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

Wednesday 22nd February 2023 (covering week 07 2023)

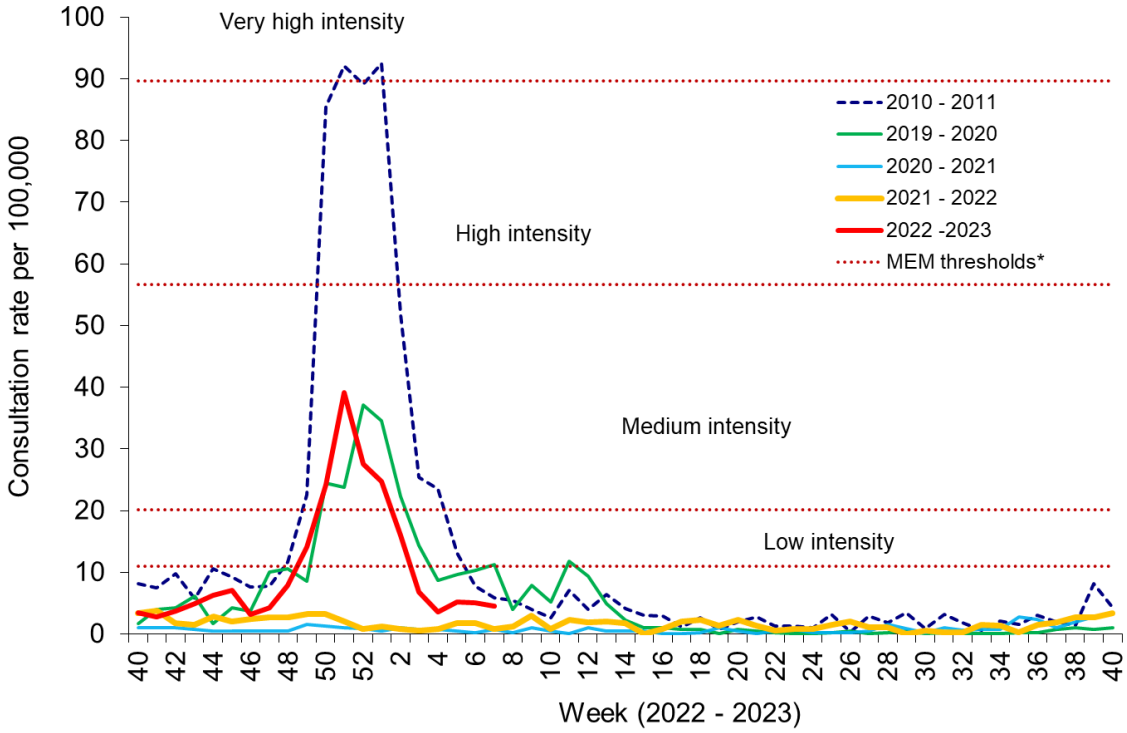
Current level of influenza activity: Low
Influenza activity trend: Decreasing
Confirmed influenza cases since 2022 week 40: **7476** *(3029 influenza A(H3N2), 1602 influenza A(H1N1)pdm09, 2631 influenza A(not subtyped) and 214 influenza B)*

During week 7 (ending 19/02/2023) there were 19 cases of influenza (a decrease from the previous week), with 12 further cases from previous weeks. Influenza continues to be confirmed in Wales, although overall activity has decreased. 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 low intensity. Rhinovirus, SARS-CoV-2, seasonal coronaviruses and adenovirus 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 07, was 4.5 consultations per 100,000 practice population (Table 1). This is a decrease compared to the previous week (5.0 consultations per 100,000, Figure 1).
- The **Sentinel GP consultation rate for Acute Respiratory Infections (ARI)** was 222.3 per 100,000 practice population during Week 07 (Table 2 and Figure 3). This is a decrease compared to the previous week (234.7 per 100,000). Weekly consultations for Lower Respiratory Tract Infections (71.9 per 100,000) increased and Upper Respiratory Tract Infections (155.5 per 100,000) decreased 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 07 increased to 21.4% (Figure 9).
- During Week 7, 1,363 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 **10** samples positive for influenza, of which four were A(H3N2), one was A(H1N1), one A(not typed) and four were influenza B. Overall influenza positivity decreased to 0.7% across all age groups; increased to 1.0% in those aged 18 years and over; and decreased to 0.0% in those aged under 18 years. In addition, there were 258 rhinovirus, 182 SARS-CoV-2, 113 seasonal coronavirus, 92 adenovirus, 62 human metapneumovirus, 47 parainfluenza, 34 RSV, and 31 enterovirus positive samples (Figure 5). Additionally, 891 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 891 samples, 216 were positive for SARS-CoV-2, ten were positive for RSV, five for influenza B, and four were positive for influenza A (Figure 6). Furthermore, during week 7, 67 respiratory specimens were tested from patients in intensive care units (ICU) of which none was positive for influenza (Figure 7).
- There were eight surveillance samples from patients with ILI symptoms collected by **sentinel GPs and community pharmacies** during week 7. Of the eight samples, one tested positive for human metapneumovirus, one for adenovirus, one for enterovirus and one for a seasonal coronavirus (as at 22/02/2023) (Figure 4).
- **In week 7 there were 9.9 confirmed cases per 100,000 in this age group (Figure 7).** The provisional MEM threshold in Wales which predicts the start of the annual RSV season 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 six during week 7, from ten during the previous week. (Figures 10 & 11).
- During Week 7, 23 **ARI outbreaks** were reported to the Public Health Wales Health Protection team. All 23 were reported as COVID-19. Nineteen **ARI outbreaks** were reported in residential care homes and four in community, mixed or other settings.
- According to **EuroMoMo** analysis, all-cause deaths in Wales were not significantly in excess during week 6.

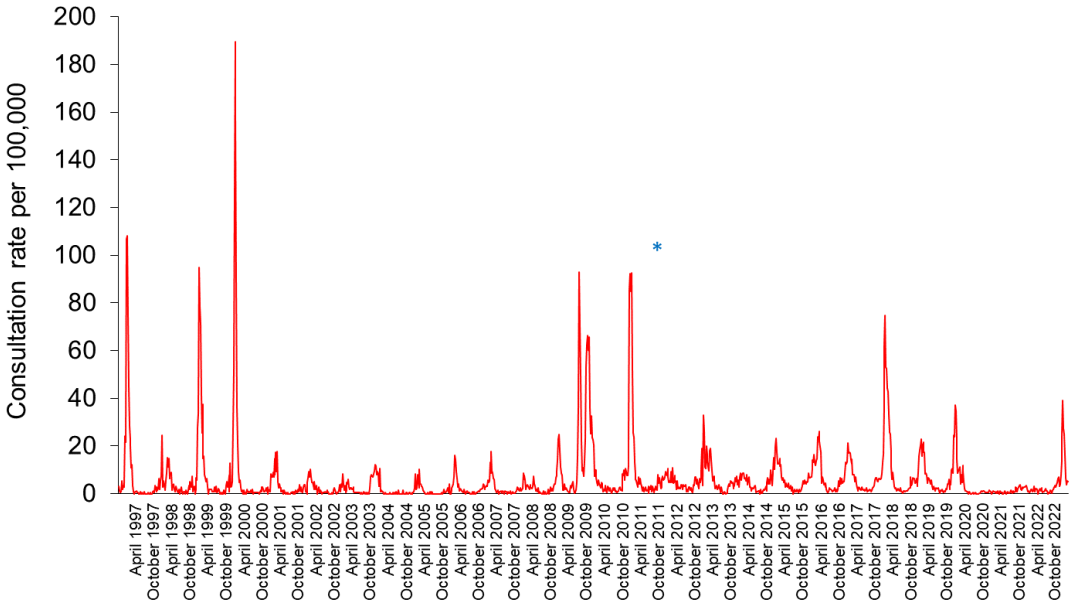
Respiratory infection activity in Wales

Figure 1. Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (as of 19/02/2023).



* 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 07 2023).



* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for ILI in Welsh sentinel practices, week 2 – week 07 2023 (as of 19/02/2023).

Age group	2	3	4	5	6	7
< 1	0.0	31.7	0.0	0.0	0.0	0.0
1 - 4	0.0	6.8	0.0	0.0	7.0	0.0
5 - 14	2.3	2.2	0.0	0.0	0.0	2.3
15 - 24	6.8	4.3	2.2	4.6	2.2	9.0
25 - 34	16.1	3.9	3.9	4.2	6.0	14.0
35 - 44	13.9	11.4	3.8	12.3	7.9	2.0
45 - 64	28.7	8.3	2.8	7.9	7.6	1.9
65 - 74	6.8	4.3	6.5	0.0	2.3	4.5
75+	25.7	8.9	8.9	4.8	4.6	2.3
Total	**15.9**	**8.9**	**3.6**	**5.2**	**5.0**	**4.5**

Table 2. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 2 – week 07 2023 (as of 19/02/2023).

Age group	2	3	4	5	6	7
< 1	1246.3	1203.3	1266.6	1637.1	1573.3	1483.7
1 - 4	660.5	791.2	1041.5	1038.1	1064.6	897.9
5 - 14	212.2	248.3	288.6	286.6	300.7	291.9
15 - 24	178.0	149.8	138.9	120.6	205.3	157.4
25 - 34	217.0	152.5	179.5	183.0	216.7	154.4
35 - 44	222.8	171.4	163.8	181.0	192.9	178.8
45 - 64	245.7	164.1	132.9	156.8	143.1	163.3
65 - 74	288.5	180.2	184.6	160.9	157.3	179.1
75+	331.4	216.2	144.9	168.2	202.8	224.9
Total	**264.6**	**216.2**	**208.5**	**217.7**	**234.7**	**222.3**

Figure 3. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 07 2022 – week 07 2023 (as of 19/02/2023).

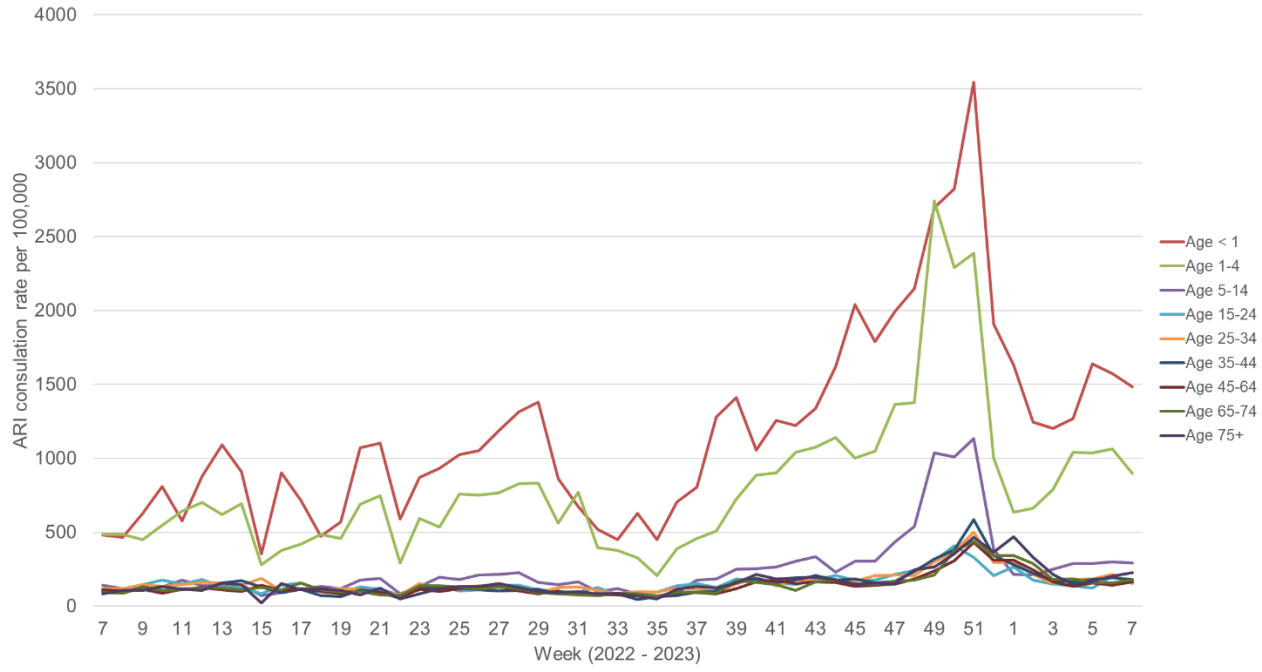
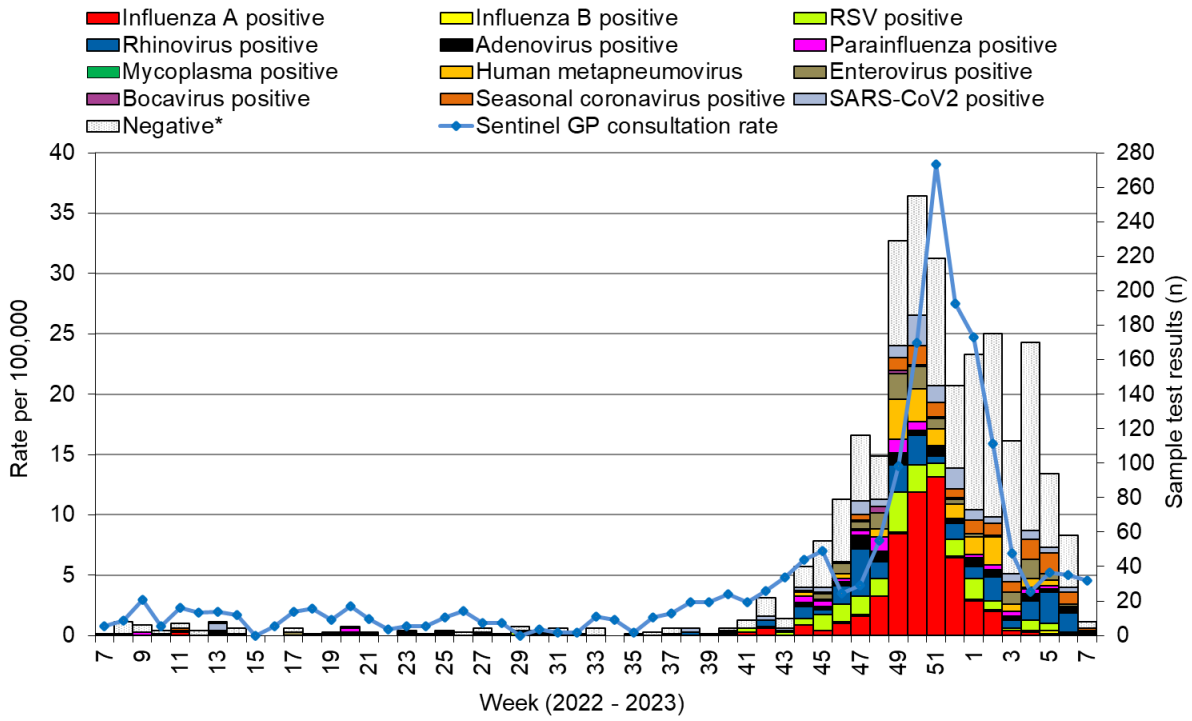
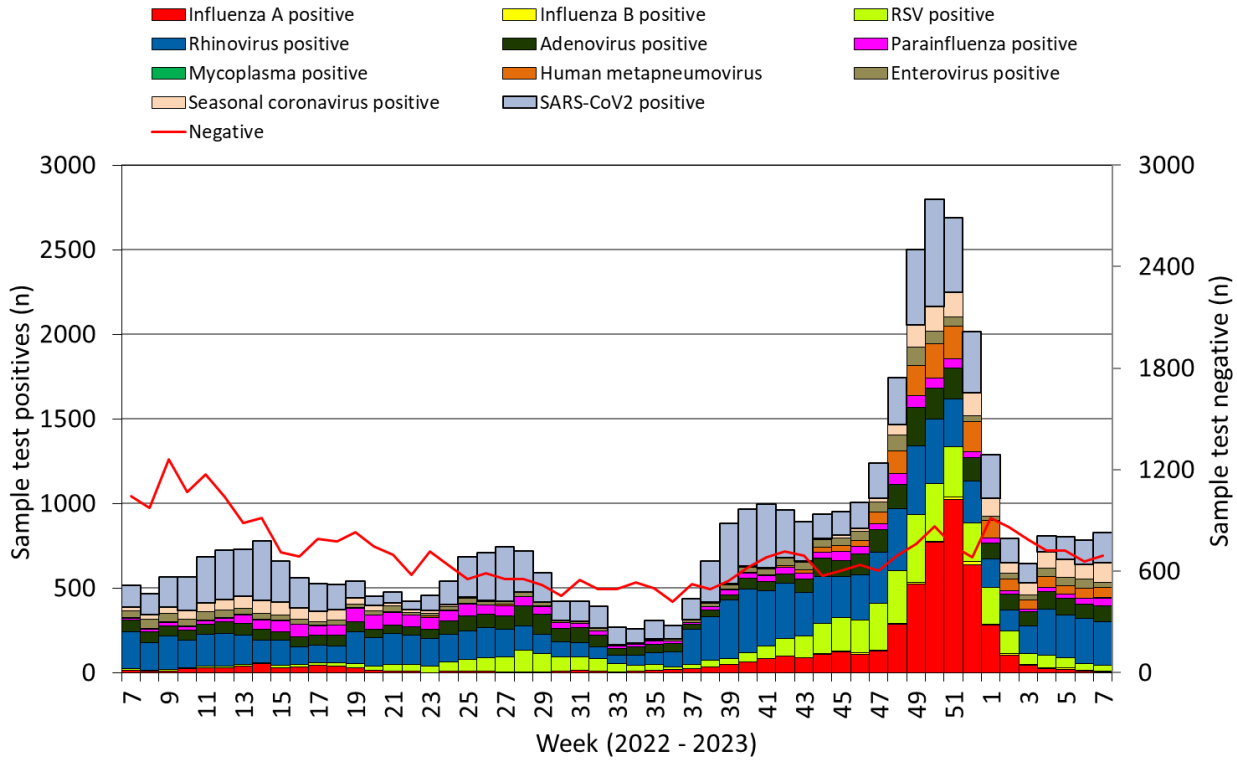


Figure 4. Specimens submitted for virological testing by sentinel GPs and community pharmacies as of 19/02/2023, by week of sample collection, week 7 2022 to week 7 2023.



* 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 19/02/2023 by week of sample collection, week 7 2022 to week 7 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 19/02/2023 by week of sample collection, week 7 2022 to week 7 2023.

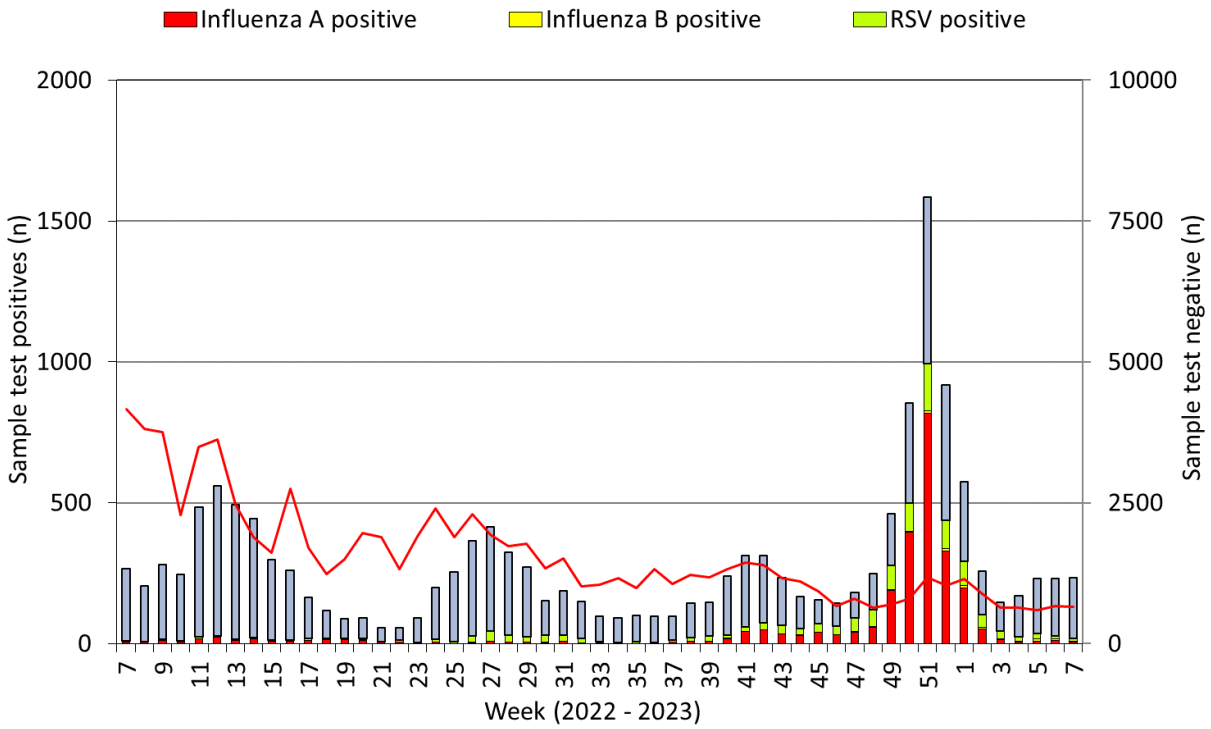
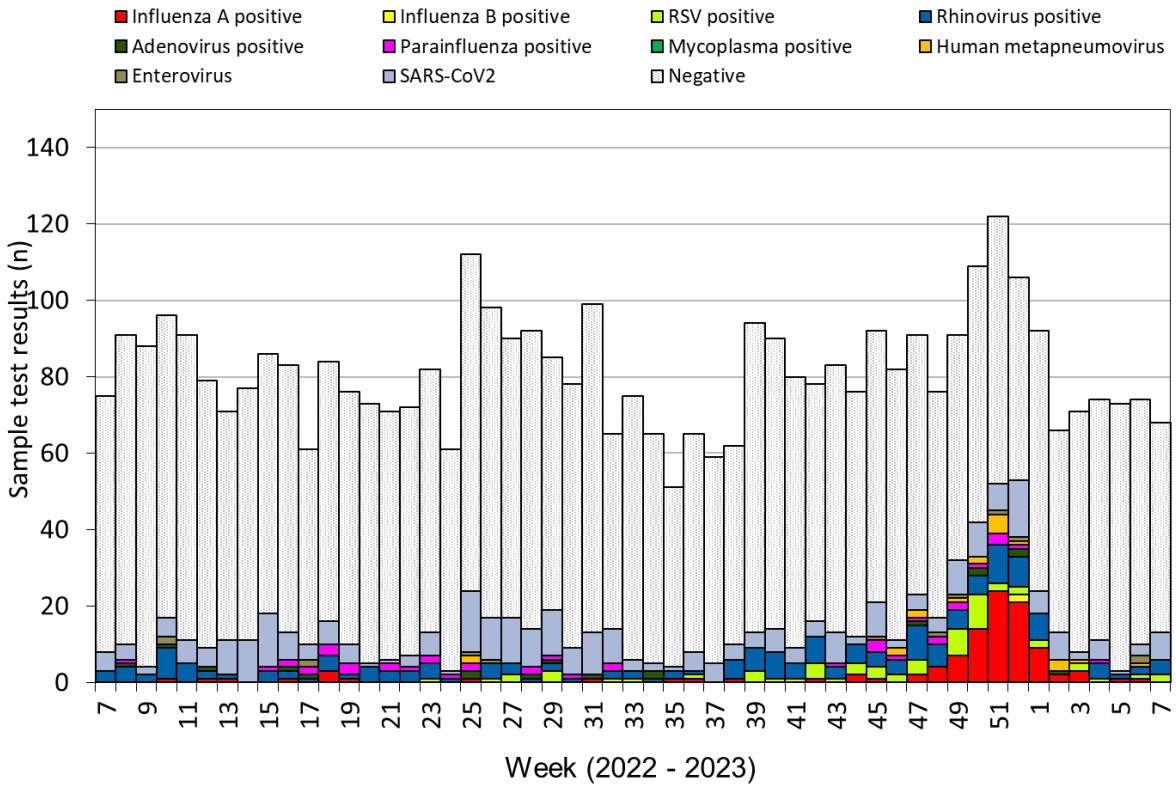
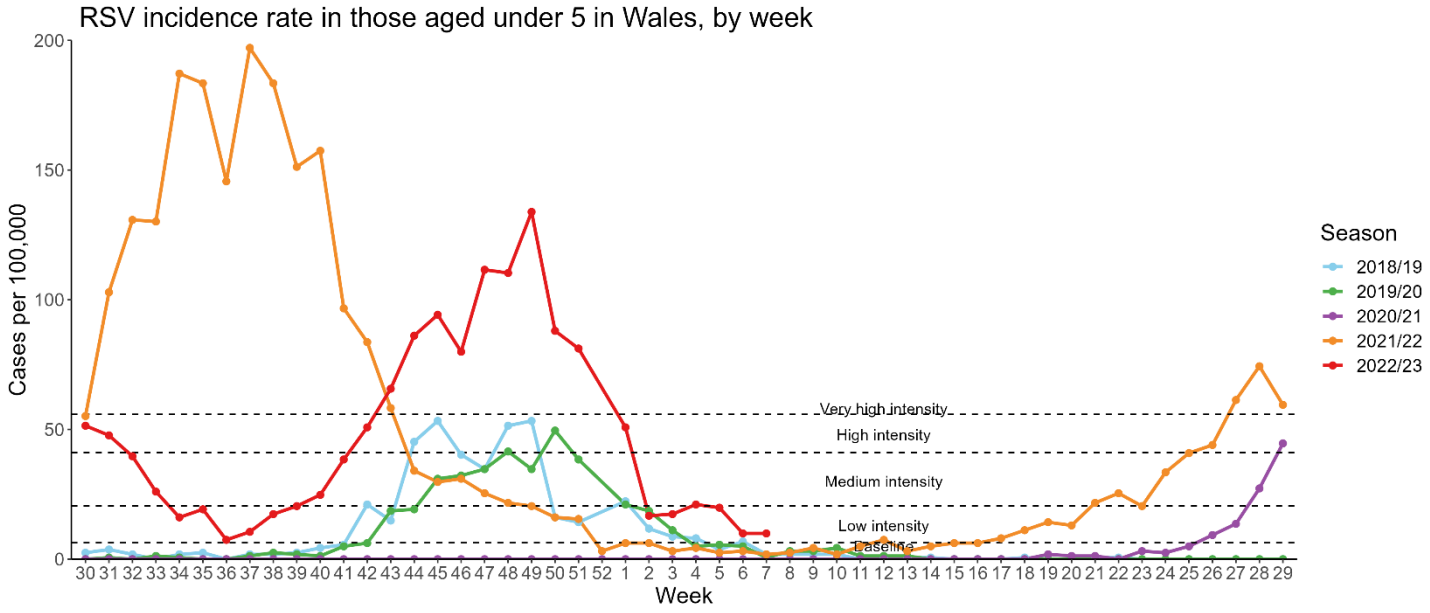


Figure 7. Specimens submitted for virological testing for ICU patients, by week of sample collection, week 7 2022 to week 7 2023.



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.

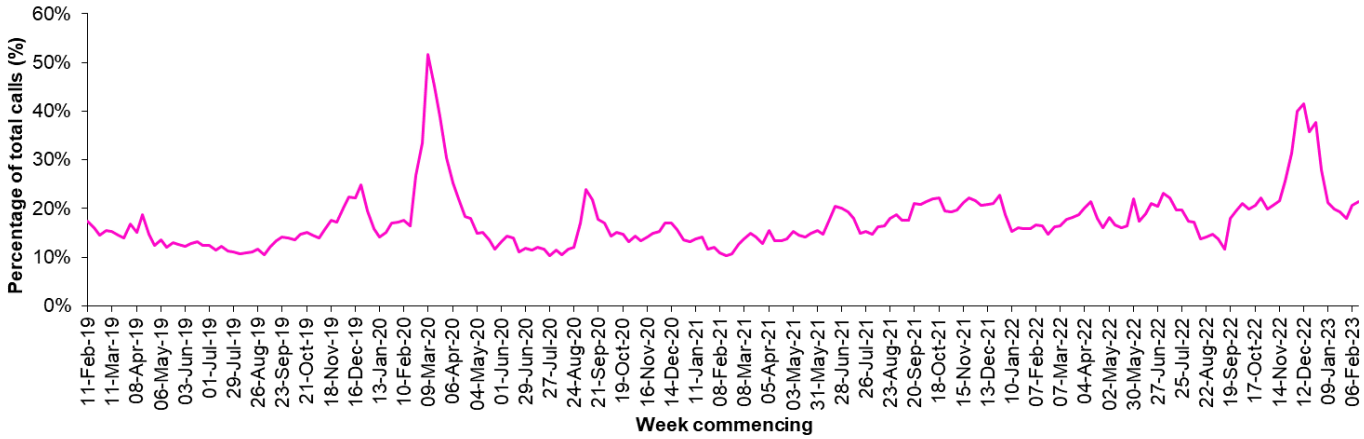
Figure 8. RSV incidence rate per 100,000 population aged under five years, week 30 2018 to week 7 2023.



*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 07 2019 - Week 07 2023 (as of 19/02/2023).



[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 positive test result in the community (or up to 2 days post-admission), as of 19/02/2023).

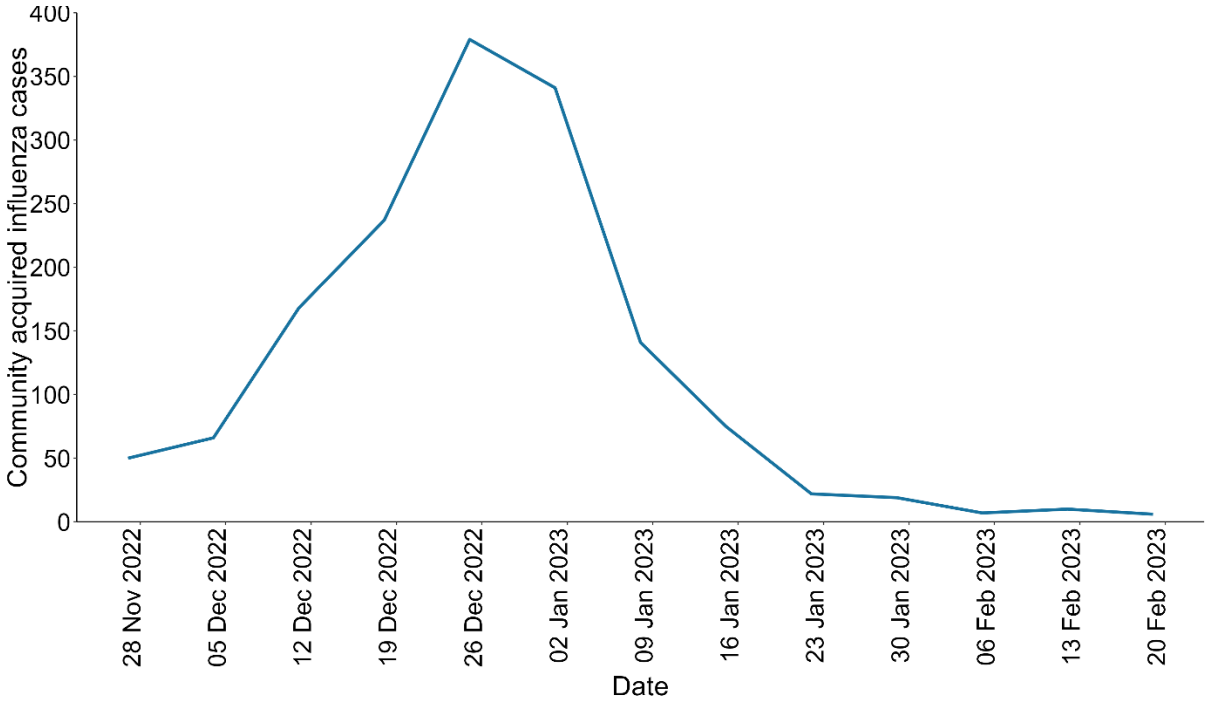
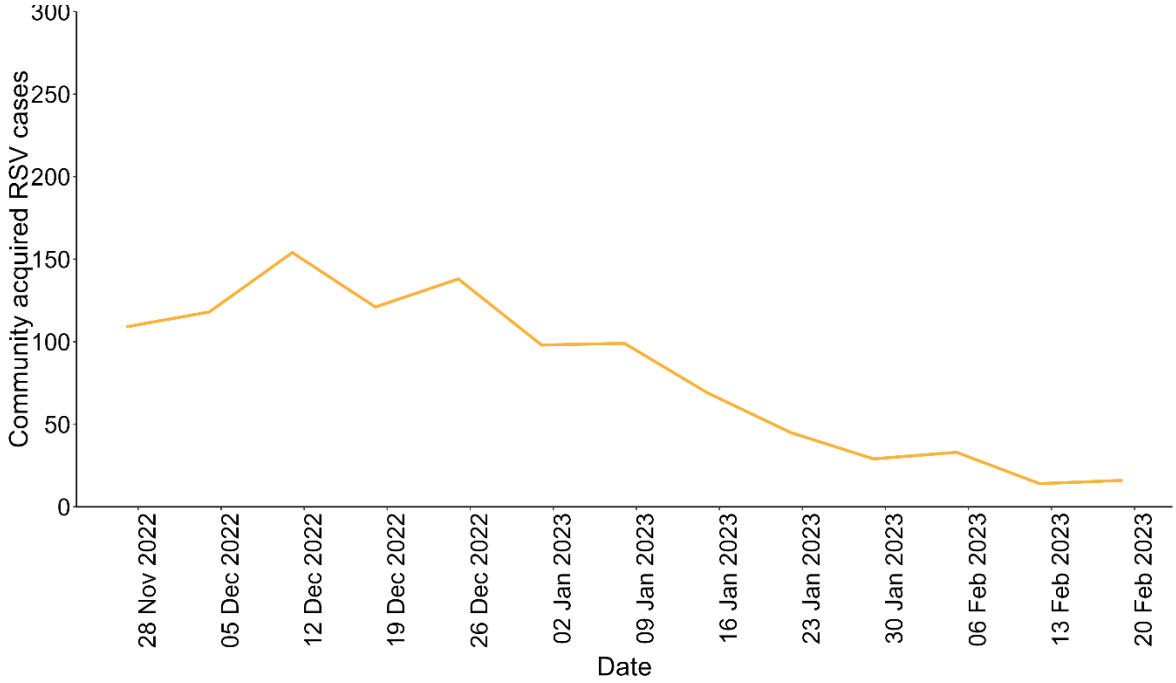


Figure 11. Seven day rolling sum of cases hospitalised in Wales within 28 days of an RSV positive test result in the community (or up to 2 days post-admission), as of 19/02/2023).



Influenza Vaccine Uptake in Wales

Table 3. Uptake of influenza immunisations in GP Practice patients in Wales 2022/23 (as of 15/02/2023).

Influenza immunisation uptake in the 2022/23 season	
People aged 65y and older	76.1%
People younger than 65y in a clinical risk group	43.6%
Children aged two & three years	43.7%
Children aged between four & ten years	61.0%
Children aged between 11 & 15 years	50.6%
Total NHS staff	45.2%
NHS staff with direct patient contact	45.4%

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 6, GP ILI consultations decreased in Northern Ireland to 3.4 per 100,000 and in England to 5.3 per 100,000; ILI consultations increased in Scotland to 6.1 per 100,000.
- During week 6, 140 samples testing positive for influenza were reported in England (including five A(H3), one A(H1N1)pdm09, 48 A(not subtyped) and 86 influenza B). Overall influenza positivity decreased to to 2.0% in week 6. 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 their weekly joint influenza update, that during week 6, ten countries reported baseline activity, five countries reported low-intensity, 18 reported medium-intensity and five reported high-intensity. From the 37 countries reporting, one reported no activity, three reported sporadic spread, two reported local spread, six reported regional spread, and 25 reported widespread activity (across the Region). During week 6, 927 (25%) of 3,645 samples from patients presenting to all sentinel primary care centres with ILI or ARI symptoms tested positive for influenza. This is a small 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, 87% were influenza A (70% H3, and 30% A(H1N1)pdm09) and 13% were influenza B. **Source:** Flu News Europe: http://www.flunewseurope.org/

- The WHO reported on 20/2/2023, based on data up to 05/02/2023, that globally, influenza has decreased, with influenza A predominating, with a slightly larger proportion of Influenza A(H1N1pdm09) viruses detected among the subtypes.
- In the temperate zones of the southern hemisphere, influenza remained at interseasonal levels. The majority of detections were influenza A(H1N1)pdm09.
- In tropical Central and South America, influenza detections remained low across the subregion. Of the influenza detected A(H3N2) virus was predominant. ILI rates increased in Guadalupe and Saint Martin. In Guatemala, influenza positivity remained above the expected levels. SARS-CoV-2 activity decreased across all countries in the region, except Costa Rica and Mexico, and RSV activity remained low.
- In Western Africa, influenza activity remained low and continues to decrease. Burkina Faso, and Cote D'Ivoire reported few detections of influenza B/Victoria. In Middle and Eastern Africa countries, sporadic detections of all influenza subtypes were reported.
- In Southern Asia, influenza activity remained low. India and reported an increase in influenza A(H3N2) detections, while Pakistan and Sri Lanka reported influenza A(H1N1) detections. In South-East Asia, influenza activity increased due to a surge in influenza cases, mainly from Malaysia. A slight increase of influenza activity was reported in Thailand and Singapore.
- In Northern Africa, influenza activity remained elevated. In Western and Middle Africa, influenza activity remained low. In Eastern Africa, all seasonal subtypes decreased.
- In Central Asia, influenza activity decreased overall but remains relatively high with positivity above 10%. In Kyrgyzstan, and Tajikistan, influenza B detections predominated.
  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 21/02/2023), during the period from 23/01/2023 – 05/02/2023, National Influenza Centres and other national influenza laboratories from 127 countries, areas or territories reported influenza surveillance data. The WHO Global Influenza Surveillance and Response System laboratories tested more than 435,112 specimens during that period, of which 27,978 were positive for influenza viruses, 19,219 (68.7%) of those positive for influenza were typed as influenza A (of the subtyped influenza A viruses, 3,040 (57.9%) were influenza A(H1N1)pdm09 and 2,211 (42.1%) were influenza A(H3N2)). Of the 27,978 samples tested positive for influenza viruses, 8,759 tested positive for Influenza B, and of the characterised B viruses, 592 (100%) was B-Victoria lineage. **Source:** Flu Net: 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 at low levels across the country during week 06 (ending 17/02/2023). Nationally, 1,155 (1.4%) out of 84,389 specimens, tested positive for influenza in week 06 in clinical laboratories nationwide. Of these, 951 (82.3%) were influenza A and 204 (17.7%) were influenza B. Further testing has been carried out on 6,251 specimens by public health laboratories, with 135 samples testing positive for influenza; 47 influenza A(H1N1)pdm09 (56%), 37 influenza A(H3N2) (44%), 37 samples where subtyping was not performed, and 14 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 6, influenza activity remains at low levels typically observed in late spring/early summer. During week 6, 282 influenza detections were reported: 190 influenza A (predominantly A(H1N1) at 69%), and 92 influenza B. The percentage of ILI visits reduced to 1.0% in week 6.
  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 28/01/2023.
  Source: CDC RSV national trends: https://www.cdc.gov/surveillance/nrevss/rsv/natl-trend.html

COVID-19 – UK and international summary

- As of 15/02/2023, there were 12 new positive PCR episodes per 100,000 population in Wales, for the most recent 7-day reporting period. There were nine suspected COVID-19 deaths with a date of death in the most recent 7-day reporting period, reported to Public Health Wales. There were 29 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 the 08/02/2023, WHO reported an additional case of MERS. In total, 2,603 laboratory-confirmed cases of locally acquired Middle East Respiratory Syndrome coronavirus (MERS-CoV) worldwide, including 935 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