

Current level of influenza activity: **Medium**

Influenza activity trend: **Increasing**

Confirmed influenza cases since 2022 week 40: **3498** (1567 influenza A(H3N2), 830 influenza A(H1N1)pdm09, 1035 influenza A(not subtyped) and 66 influenza B)

Key points – Wales

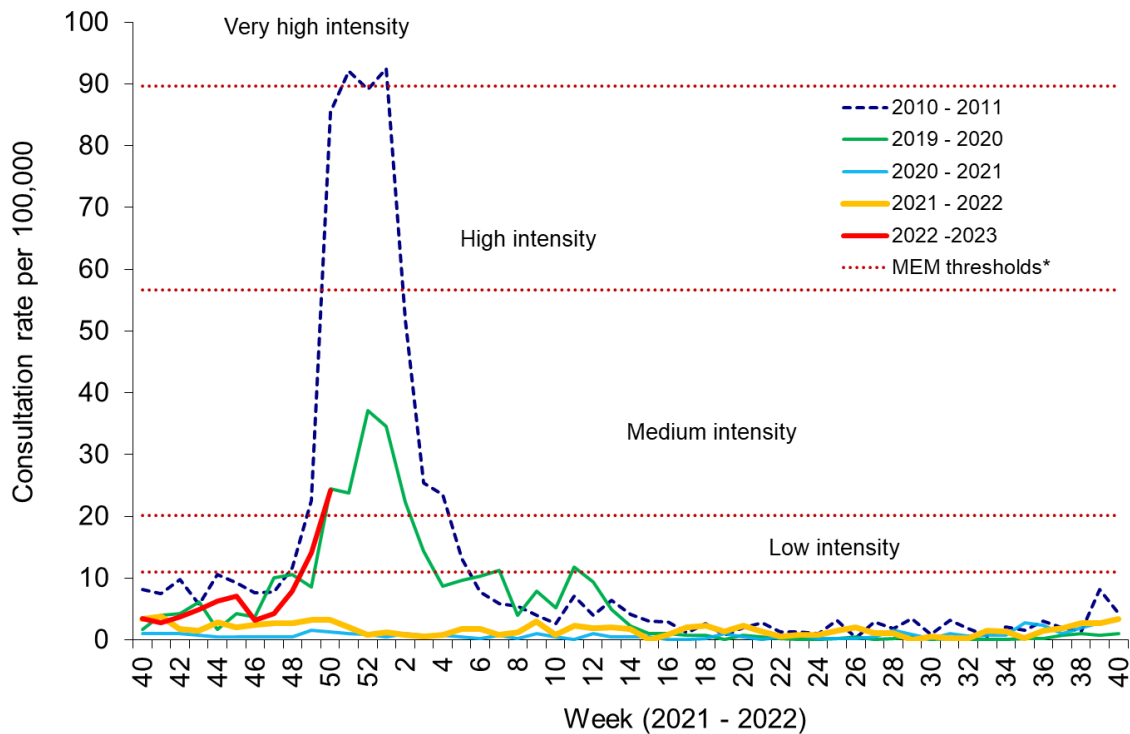
Influenza circulates in Wales and confirmed cases of RSV remain at very high intensity levels.

During Week 50 (ending 18/12/2022) there were 1200 cases of influenza (a large increase from the previous week), with a further seven cases from previous weeks. Influenza is currently circulating in Wales. COVID-19 cases also continue to be detected in symptomatic patients in hospitals and in the community. RSV incidence in children under five years of age has decreased, but remains at very high levels of activity (compared to the 10 seasons leading up to 2020). Rhinovirus, RSV and Influenza A are the most commonly detected causes of non-COVID-19 Acute Respiratory Infection (ARI), but other causes have increased in recent weeks, including: human metapneumovirus, adenovirus and seasonal coronaviruses.

- The **Sentinel GP consultation rate for influenza-like illness (ILI)** in Wales during week 50, was 24.2 consultations per 100,000 practice population (Table 1). This is an increase compared to the previous week (14.1 consultations per 100,000) and has exceeded the threshold for medium intensity levels (Figure 1). Consultation rates were highest in those aged five to 44 years.
- The **Sentinel GP consultation rate for Acute Respiratory Infections (ARI)** was 514.9 per 100,000 practice population during Week 50, an increase compared to the previous week (459.9 per 100,000) (Table 2 and Figure 3). Weekly consultations for both Lower Respiratory Tract Infections and Upper Respiratory Tract Infections increased compared to the previous week.
- The percentage of calls to **NHS Direct Wales** which were 'influenza-related' (cold/flu, cough, fever, headache and sore throat) during Week 50 increased to 41.6% (Figure 9).
- During Week 50, 3,153 specimens received multiplex respiratory panel testing mainly from patients attending hospitals. These results do not include samples tested solely for SARS-CoV-2. There were 769 samples positive for influenza of which 234 were A(H1N1), 500 were A(H3N2), 31 were A(not typed), and four were influenza B. Overall influenza positivity was 24.4% across all age groups; 22.4% in those aged 18 years and over; and 30.5% in those aged under 18 years. In addition there were 628 SARS-CoV-2, 395 rhinovirus, 343 RSV, 207 human metapneumovirus, 185 adenovirus, 146 seasonal coronavirus, 60 enterovirus, 56 parainfluenza and one bocavirus positive samples (Figure 5). Additionally, 1,691 samples from patients were tested for influenza, RSV and SARS-CoV-2 only, many of these tests may be associated with screening activities rather than diagnostic testing for patients presenting with ARI symptoms. Of these, 399 were positive for influenza A, five for influenza B, 359 were positive for SARS-CoV-2 and 102 were positive for RSV (Figure 6). Furthermore, 105 respiratory specimens were tested from patients in intensive care units (ICU) of which 14 were positive for influenza (eight A(H3N2), three A(H1N1) and three A(not subtyped) (Figure 7).
- There were 70 surveillance samples from patients with ILI symptoms collected by **sentinel GPs and community pharmacies** during Week 50. Of the 70 samples, 27 samples tested positive for influenza (20 A(H3N2), five A(H1N1), and two A(not subtyped)), seven for RSV, six for rhinovirus, six for human metapneumovirus, five for SARS-CoV2, four for enterovirus, three for seasonal coronaviruses, and two for adenovirus (as at 21/12/2022) (Figure 4).
- **Confirmed RSV case incidence in children aged under five has substantially decreased compared to previous weeks but remains at very high intensity levels.** In week 50 there were 88.0 confirmed cases per 100,000 in this age group (Figure 7).
- The 7-day rolling sum of cases hospitalised within 28 days of an influenza positive test result in the community (or up to two days post-admission) increased to 218 during week 50, from 165 cases in week 49. (figure 8).
- During Week 50, 61 **ARI outbreaks** were reported to the Public Health Wales Health Protection team. One was reported as influenza A and the rest were reported as COVID-19. Of these 61 **ARI outbreaks**, 55 were reported in residential care homes, five in school settings and one in community/mixed or other setting.
- According to [EuroMoMo](#) analysis, all-cause deaths in Wales were not significantly in excess during week 49.

Respiratory infection activity in Wales

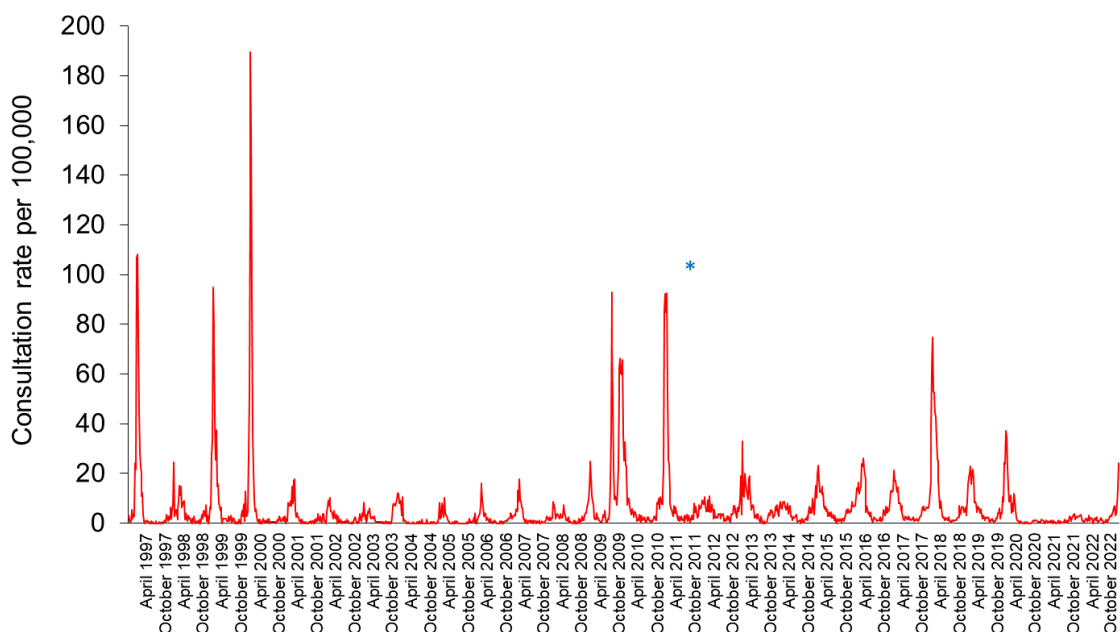
Figure 1. Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (as of 18/12/2022).



* The Moving Epidemic Method (MEM) threshold calculated for Wales ILI consultation rates is 11.1 per 100,000. MEM thresholds used in this chart are based on influenza from 2010-11 to 2018-19 seasons. Caution should be used when comparing consultation rates from March 2020 onwards to previous periods due to the changes in health-seeking behaviours brought about by the COVID-19 pandemic.

**Clinical consultations for ILI seasons are monitored from W40 to W40, the most recent data is presented in red.

Figure 2. Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (week 48 1996 – week 50 2022).



* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for ILI in Welsh sentinel practices, week 45 – week 50 2022 (as of 18/12/2022).

Age group	45	46	47	48	49	50
< 1	0.0	0.0	0.0	0.0	0.0	0.0
1 - 4	6.8	6.8	6.8	7.4	13.5	13.5
5 - 14	2.2	0.0	0.0	7.3	6.7	40.3
15 - 24	2.2	0.0	6.6	21.1	17.4	47.8
25 - 34	9.7	5.8	7.8	6.3	19.3	38.7
35 - 44	17.3	3.8	9.7	8.4	19.1	38.3
45 - 64	7.3	3.7	1.9	6.0	18.3	11.9
65 - 74	6.5	4.3	4.4	7.0	8.7	8.7
75+	2.2	2.2	0.0	2.4	2.2	2.2
Total	7.0	3.2	4.2	7.9	14.1	24.2

Table 2. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 45 – week 50 2022 (as of 18/12/2022).

Age group	45	46	47	48	49	50
< 1	2022.4	1779.0	1992.4	2144.3	2704.4	2830.2
1 - 4	1006.1	1052.4	1365.4	1375.2	2742.4	2291.0
5 - 14	302.4	304.5	436.6	539.0	1035.9	1009.0
15 - 24	178.0	175.8	213.5	243.7	308.6	406.4
25 - 34	170.1	208.7	209.5	206.3	301.5	371.1
35 - 44	186.0	157.2	169.1	233.8	317.7	382.7
45 - 64	134.7	140.1	150.8	186.0	239.2	306.1
65 - 74	149.4	149.4	168.9	174.5	212.4	372.7
75+	150.4	159.1	151.7	245.3	266.1	355.5
Total	217.9	221.2	258.5	301.8	459.9	514.9

Figure 3. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 1 – week 50 2022 (as of 18/12/2022).

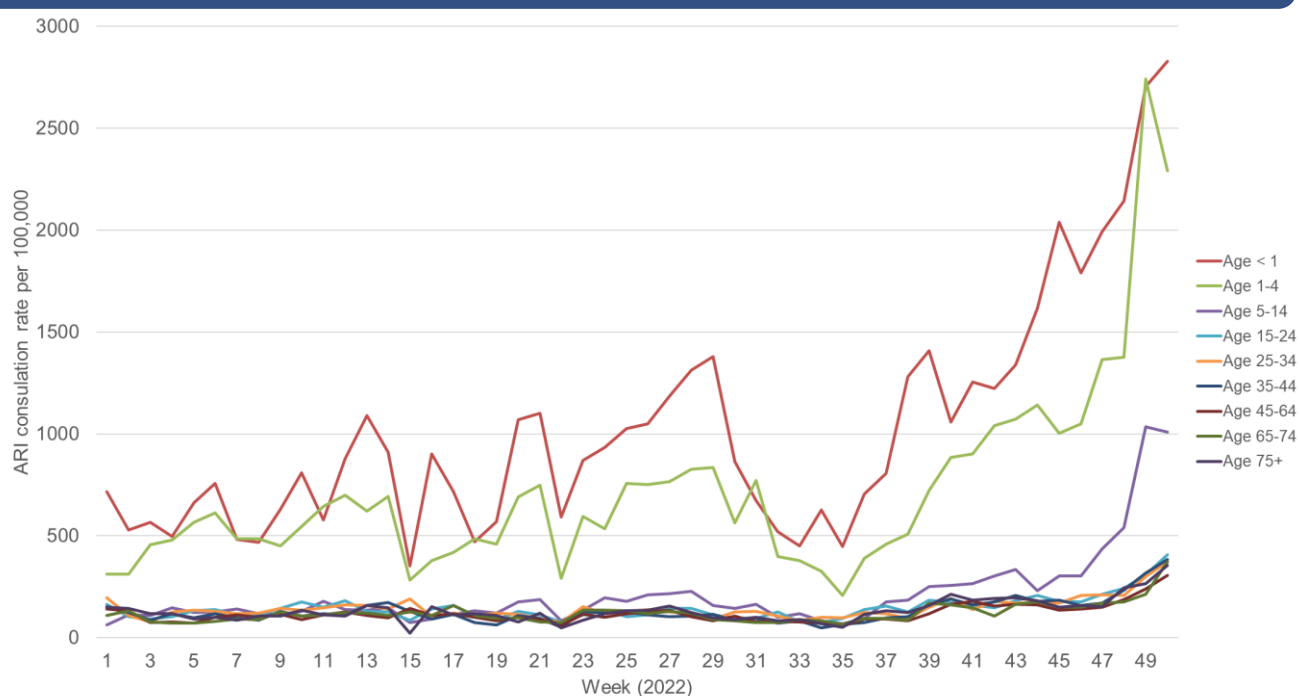
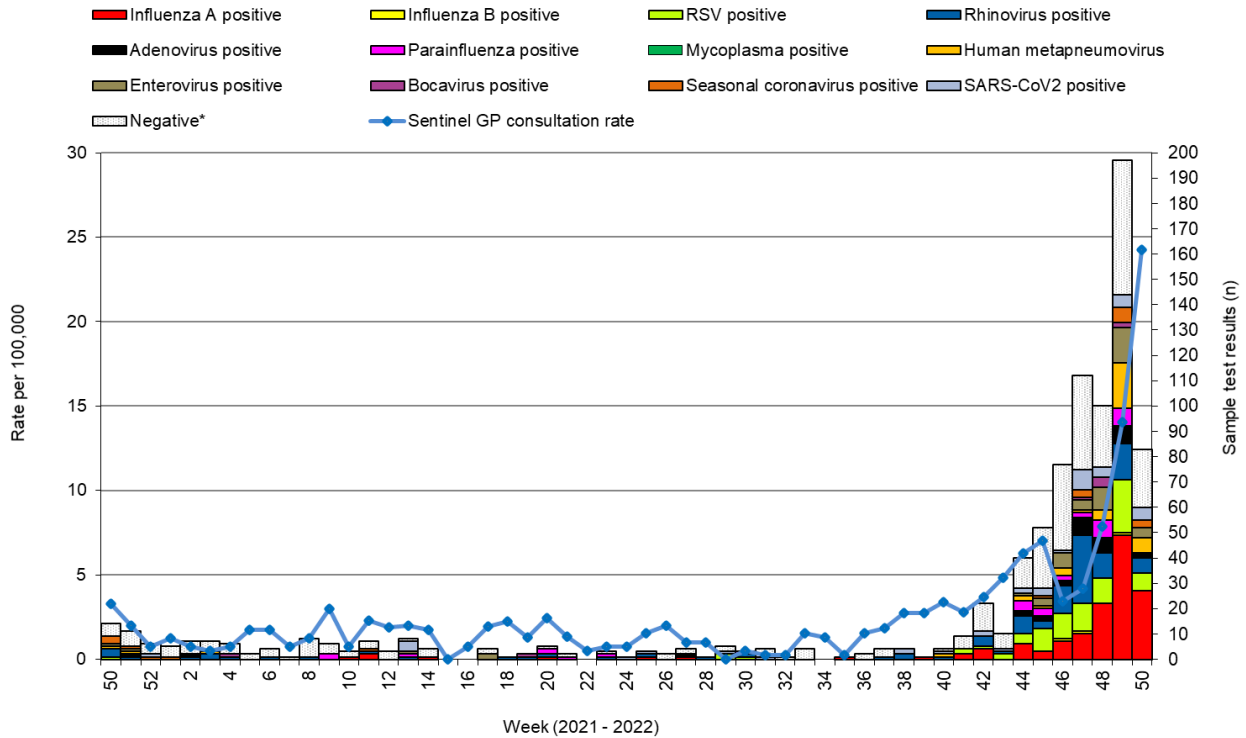
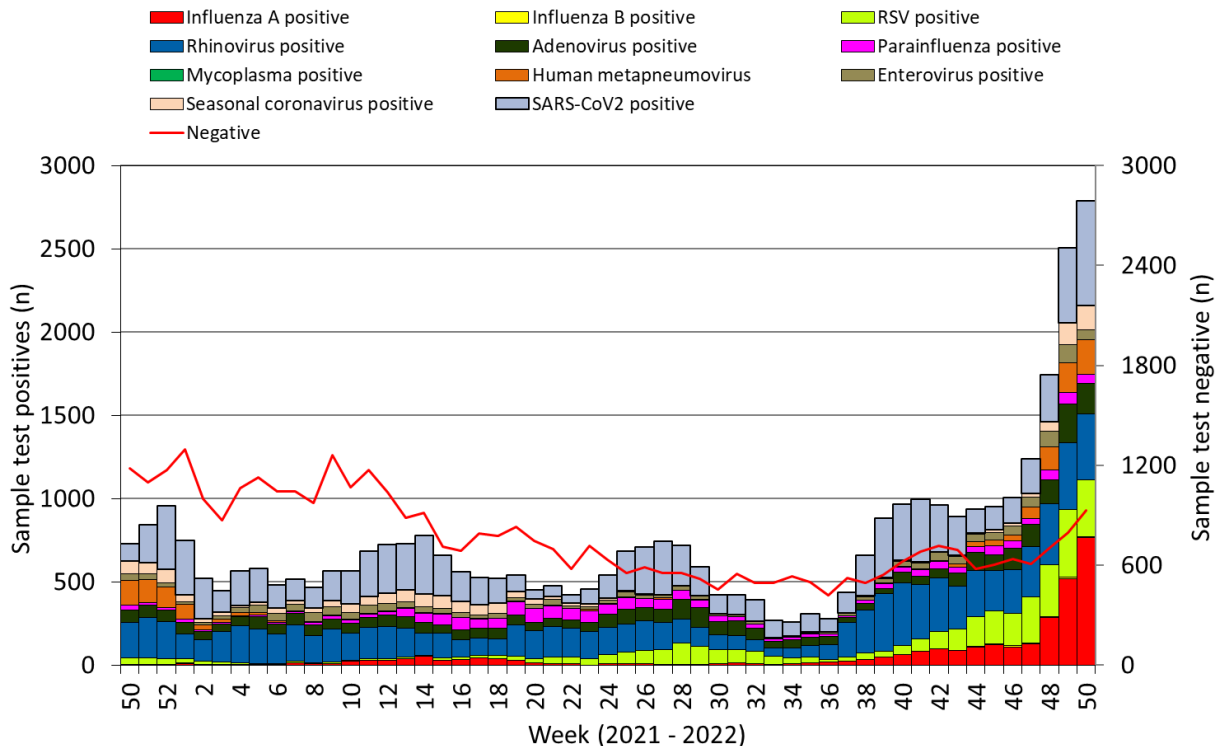


Figure 4. Specimens submitted for virological testing by sentinel GPs as of 18/12/2022, by week of sample collection, week 50 2021 to week 50 2022.



* Tested negative for influenza, adenovirus, rhinovirus, RSV, parainfluenza, mycoplasma, human metapneumovirus, enterovirus, bocavirus and coronaviruses. Samples which test positive for more than on pathogen will appear more than once in the chart.

Figure 5. Specimens submitted for virological testing for hospital patients and non-sentinel GPs as of 18/12/2022 by week of sample collection, week 50 2021 to week 50 2022.



This chart summarises respiratory panel test data and does not include data for patients tested SOLELY for SARS-CoV2. Combined data for tests carried out in Public Health Wales Microbiology: Cardiff laboratory, provided by Public Health Wales Microbiology Cardiff Specialist Virology Centre. This chart summarises individual test results, patients who are positive for multiple infections within a given week will appear multiple times. Samples which test positive for more than on pathogen will appear more than once in the chart.

Figure 6. Specimens from hospital patients submitted for RSV, Influenza and SARS-CoV2 testing only, as of 18/12/2022 by week of sample collection, week 50 2021 to week 50 2022.

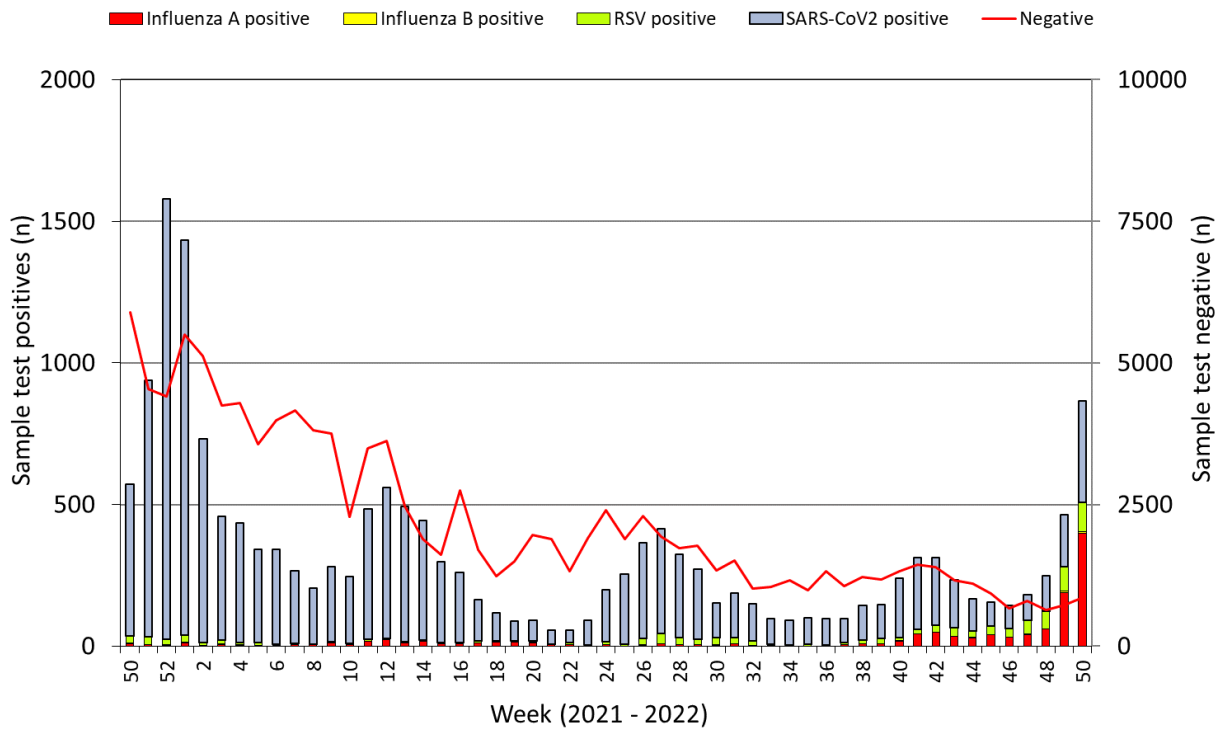
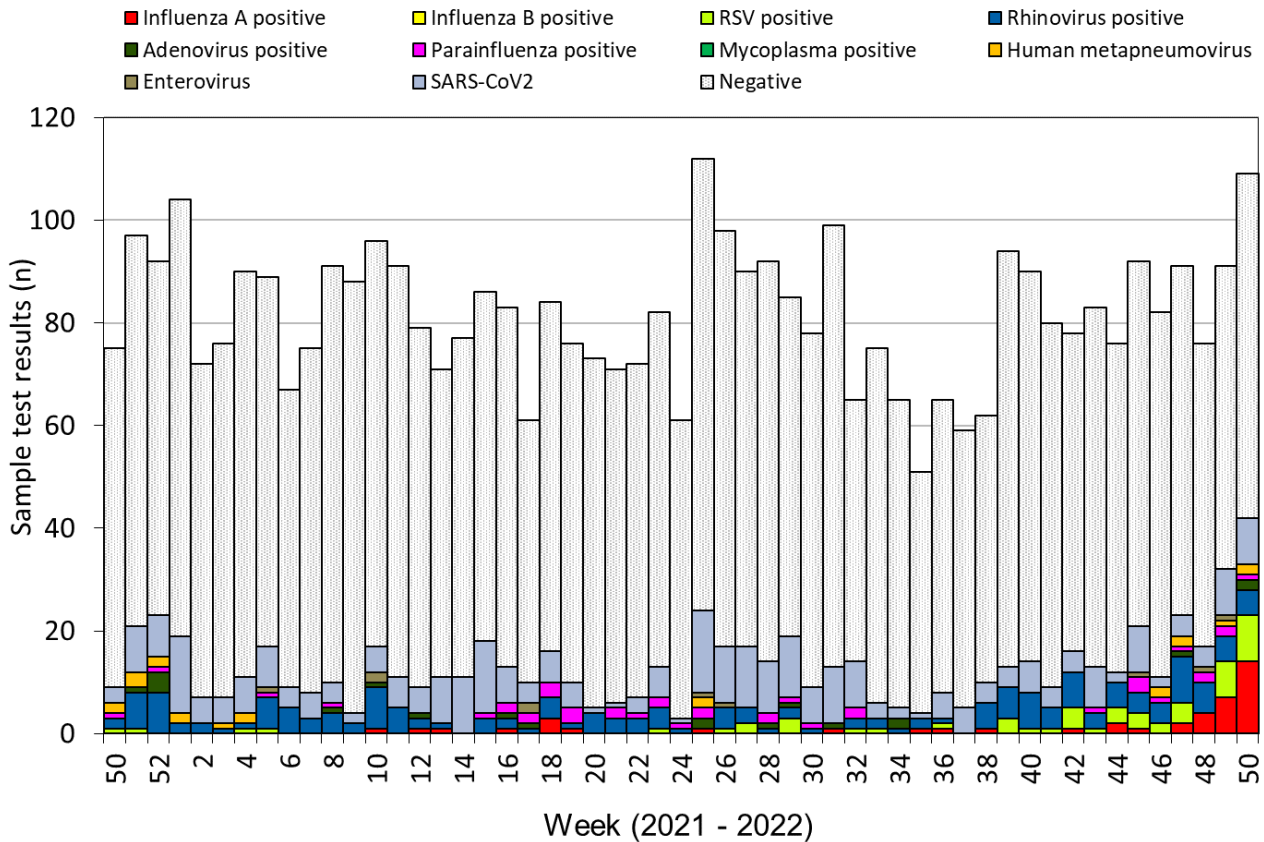
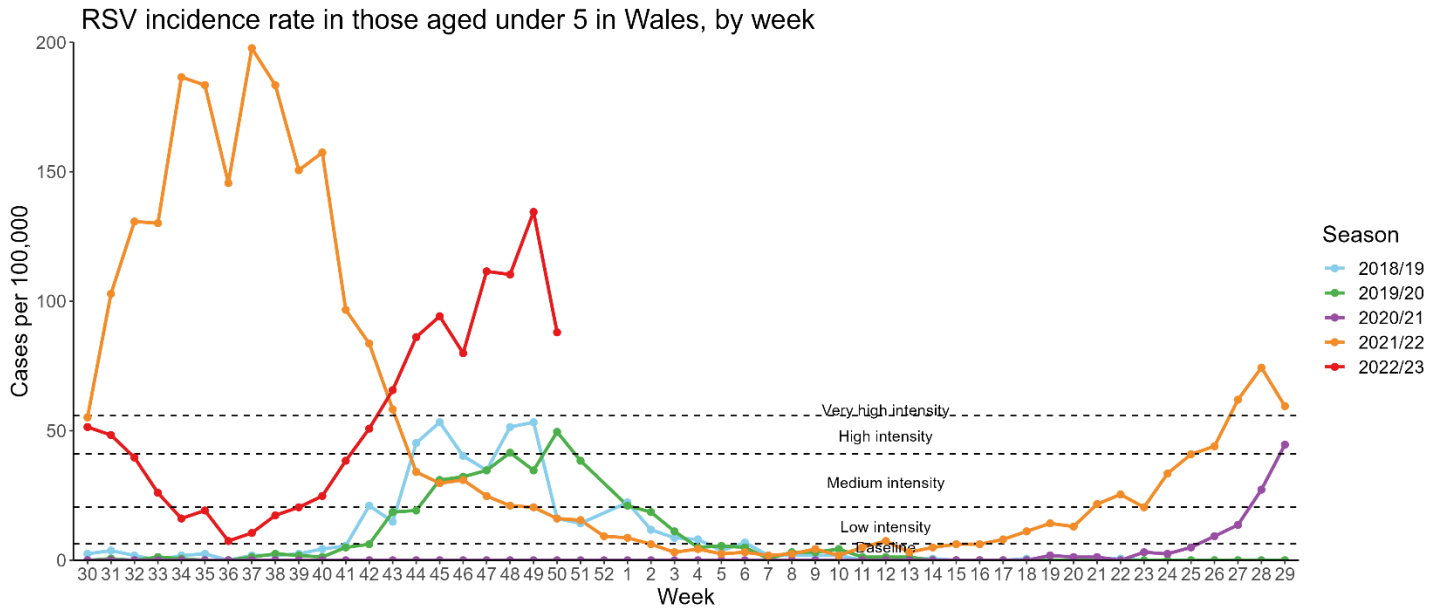


Figure 7. Specimens submitted for virological testing for ICU patients, by week of sample collection, week 50 2021 to Week 50 2022.



This chart summarises respiratory panel test data and does not include data for patients tested SOLELY for SARS-CoV2. Samples which test positive for more than one pathogen will appear more than once in the chart.

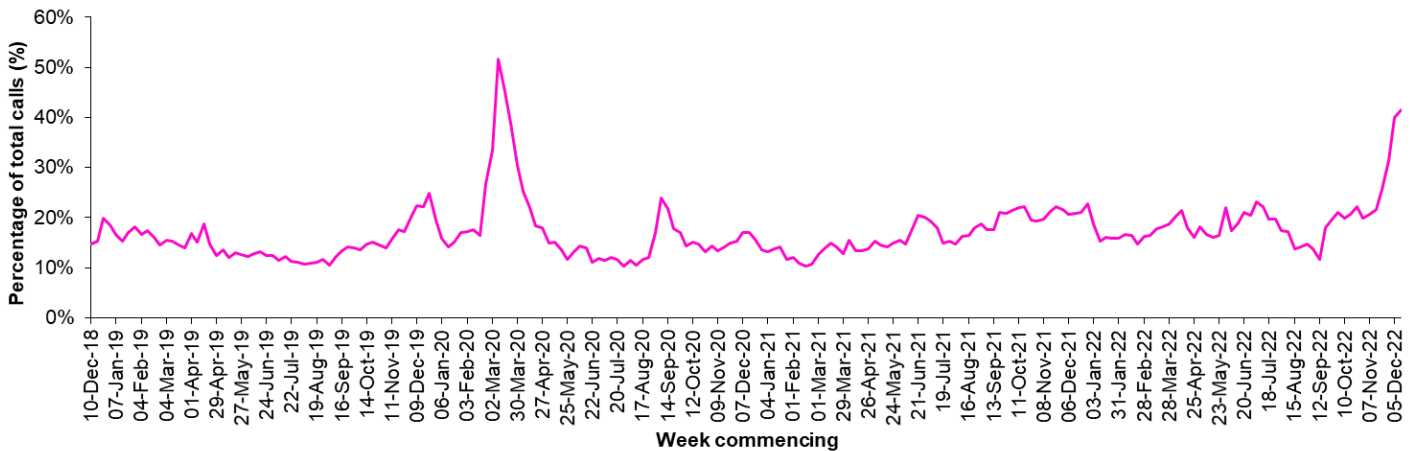
Figure 8. RSV incidence rate per 100,000 population aged under five years, week 30 2018 to Week 50 2022.



*RSV seasons are monitored from W30 to W29, the most recent data is presented in red

Calls to NHS Direct Wales

Figure 9. Influenza related calls to NHS Direct Wales¹ (as a percentage of total calls) from week 50 2018 - Week 50 2022 (as of 18/12/2022).



¹ Data supplied by Health Statistics and Analysis Unit, Welsh Government.

Flu related calls are the sum of calls recorded as 'cold/flu', 'cough', 'headache', 'fever' and 'sore throat'. Following changes to the NHS Direct calls system, including the start of the 111 pilot, there has been a change in the way in which denominator data are calculated for this chart, NHS Direct Wales now count the total number of nurse triaged calls (i.e. calls which could have symptom data recorded against them), note that 111 includes out-of-hours calls.

Influenza Vaccine Uptake in Wales

Table 3. Uptake of influenza immunisations in GP Practice patients in Wales 2022/23 (as of 13/12/2022).

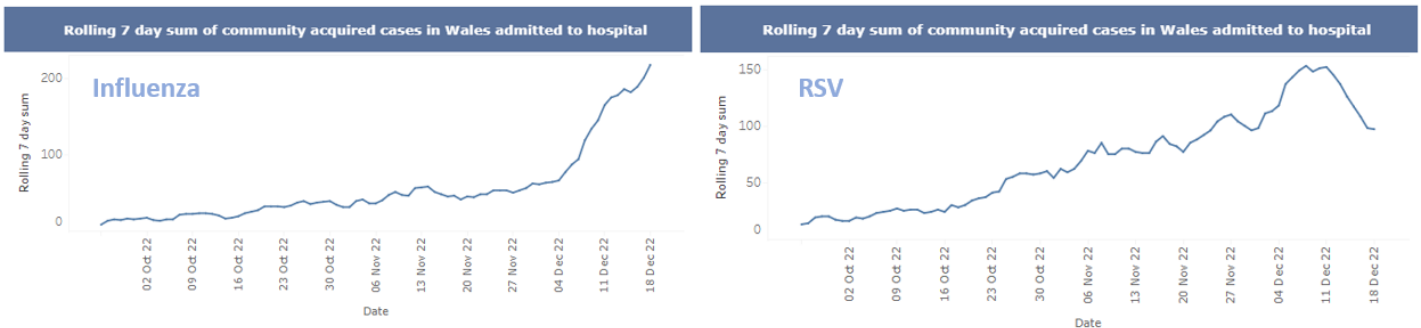
Influenza immunisation uptake in the 2022/23 season	
People aged 65y and older	73.5%
People younger than 65y in a clinical risk group	39.7%
Children aged two & three years	37.5%
Children aged between four & ten years	63.0%
Children aged between 11 & 15 years	54.8%
Total NHS staff	41.6%
NHS staff with direct patient contact	41.3%

Uptake in other eligible groups will be available in the coming weeks.

The end of season report Influenza in Wales 2019/20 is available to download and contains a full breakdown of vaccination uptake amongst eligible groups.

Link to report: <https://phw.nhs.wales/topics/immunisation-and-vaccines/flu vaccine/annual-influenza-surveillance-and-influenza-vaccination-uptake-reports/>

Figure 8. Seven day rolling sum of cases hospitalised in Wales within 28 days of an influenza or RSV positive test result in the community (or up to 2 days post-admission), as of 18/12/2022).



Influenza activity – UK and international summary

- As of week 49, GP ILI consultations increased in Northern Ireland to 6.0 per 100,000, and in Scotland to 7.3 per 100,000. The weekly ILI GP consultation rate in England reported through the RCGP system increased to 15.5 per 100,000.
- During week 49, 856 samples tested positive for influenza were reported in England (including 35 A(H1N1)pdm09, 269 A(H3N2), 525 A(not subtyped) and 27 influenza B). Overall influenza positivity increased to 20.2%. UK summary data are available from the [UKHSA Influenza and COVID-19 Surveillance Report](#).
- The WHO and the European Centre for Disease Prevention and Control (ECDC) reported in its weekly influenza update, that during week 49, eight countries reported baseline-intensity, 10 reported low-intensity, 14 reported medium-intensity, four reported high-intensity, and two reported very-high intensity (Austria and Russian Federation). From the 38 countries reporting, two reported no activity, seven reported sporadic spread, five reported local spread, eight reported regional spread, and 16 reported widespread activity (across the Region). During week 49, 921 of 3,937 (23%) samples from patients presenting to all sentinel primary care centres with ILI or ARI symptoms were tested positive for influenza. This is an increase from the previous week and remains above the threshold for epidemic activity (10%). Of sentinel specimens that tested positive for influenza for the season to date, 95% were influenza A (82% H3, and 18% A(H1N1)pdm09) and 5% were influenza B. **Source:** Flu News Europe: <http://www.flunewseurope.org/>
- The WHO reported on 12/12/2022, based on data up to 27/11/2022, that globally, influenza activity has increased, with influenza A(H3N3) predominating.
- In the temperate zones of the southern hemisphere, overall influenza was low, with the exception of Chile, and Argentina, where influenza A(H3N2) and influenza B predominated respectively.
- In tropical South America, influenza detections of predominantly A(H3N2) virus increased, mainly in Mexico, the Caribbean and Central American countries. Puerto Rico, Bolivia and Ecuador also reported slightly increased influenza activity.
- In Western Africa, influenza activity remained low, although influenza B/Victoria and A(H3N2) detections were sporadically reported. In Middle Africa, Cameroon reported a single case of influenza B. In Eastern Africa, cases of influenza A and B were reported.
- In Southern Asia, influenza detections of predominately A(H3N2) viruses decreased mainly due to a decrease in activity reported in Iran. Influenza A(H3N2) predominated, though detections of A(H1N1)pdm09 and influenza B viruses were also reported. In South-East Asia, influenza activity decreased. In Western Asia, influenza detections decreased in the countries of the Arabian Peninsula.
- In Central Asia, specifically in Kazakhstan, influenza activity of predominantly influenza B viruses, continued to reported. Influenza like illnesses and severe acute respiratory infections activity has also increased. **Source:** WHO influenza update: <https://www.who.int/teams/global-influenza-programme/surveillance-and-monitoring/influenza-updates/current-influenza-update>
- Based on FluNet reporting (as of 09/12/2022), during the time period from 14/11/2022 – 27/11/2022, National Influenza Centres and other national influenza laboratories from 125 countries, areas or territories reported influenza surveillance data. The WHO Global Influenza Surveillance and Response System laboratories tested more than 560,422 specimens during that time period, of which 93,082 were positive for influenza viruses. 91,170 (97.9%) of those positive for influenza were typed as influenza A (of the subtyped influenza A viruses, 2,203 (14.4%) were influenza A(H1N1)pdm09 and 13,091 (85.6%) were influenza A(H3N2)) and 1,912 (2.1%) influenza B (of the 400 characterised influenza B viruses, all belonged to the B-Victoria lineage). **Source:** [FluNet: https://www.who.int/tools/flunet](https://www.who.int/tools/flunet)

Update on influenza activity in North America

- The USA Centers for Disease Control and Prevention (CDC) report that seasonal influenza activity is at high levels, although it appeared to decline in some areas across the country during week 49 (ending 10/12/2022). Nationally, 31,442 (25.4%) out of 123,987 specimens tested positive for influenza in week 49 in clinical laboratories nationwide, of these positives 31,287 (99.5%) were influenza A and 155 (0.5%) were influenza B. Further characterisation has been carried out on 8,996 specimens by public health laboratories, and 1,760 samples tested positive for influenza; 190 influenza A(H1N1)pdm09 (20.2%), 750 influenza A(H3N2) (79.8%), 820 influenza A(not subtyped) and three influenza B. **Source:** CDC Weekly US Influenza Surveillance Report: <http://www.cdc.gov/flu/weekly/>

- The Public Health Agency of Canada reported that during week 49, influenza activity along with most surveillance indicators remained above expected levels, with some reporting small decreases. During week 49, 9,393 influenza detections were reported: 9,365 influenza A (predominantly A(H3N2) at 95%), and 28 influenza B. The percentage of ILI visits rose to 4.0% in week 48.
Source: Public Health Agency of Canada: <https://www.canada.ca/en/public-health/services/diseases/flu-influenza/influenza-surveillance/weekly-influenza-reports.html>

Respiratory syncytial virus (RSV) in North America

- The USA CDC reported RSV positivity rate and detections both decreased in the week beginning 10/12/2022.
Source: CDC RSV national trends: <https://www.cdc.gov/surveillance/nrvss/rsv/natl-trend.html>

COVID-19 – UK and international summary

- As of 14/12/2022, there were 21 new positive PCR episodes, for the most recent 7-day reporting period, per 100,000 population in Wales. There were 13 suspected COVID-19 deaths with a date of death in the most recent 7-day reporting period, reported to Public Health Wales. There were 17 COVID-19 death registrations in the last reporting period reported by ONS. Latest COVID-19 data from Public Health Wales is available from: <https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/>
- The latest UKHSA COVID-19 data summary is available from: <https://coronavirus.data.gov.uk/>
- WHO situation updates on COVID-19 are available from: <https://covid19.who.int/>

Middle East respiratory syndrome coronavirus (MERS-CoV) – latest update from WHO and ECDC

- On 16/11/22 WHO reported four laboratory-confirmed cases of locally acquired Middle East Respiratory Syndrome coronavirus (MERS-CoV) in the Kingdom of Saudi Arabia from 29/12/2021 to 31/10/2022. This follows on from one laboratory-confirmed case in Oman reported on 28/04/2022, and two (including 1 death) reported from Qatar between 22/03/2022 to 03/04/2022. Since the beginning of 2022 and as of 22/11/2022 there have been six reported cases of MERS-CoV, with an additional case reported from 29/12/2022. As of 16/11/2022, 2,600 laboratory confirmed cases of human infection with MERS-CoV, including 935 associated deaths, from across the globe have officially been reported to WHO since 2012.
Source: WHO Global Alert and Response website: <https://www.who.int/emergencies/disease-outbreak-news>
- The majority of the MERS cases continue to be reported from Middle Eastern countries within the Arabian Peninsula, and specifically from Saudi Arabia. Rapid risk assessments of the situation from ECDC, which contain epidemiological updates and advice for travellers and healthcare workers, are available from: <https://ecdc.europa.eu/en/middle-east-respiratory-syndrome-coronavirus>
- Further updates and advice for healthcare workers and travellers are available from WHO: <http://www.who.int/emergencies/mers-cov/en/> and from NaTHNaC: <https://travelhealthpro.org.uk/news/237/mers-cov-update-travelhealthpro-country-pages>

Human infection with avian influenza A(H7N9), China

- The latest WHO Influenza at Human-Animal Interface summary (31/08/2022 – 05/10/2022) reports that there have been no publicly available reports from China or other countries on influenza A(H7N9) in recent months. Since February 2013, a total of 1,568 laboratory-confirmed cases of human infection with avian influenza A(H7N9), including at least 616 deaths, have been reported to the global influenza programme: <https://www.who.int/teams/global-influenza-programme/avian-influenza/monthly-risk-assessment-summary>
The risk of international spread of avian influenza A(H7N9) is considered to be low at present. However, it is important that clinicians are aware of the possibility of human infection with animal influenza, in persons presenting with severe acute respiratory disease, while travelling or soon after returning from an area where avian influenza is a concern. WHO Global Alert & Response updates: <https://www.who.int/emergencies/disease-outbreak-news>

Links:

Public Health Wales influenza surveillance webpage:

<http://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=25480>

Public Health Wales COVID-19 data dashboard:

<https://phw.nhs.wales/topics/latest-information-on-novel-coronavirus-covid-19/>

Public Health Wales interactive report on hospitalisations in influenza and RSV cases:

<https://public.tableau.com/app/profile/public.health.wales.health.protection/viz/ARI-Hospitaladmissionsdashboard/ARIHospitaladmissionsdashboard?publish=yes>

GP Sentinel Surveillance of Infections Scheme:

<http://www.wales.nhs.uk/sites3/page.cfm?orgid=457&pid=27918>

NICE influenza antiviral usage guidance:

<http://www.nice.org.uk/Guidance/TA158>

England influenza and COVID-19 surveillance:

<https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2022-to-2023-season>

Scotland seasonal respiratory surveillance:

<https://beta.isdscotland.org/find-publications-and-data/population-health/covid-19/weekly-national-seasonal-respiratory-report/>

Northern Ireland influenza surveillance:

<https://www.publichealth.hscni.net/directorate-public-health/health-protection/seasonal-influenza>

European Centre for Communicable Disease:

<http://ecdc.europa.eu/>

European influenza information:

<http://flunewseurope.org/>

Advice on influenza immunisation

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

Advice on influenza immunisation (for intranet users)

[Influenza \(sharepoint.com\)](#)

For further information on this report, please email Public Health Wales using:

surveillance.requests@wales.nhs.uk