Public Health Wales CDSC Weekly Influenza & Acute Respiratory Infection Surveillance Report

Wednesday 01st February 2023 (covering week 04 2023)

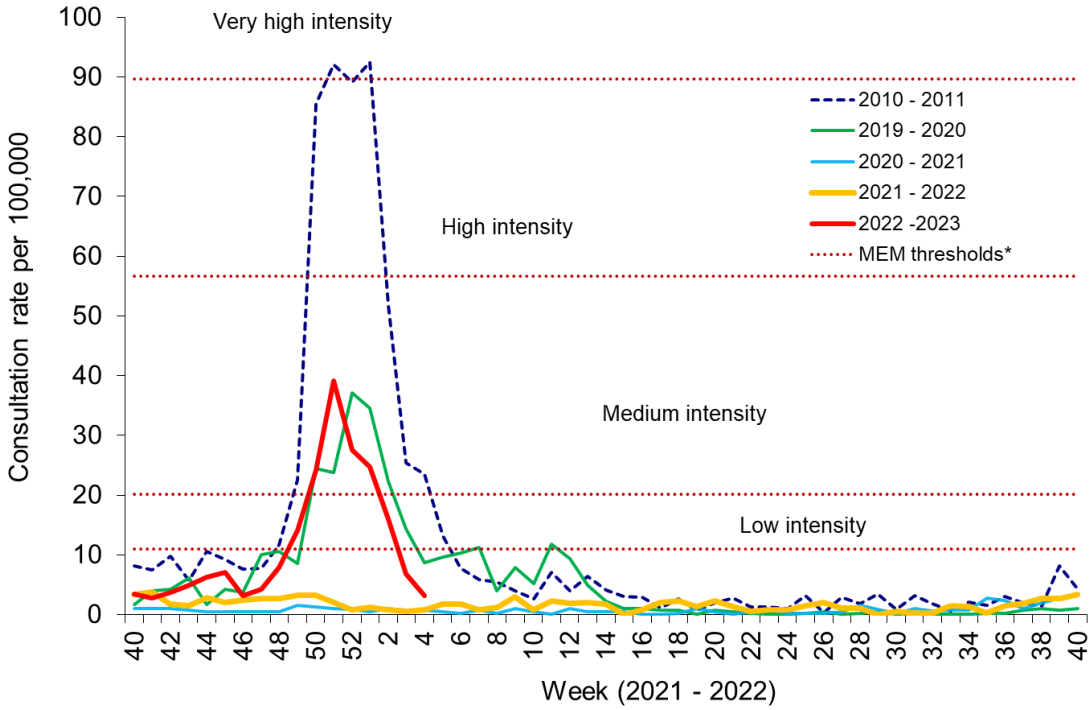
Current level of influenza activity: Low
Influenza activity trend: Decreasing
Confirmed influenza cases since 2022 week 40: **7356** *(2996 influenza A(H3N2), 1591 influenza A(H1N1)pdm09, 2604 influenza A(not subtyped) and 165 influenza B)*

During Week 04 (ending 29/01/2023) there were 39 cases of influenza (a decrease from the previous week), with a further 3 cases from previous weeks. Influenza continues to circulate in Wales, although activity is decreasing. 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 from peak levels seen in December and is currently at the threshold between low and medium intensity. SARS-CoV-2, rhinovirus, adenovirus, seasonal coronaviruses, and RSV are the most commonly detected causes of Acute Respiratory Infection (ARI).

- The **Sentinel GP consultation rate for influenza-like illness (ILI)** in Wales during week 04, was 3.13 consultations per 100,000 practice population (Table 1). This is a decrease compared to the previous week (6.78 consultations per 100,000, Figure 1). Consultation rates were highest in those aged 75+.
- The **Sentinel GP consultation rate for Acute Respiratory Infections (ARI)** was 185.0 per 100,000 practice population during Week 04 (Table 2 and Figure 3). Weekly consultations for Lower Respiratory Tract Infections have decreased whilst Upper Respiratory Tract Infections has 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 04 decreased to 19.3% (Figure 9).
- During Week 04 2023, 1,364 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 **30** samples positive for influenza of which seven were A(H1N1), 17 were A(H3N2) and six were A(not typed). Overall influenza positivity was 2.2% across all age groups; 2.7% in those aged 18 years and over; and 1.3% in those aged under 18 years. In addition, there were 94 SARS-CoV-2, 283 rhinovirus, 71 RSV, 106 adenovirus, 63 human metapneumovirus, 94 seasonal coronavirus, 41 enterovirus, 22 parainfluenza, one bocavirus and one mycoplasma positive samples (Figure 5). Additionally, 843 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 843 samples, 150 were positive for SARS-CoV-2, 16 were positive for RSV, 5 were positive for influenza A and 3 for influenza B (Figure 6). Furthermore, 73 respiratory specimens were tested from patients in intensive care units (ICU) of which none were positive for influenza (Figure 7).
- There were 65 surveillance samples from patients with ILI symptoms collected by **sentinel GPs and community pharmacies** during Week 04. Of the 65 samples, one tested positive for influenza A(H3N2), four for a seasonal coronavirus, two for SARS-CoV2, three for RSV, one for human metapneumovirus, one for adenovirus, three for rhinovirus and seven for enterovirus (as at 01/02/2023) (Figure 4).
- **Confirmed RSV case incidence in children aged under five was at the medium intensity threshold.** In week 4 there were 21.1 confirmed cases per 100,000 in this age group (Figure 7). The MEM threshold in Wales which predicts the start of RSV seasons in children younger than five years is 6.3 confirmed cases per 100,000.
- 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) decreased to 19 during week 04 2023 from 75 during the previous week. (figure 10).
- During Week 04 2023, 10 **ARI outbreaks** were reported to the Public Health Wales Health Protection team. Of the 10 outbreaks, all were reported as COVID-19. Eight **ARI outbreaks** were reported in residential care homes and two in community settings.
- According to **EuroMoMo** analysis, all-cause deaths in Wales were not significantly in excess during week 03.

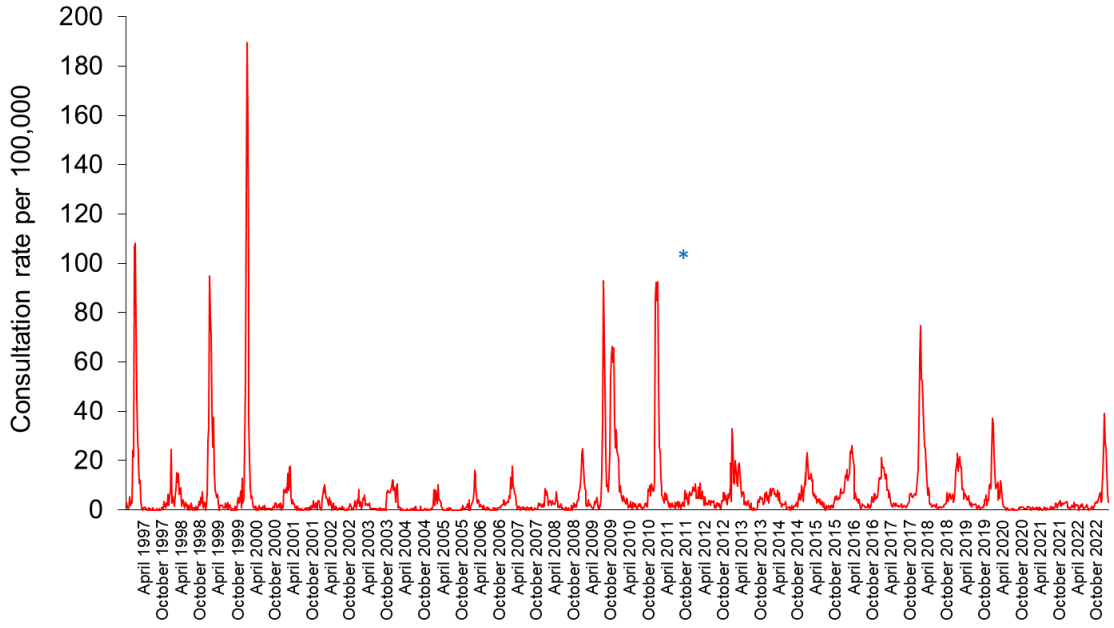
Respiratory infection activity in Wales

Figure 1. Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (as of 29/01/2023).



* 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 04 2023).



* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for ILI in Welsh sentinel practices, week 51 – week 04 2023 (as of 29/01/2023).

Age group	51	52	1	2	3	4
< 1	0.0	0.0	0.0	0.0	31.7	0.0
1 - 4	9.1	8.9	13.9	0.0	6.8	0.0
5 - 14	30.6	11.9	4.6	2.3	2.2	0.0
15 - 24	25.6	30.6	11.2	6.8	4.4	2.5
25 - 34	74.6	39.9	47.6	16.1	3.9	4.6
35 - 44	85.2	42.7	23.6	13.9	11.4	0.0
45 - 64	25.2	25.8	31.3	28.7	8.3	3.2
65 - 74	26.9	23.3	11.2	6.8	4.3	4.9
75+	24.4	23.7	36.8	25.7	8.9	7.5
Total	**39.1**	**27.5**	**24.7**	**15.91**	**6.78**	**3.13**

Table 2. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 51 – week 04 2023 (as of 29/01/2023).

Age group	51	52	1	2	3	4
< 1	3542.8	1909.8	1630.3	1246.3	1205.2	1089.5
1 - 4	2386.8	1000.5	633.7	660.5	791.1	992.2
5 - 14	1135.2	385.2	215.2	212.2	248.3	263.0
15 - 24	329.6	206.0	266.6	178.0	150.0	134.6
25 - 34	501.8	296.5	297.6	217.0	152.6	152.0
35 - 44	585.9	341.5	280.9	222.8	171.5	133.8
45 - 64	430.8	312.1	310.8	245.7	164.2	120.1
65 - 74	439.0	340.6	343.4	288.5	180.1	158.1
75+	466.5	364.8	468.0	331.4	216.4	130.2
Total	**622.7**	**355.7**	**322.5**	**264.6**	**209.0**	**185.0**

Figure 3. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 04 2022 – week 04 2023 (as of 29/01/2023).

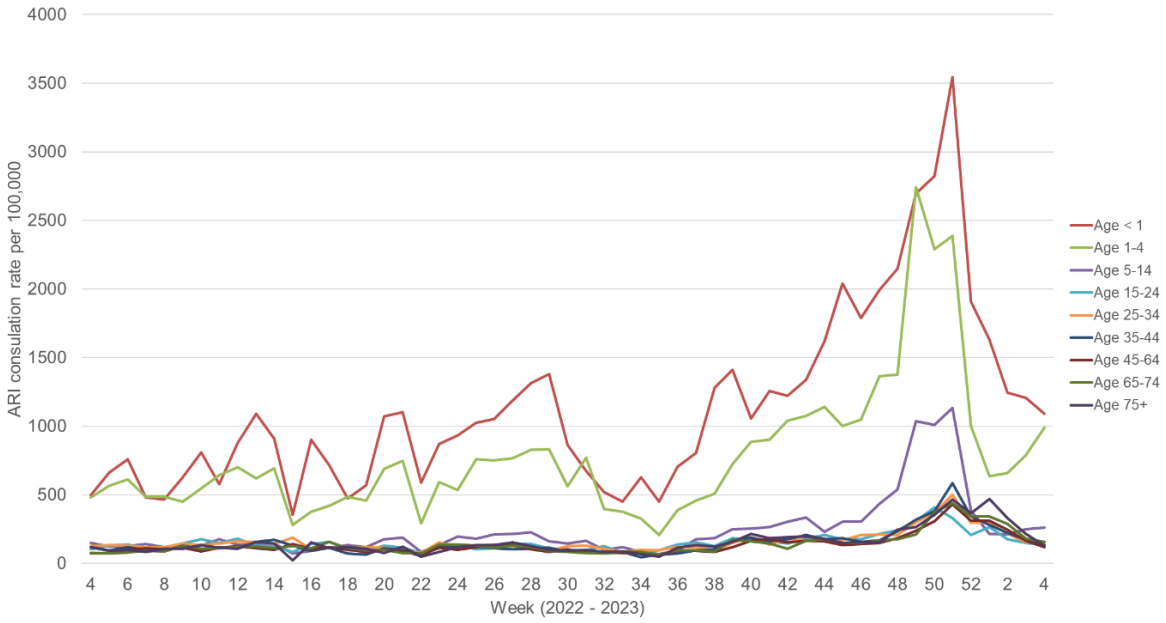
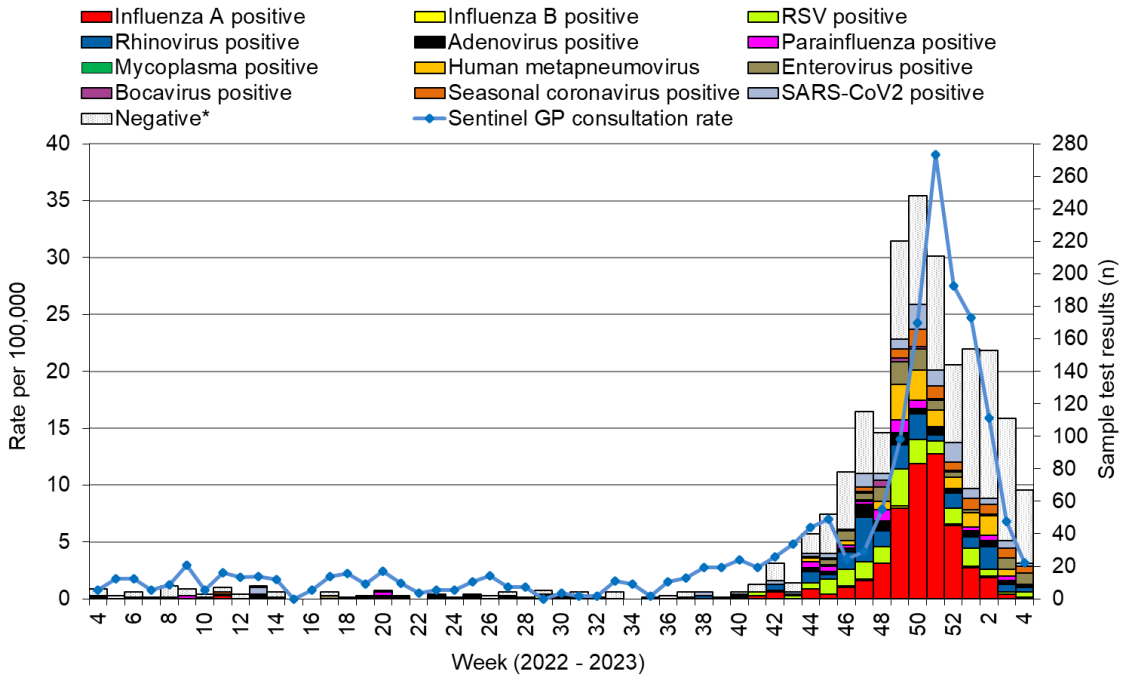
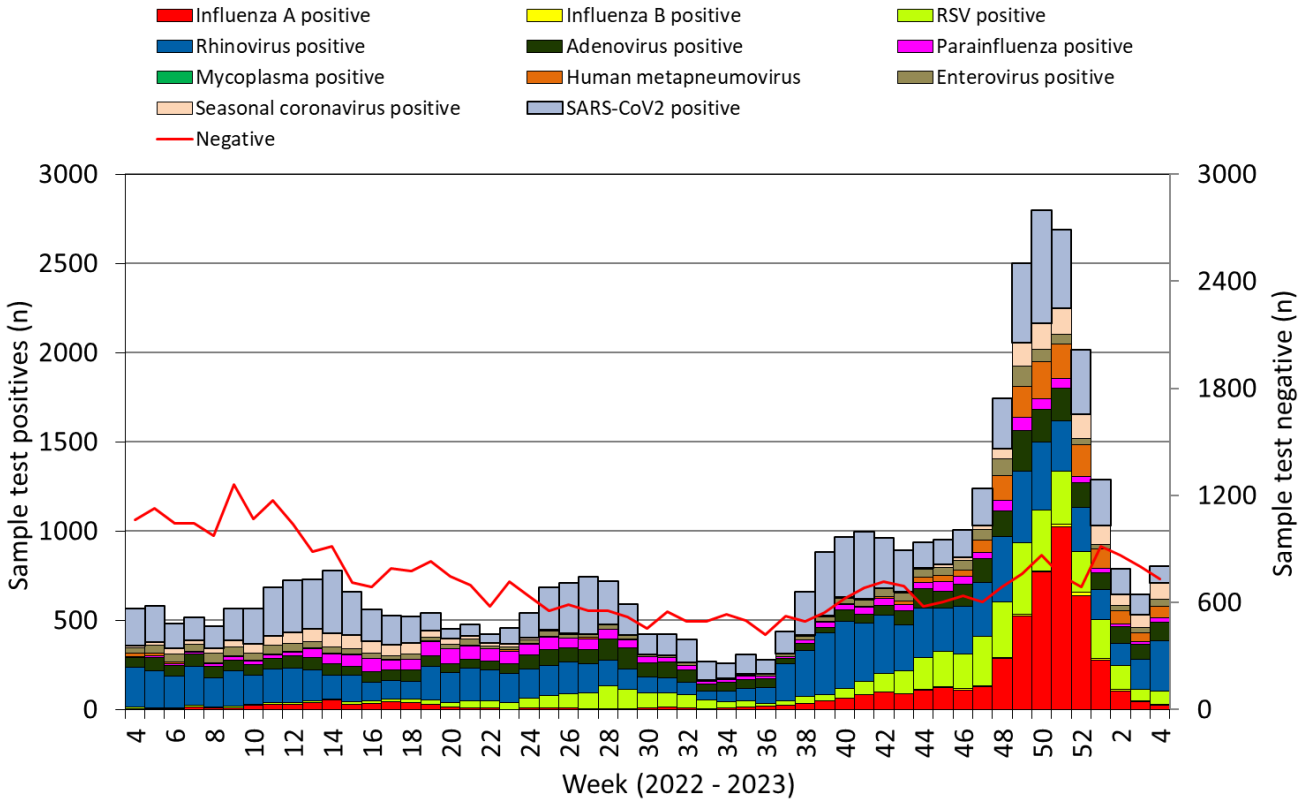


Figure 4. Specimens submitted for virological testing by sentinel GPs as of 29/01/2023, by week of sample collection, week 04 2022 to week 04 2023.



* 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 29/01/2023 by week of sample collection, week 04 2022 to week 04 2023.



This chart summarises respiratory panel test data and does not include data for patients tested SOLEY 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 29/01/2023 by week of sample collection, week 04 2022 to week 04 2023.

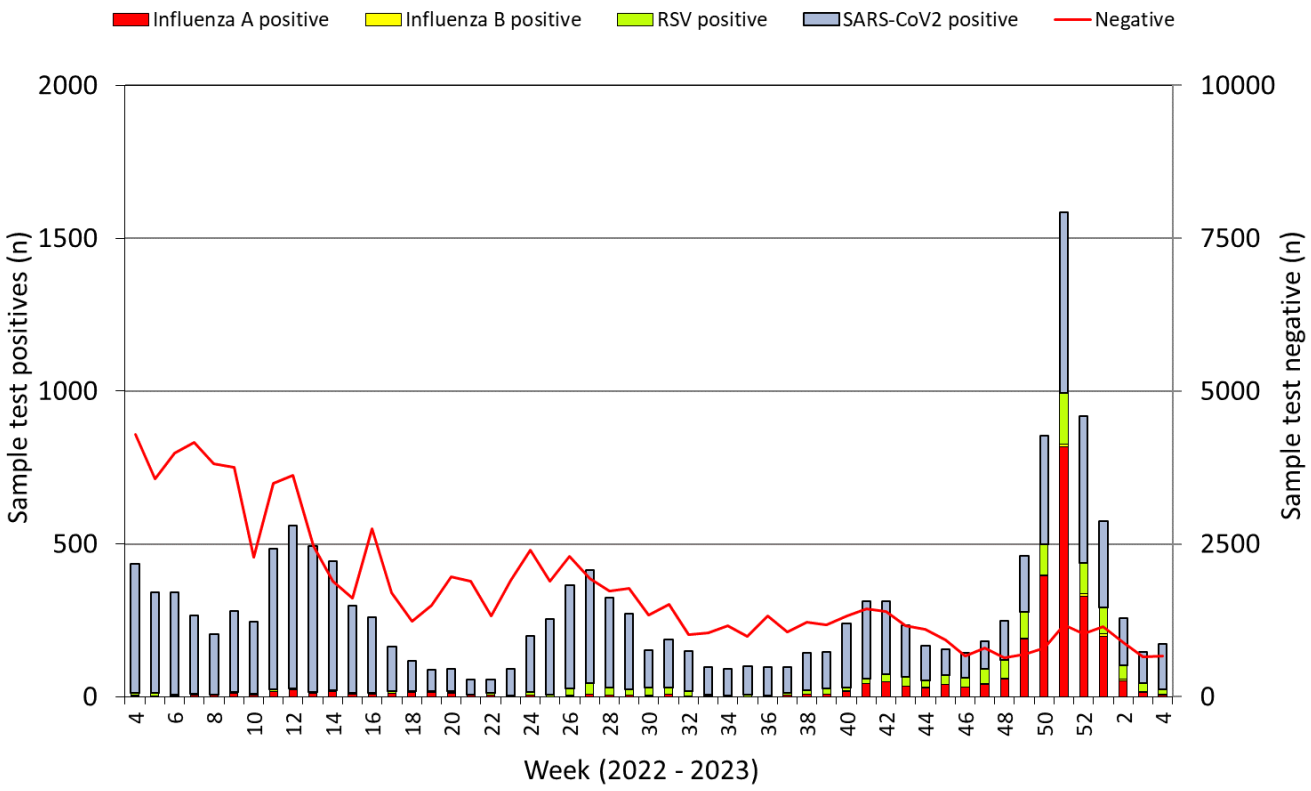
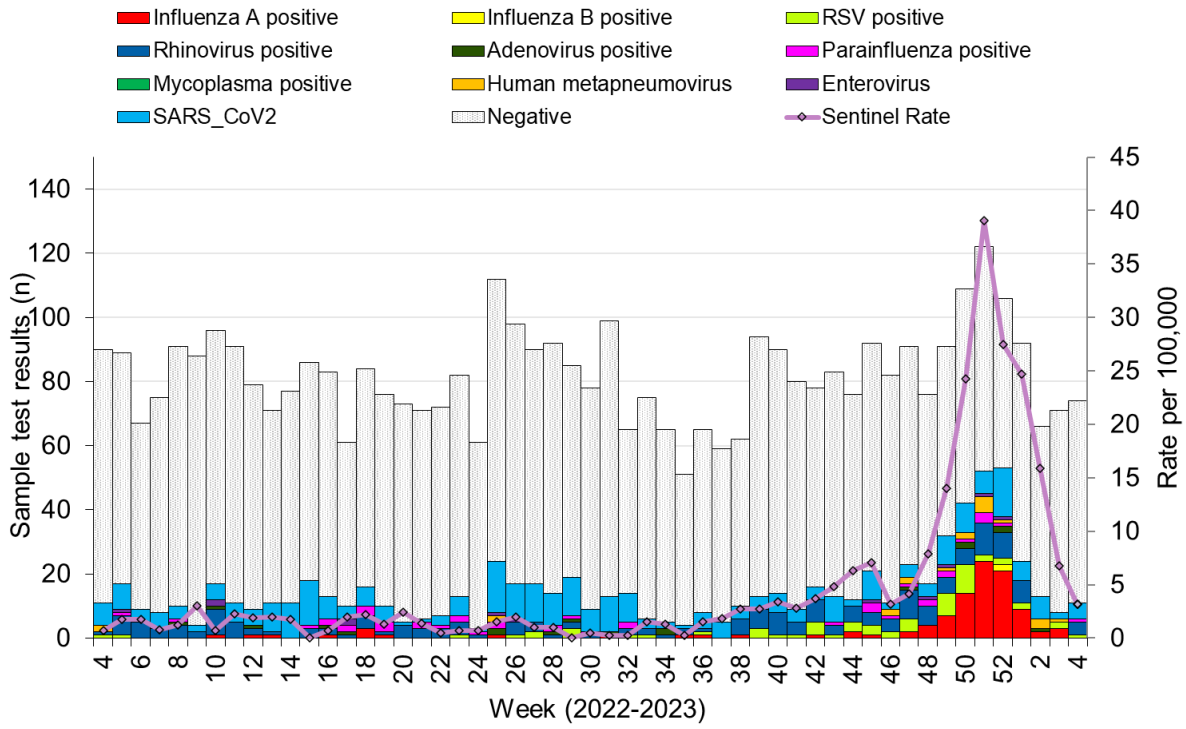
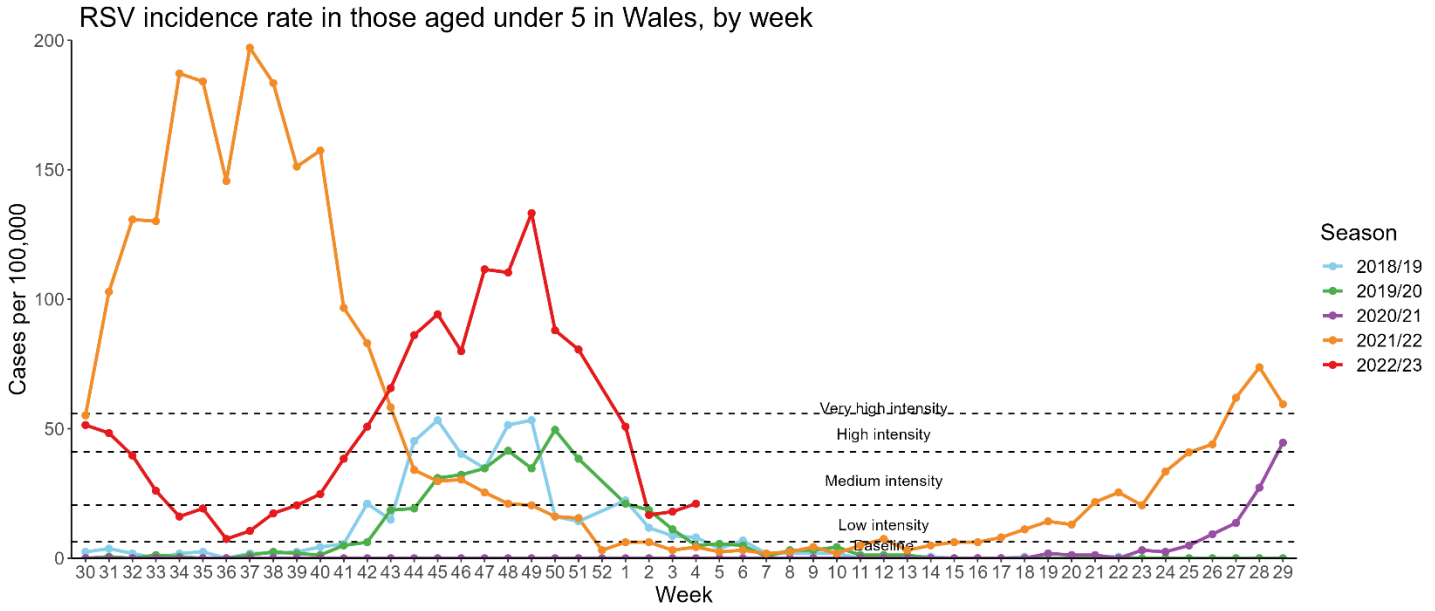


Figure 7. Specimens submitted for virological testing for ICU patients, by week of sample collection, week 4 2022 to Week 04 2023.



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 on pathogen will appear more than once in the chart.

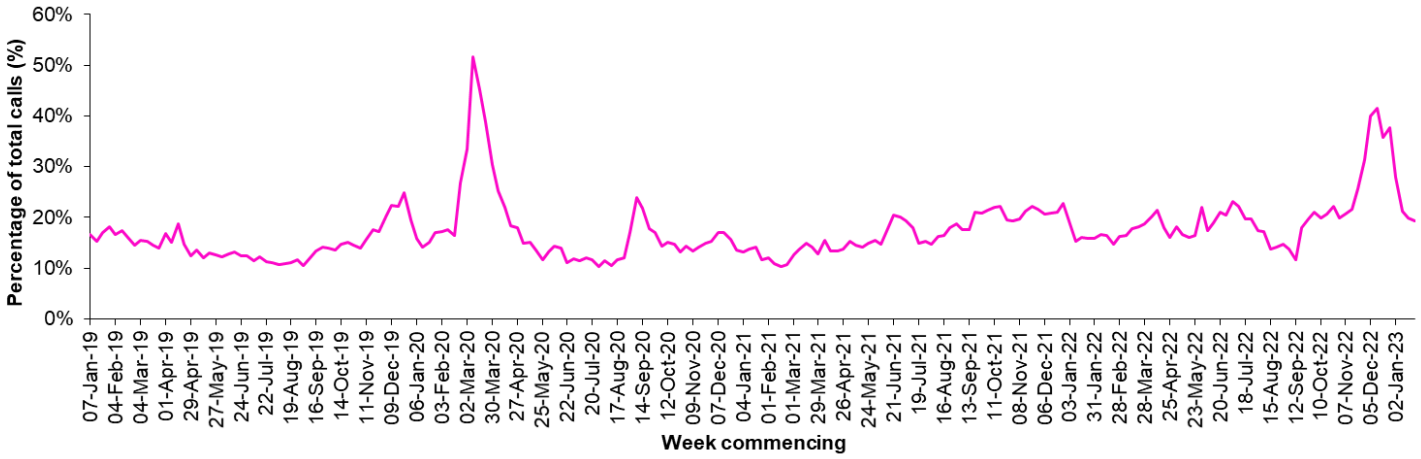
Figure 8. RSV incidence rate per 100,000 population aged under five years, week 30 2018 to Week 04 2023.



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

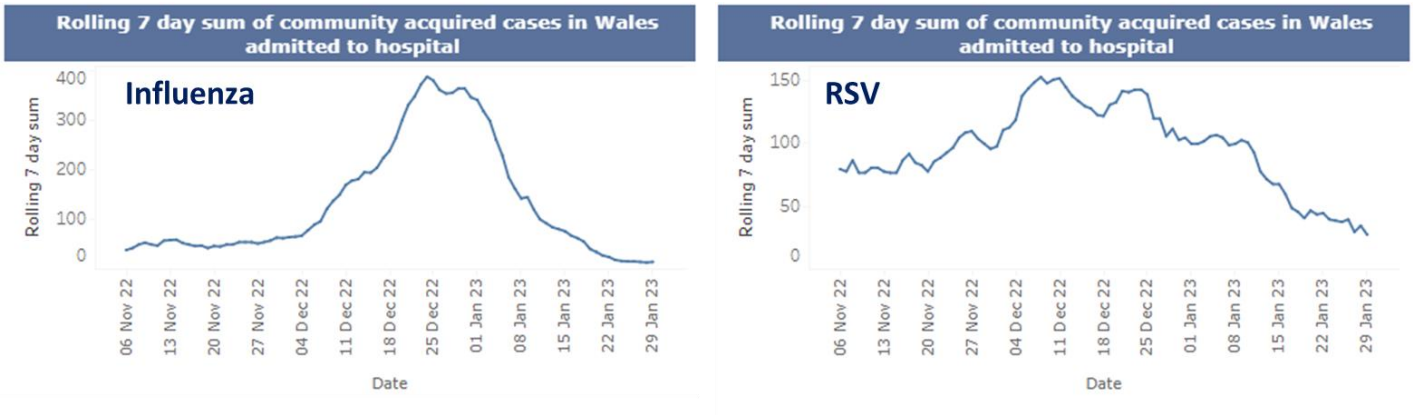
Calls to NHS Direct Wales

Figure 9. Influenza related calls to NHS Direct Wales[1] (as a percentage of total calls) from week 02 2019 - Week 04 2023 (as of 29/01/2023).



[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.

Figure 10. 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 29/01/2023).



Influenza Vaccine Uptake in Wales

Table 3. Uptake of influenza immunisations in GP Practice patients in Wales 2022/23 (as of 24/01/2023).

Influenza immunisation uptake in the 2022/23 season	
People aged 65y and older	77.1%
People younger than 65y in a clinical risk group	46.7%
Children aged two & three years	46.0%
Children aged between four & ten years	67.0%
Children aged between 11 & 15 years	57.1%
Total NHS staff	54.1%
NHS staff with direct patient contact	55.3%

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/fluvaccine/annual-influenza-surveillance-and-influenza-vaccination-uptake-reports/

Influenza activity – UK and international summary

- As of week 3, GP ILI consultations decreased in Northern Ireland to 6.8 per 100,000, 9.7 per 100,000 in Scotland and 7.0 per 100,000 in England.
- During week 3, 203 samples tested positive for influenza were reported in England (including 40 A(H3), 4 A(H1N1)pdm09, 112 A(not subtyped) and 47 influenza B). Overall influenza positivity increased to 6.5%. 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 3, six countries reported baseline activity, six countries reported low-intensity, seventeen reported medium-intensity and nine reported high-intensity. From the 48 countries reporting, three reported sporadic spread, three reported local spread, four reported regional spread, and twenty-eight reported widespread activity (across the Region). During week 3, 827 of (22%) 3,777 samples from patients presenting to all sentinel primary care centres with ILI or ARI symptoms were tested positive for influenza. This is a remains the same as 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, 92% were influenza A (72% H3, and 28% A(H1N1)pdm09) and 8% were influenza B. **Source:** Flu News Europe: http://www.flunewseurope.org/

- The WHO reported on 23/01/2023, based on data up to 08/01/2022, that globally, influenza has decreased but remains elevated due to activity in the Northern Hemisphere with influenza A predominating with a slightly larger proportion of Influenza A(H3N2) viruses detected among the subtypes
- In the temperate zones of the southern hemisphere, influenza decreased to low levels. The majority of detections were influenza A(H3N2) or A(H1N1)pdm09. RSV activity in South Africa remains low.
- In tropical South America, influenza detections decreased across the subregion. Of the influenza detected A(H3N2) virus was predominant. ILI and SARI were at baseline levels in Argentina and below seasonal threshold in Uruguay. Influenza, ILI and SAI remained above average in Chile and Paraguay. RSV increased in Chile. SARS-CoV-2 increased in several countries.
- In Western Africa, influenza activity remained low and continues to decrease. Burkina Faso, Ghana, and Cote D'Ivoire reported few detections of influenza A(H1N1)pdm09. Small amount of Influenza B/Victoria detections were seen across the region. Cote D'Ivoire and Ghana reported few detections of influenza A(H3N2)
- In Southeast Asia, influenza activity remains low and continues to decrease in all reporting countries except in Nepal and Sri Lanka with influenza A(H1N1)pdm09 predominant. Influenza activity in Pakistan remains elevated.
- In Eastern Africa, all seasonal subtypes decreased but fewer Influenza A(H3N2) and influenza B viruses. Elsewhere, detections where stable amongst reporting countries. Influenza epidemics continued in the French territories continue with decreasing activity in Mayotte and Reunion.
- In Southeast Asia, influenza detections increased overall due to an increase of influenza B(Victoria) and a slight increase in influenza A activity. The majority of detections were found in Malaysia where detections remained elevated. Cambodia, Lao People's Democratic Republic and the Philippines reported a decrease in detections. Thailand and Singapore reported stable detections across all lineages.
- In Central Asia, influenza activity decreased overall but remains relatively high with positivity above 22%. Influenza activity remained stable, and ILI increased in Kazakhstan, Kyrgyzstan, and Tajikistan. Influenza activity and ILI decreased Kyrgyzstan and Uzbekistan. An increased proportion of influenza A(H1N1)pdm09 among subtyped viruses was reported in Kazakhstan
  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 25/01/2023), during the period from 26/12/2022 – 08/01/2023, National Influenza Centres and other national influenza laboratories from 122 countries, areas or territories reported influenza surveillance data. The WHO Global Influenza Surveillance and Response System laboratories tested more than 563,948 specimens during that period, of which 84,596 were positive for influenza viruses 79,268 (93.7%) of those positive for influenza were typed as influenza A (of the subtyped influenza A viruses, 8225 (51.9%) were influenza A(H1N1)pdm09 and 7621 (48.1%) were influenza A(H3N2)) and all 394 characterised influenza B viruses belonged to the B-Victoria lineage. **Source:** Flu Net: https://www.who.int/tools/flunet

Update on influenza activity in North America

- The USA Center for Disease Control and Prevention (CDC) report that seasonal influenza activity is at moderate levels and is continuing to decline across the country during week 03 (ending 21/01/2023). Nationally, 2,588 (3.0%) out of 86,499 specimens tested positive for influenza in week 03 in clinical laboratories nationwide, of these positives, 2,484 (96.0%) were influenza A and 104 (2.3%) were influenza B. Further characterisation has been carried out on 5,727 specimens by public health laboratories, and 338 samples tested positive for influenza; 66 influenza A(H1N1)pdm09 (126.8%), 183 influenza A(H3N2) (73.2%), 79 influenza A(not subtyped) and 9 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 3, influenza activity continued to decline, and activity is now at levels typically seen in late spring/early summer. During week 3, 798 influenza detections were reported: 779 influenza A (predominantly A(H3N2) at 71%), and 19 influenza B. The percentage of ILI visits reduced to 1.7% in week 3.
  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 21/01/2023.
  Source: CDC RSV national trends: https://www.cdc.gov/surveillance/nrevss/rsv/natl-trend.html

COVID-19 – UK and international summary

- As of 25/01/2023, there were 8 new positive PCR episodes per 100,000 population in Wales, for the most recent 7-day reporting period. There were 25 suspected COVID-19 deaths with a date of death in the most recent 7-day reporting period, reported to Public Health Wales. There were 70 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 16/01/2023 2521 laboratory-confirmed cases of locally acquired Middle East Respiratory Syndrome coronavirus (MERS-CoV) worldwide, including 919 deaths. WHO Global Alert and Response website: https://www.who.int/emergencies/disease-outbreak-news
- Most 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 reports that there have been no publicly available reports from China or other countries on influenza A(H7N9) in recent months, but overall risk assessments are unchanged. Previous reports are available from:
  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/fluvaccine/

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