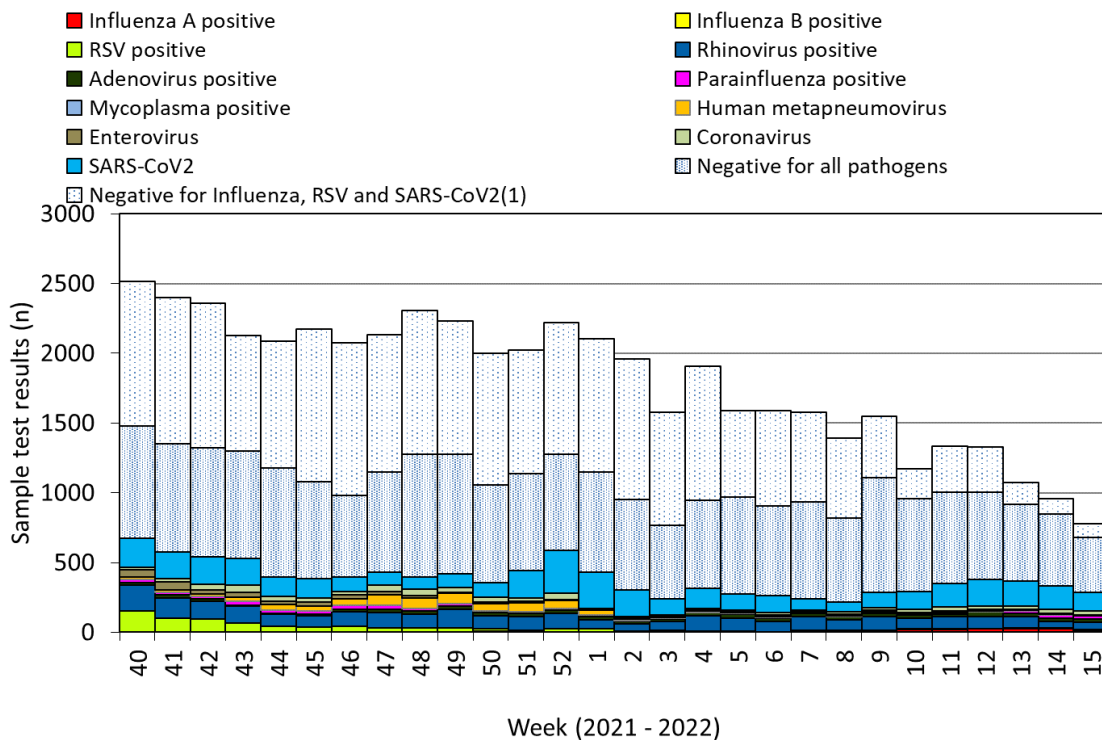
Patients who were aged 75 years and older accounted for the highest proportion of confirmed influenza cases in general inpatient and outpatient hospital wards (57/192, 29.7%). Patients who were aged 15-24 years old accounted for the highest proportion of confirmed influenza cases in accident & emergency or urgent care ward (53/208, 25.5%) (Table 2.3.3a).

Children aged 1 to 4 accounted for the highest proportion of confirmed cases of RSV in general hospital wards (336/1,223, 27.5%) and accident & emergency or urgent care ward (172/738, 23.3%) (Table 2.3.3b).

2.4 Hospital indicators - patients in accident and emergency departments

During the period 2021 week 40 to 2022 week 15, 49,433 patients attending an accident & emergency or urgent care ward (A&E ward) with symptoms of an acute respiratory infection had samples collected and were tested. These samples may include screening tests for non-symptomatic individuals. Of the 49,433 patients attending an A&E ward that had a sample collected, all were tested for influenza, RSV and SARS-CoV2, 54.5% (n=26,917/49,433) were tested for all respiratory pathogens included for surveillance purposes and 45.5% (n=22,516/49,433) were only tested for influenza, RSV and SARS-CoV2.

Figure 2.4.1. Results from respiratory tests carried out on samples from patients in A&E or urgent care units in Wales by Week, 2021/22



¹ A small proportion of samples included have only been tested for influenza, RSV and SARS-CoV2.

From the A&E patients tested, 208 were confirmed with influenza, of whom 203 were positive for influenza A only, three were positive for influenza B only and two had dual infections of both influenza A and influenza B. Typing data was available for 152 influenza A samples, 11 samples were influenza A(H1N1) pdm09 and 141 were influenza A(H3).

The most commonly detected non-influenza respiratory pathogens from the A&E patients tested were SARS-CoV (15.7%, n= 4,238/49,433), rhinovirus (9.9%, n=2,665/26,917) and adenovirus (2.2%, n= 589/26,917). Other detected causes of respiratory infection included: enterovirus (1.8%, n=477/26,917), seasonal coronaviruses (2.6%, n=705/26,917), RSV (1.5%, n=738/49,433), parainfluenza (1.4%, n=376/26,917) and human metapneumovirus (2.6%, n=700/26,917). Seventy-one percent of the 26,917 A&E patient samples receiving a full PCR screen tested negative for all nine pathogens, and from the patients that were only tested for influenza, RSV and SARS-CoV2, 91.9% (20,702/22,516) were negative for all three pathogens.

Table 2.4.1. Samples from patients in A&E testing positive for influenza and RSV between 2021 week 40 and 2022 week 15 by age group^{2,3}

Age Group	Samples Tested		Influenza A		Influenza B		RSV		Negative ¹	
	n	%	n	%	n	%	n	%	n	%
Under 1	1083	2.2%	2	1.0%	0	0.0%	160	21.7%	411	1.0%
1 to 4	2023	4.1%	11	5.4%	3	60.0%	172	23.3%	678	1.7%
5 to 9	759	1.5%	2	1.0%	0	0.0%	24	3.3%	392	1.0%
10 to 14	670	1.4%	2	1.0%	0	0.0%	5	0.7%	492	1.2%
15 to 24	2859	5.8%	53	25.9%	0	0.0%	43	5.8%	2188	5.5%
25 to 34	4167	8.4%	26	12.7%	0	0.0%	43	5.8%	3335	8.4%
35 to 44	3790	7.7%	13	6.3%	0	0.0%	26	3.5%	3070	7.7%
45 to 64	9870	20.0%	29	14.1%	1	20.0%	83	11.2%	8250	20.7%
65 to 74	7691	15.6%	23	11.2%	1	20.0%	61	8.3%	6624	16.6%
75 and older	16521	33.4%	44	21.5%	0	0.0%	121	16.4%	14368	36.1%
Total	49433	100%	205	100%	5	100%	738	100%	39808	100%

¹ This measure represents the number of samples negative for all pathogens routinely tested for. A small proportion of samples included have only been tested for influenza, RSV and SARS-CoV2.

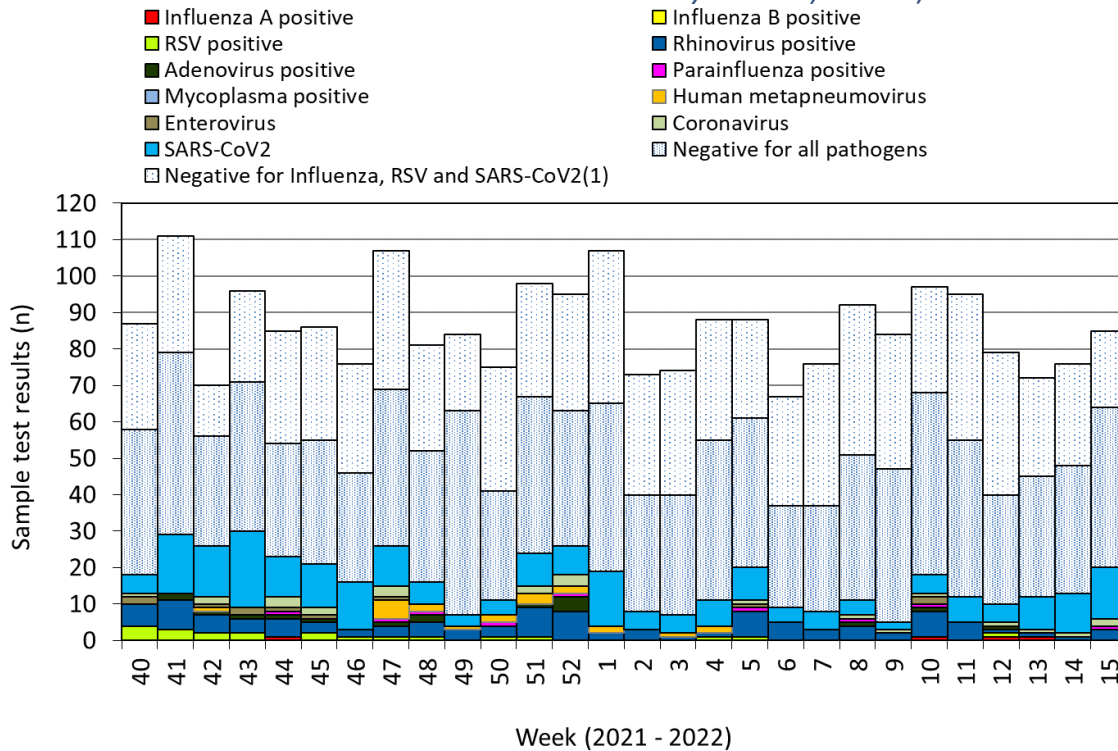
² Samples positive and negative will not add up to total screens as some individuals tested positive for more than one pathogen.

³ Samples are routinely tested for: influenza, RSV, adenovirus, *Mycoplasma pneumoniae*, rhinovirus, enterovirus, parainfluenza and human metapneumovirus and SARS-CoV2.

2.5 Hospital indicators - patients in intensive care units

During the period 2021 week 40 to 2022 week 15, 2,376 samples were collected from patients in an intensive care setting with symptoms of an acute respiratory infection. Of the 2,376 patients in an intensive care unit that had a sample collected, all were tested for influenza and RSV, with 59.3% (n=1,410/2,376) tested for all respiratory pathogens included for surveillance purposes and 40.7% (n=966/2,376) tested for influenza, RSV and SARS-CoV2 only.

Figure 2.5.1. Results from respiratory tests carried out on samples from patients in intensive care units in Wales by Week, 2021/22



¹ A small proportion of samples included have only been tested for influenza, RSV and SARS-CoV2.

Four cases of influenza were detected in ICU settings throughout the whole season. All cases were confirmed with influenza A with one case subtyped as influenza A (H3).

The most commonly detected non-influenza respiratory pathogens, from the ICU patients tested, were SARS-CoV2 (10.1%, n= 240/2,376) and rhinovirus (7.7%, n=108/1,410). Other detected causes of respiratory infection included: human seasonal coronaviruses (1.8%, n=25/1,410), metapneumovirus (1.5% n=21/1,410), adenovirus (1.2%, n=17/1,410), RSV (0.9%, n=21/2,376), enterovirus (0.8%, n=11/1,410) and parainfluenza (0.6%, n=9/1,410). Seventy-six percent (n=1,071/1,410) of ICU patient samples screened for all nine pathogens tested negative, and from the ICU patients that were only tested for influenza, RSV and SARS-CoV2, 90.8% (n=877/966) were negative for those pathogens (Table 2.5.1).

Table 2.5.1. Samples from patients in ICU/HDU testing positive for influenza and RSV between 2021 week 40 and 2022 week 15 by age group²

Age Group	Samples Tested		Influenza A		Influenza B		RSV		Negative ¹	
	n	%	n	%	n	%	n	%	n	%
Under 1	439	18.5%	0	0.0%	0	0.0%	4	0.0%	388	19.9%
1 to 4	35	1.5%	0	0.0%	0	0.0%	5	0.0%	6	0.3%
5 to 9	9	0.4%	0	0.0%	0	0.0%	0	0.0%	4	0.2%
10 to 14	10	0.4%	0	0.0%	0	0.0%	0	0.0%	7	0.4%
15 to 24	66	2.8%	0	0.0%	0	0.0%	4	0.0%	50	2.6%
25 to 34	118	5.0%	0	0.0%	0	0.0%	1	0.0%	93	4.8%
35 to 44	179	7.5%	1	0.0%	0	0.0%	1	0.0%	135	6.9%
45 to 64	642	27.0%	1	0.0%	0	0.0%	3	0.0%	515	26.4%
65 to 74	487	20.5%	2	0.0%	0	0.0%	1	0.0%	396	20.3%
75 and older	391	16.5%	0	0.0%	0	0.0%	2	0.0%	354	18.2%
Total	2376	100%	4	0%	0	0%	21	0%	1948	100%

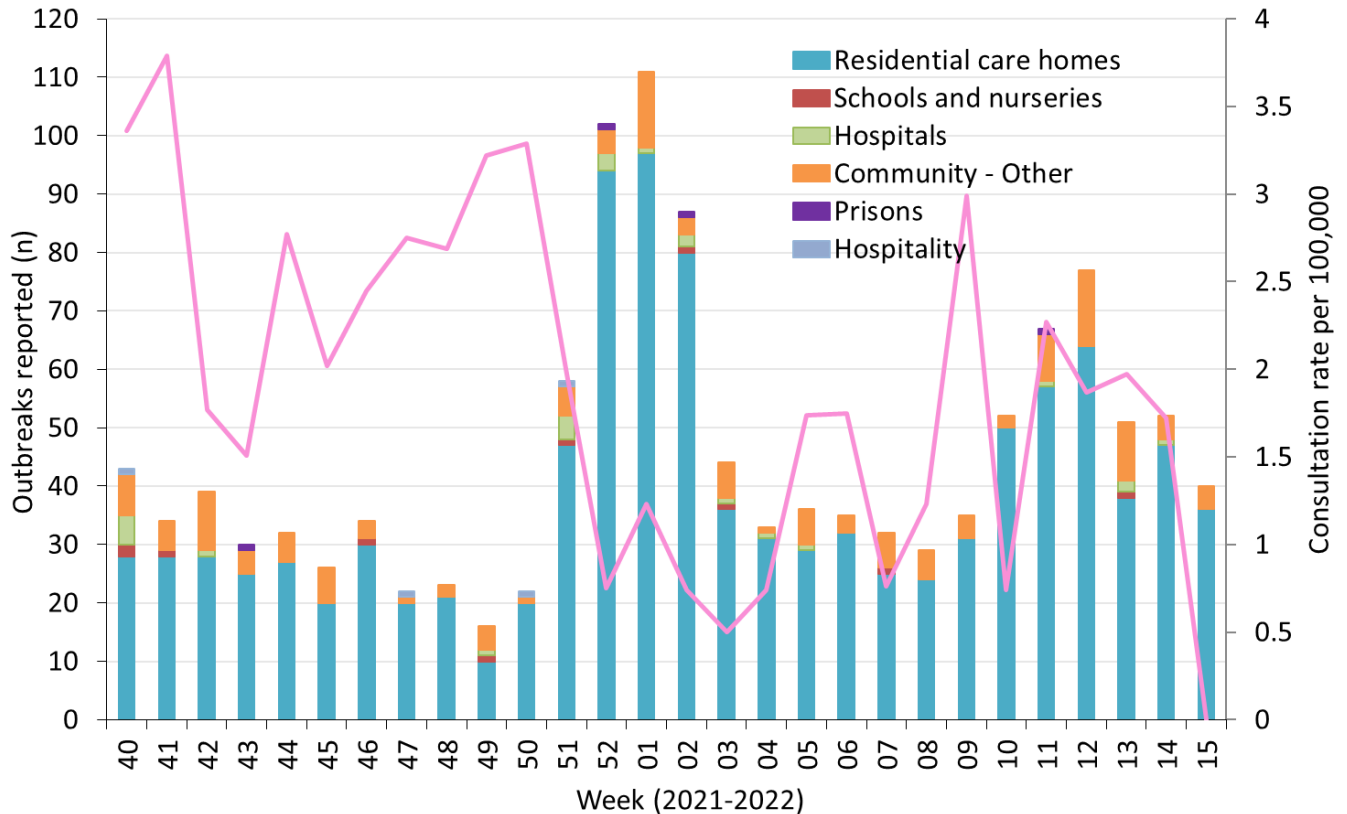
¹ This measure represents the number of samples negative for all pathogens routinely tested for. A small proportion of samples included have only been tested for influenza, RSV and SARS-CoV2.

² Samples are routinely tested for: influenza, RSV, adenovirus, *Mycoplasma pneumoniae*, rhinovirus, enterovirus, parainfluenza and human metapneumovirus and SARS-CoV2.

2.6 Outbreaks of influenza, ILI or acute respiratory illness

During the 2021/22 influenza season in Wales there were 1,262 outbreaks of influenza, ILI or acute respiratory illness (ARI) reported to Public Health Wales Health Protection Teams (Figure 2.6.1), compared to 2,894 reported outbreaks during the 2020/21 season. Outbreaks were reported from 2021 week 40 to 2022 week 15. Of these, 1,260 outbreaks were SARS-CoV2, of which 1,253 were confirmed, and seven were suspected. Of the confirmed SARS-CoV2 incidents, 36 had only one reported case. Of the other outbreaks, both were Influenza A (one untyped and one H3). Eighty-five percent (n=1,075) of the outbreaks were reported from residential homes, 2% (n=24) were reported from hospital, 0.8% (n=10) were reported from school or nursery settings, 0.3% (n=4) were reported from a hospitality setting, 0.3% (n=4) were reported from prison and 11% (n=145) were reported from other community settings. Forty-eight percent (n=602) of outbreaks occurred in South East Wales (covering Aneurin Bevan UHB, Cardiff and Vale UHB and Cwm Taf Morgannwg UHB areas), 30% (n=380) of the outbreaks occurred in Mid and West Wales (covering Swansea Bay UHB, Hywel Dda UHB and Powys THB), and 22% (n=280) of the outbreaks were reported from North Wales (covering Betsi Cadwaladr UHB).

Figure 2.6.1. Outbreaks of acute respiratory illness reported to Public Health Wales Health Protection Team during the 2021/22 season, and sentinel GP ILI consultation rate per 100,000



2.7 Excess mortality during the influenza season

There was no notable influenza season during 2021-22, and influenza-related mortality would be expected to be at extremely low levels. However, surveillance of weekly all-cause mortality in Wales during 2021/22 was carried out using the EuroMoMo method by UKHSA [4]. In Wales, during the influenza season significant excess mortality was seen during weeks 40, 42-43, 45 and 51 of 2021 at an all Wales level. For further information on COVID-19 mortality in Wales see:

<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/> and for comparative data on excess mortality surveillance across Europe see: <https://www.euromomo.eu/>

3. Influenza vaccine effectiveness

3.1 Effectiveness of the 2021/22 seasonal influenza vaccine in the UK

During 2021/22 an adjuvanted trivalent vaccine (aTIV) was available for use in those aged 65 years and older. A high dose trivalent vaccine (TIV-HD) was also available for this age group, although it was not recommended for use in NHS Wales due to the higher list price. For the third time this season a cell grown quadrivalent adjuvanted vaccine (QIVc) was available for those eligible aged over 9 years in addition to the standard egg cultured quadrivalent influenza vaccine (QIVe) that is licensed for under 65 year olds.

End of season estimates of influenza vaccine effectiveness against laboratory confirmed influenza in the UK were published in the PHE annual report [4]. Estimated overall adjusted vaccine effectiveness for the 2021/22 season in those aged 50 years and over measured using a test-negative case control design was 26% (95% CI 5% to 43%). At 76% (95% CI 30% to 92%) effectiveness was estimated to be higher against influenza A(H1N1)pdm09 compared to A(H3), 28% (95% CI -3% to 50%). The overall adjusted vaccine effectiveness for LAIV in children was 72% (95% CI 50% to 85%).

4. Influenza immunisation in Wales 2021/22

4.1 Data collection

4.1.1 Primary Care data

Data on influenza immunisation for the 2021/22 campaign were collected directly from GP IT systems using the Audit+ Data Quality System. Audit+ interrogates GP systems using specified Read codes and automatically relays the relevant anonymous aggregate data to a central database on a weekly basis. This provides the information required to monitor uptake of influenza immunisation in Wales, whilst minimising impact on GPs. Data were collected on immunisations given and recorded on GP systems between 1st September 2021 and 29th April 2022.

If data from individual General Practices were not received for a particular week, the most recent submission of data from the relevant practice was identified and used. This report is based on data submitted from all 391 practices in Wales.

Data were collected on immunisations given to those aged 50 years and older, those aged between six months and 49 years recorded as belonging to one or more clinical risk group (in total and by specific risk group) and children aged two to three years (age on 31st August 2021). Immunisation uptake figures for pregnant women calculated from practice data represent the proportion of women whose practice records contained Read codes associated with pregnancy at any point during September 2021 to January 2022 who had received an influenza vaccine since 1st September 2021. Risk categories were based on the Read and SNOMED code groups defined in the [PRIMIS Seasonal Influenza Vaccine Uptake Reporting Specification for 2021/22](#) [5].

4.1.2 Point of delivery survey data of coverage in pregnant women

During January 2022 a survey was conducted with Heads of Midwifery and midwifery colleagues in all Welsh health boards on how many women delivering in the major maternity units recalled being offered influenza immunisation, and how many recalled receiving it [6]. During the five-day period, information was collected from 391 women giving birth.

4.1.3 Nursery, Reception class to School Year 6 classes (children aged four to 10 years) data

Data on uptake of Live Attenuated Influenza Vaccine (LAIV) in schoolchildren in reception class and in school years 1 to 6 (children aged four to 10 years of age as at 31st August 2021) were manually submitted by health board Immunisation Coordinators on a fortnightly basis throughout the campaign through an online data reporting survey hosted on SmartSurvey. Uptake figures represent the proportion of children that received LAIV at a school immunisation session. Data on uptake of LAIV in three year old children in nursery classes in Cwm Taf Morgannwg UHB were also manually submitted by the health board throughout the campaign as part of a nursery school based influenza immunisation programme. Children not attending school and children who were vaccinated in primary care are not included in the data used to calculate uptake in these age groups to avoid double counting of children recorded as vaccinated in both school and general practice datasets. This season, where children who were not in

school for reasons related to COVID-19 or were in the process of moving, these children were included the denominator if that child was on the school roll on the date school vaccinations took place.

4.1.4 NHS staff data

Immunisation uptake data for NHS staff employed by health boards and trusts were provided on a monthly basis from October 2021 to March 2022 by health board and trust occupational health departments. Denominator data were sourced at the start of the campaign from health boards and trusts using Electronic Staff Record (ESR) staff groupings. In Wales all NHS staff are offered influenza immunisation, however the approach to offering influenza immunisation to staff not normally considered to have direct patient contact may vary between health boards and trusts. Data provided relates to immunisations given to all staff and staff with direct patient contact which are calculated by aggregating data for ESR staff-groups which would normally have direct contact with patients.

4.1.5 Pharmacy data

Immunisations given in community pharmacies are recorded in the Choose Pharmacy data system. This is an anonymised dataset that provides information on location and health board of the pharmacy; eligibility of the patient and date of vaccination. This data provides a detailed breakdown of carers, however accurate equivalent denominators are not currently available, so it is not possible to calculate uptake. A number of pharmacy vaccinations may also be recorded in general practice systems, so it is not possible to add the number of pharmacy vaccinations to the number of general practice vaccinations as some patients may be double-counted.

4.2 Influenza immunisation uptake

4.2.1 Uptake in children

Of a total of 64,832 children aged two and three years old (as at 31 August 2021), 47.6% (n=30,853) were immunised against influenza in general practice between 1st September 2021 and 29th April 2022. The number of immunisations given to children aged two and three years old in general practice decreased by 6,417 in 2021/22 compared to 2020/21. Uptake in two and three year olds varied by health board, ranging from 40.0% (Cwm Taf Morgannwg UHB) to 57.0% (Powys Teaching HB). Uptake in three year olds (48.2%) was higher compared to uptake in two year olds (47.0%) (Table 4.2.1).

Table 4.2.1. Uptake of influenza immunisation in general practice in children aged two and three years by health board, Wales, 2021/22¹

Health Board	Children aged 2 years			Children aged 3 years			Combined Uptake (%)
	Immunised (n)	Denominator (n)	Uptake (%)	Immunised (n)	Denominator (n)	Uptake (%)	
Aneurin Bevan UHB	3143	6399	49.1	3430	6664	51.5	50.3
Betsi Cadwaladr UHB	3210	6532	49.1	3745	7025	53.3	53.3
Cardiff and Vale UHB	2333	5352	43.6	2605	5751	45.3	45.3
Cwm Taf Morgannwg UHB	2154	4832	44.6	1983	4955	40.0	40.0
Hywel Dda UHB	1640	3504	46.8	1739	3675	47.3	47.3
Powys Teaching HB	715	1191	60.0	738	1295	57.0	57.0
Swansea Bay UHB	1599	3696	43.3	1819	3961	45.9	44.6
Wales	14794	31506	47.0	16059	33326	48.2	47.6

¹Children aged three years from Cwm Taf Morgannwg UHB were offered influenza immunisation in nurseries attached to primary schools. Data presented in Table 4.2.1 are provided by general practices and it is likely information for a small proportion of children immunised in nursery sessions in Cwm Taf Morgannwg UHB was not entered into GP records. As a result, uptake presented here for three year olds in Cwm Taf Morgannwg UHB is likely to underestimate true uptake (see Table 4.2.2 for further information).

In Cwm Taf Morgannwg UHB, LAIV was offered to children aged three years old in nursery classes attached to primary schools. Uptake in this group of children was 61.9% (Table 4.2.2), an increase from 53.1% in 2020/21 in this same age group. Of a total of 4,955 three year old children registered with a GP in Cwm Taf Morgannwg UHB, 3,075 (62.1%) were also recorded in the nursery school data.

Table 4.2.2. Uptake of influenza immunisation in children aged three years in nursery classes in Cwm Taf Morgannwg UHB, 2021/22

Health Board	Schools targeted (n)	Children aged 3 years (Nursery classes)		
		Immunised (n)	Denominator (n)	Uptake (%)
Cwm Taf Morgannwg UHB	183	1902	3075	61.9

LAIV was offered in 1,205 schools in Wales to children in reception class, and School Years 1 to 6. Of the 243,144 eligible children who were aged four to 10 years on 31st August 2021, 68.7% (167,031) were immunised against influenza. This decreased compared to 71.5% in 2020/21. Uptake ranged by HB from 60.6% (Cardiff and Vale UHB) to 73.9% (Hywel Dda UHB) (Table 4.2.3).

Uptake in school reception classes (children four to five years of age) decreased to 67.5% (21,624/32,048) from 72.4% in the same age group last year. Uptake varied by HB, ranging from 62.7% (Cardiff and Vale UHB) to 71.2% (Hywel Dda UHB) (Table 4.2.4).

Uptake in School Year 1 (children five to six years of age) decreased to 69.5% (23,385/33,655) from 72.4% in the same age group last year. Uptake varied by HB, ranging from 65.3% (Cardiff and Vale UHB) to 75.6% (Powys Teaching HB) (Table 4.2.4).

Uptake in School Year 2 (children six to seven years of age) decreased to 69.7% (23,961/34,380) from 72.4% in the same age group last year. Uptake varied by HB, ranging from 61.9% (Cardiff and Vale UHB) to 75.2% (Powys Teaching HB) (Table 4.2.4).

Uptake in School Year 3 (children seven to eight years of age) decreased to 69.1% (23,778/34,409) from 71.4% in the same age group last year. Uptake varied by HB, ranging from 59.6% (Cardiff and Vale UHB) to 76.5% (Hywel Dda UHB) (Table 4.2.4).

Uptake in School Year 4 (children eight to nine years of age) decreased to 69.2% (24,340/35,193) from 70.2% in the same age group last year. Uptake varied by HB, ranging from 60.1% (Cardiff and Vale UHB) to 75.7% (Powys Teaching HB) (Table 4.2.4).

Uptake in School Year 5 (children nine to 10 years of age) decreased to 68.2% (24,859/36,445) from 70.6% in the same age group last year. Uptake varied by HB, ranging from 57.8% (Cardiff and Vale UHB) to 74.2% (Powys Teaching HB) (Table 4.2.4).

Uptake in School Year 6 (children 10 to 11 years of age) decreased to 67.8% (25,084/37,014) from 71.0% in the same age group last year. Uptake varied by HB, ranging from 57.8% (Cardiff and Vale UHB) to 73.1% (Swansea Bay UHB) (Table 4.2.4).

Table 4.2.3. *Uptake of influenza immunisation in all eligible school children by health board, Wales, 2021/22*

Health Board	Schools Targeted (n)	All children aged 4 to 10 years		
		Immunised (n)	Denominator (n)	Uptake (%)
Aneurin Bevan UHB	205	31950	48134	66.4
Betsi Cadwaladr UHB	364	36688	52809	69.5
Cardiff and Vale UHB	153	24277	40032	60.6
Cwm Taf Morgannwg UHB	183	25818	36081	71.6
Hywel Dda UHB	77	20551	27816	73.9
Powys Teaching HB	83	6972	9573	72.8
Swansea Bay UHB	140	20775	28699	72.4
Wales	1205	167031	243144	68.7

Table 4.2.4. Uptake of influenza immunisation in school children aged four to ten years by health board, Wales, 2021/22

Health Board	Schools targeted (n)	School children aged:						
		4 years Uptake (%)	5 years Uptake (%)	6 years Uptake (%)	7 years Uptake (%)	8 years Uptake (%)	9 years Uptake (%)	10 years Uptake (%)
Aneurin Bevan UHB	205	63.6	65.4	67.2	67.4	67.2	66.4	67.2
Betsi Cadwaladr UHB	364	68.7	69.5	70.3	70.6	69.8	69.4	68.0
Cardiff and Vale UHB	153	62.7	65.3	61.9	59.6	60.1	57.8	57.8
Cwm Taf Morgannwg UHB	183	71.1	72.7	71.8	71.3	71.8	70.8	71.5
Hywel Dda UHB	77	71.2	74.6	74.6	76.5	74.7	73.9	71.6
Powys Teaching HB	83	66.6	75.6	75.2	73.1	75.7	74.2	69.2
Swansea Bay UHB	140	70.4	71.3	74.4	71.3	73.3	72.8	73.1
Wales	1205	67.5	69.5	69.7	69.1	69.2	68.2	67.8

This influenza season LAIV was offered in 241 secondary schools in Wales to children in School Years 7 to 11. Of the 173,628 eligible children who were aged 11 to 15 years on 31st August 2021, 58.2% (101,009) were immunised against influenza. Uptake ranged by HB from 51.0% (Betsi Cadwaladr UHB) to 68.7% (Powys Teaching HB) (Table 4.2.5).

Uptake in School Year 7 (children 11 to 12 years of age) was 64.7% (22,881/35,367). Uptake varied by HB, ranging from 57.3% (Betsi Cadwaladr UHB) to 72.5% (Powys Teaching HB) (Table 4.2.6).

Uptake in School Year 8 (children 12 to 13 years of age) was 60.2% (20,639/34,292). Uptake varied by HB, ranging from 53.3% (Betsi Cadwaladr UHB) to 72.6% (Powys Teaching HB) (Table 4.2.6).

Uptake in School Year 9 (children 13 to 14 years of age) was 58.0% (20,841/35,949). Uptake varied by HB, ranging from 51.3% (Betsi Cadwaladr UHB) to 67.9% (Swansea Bay UHB) (Table 4.2.6).

Uptake in School Year 10 (children 14 to 15 years of age) was 54.9% (19,047/34,722). Uptake varied by HB, ranging from 48.2% (Betsi Cadwaladr UHB) to 67.7% (Swansea Bay UHB) (Table 4.2.6).

Uptake in School Year 11 (children 15 to 16 years of age) was 52.9% (17,301/33,298). Uptake varied by HB, ranging from 44.8% (Betsi Cadwaladr UHB) to 72.0% (Powys Teaching HB) (Table 4.2.6).

Table 4.2.5. Uptake of influenza immunisation in secondary school children by health board, Wales, 2021/22

Health Board	Schools Targeted (n)	All children aged 11 to 15 years		
		Immunised (n)	Denominator (n)	Uptake (%)
Aneurin Bevan UHB	42	18354	33171	55.3
Betsi Cadwaladr UHB	68	19471	38160	51.0
Cardiff and Vale UHB	35	15596	27217	57.3
Cwm Taf Morgannwg UHB	30	14749	25899	56.9
Hywel Dda UHB	17	13363	20697	64.6
Powys Teaching HB	18	5066	7370	68.7
Swansea Bay UHB	31	14410	21114	68.2
Wales	241	101009	173628	58.2

Table 4.2.6. Uptake of influenza immunisation in school children aged 11 to 15 years by health board, Wales, 2021/22

Health Board	Schools targeted (n)	School children aged:				
		11 years Uptake (%)	12 years Uptake (%)	14 years Uptake (%)	14 years Uptake (%)	15 years Uptake (%)
Aneurin Bevan UHB	42	61.1	55.6	56.2	52.4	50.9
Betsi Cadwaladr UHB	68	57.3	53.3	51.3	48.2	44.8
Cardiff and Vale UHB	35	65.3	63.5	56.3	51.1	51.0
Cwm Taf Morgannwg UHB	30	67.1	59.3	56.4	53.8	47.3
Hywel Dda UHB	17	70.7	65.3	65.5	60.9	59.9
Powys Teaching HB	18	72.5	72.6	62.8	64.3	72.0
Swansea Bay UHB	31	71.1	67.5	67.9	67.7	66.9
Wales	241	64.7	60.2	58.0	54.9	52.9

Uptake in children at risk aged two to three years was 55.0% and ranged by health board from 47.8% (Cwm Taf Morgannwg UHB) to 59.7% (Betsi Cadwaladr UHB). Uptake in children at risk aged four to 10 years was 39.3% and ranged by health board from 9.1% (Cardiff and Vale UHB) to 60.2% (Powys THB). The proportion of children in a risk group vaccinated aged four to 10 years may be higher as some vaccinations given in school sessions will not be recorded on the child's General Practice record. Uptake in children at risk aged 11 to 17 years was 34.2% and ranged by health board from 16.4% (Cardiff and Vale UHB) to 48.6% (Swansea Bay UHB) (Table 4.2.7).

Table 4.2.7. Uptake of influenza immunisation in children aged two to seventeen with a risk condition by health board, Wales, 2021/22^{1,2,3}

Health Board	Children aged 2-3 years			Children aged 4-10 years			Children aged 11-17 years		
	Immunised (n)	Denominator (n)	Uptake (%)	Immunised (n)	Denominator (n)	Uptake (%)	Immunised (n)	Denominator (n)	Uptake (%)
Aneurin Bevan UHB	284	481	59.0	1776	3336	53.2	1812	3945	45.9
Betsi Cadwaladr UHB	243	407	59.7	1738	3448	50.4	1772	4503	39.4
Cardiff and Vale UHB	176	318	55.3	268	2937	9.1	566	3444	16.4
Cwm Taf Morgannwg UHB	165	345	47.8	775	2735	28.3	647	3125	20.7
Hywel Dda UHB	83	162	51.2	633	1710	37.0	761	2400	31.7
Powys Teaching HB	41	72	56.9	360	598	60.2	364	809	45.0
Swansea Bay UHB	116	230	50.4	909	1672	54.4	1048	2156	48.6
Wales	1108	2015	55.0	6459	16436	39.3	6970	20382	34.2

¹Age as at 31/08/2021.

²Data from Audit+

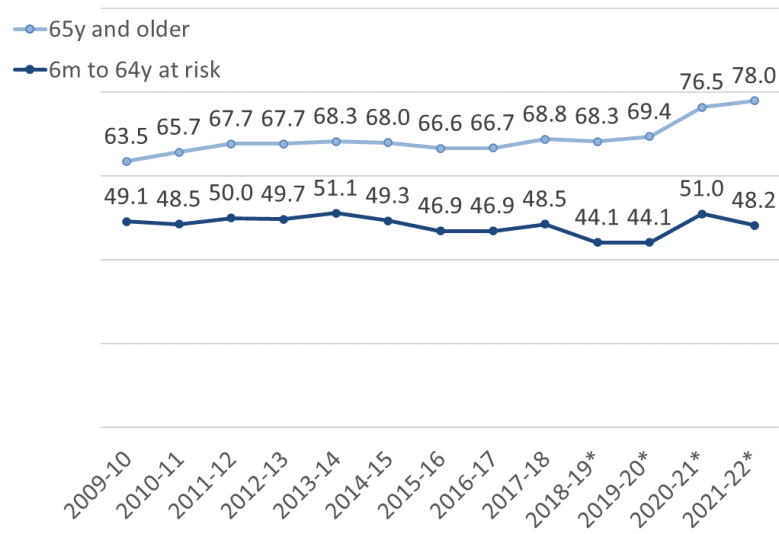
³All children aged four to 10 years are eligible for immunisation through school vaccination sessions. Data presented here for four to 10 year olds in clinical risk groups show the numbers of patients at clinical risk, whose GP record contains appropriate influenza vaccination Read codes; and is likely to underestimate true uptake in the group.

4.2.2 Uptake in those aged 65 years and older and aged six months to 64 years in a clinical risk group

Uptake of influenza vaccine in those aged 65 years and older was 78.0%, an increase compared to 76.5% in the 2020/21 season (Figure 4.2.1). Of all influenza immunisations given to those aged 65 years and over, 90% were delivered by the week ending 28th November 2021 (Figure 4.2.2). Uptake varied by HB from 75.3% (Powys Teaching HB) to 80.0% (Aneurin Bevan UHB), (Table 4.2.8, Figure 4.2.3) and ranged by Local Authority (LA) area from 69.3% (Merthyr Tydfil) to 85.4% (Monmouthshire) (Appendix Table A1). For patients aged 65 years or older, 6.7% were recorded as having declined immunisation, compared to 6.7% in the 2020/21 season. One HB and five LA areas achieved the 80% ambition.

Uptake in those aged six months to 64 years in a clinical risk group was 48.2%, an increase compared to 51.0% in the 2020/21 season (Figure 4.2.1). Of all immunisations given to those aged six months to 64 years in clinical risk groups, 90% were delivered by the week ending 19th December 2021 (Figure 4.2.2). Uptake ranged by HB from 41.9% (Cardiff and Vale UHB) to 53.6% (Aneurin Bevan UHB) (Table 4.2.8, Figure 4.2.4) and by LA area from 40.4% (Merthyr Tydfil) to 63.1% (Monmouthshire) (Appendix Table A1). The proportion of all people aged six months to 64 years recorded in one or more clinical risk categories was 17.1% (a slight decrease from 17.2% in 2020/21). Of those aged six months to 64 years in a clinical risk group, 8.1% were recorded as having declined immunisation, compared to 7.3% in 2020/21.

Figure 4.2.1. Annual trends in influenza immunisation uptake (%) in those aged 65 years and over and in those aged six months to 64 years in clinical risk groups, Wales, 2009/10 – 2021/22



*Data for those aged six months to 64 years at risk includes those morbidly obese not otherwise at risk. Prior to 2018/19 this group were not included in the overall uptake figures for this category.

Figure 4.2.2. Weekly trend in uptake of influenza vaccine in patients aged 65 years and over and in those aged six months to 64 years in clinical risk groups, Wales, 2020/21 and 2021/22

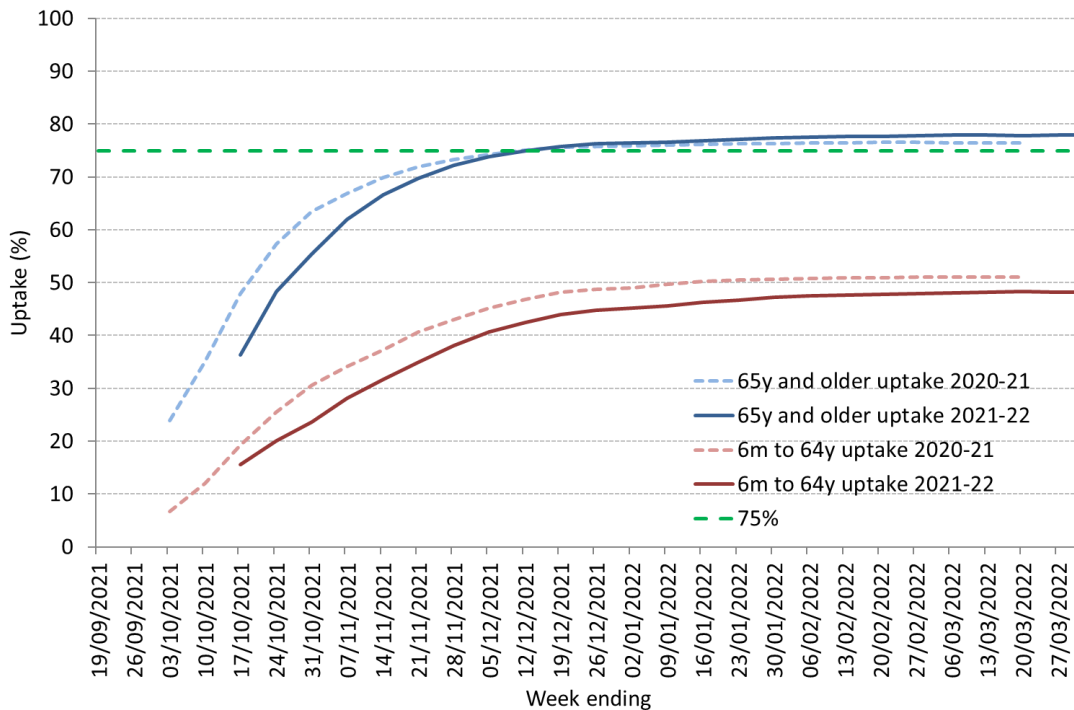


Table 4.2.8. Trends in uptake (%) of influenza immunisation in health boards, Wales, 2018/19 – 2021/22

Health Board	Uptake in patients aged 65y and older				Uptake in patients younger than 65y at risk			
	2018/19	2019/20	2020/21	2021/22	2018/19	2019/20	2020/21	2021/22
Aneurin Bevan UHB	69.7	70.8	78.3	80.0	46.9	46.5	54.6	53.6
Betsi Cadwaladr UHB	71.0	71.4	78.2	79.8	47.9	46.9	54.2	51.0
Cardiff and Vale UHB	69.9	71.2	77.4	76.1	44.0	43.8	48.3	41.9
Cwm Taf Morgannwg / Cwm Taf UHB	67.1	68.9	75.4	76.7	40.0	40.3	46.3	43.2
Hywel Dda UHB	62.9	64.8	73.6	75.9	38.1	40.2	49.8	47.5
Powys Teaching UHB	65.5	67.1	73.5	75.3	43.1	44.3	52.2	50.9
Swansea Bay / ABM UHB	68.1	68.1	75.5	78.5	43.0	44.0	49.4	48.8
Wales	68.3	69.4	76.5	78.0	44.1	44.1	51.0	48.2

Figure 4.2.3. Uptake of influenza immunisation in health boards in Wales in patients aged 65 years and over, 2018/19 – 2021/22

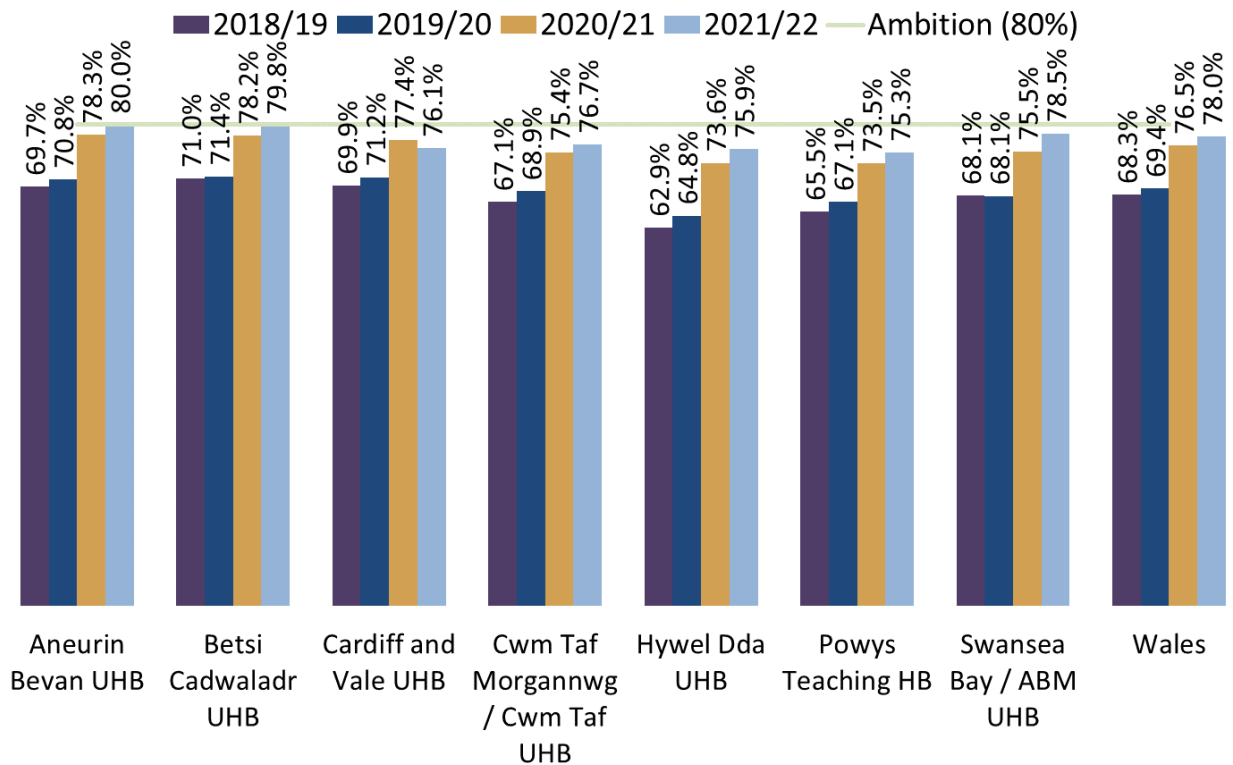
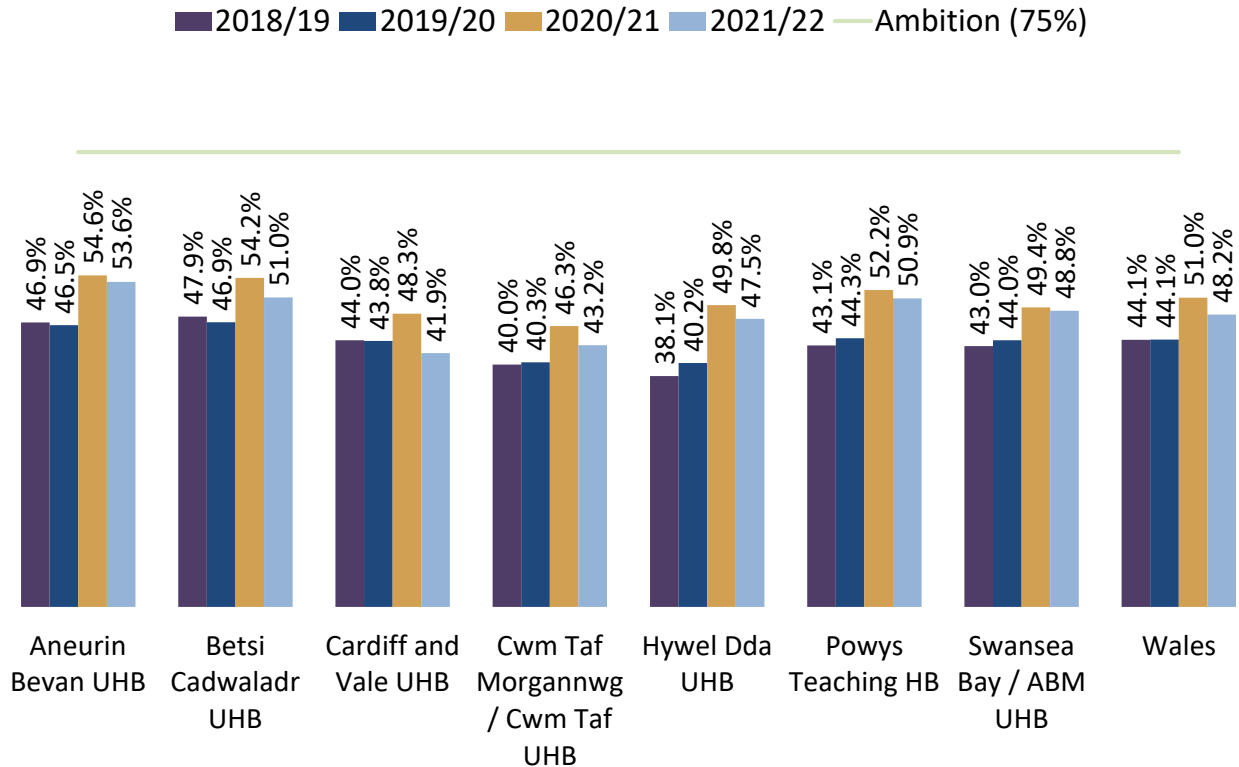


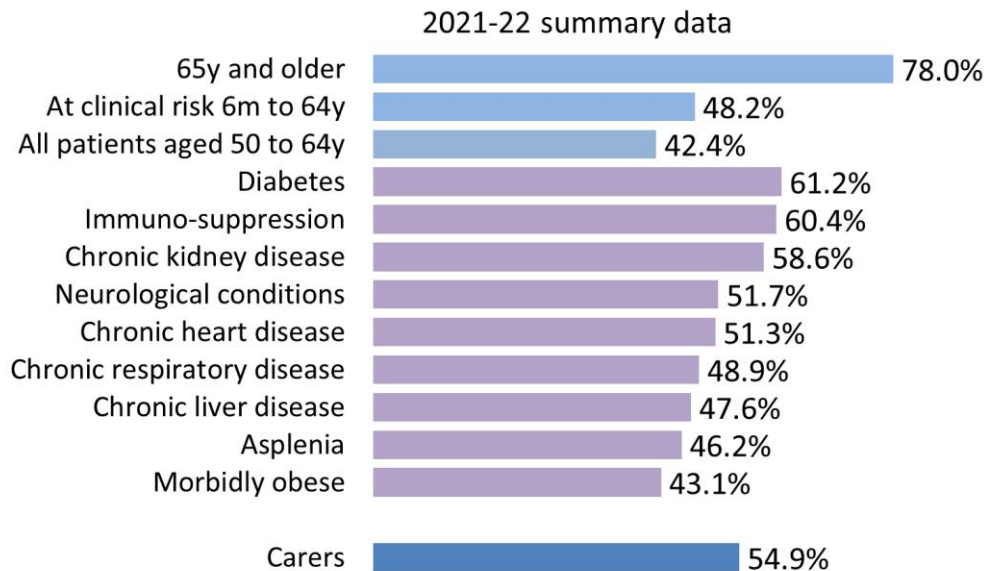
Figure 4.2.4. Uptake of influenza immunisation in health boards in Wales in patients aged six months to 64 years in clinical risk groups, 2018/19 – 2021/22



4.2.3 Immunisation uptake by risk group

Vaccine uptake in those aged six months to 64 years in a clinical risk group (including morbidly obese adults not otherwise at risk) was 48.2%. Many people will have more than one clinical risk, for example, a patient may suffer from both diabetes and chronic heart disease, therefore the same patient may be represented in the uptake figures for more than one risk group. However, a patient will only be counted once in the overall total uptake figure of 48.2% for those aged six months to 64 years in a clinical risk group, irrespective of how many clinical risk conditions they suffer from. Numbers of individuals coded as being in each clinical risk group can be found in appendix Table A2.

Figure 4.2.5. *Influenza immunisation uptake rates in patients aged 65 years and over and six months to 64 years at risk, by individual risk group, Wales, 2021/22*



- Chronic heart disease was recorded in 2.7% of patients aged six months to 64 years, of whom 51.3% were immunised against influenza (Figure 4.2.5, Appendix Table A2). Uptake by HB ranged from 43.2% (Cardiff and Vale UHB) to 57.5% (Aneurin Bevan UHB).
- Chronic respiratory disease was recorded in 7.5% of patients aged six months to 64 years, of whom 48.9% were immunised against influenza (Figure 4.2.5, Appendix Table A2), ranging by HB from 42.2% (Cardiff and Vale UHB) to 54.7% (Aneurin Bevan UHB). At Wales level, 61.7% of those with COPD were immunised against influenza, whilst 47.9% of those with asthma and 54.4% of those with non-asthma non-COPD respiratory were immunised against influenza.
- Chronic kidney disease was recorded in 0.5% of patients aged six months to 64 years, of whom 58.6% were immunised against influenza (Figure 4.2.5, Appendix Table A2), ranging by HB from 50.9% (Cardiff and Vale UHB) to 63.4% (Aneurin Bevan UHB).
- Diabetes was recorded in 3.6% of patients aged six months to 64 years, of whom 61.2% were immunised against influenza (Figure 4.2.5, Appendix Table A2), ranging by HB from 55.2% (Cardiff and Vale UHB) to 65.1% (Aneurin Bevan UHB).
- Immunosuppression due to disease or treatment was recorded in 1.0% of patients aged six months to 64 years, of whom 60.4% were immunised against influenza (Figure 4.2.5, Appendix Table A2), ranging by HB from 53.5% (Cardiff and Vale UHB) to 65.8% (Aneurin Bevan UHB).
- Chronic liver disease was recorded in 0.4% of patients aged six months to 64 years, of whom 47.6% were immunised against influenza (Figure 4.2.5, Appendix Table A2), ranging by HB from 41.3% (Cardiff and Vale UHB) to 53.6% (Powys Teaching HB).
- Chronic neurological conditions (including stroke and TIA) were recorded in 1.4% of patients aged six months to 64 years, of whom 51.7% were immunised against influenza (Figure 4.2.5, Appendix Table A2), ranging by HB from 45.4% (Cardiff and Vale UHB) to 57.2% (Aneurin Bevan UHB).

- Morbidly obese was recorded in 3.5% of patients aged 18 to 64 years (eligible age group for this clinical risk group), of whom 43.1% were immunised against influenza (Figure 4.2.5, Appendix Table A2). Uptake ranged by HB from 37.5% (Cardiff and Vale UHB) to 47.7% (Aneurin Bevan UHB).
- Being asplenic (or having a dysfunctional spleen) was recorded in 0.5% of patients aged six months to 64 years, of whom 46.2% were immunised against influenza (Figure 4.2.5, Appendix Table A2), ranging by HB from 39.0% (Cardiff and Vale UHB) to 51.6% (Aneurin Bevan UHB).
- A total of 46,788 people aged six months to 64 years were recorded as being a carer (including carers who are also in a clinical risk group), of whom 54.9% were immunised against influenza (Figure 4.2.5, Appendix Table A4). These figures only include those who have identified themselves as a carer to their GP, and have been coded appropriately in the GP records; the true denominator for carers is likely to be higher. Uptake ranged by HB from 48.0% (Cardiff and Vale UHB) to 61.2% (Aneurin Bevan UHB).

4.2.4 Uptake in pregnant women

Coverage of influenza vaccination in pregnant women was measured using two methods:

1. A five-day survey carried out with health board midwifery services in major maternity units across Wales, ascertaining self-reported vaccination status for the women delivering during the survey period. Ascertainment of pregnancy status is more robust using this method. However, the survey does not capture information on women whose pregnancies ended with outcomes other than a birth in a major maternity unit.
2. Weekly collections of data from GPs using Audit+. This method provides timely data on immunisations given to pregnant women, however ascertaining pregnancy status using Read codes in GP data systems can be problematic and results in underestimation of uptake in this group.

From 1st September 2021 to 31st January 2022, 21,133 women were coded in General Practice with Read codes associated with pregnancy. Out of these women, 2,409 (11.4%) had an existing risk (as defined by the CMO letter [1]), the remainder (18,724) did not have another identified clinical risk (Appendix Table A3). Uptake of influenza vaccination in all pregnant women, measured using GP data was 39.5% and ranged by HB from 37.5% (Hywel Dda UHB) to 44.2% (Powys THB). Uptake in pregnant women with another existing risk condition was 51.3% and ranged by HB from 48.0% (Cwm Taf Morgannwg UHB) to 62.2% (Powys THB). Uptake in pregnant women without another existing risk condition was 38.0% and ranged by HB from 36.0% (Hywel Dda UHB) to 42.1% (Powys THB).

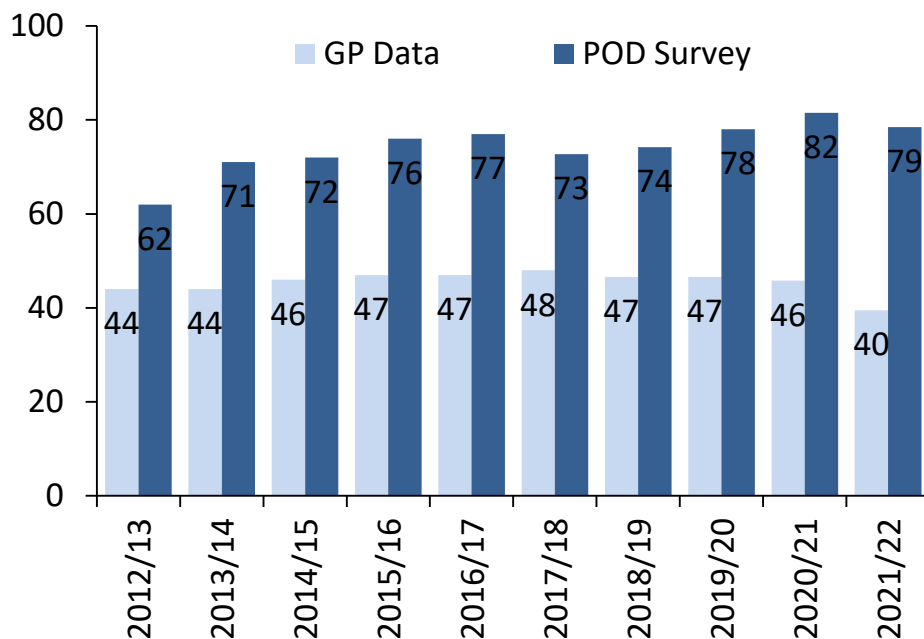
The point of delivery (POD) survey included 391 women giving birth during a five-day period in January 2022 [6]. Data were submitted by all health boards in Wales. Uptake of influenza immunisation recalled in this group was 78.5% (95% CI 74.1%-82.5%), a decrease compared to 81.5% (95% CI 77.2%-85.4%) last year and below the 90% vaccination ambition set by Welsh Government. Uptake increased in two HBs (Cardiff & Vale UHB and Swansea UHB) compared to the 2020/21 survey, and decreased in the remaining five HBs [6]. The survey also found that 96.9% of the women could recall being offered influenza

immunisation, stable compared to last year (Table 4.2.9). The estimates using GP data are uniformly lower than those estimated using the survey at the point of delivery (Figure 4.2.6).

Table 4.2.9. Number of women offered influenza vaccine during pregnancy, Wales, 2021/22 (Data source: 2021/22 point of delivery survey)

Women offered influenza vaccination while pregnant		
	n	%
Yes	379	96.9
No	6	1.5
Not sure/missing	6	1.5
Total	391	100

Figure 4.2.6. Uptake (%) of influenza vaccination in pregnant women by data source, Wales, 2012/13-2021/22



Although there may be problems with ascertainment of the percentage uptake, data provided by GPs on uptake in pregnancy are still useful in estimating and monitoring the number of pregnant women in Wales who have received influenza vaccination each season. During the 2021/22 winter, 8,349 women whose GP record contained Read codes relating to pregnancy were recorded as having received influenza vaccination. This is a decrease from the 2020/21 total of 10,005 women vaccinated.

4.2.5 Estimated numbers of individuals immunised in Wales in 2021/22

The estimated total number of individuals recorded by their general practice as immunised against influenza was 1,117,184 as at 29th April 2022, based on Read coded data reported from all practices in Wales for 2021/22. This represents an estimated 35% of the population of Wales.

This includes 535,876 individuals aged 65 years and over, 288,862 individuals aged 50 to 64 years, 84,359 aged six months to 49 years in a clinical risk group, 7,113 pregnant women not at additional clinical risk, 30,853 children aged two and three years and 25,679 carers. Vaccinated individuals are ascertained using Read codes which correspond to eligibility criteria [6].

The remaining 144,442 immunisations were likely received by:

- Patients aged younger than 50 years who did not have Read codes attached to their GP records which are recommended for use in surveillance of influenza immunisation uptake in risk groups who were regarded as at risk by GPs based on clinical judgement.
- Those in long-stay residential homes who are not aged 50 years or older, and not in a clinical risk group.
- Patients immunised by other service providers, for example occupational health departments and school nursing services, whose GPs were notified and whose records were updated with appropriate vaccination Read codes.

The estimated total of 1,117,184 individuals immunised in 2021/22 is an increase on the estimated 1,051,015 individuals immunised during the 2020/21 influenza immunisation campaign. These estimates are based on data recorded by general practices, the actual number of individuals immunised against influenza in Wales will be higher as not all immunisations given by other service providers will be recorded in general practice databases. In addition, the extent to which immunisations given in community pharmacies are recorded using Read codes in GP patient databases is unknown; these vaccinations may be under-reported in uptake figures calculated using GP data.

4.2.6 Uptake in NHS staff in Wales

All health boards and NHS trusts in Wales provided NHS staff immunisation uptake data. Uptake in staff groups expected to have direct patient contact was 57.2% (n=35,399) (Table 4.2.10). Uptake in staff with direct patient contact ranged by organisation from 43.8% (Public Health Wales NHS Trust) to 63.7% (Cwm Taf Morgannwg UHB). Uptake in staff groups ranged from 49.3% (Estates and Ancillary) to 65.0% (Allied Health Professionals) (Table 4.2.11).

There were a total of 95,581 NHS health board or trust staff reported under the care of NHS Occupational Health departments in Wales and offered influenza vaccination, of whom 55.7% (n=53,254) were immunised during 2021/22, a decrease of 7.8 from 63.5% in 2020/21. Uptake has increased in ten of the twelve years since 2009/10. Uptake in all staff ranged by organisation from 38.5% (Welsh Ambulance Service NHS Trust) to 62.4% (Cwm Taf Morgannwg UHB). No Health Boards or NHS Trusts showed an increase in uptake compared to the previous season (Figure 4.2.7).

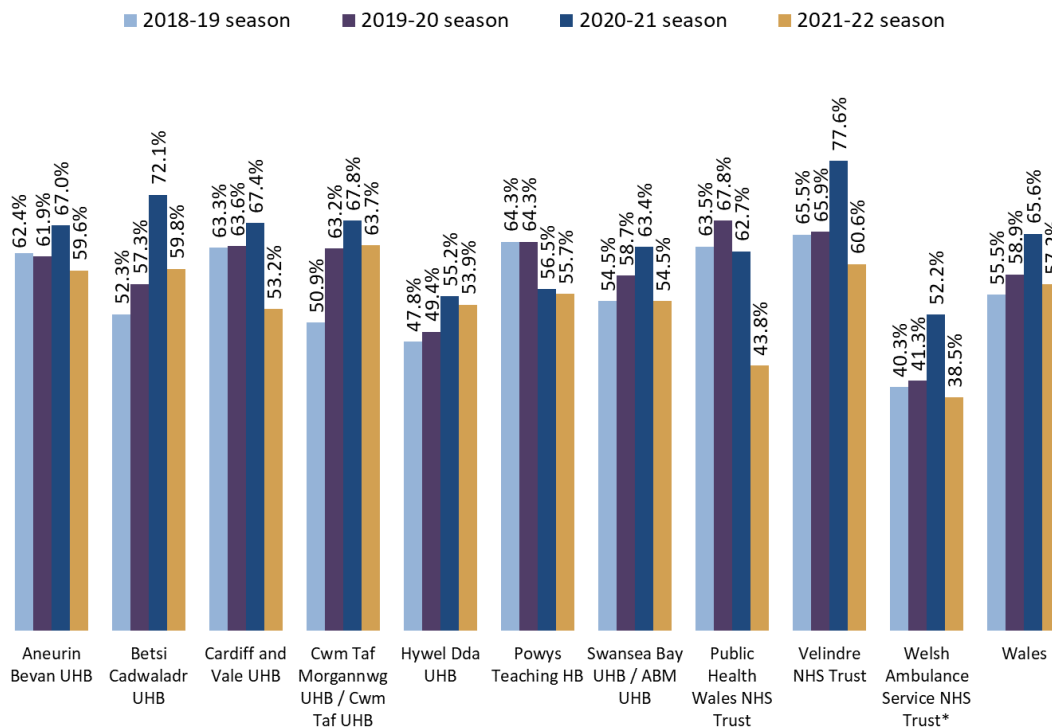
Uptake of influenza vaccination in staff with direct patient contact did not exceed the Welsh Government ambition of 80% in any Health Board or NHS Trust (Table 4.2.10).

Table 4.2.10. Uptake of influenza immunisation in NHS staff in Wales, 2021/22

Health Board/Trust	Total Staff			Staff with direct patient contact ¹		
	Immunised (n)	Denominator (n)	Uptake (%)	Immunised (n)	Denominator (n)	Uptake (%)
Aneurin Bevan UHB	8234	14141	58.2	5786	9714	59.6
Betsi Cadwaladr UHB	11126	18634	59.7	7823	13076	59.8
Cardiff and Vale UHB	8512	16365	52.0	6145	11550	53.2
Cwm Taf Morgannwg UHB	7259	11635	62.4	4952	7773	63.7
Hywel Dda UHB	5916	10859	54.5	3999	7419	53.9
Powys Teaching HB	1201	2297	52.3	819	1470	55.7
Swansea Bay UHB	7187	13250	54.2	4935	9052	54.5
Velindre NHS Trust	1031	1657	62.2	527	869	60.6
Welsh Ambulance Service NHS Trust	1637	4252	38.5	-	-	-
Public Health Wales NHS Trust	1151	2491	46.2	413	944	43.8
Wales	53254	95581	55.7	35399	61867	57.2

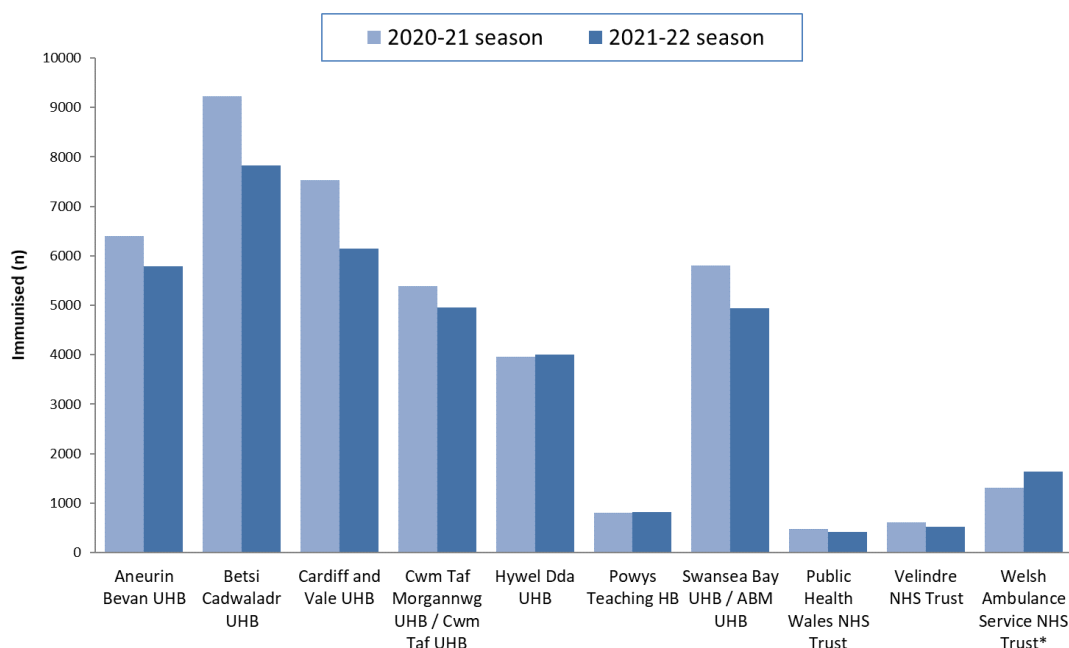
¹ Combined figures for: Additional Prof Scientific and Technical, Additional Clinical Services, Allied Health Professions, Medical and Dental, Nursing & Midwifery Registered staff groups.

Figure 4.2.7. Uptake of influenza immunisation in NHS staff with direct patient contact in Wales, 2018/19 – 2021/22



*All staff data used for Welsh Ambulance Service NHS Trust for 2021/22

Figure 4.2.8. Number of influenza immunisations in Welsh Health Board & NHS Trust staff with direct patient contact – seasonal comparison 2020/21 and 2021/22.



*All staff data used for Welsh Ambulance Service NHS Trust for 2021/22

Table 4.2.11. Uptake of influenza immunisation in NHS staff groups, Wales, 2021/22

ESR staff group	Staff		
	Immunised (n)	Denominator (n)	Uptake (%)
Additional Clinical Services	9732	18673	52.1
Additional Prof Scientific and Technical	1918	3062	62.6
Administrative and Clerical	10189	17740	57.4
Allied Health Professionals	4137	6368	65.0
Estates and Ancillary	4043	8203	49.3
Healthcare Scientists	1248	1972	63.3
Medical and Dental	3786	6143	61.6
Nursing & Midwifery Registered	15413	26677	57.8

4.2.7 Immunisations given in community pharmacies

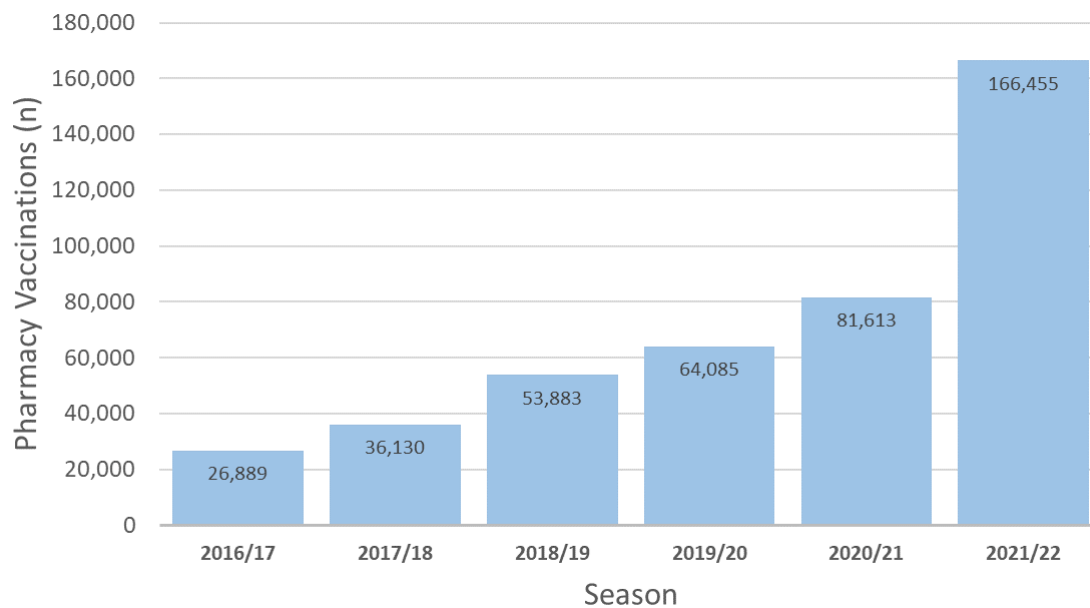
A total of 166,445 people were immunised against influenza in community pharmacies in Wales, as of 30th April 2022. This is an increase compared to 81,613 immunisations given in 2020/21, as recorded in the Choose Pharmacy system (Figure 4.2.11). The highest number of influenza immunisations given in this setting was in Betsi Cadwaladr UHB (22.9%) whilst the lowest was in Powys Teaching HB (4.1%) (Table 4.2.12).

The majority of influenza immunisations given in community pharmacies were given to individuals aged 50 to 64 years (46.5%); whilst 38.6% were given to individuals aged 65 years and over and 12.2% of

immunisations were given to those aged under 65 years in one or more clinical risk group (Table 4.2.13). Of the influenza immunisations given to those in a risk group, the majority were given to individuals with chronic respiratory disease (54.8%) and individuals with diabetes (19.4%) (Table 4.2.14).

A total of 9,849 influenza immunisations were given to carers; 5.9% of all pharmacy immunisations; with 4,466 immunisations given to care home workers; 1,678 to domiciliary carers and 3,705 to unpaid carers (Table 4.2.16).

Figure 4.2.11. *Influenza immunisations given in community pharmacies in Wales, 2016/17-2021/22**



*Data for 2016/17-2019-20 were taken from the NECAF (National Electronic Claim and Audit Forms) data system, whilst 2020/21 and 2021/22 data were taken from the Choose Pharmacy system.

Table 4.2.12. *Number of influenza immunisations given in community pharmacies in Wales, by health board of residence, 2021/22¹*

Health Board	Immunised	
	(n)	(%)
Aneurin Bevan UHB	29,072	17.5
Betsi CadwaladrUHB	38,083	22.9
Cardiff and Vale UHB	25,005	15.0
Cwm Taf Morgannwg UHB	15,114	9.1
Hywel Dda UHB	23,753	14.3
Powys Teaching HB	6,741	4.1
Swansea Bay UHB	28,638	17.2
Wales	166,406	100.0

¹Total excludes 49 vaccinations with an unknown health board.

Table 4.2.13. Number of influenza immunisations given in community pharmacies, by eligibility group, 2021/22

Eligibility	Immunised in pharmacies		Total recorded as vaccinated in general practice databases (n) ¹	% of total vaccinations given through pharmacies ¹
	n	% of total pharmacy influenza vaccinations		
Aged 65 or over	64,304	38.6	535,876	12.0
Aged 50 to 64	77,459	46.5	288,862	26.8
Risk group aged under 65	20,279	12.2	215,332	9.4
Pregnancy	1,257	0.8	8,349	15.1
Learning Disability	529	0.3	-	-
Carer ²	3,705	2.2	25,679	14.4
Domiciliary Carer	1,678	1.0	-	-
Care Home Staff	4,466	2.7	-	-
Other ³	3,968	2.4	-	-
Total	166,455⁴	100.0		

¹ Completeness of reporting of pharmacy vaccinations to general practices and consistency of coding for pharmacy vaccinations in general practice databases are unknown. Due to this, the total number of individuals vaccinated may be an underestimate.

² Includes informal unpaid and voluntary sector unpaid carers.

³ Includes individuals who are categorised as: Community First Responder; Designated First Aider; Household contact of immunocompromised; Household contacts of people on the NHS Shielded List; Not in a risk group; People living in long-stay residential care homes or other long-stay care facilities; Third Sector Carer; Other (as specified in PGD).

⁴ Total is not the sum of all categories as individuals may fall in to multiple groups.

Table 4.2.14. Number of influenza immunisations given in community pharmacies, by risk group, 2021/22

Risk Group	Immunised in pharmacies			Total recorded as vaccinated in general practice databases (n) ¹	% of total vaccinations given through pharmacies ¹
	n	% of total risk group pharmacy influenza vaccinations	% of total pharmacy influenza vaccinations		
Asplenia or splenic dysfunction	116	0.6	0.1	5,913	2.0
Chronic Heart Disease	1,736	8.6	1.0	36,205	4.8
Chronic Kidney Disease	262	1.3	0.2	8,166	3.2
Chronic Liver Disease	144	0.7	0.1	5,443	2.6
Chronic Neurological Disease	1,091	5.4	0.7	19,243	5.7
Chronic Respiratory Disease	11,111	54.8	6.7	95,076	11.7
Diabetes	3,943	19.4	2.4	56,936	6.9
Immuno-suppressed	2,251	11.1	1.4	15,718	14.3
Morbidly obese adults	779	3.8	0.5	38,964	2.0
Total	20,279²	100.0	12.5	215,332	9.6

¹ Completeness of reporting of pharmacy vaccinations to general practices and consistency of coding for pharmacy vaccinations in general practice databases are unknown. Due to this the total number of individuals vaccinated may be an underestimate.

² Total is not the sum of all categories as individuals may fall in to multiple groups.

Table 4.2.15. Number of influenza immunisations given to patients aged 65y and older, aged 50y to 65y, and those aged 6m to 64y at clinical risk in community pharmacies, by health board of residence 2021/22

Health Board	Patients aged 65y and older	Patients aged 50y to 64y	Eligible patients aged <65y at clinical risk	Other Eligible patients aged <65y of age
	Immunised(n)	Immunised(n)	Immunised(n)	Immunised(n)
Aneurin Bevan UHB	11,071	13,961	3,480	2,202
Betsi CadwaladrUHB	14,663	16,870	4,211	4,505
Cardiff and Vale UHB	8,801	12,065	3,816	1,905
Cwm Taf Morgannwg UHB	6,163	6,906	1,909	1,298
Hywel Dda UHB	9,700	10,783	2,798	2,105
Powys Teaching HB	2,950	3,116	558	530
Swansea Bay UHB	10,956	13,704	3,507	2,250
Wales	64,304	77,405	20,279	14,795

Table 4.2.16. Number of influenza immunisations given to social care sector staff (Domiciliary and Carers in a care home) and unpaid (voluntary or informal) carers in community pharmacies, by health board, 2021/22

Health Board	Social Care Staff		
	Domiciliary Carers	Carers in a Care Home	Unpaid Carers
Aneurin Bevan UHB	229	667	521
Betsi CadwaladrUHB	367	2,185	770
Cardiff and Vale UHB	137	384	525
Cwm Taf Morgannwg UHB	246	172	357
Hywel Dda UHB	401	448	561
Powys Teaching HB	84	133	207
Swansea Bay UHB	214	477	764
Wales	1,678	4,466	3,705

4.2.8 Immunisations given in prisons

All prisons in Wales excluding HMP Swansea provided prisoners' immunisation uptake data on monthly basis. By the end of the season, immunisation coverage was 71.1% in those aged 55 years and older and 50.4% in those aged under 55 years at clinical risk.

5. Conclusions

There was no detectable influenza season during 2021/22, although more activity was seen than during 2020/21. Circulation of influenza viruses remained impacted by restrictions on movement and social activities during the COVID-19 pandemic, although many restrictions have been lifted, movement and social mixing were unlikely to have returned to normal levels.

A record number of samples were collected and tested by Public Health Wales Microbiology services enabling wider surveillance of a large number of respiratory viruses in the Welsh population. A small proportion of hospital patients tested were positive for influenza, although high intensity out of season RSV activity was seen in children aged under 5 years. The majority of typed viruses were influenza A(H3N2), with small numbers of influenza B virus also detected.

Once again this season, more patients than ever at risk or in eligible groups were vaccinated against influenza. Vaccine uptake in those aged 65 years and older increased again this season, although uptake in other groups decreased. For the second year, all those aged 50 to 64 years were eligible for influenza vaccination although coverage remained under 50%. More than twice the number of vaccinations were given in community pharmacies compared to the previous year.

Vaccine effectiveness studies from the UK show that the 2021/21 influenza vaccine showed significant effectiveness against influenza A overall but effectiveness was lower against A(H3).

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Further information on influenza and influenza immunisation can be found using the links below:

Information for Health Professionals on influenza immunisation:

<https://phw.nhs.wales/topics/immunisation-and-vaccines/flu vaccine/resourcesforprofessionals/>

General information on influenza immunisation in Wales:

<https://phw.nhs.wales/topics/immunisation-and-vaccines/flu vaccine/>

Influenza surveillance in Wales:

<https://phw.nhs.wales/topics/immunisation-and-vaccines/flu vaccine/weekly-influenza-and-acute-respiratory-infection-report/>

7. Information about this report

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8. Appendix A: Influenza immunisation data tables

Table A1. Uptake of influenza immunisation in Wales 2021/22.

Local Authority	Patients aged 65y and older			Patients aged 6m to 64y at risk		
	Immunised (n)	Denominator (n)	Uptake (%)	Immunised (n)	Denominator (n)	Uptake (%)
Aneurin Bevan UHB						
Blaenau Gwent LA	11,029	14,401	76.6	6,064	11,537	52.6
Caerphilly LA	29,161	37,246	78.3	13,944	27,316	51.0
Monmouthshire LA	22,059	25,818	85.4	8,320	13,190	63.1
Newport LA	21,461	27,226	78.8	11,610	22,159	52.4
Torfaen LA	15,883	19,869	79.9	7,763	14,796	52.5
Health Board Total	99,593	124,560	80.0	47,701	88,998	53.6
Betsi Cadwaladr UHB						
Anglesey LA	14,219	17,443	81.5	5,058	9,219	54.9
Conwy LA	24,277	31,197	77.8	7,390	14,786	50.0
Denbighshire LA	19,357	24,829	78.0	6,977	14,388	48.5
Flintshire LA	26,844	32,524	82.5	11,057	20,698	53.4
Gwynedd LA	21,836	28,337	77.1	7,634	15,495	49.3
Wrexham LA	24,511	29,907	82.0	10,292	20,304	50.7
Health Board Total	131,044	164,237	79.8	48,408	94,890	51.0
Cardiff and Vale UHB						
Cardiff LA	43,209	57,083	75.7	21,182	50,646	41.8
Vale of Glamorgan LA	22,287	29,029	76.8	7,372	17,571	42.0
Health Board Total	65,496	86,112	76.1	28,554	68,217	41.9
Cwm Taf Morgannwg UHB						
Bridgend LA	27,328	33,984	80.4	11,429	24,454	46.7
Merthyr Tydfil LA	8,221	11,862	69.3	3,856	9,552	40.4
Rhondda Cynon Taff LA	37,077	48,883	75.8	15,439	37,168	41.5
Health Board Total	72,626	94,729	76.7	30,724	71,174	43.2
Hywel Dda UHB						
Carmarthenshire LA	33,681	43,510	77.4	11,886	25,379	46.8
Ceredigion LA	17,199	23,702	72.6	5,481	11,014	49.8
Pembrokeshire LA	23,967	31,412	76.3	7,835	16,674	47.0
Health Board Total	74,847	98,624	75.9	25,202	53,067	47.5
Powys Teaching HB						
	28,949	38,440	75.3	8,889	17,467	50.9
Swansea Bay UHB						
Neath Port Talbot LA	23,552	29,804	79.0	9,894	20,116	49.2
Swansea LA	39,769	50,833	78.2	15,960	32,843	48.6
Health Board Total	63,321	80,637	78.5	25,854	52,959	48.8
Wales Total	535,876	687,339	78.0	215,332	446,772	48.2

Table A2. Uptake of influenza immunisation in those aged six months to 64 years with one or more clinical risk (by risk category) in Wales 2021/22.

Local Authority	Total patients aged 6m to 64y	Chronic heart disease				Chronic respiratory disease				Chronic kidney disease				Diabetes			
		With condition (n)	(%)	Immunised (n)	Uptake (%)	With condition (n)	(%)	Immunised (n)	Uptake (%)	With condition (n)	(%)	Immunised (n)	Uptake (%)	With condition (n)	(%)	Immunised (n)	Uptake (%)
Aneurin Bevan UHB																	
Blaenau Gwent LA	57,376	1,794	3.1	991	55.2	4,740	8.3	2,645	55.8	417	0.7	259	62.1	2,601	4.5	1,634	62.8
Caerphilly LA	149,297	4,139	2.8	2,308	55.8	11,178	7.5	5,767	51.6	669	0.4	406	60.7	6,127	4.1	3,996	65.2
Monmouthshire LA	77,046	2,249	2.9	1,492	66.3	5,651	7.3	3,497	61.9	409	0.5	296	72.4	2,529	3.3	1,896	75.0
Newport LA	135,003	3,199	2.4	1,768	55.3	9,140	6.8	5,026	55.0	642	0.5	393	61.2	5,294	3.9	3,276	61.9
Torfaen LA	77,259	2,479	3.2	1,404	56.6	6,327	8.2	3,308	52.3	373	0.5	237	63.5	3,099	4.0	1,989	64.2
Health Board Total	495,981	13,860	2.8	7,963	57.5	37,036	7.5	20,243	54.7	2,510	0.5	1,591	63.4	19,650	4.0	12,791	65.1
Betsi Cadwaladr UHB																	
Anglesey LA	48,510	1,255	2.6	743	59.2	4,336	8.9	2,288	52.8	247	0.5	148	59.9	1,840	3.8	1,285	69.8
Conwy LA	85,325	2,352	2.8	1,272	54.1	6,653	7.8	3,291	49.5	504	0.6	290	57.5	2,986	3.5	1,863	62.4
Denbighshire LA	78,559	2,334	3.0	1,231	52.7	6,704	8.5	3,232	48.2	432	0.5	262	60.6	2,819	3.6	1,697	60.2
Flintshire LA	121,714	3,201	2.6	1,844	57.6	9,237	7.6	4,955	53.6	675	0.6	448	66.4	4,168	3.4	2,765	66.3
Gwynedd LA	95,624	2,174	2.3	1,116	51.3	7,221	7.6	3,535	49.0	463	0.5	279	60.3	2,893	3.0	1,828	63.2
Wrexham LA	116,224	3,113	2.7	1,671	53.7	9,075	7.8	4,702	51.8	668	0.6	423	63.3	3,911	3.4	2,489	63.6
Health Board Total	545,956	14,429	2.6	7,877	54.6	43,226	7.9	22,003	50.9	2,989	0.5	1,850	61.9	18,617	3.4	11,927	64.1
Cardiff and Vale UHB																	
Cardiff LA	349,954	7,249	2.1	3,167	43.7	22,967	6.6	9,742	42.4	1,350	0.4	677	50.1	10,831	3.1	5,995	55.4
Vale of Glamorgan LA	108,820	2,713	2.5	1,139	42.0	8,037	7.4	3,333	41.5	531	0.5	280	52.7	3,342	3.1	1,824	54.6
Health Board Total	458,774	9,962	2.2	4,306	43.2	31,004	6.8	13,075	42.2	1,881	0.4	957	50.9	14,173	3.1	7,819	55.2
Cwm Taf Morgannwg UHB																	
Bridgend LA	130,897	4,287	3.3	2,132	49.7	10,511	8.0	4,875	46.4	970	0.7	565	58.2	5,159	3.9	3,195	61.9
Merthyr Tydfil LA	50,673	1,570	3.1	637	40.6	4,080	8.1	1,794	44.0	294	0.6	162	55.1	2,043	4.0	1,143	55.9
Rhondda Cynon Taff LA	200,681	5,479	2.7	2,505	45.7	15,987	8.0	6,825	42.7	1,239	0.6	644	52.0	7,932	4.0	4,570	57.6
Health Board Total	382,251	11,336	3.0	5,274	46.5	30,578	8.0	13,494	44.1	2,503	0.7	1,371	54.8	15,134	4.0	8,908	58.9
Hywel Dda UHB																	
Carmarthenshire LA	139,115	4,369	3.1	2,224	50.9	11,131	8.0	5,159	46.3	809	0.6	491	60.7	5,159	3.7	3,095	60.0
Ceredigion LA	69,276	1,916	2.8	990	51.7	4,856	7.0	2,488	51.2	338	0.5	193	57.1	2,146	3.1	1,319	61.5
Pembrokeshire LA	90,894	2,725	3.0	1,355	49.7	7,423	8.2	3,574	48.1	552	0.6	309	56.0	3,396	3.7	2,009	59.2
Health Board Total	299,285	9,010	3.0	4,569	50.7	23,410	7.8	11,221	47.9	1,699	0.6	993	58.4	10,701	3.6	6,423	60.0
Powys Teaching HB																	
	102,430	3,165	3.1	1,658	52.4	7,498	7.3	3,942	52.6	636	0.6	376	59.1	3,253	3.2	2,029	62.4
Swansea Bay UHB																	
Neath Port Talbot LA	108,894	3,483	3.2	1,826	52.4	7,901	7.3	3,909	49.5	826	0.8	502	60.8	4,472	4.1	2,741	61.3
Swansea LA	204,332	5,368	2.6	2,732	50.9	13,967	6.8	7,189	51.5	900	0.4	526	58.4	7,049	3.4	4,298	61.0
Health Board Total	313,226	8,851	2.8	4,558	51.5	21,868	7.0	11,098	50.7	1,726	0.6	1,028	59.6	11,521	3.7	7,039	61.1
Wales Total	2,597,903	70,613	2.7	36,205	51.3	194,620	7.5	95,076	48.9	13,944	0.5	8,166	58.6	93,049	3.6	56,936	61.2

Table A2 (cont). Uptake of influenza immunisation in those aged six months to 64 years with one or more clinical risk (by risk category) in Wales 2021/22.

Local Authority	Total patients aged 6m to 64y	Immuno-suppression				Chronic liver disease				Neurological conditions				Morbidly obese				Asplenia/ splenic dysfunction			
		With condition (n)	(%)	Immunised (n)	Uptake (%)	With condition (n)	(%)	Immunised (n)	Uptake (%)	With condition (n)	(%)	Immunised (n)	Uptake (%)	With condition (n)	(%)	Immunised (n)	Uptake (%)	With condition (n)	(%)	Immunised (n)	Uptake (%)
Aneurin Bevan UHB																					
Blaenau Gwent LA	57,376	742	1.3	511	68.9	322	0.6	171	53.1	887	1.5	476	53.7	2,774	4.8	1,205	43.4	280	0.5	151	53.9
Caerphilly LA	149,297	1,557	1.0	985	63.3	648	0.4	328	50.6	2,184	1.5	1,208	55.3	6,658	4.5	3,073	46.2	696	0.5	328	47.1
Monmouthshire LA	77,046	867	1.1	645	74.4	300	0.4	184	61.3	1,108	1.4	760	68.6	2,530	3.3	1,509	59.6	484	0.6	283	58.5
Newport LA	135,003	1,387	1.0	847	61.1	551	0.4	279	50.6	1,664	1.2	921	55.3	4,807	3.6	2,214	46.1	602	0.4	290	48.2
Torfaen LA	77,259	1,092	1.4	729	66.8	374	0.5	200	53.5	1,235	1.6	683	55.3	3,146	4.1	1,503	47.8	453	0.6	246	54.3
Health Board Total	495,981	5,645	1.1	3,717	65.8	2,195	0.4	1,162	52.9	7,078	1.4	4,048	57.2	19,915	4.0	9,504	47.7	2,515	0.5	1,298	51.6
Betsi Cadwaladr UHB																					
Anglesey LA	48,510	598	1.2	415	69.4	222	0.5	125	56.3	755	1.6	447	59.2	1,832	3.8	953	52.0	256	0.5	144	56.3
Conwy LA	85,325	935	1.1	566	60.5	405	0.5	213	52.6	1,234	1.4	664	53.8	2,579	3.0	1,184	45.9	492	0.6	239	48.6
Denbighshire LA	78,559	937	1.2	567	60.5	406	0.5	197	48.5	1,228	1.6	633	51.5	2,634	3.4	1,171	44.5	408	0.5	199	48.8
Flintshire LA	121,714	1,316	1.1	895	68.0	531	0.4	259	48.8	1,536	1.3	877	57.1	3,940	3.2	1,877	47.6	606	0.5	316	52.1
Gwynedd LA	95,624	1,056	1.1	697	66.0	383	0.4	176	46.0	1,207	1.3	630	52.2	2,718	2.8	1,185	43.6	451	0.5	193	42.8
Wrexham LA	116,224	1,218	1.0	745	61.2	564	0.5	255	45.2	1,502	1.3	818	54.5	4,248	3.7	1,922	45.2	586	0.5	312	53.2
Health Board Total	545,956	6,060	1.1	3,885	64.1	2,511	0.5	1,225	48.8	7,462	1.4	4,069	54.5	17,951	3.3	8,292	46.2	2,799	0.5	1,403	50.1
Cardiff and Vale UHB																					
Cardiff LA	349,954	3,083	0.9	1,590	51.6	1,190	0.3	482	40.5	3,903	1.1	1,763	45.2	8,723	2.5	3,218	36.9	1,740	0.5	662	38.0
Vale of Glamorgan LA	108,820	1,043	1.0	619	59.3	361	0.3	159	44.0	1,472	1.4	675	45.9	3,068	2.8	1,199	39.1	583	0.5	243	41.7
Health Board Total	458,774	4,126	0.9	2,209	53.5	1,551	0.3	641	41.3	5,375	1.2	2,438	45.4	11,791	2.6	4,417	37.5	2,323	0.5	905	39.0
Cwm Taf Morgannwg UHB																					
Bridgend LA	130,897	1,029	0.8	591	57.4	551	0.4	256	46.5	2,167	1.7	1,128	52.1	5,069	3.9	2,208	43.6	638	0.5	277	43.4
Merthyr Tydfil LA	50,673	481	0.9	277	57.6	278	0.5	82	29.5	818	1.6	354	43.3	2,241	4.4	781	34.9	186	0.4	71	38.2
Rhondda Cynon Taff LA	200,681	1,928	1.0	1,009	52.3	1,017	0.5	458	45.0	3,008	1.5	1,344	44.7	8,819	4.4	3,206	36.4	884	0.4	334	37.8
Health Board Total	382,251	3,438	0.9	1,877	54.6	1,846	0.5	796	43.1	5,993	1.6	2,826	47.2	16,129	4.2	6,195	38.4	1,708	0.4	682	39.9
Hywel Dda UHB																					
Carmarthenshire LA	139,115	1,428	1.0	878	61.5	559	0.4	259	46.3	2,396	1.7	1,207	50.4	5,050	3.6	2,243	44.4	584	0.4	264	45.2
Ceredigion LA	69,276	635	0.9	379	59.7	282	0.4	163	57.8	942	1.4	458	48.6	1,921	2.8	865	45.0	369	0.5	183	49.6
Pembrokeshire LA	90,894	1,078	1.2	636	59.0	509	0.6	241	47.3	1,482	1.6	747	50.4	3,117	3.4	1,252	40.2	517	0.6	231	44.7
Health Board Total	299,285	3,141	1.0	1,893	60.3	1,350	0.5	663	49.1	4,820	1.6	2,412	50.0	10,088	3.4	4,360	43.2	1,470	0.5	678	46.1
Powys Teaching HB																					
Health Board Total	102,430	1,095	1.1	695	63.5	414	0.4	222	53.6	1,694	1.7	890	52.5	3,068	3.0	1,389	45.3	608	0.6	300	49.3
Swansea Bay UHB																					
Neath Port Talbot LA	108,894	861	0.8	548	63.6	529	0.5	252	47.6	1,785	1.6	956	53.6	4,923	4.5	2,181	44.3	471	0.4	236	50.1
Swansea LA	204,332	1,645	0.8	894	54.3	1,032	0.5	482	46.7	2,981	1.5	1,604	53.8	6,473	3.2	2,626	40.6	900	0.4	411	45.7
Health Board Total	313,226	2,506	0.8	1,442	57.5	1,561	0.5	734	47.0	4,766	1.5	2,560	53.7	11,396	3.6	4,807	42.2	1,371	0.4	647	47.2
Wales Total	2,597,903	26,011	1.0	15,718	60.4	11,428	0.4	5,443	47.6	37,188	1.4	19,243	51.7	90,338	3.5	38,964	43.1	12,794	0.5	5,913	46.2

Table A3. Uptake of influenza immunisation in pregnant women, with breakdown for those who have another clinical risk condition in Wales 2021/22.

Local Authority	Pregnant women with clinical risk			Pregnant women without clinical risk			Total pregnant women		
	Immunised (n)	Denominator (n)	Uptake (%)	Immunised (n)	Denominator (n)	Uptake (%)	Immunised (n)	Denominator (n)	Uptake (%)
<u>Aneurin Bevan UHB</u>									
Blaenau Gwent LA	31	65	47.7	149	429	34.7	180	494	36.4
Caerphilly LA	69	121	57.0	403	928	43.4	472	1,049	45.0
Monmouthshire LA	42	82	51.2	315	696	45.3	357	778	45.9
Newport LA	81	159	50.9	490	1,561	31.4	571	1,720	33.2
Torfaen LA	43	98	43.9	209	607	34.4	252	705	35.7
Health Board Total	266	525	50.7	1,566	4,221	37.1	1,832	4,746	38.6
<u>Betsi Cadwaladr UHB</u>									
Anglesey LA	35	58	60.3	206	443	46.5	241	501	48.1
Conwy LA	47	105	44.8	265	736	36.0	312	841	37.1
Denbighshire LA	71	140	50.7	291	831	35.0	362	971	37.3
Flintshire LA	78	146	53.4	419	1,140	36.8	497	1,286	38.6
Gwynedd LA	59	106	55.7	310	753	41.2	369	859	43.0
Wrexham LA	71	150	47.3	385	1,058	36.4	456	1,208	37.7
Health Board Total	361	705	51.2	1,876	4,961	37.8	2,237	5,666	39.5
<u>Cardiff and Vale UHB</u>									
Cardiff LA	137	266	51.5	825	2,149	38.4	962	2,415	39.8
Vale of Glamorgan LA	39	61	63.9	253	584	43.3	292	645	45.3
Health Board Total	176	327	53.8	1,078	2,733	39.4	1,254	3,060	41.0
<u>Cwm Taf Morgannwg UHB</u>									
Bridgend LA	84	171	49.1	453	1,170	38.7	537	1,341	40.0
Merthyr Tydfil LA	15	29	51.7	121	292	41.4	136	321	42.4
Rhondda Cynon Taff LA	56	123	45.5	395	1,053	37.5	451	1,176	38.4
Health Board Total	155	323	48.0	969	2,515	38.5	1,124	2,838	39.6
<u>Hywel Dda UHB</u>									
Carmarthenshire LA	56	111	50.5	345	874	39.5	401	985	40.7
Ceredigion LA	28	53	52.8	158	428	36.9	186	481	38.7
Pembrokeshire LA	48	109	44.0	224	717	31.2	272	826	32.9
Health Board Total	132	273	48.4	727	2,019	36.0	859	2,292	37.5
<u>Powys Teaching HB</u>									
	61	98	62.2	361	857	42.1	422	955	44.2
<u>Swansea Bay UHB</u>									
Neath Port Talbot LA	17	40	42.5	133	329	40.4	150	369	40.7
Swansea LA	68	118	57.6	403	1,089	37.0	471	1,207	39.0
Health Board Total	85	158	53.8	536	1,418	37.8	621	1,576	39.4
Wales Total	1,236	2,409	51.3	7,113	18,724	38.0	8,349	21,133	39.5

Table A4. Uptake of influenza immunisation in those aged six months to 64 years and recorded as being a carer in Wales 2021/22.

Local Authority	Total carers		
	Immunised (n)	Denominator (n)	Uptake (%)
Aneurin Bevan UHB			
Blaenau Gwent LA	405	704	57.5
Caerphilly LA	1,416	2,401	59.0
Monmouthshire LA	1,338	1,885	71.0
Newport LA	1,118	2,055	54.4
Torfaen LA	1,103	1,741	63.4
Health Board Total	5,380	8,786	61.2
Betsi Cadwaladr UHB			
Anglesey LA	683	1,244	54.9
Conwy LA	978	1,789	54.7
Denbighshire LA	1,043	2,095	49.8
Flintshire LA	1,413	2,642	53.5
Gwynedd LA	1,059	1,978	53.5
Wrexham LA	1,405	2,556	55.0
Health Board Total	6,581	12,304	53.5
Cardiff and Vale UHB			
Cardiff LA	1,701	3,495	48.7
Vale of Glamorgan LA	815	1,743	46.8
Health Board Total	2,516	5,238	48.0
Cwm Taf Morgannwg UHB			
Bridgend LA	1,095	1,831	59.8
Merthyr Tydfil LA	304	572	53.1
Rhondda Cynon Taff LA	1,442	2,797	51.6
Health Board Total	2,841	5,200	54.6
Hywel Dda UHB			
Carmarthenshire LA	2,090	3,718	56.2
Ceredigion LA	862	1,627	53.0
Pembrokeshire LA	1,215	2,577	47.1
Health Board Total	4,167	7,922	52.6
Powys Teaching HB	1,094	1,902	57.5
Swansea Bay UHB			
Neath Port Talbot LA	1,222	1,959	62.4
Swansea LA	1,878	3,477	54.0
Health Board Total	3,100	5,436	57.0
Wales Total	25,679	46,788	54.9

Table A5. Uptake of influenza immunisation, through general practice, in children aged two and three years in Wales 2021/22.

Local Authority	Two year olds			Three year olds		
	Immunised (n)	Denominator (n)	Uptake (%)	Immunised (n)	Denominator (n)	Uptake (%)
<u>Aneurin Bevan UHB</u>						
Blaenau Gwent LA	444	765	58.0	388	760	51.1
Caerphilly LA	859	1,821	47.2	1,033	2,005	51.5
Monmouthshire LA	538	825	65.2	655	938	69.8
Newport LA	876	1,973	44.4	934	1,941	48.1
Torfaen LA	426	1,015	42.0	420	1,020	41.2
Health Board Total	3,143	6,399	49.1	3,430	6,664	51.5
<u>Betsi Cadwaladr UHB</u>						
Anglesey LA	376	558	67.4	421	641	65.7
Conwy LA	414	1,014	40.8	465	1,063	43.7
Denbighshire LA	395	1,021	38.7	465	1,013	45.9
Flintshire LA	765	1,466	52.2	929	1,551	59.9
Gwynedd LA	577	1,076	53.6	672	1,208	55.6
Wrexham LA	683	1,397	48.9	793	1,549	51.2
Health Board Total	3,210	6,532	49.1	3,745	7,025	53.3
<u>Cardiff and Vale UHB</u>						
Cardiff LA	1,684	4,017	41.9	1,845	4,263	43.3
Vale of Glamorgan LA	649	1,335	48.6	760	1,488	51.1
Health Board Total	2,333	5,352	43.6	2,605	5,751	45.3
<u>Cwm Taf Morgannwg UHB</u>						
Bridgend LA	824	1,613	51.1	804	1,662	48.4
Merthyr Tydfil LA	241	675	35.7	170	716	23.7
Rhondda Cynon Taff LA	1,089	2,544	42.8	1,009	2,577	39.2
Health Board Total	2,154	4,832	44.6	1,983	4,955	40.0
<u>Hywel Dda UHB</u>						
Carmarthenshire LA	857	1,751	48.9	865	1,760	49.1
Ceredigion LA	327	663	49.3	402	771	52.1
Pembrokeshire LA	456	1,090	41.8	472	1,144	41.3
Health Board Total	1,640	3,504	46.8	1,739	3,675	47.3
<u>Powys Teaching HB</u>						
	715	1,191	60.0	738	1,295	57.0
<u>Swansea Bay UHB</u>						
Neath Port Talbot LA	565	1,305	43.3	694	1,406	49.4
Swansea LA	1,034	2,391	43.2	1,125	2,555	44.0
Health Board Total	1,599	3,696	43.3	1,819	3,961	45.9
Wales Total	14,794	31,506	47.0	16,059	33,326	48.2