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

Wednesday 25th January 2023 (covering week 03 2023)

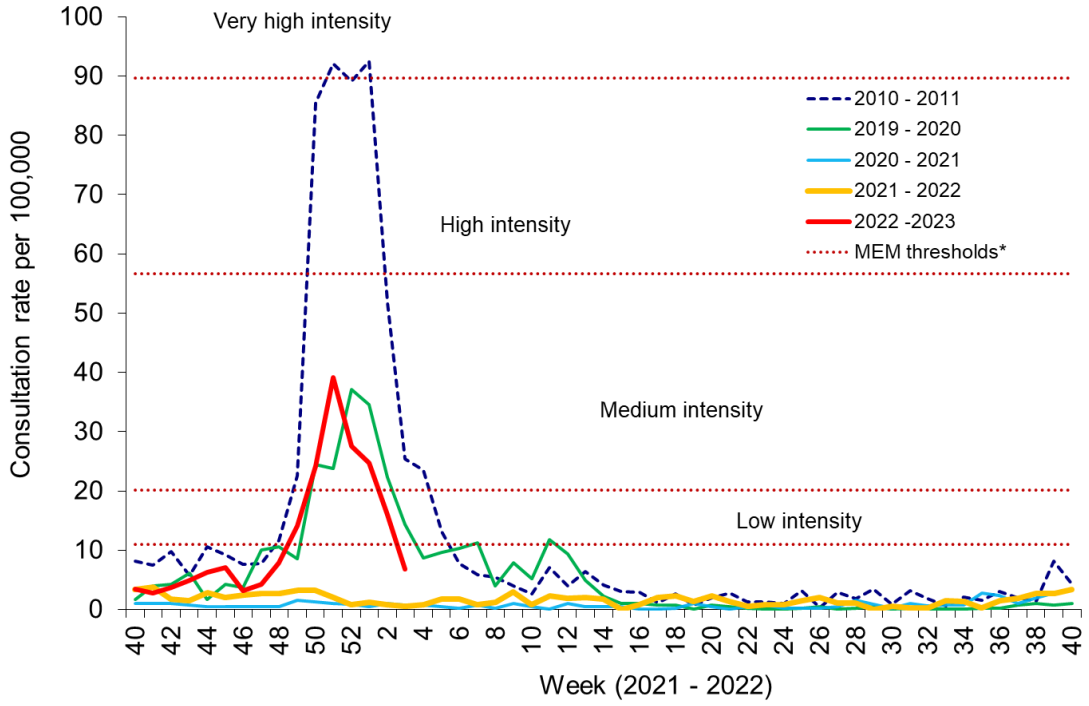
Current level of influenza activity: Low
Influenza activity trend: Decreasing
Confirmed influenza cases since 2022 week 40: **7314** *(2976 influenza A(H3N2), 1583 influenza A(H1N1)pdm09, 2599 influenza A(not subtyped) and 156 influenza B)*

During Week 03 (ending 22/01/2023) there were 68 cases of influenza (a decrease from the previous week), with a further 7 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 is at low levels (compared to the 10 seasons leading up to 2020). SARS-CoV-2, rhinovirus, adenovirus, and seasonal coronaviruses 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 03, was 6.78 consultations per 100,000 practice population (Table 1). This is a decrease compared to the previous week (15.91 consultations per 100,000, Figure 1). Consultation rates were highest in those aged 35 to 44 years.
- The **Sentinel GP consultation rate for Acute Respiratory Infections (ARI)** was 209.1 per 100,000 practice population during Week 03 (Table 2 and Figure 3). Weekly consultations for both Lower Respiratory Tract Infections and Upper Respiratory Tract Infections 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 03 decreased to 19.9% (Figure 9).
- During Week 03 2023, 1,335 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 **48** samples positive for influenza of which 10 were A(H1N1), 29 were A(H3N2), 6 were A(not typed), and 3 were influenza B. Overall influenza positivity was 3.6% across all age groups; 3.6% in those aged 18 years and over; and 3.7% in those aged under 18 years. In addition, there were 111 SARS-CoV-2, 172 rhinovirus, 65 RSV, 83 adenovirus, 53 human metapneumovirus, 75 seasonal coronavirus, 21 enterovirus, and 15 parainfluenza positive samples (Figure 5). Additionally, 798 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 798 samples, 103 were positive for SARS-CoV-2, 14 were positive for influenza A, 26 were positive for RSV and 4 for influenza B (Figure 6). Furthermore, 71 respiratory specimens were tested from patients in intensive care units (ICU) of which three were positive for influenza (two A(H3N2) and one A(H1N1)) (Figure 7).
- There were 66 surveillance samples from patients with ILI symptoms collected by **sentinel GPs and community pharmacies** during Week 03. Of the 66 samples, three tested positive for influenza (two A(H3N2), one A(H1N1), three for a seasonal coronavirus, three for SARS-CoV2, one for RSV, three for human metapneumovirus, two for adenovirus, four for rhinovirus, three for parainfluenza and four for enterovirus (as at 25/01/2023) (Figure 4).
- **Confirmed RSV case incidence in children aged under five remains at low intensity levels.** In week 3 there were 17.4 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) decreased to 19 during week 03 2023, from 55 cases in week 02 (figure 10).
- During Week 03 2023, 10 **ARI outbreaks** were reported to the Public Health Wales Health Protection team. Of the 10 outbreaks, all were reported as COVID-19. All 10 **ARI outbreaks** were reported in residential care homes.
- According to **EuroMoMo** analysis, all-cause deaths in Wales were not significantly in excess during week 02.

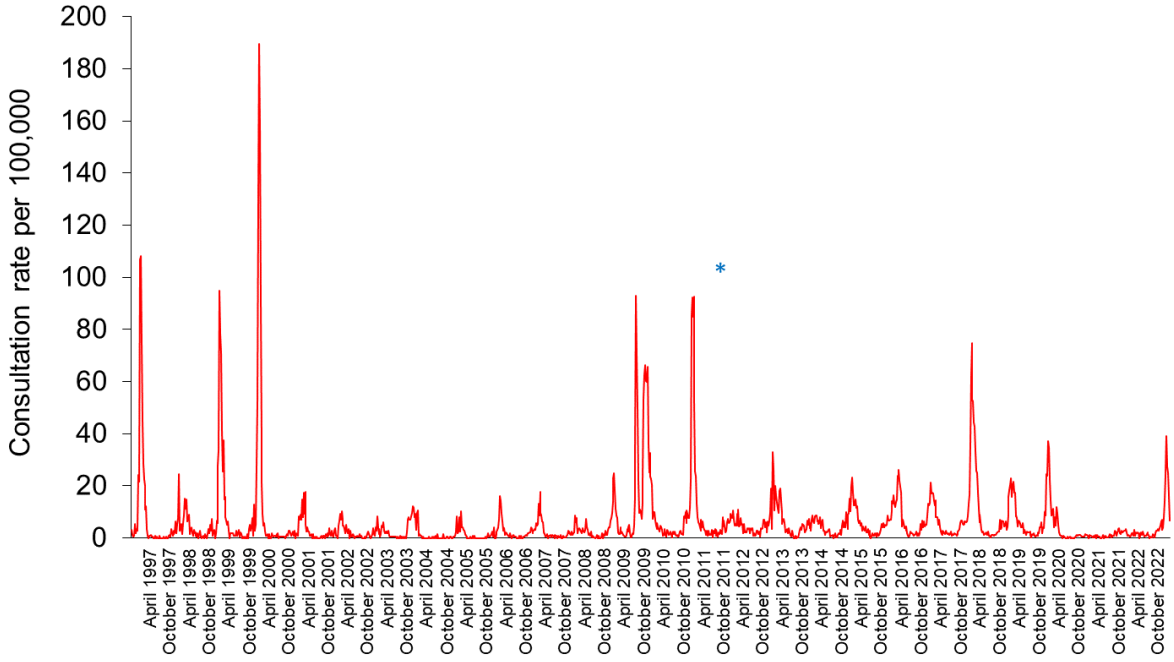
Respiratory infection activity in Wales

Figure 1. Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (as of 22/01/2023).



* 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 03 2023).



* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for ILI in Welsh sentinel practices, week 50 – week 03 2023 (as of 22/01/2023).

Age group	50	51	52	1	2	3
< 1	0.0	0.0	0.0	0.0	0.0	0.0
1 - 4	13.5	9.1	8.9	13.9	0.0	6.8
5 - 14	40.3	30.6	11.9	4.6	2.3	2.2
15 - 24	47.8	25.6	30.6	11.2	6.8	4.4
25 - 34	38.7	74.6	39.9	47.6	16.1	3.9
35 - 44	38.2	85.2	42.7	23.6	13.9	11.4
45 - 64	11.9	25.2	25.8	31.3	28.7	8.3
65 - 74	8.7	26.9	23.3	11.2	6.8	4.3
75+	2.2	24.4	23.7	36.8	25.7	8.9
Total	**24.2**	**39.1**	**27.5**	**24.7**	**15.91**	**6.78**

Table 2. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 50 – week 02 2023 (as of 22/01/2023).

Age group	50	51	52	1	2	3
< 1	2823.1	3542.8	1909.8	1630.3	1247.1	1207.1
1 - 4	2292.3	2386.8	1000.5	633.7	659.8	790.4
5 - 14	1009.0	1135.2	385.2	215.2	212.3	248.4
15 - 24	406.4	329.6	206.0	266.6	178.1	150.1
25 - 34	371.1	501.8	296.5	297.6	217.1	152.7
35 - 44	382.4	585.9	341.5	280.9	222.9	171.6
45 - 64	306.1	430.8	312.1	310.8	245.7	164.2
65 - 74	372.9	439.0	340.6	343.4	288.6	180.2
75+	355.2	466.5	364.8	468.0	331.4	216.4
Total	**514.8**	**622.7**	**355.7**	**322.5**	**264.7**	**209.1**

Figure 3. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 03 2022 – week 03 2023 (as of 22/01/2023).

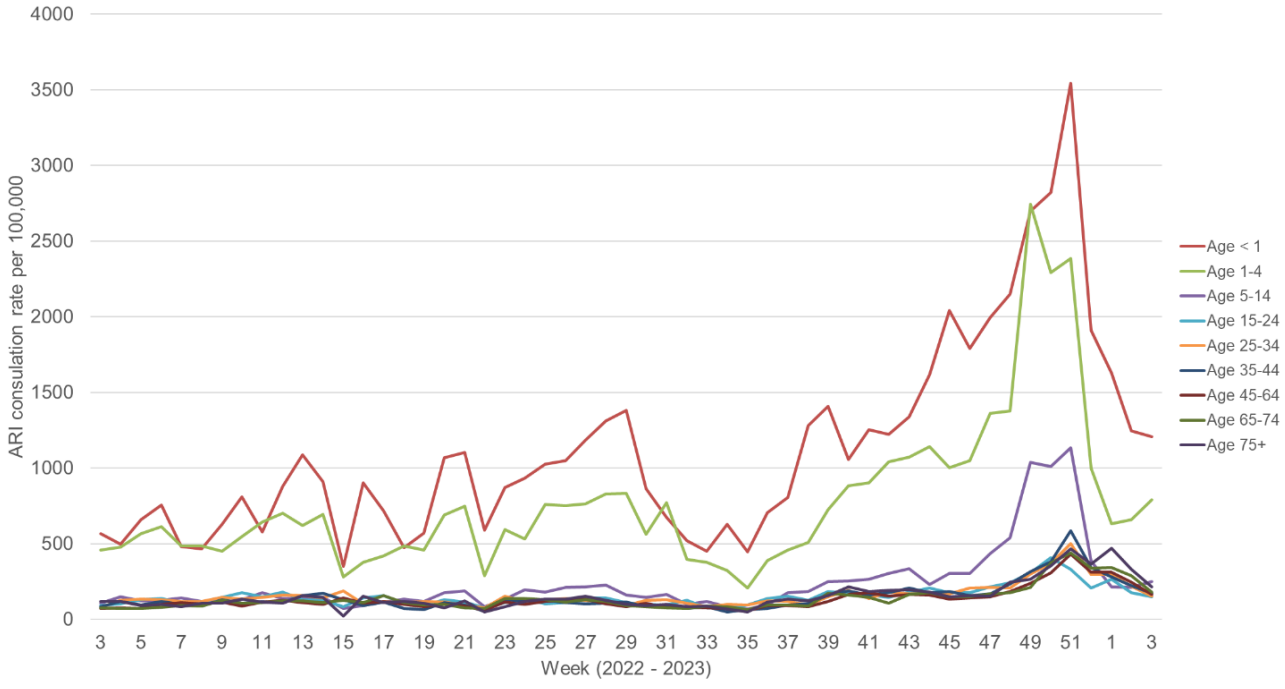
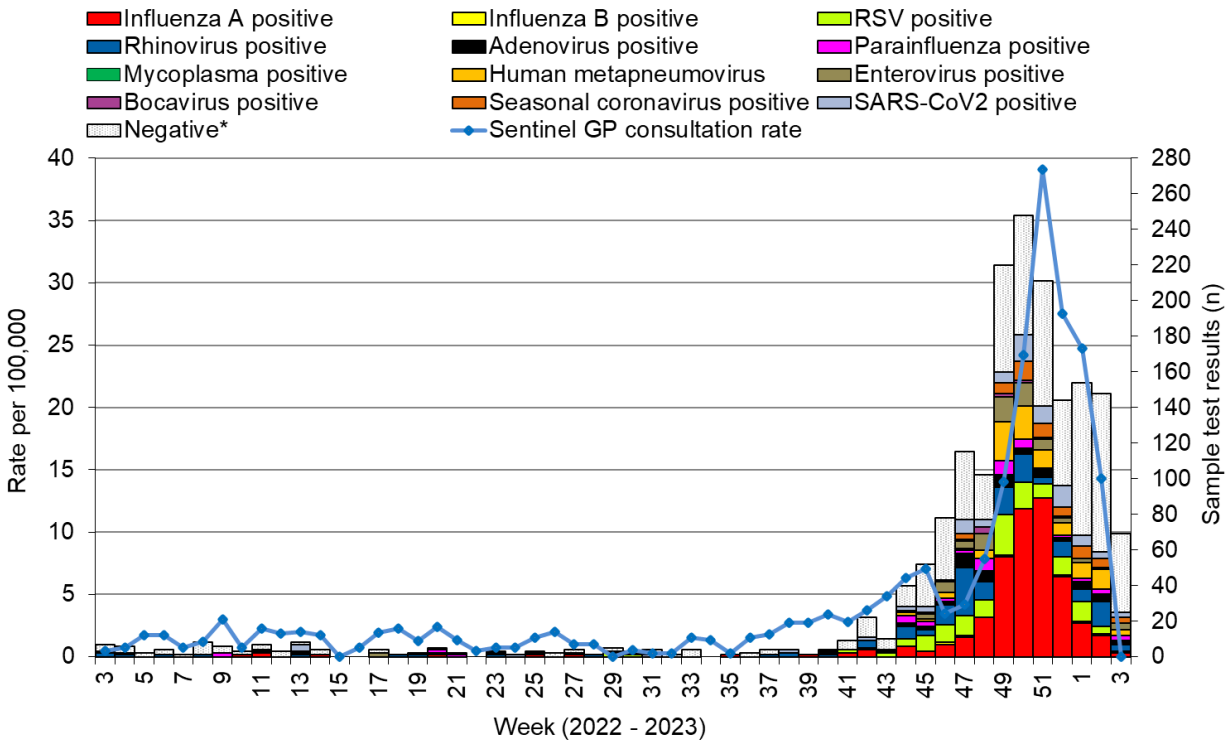
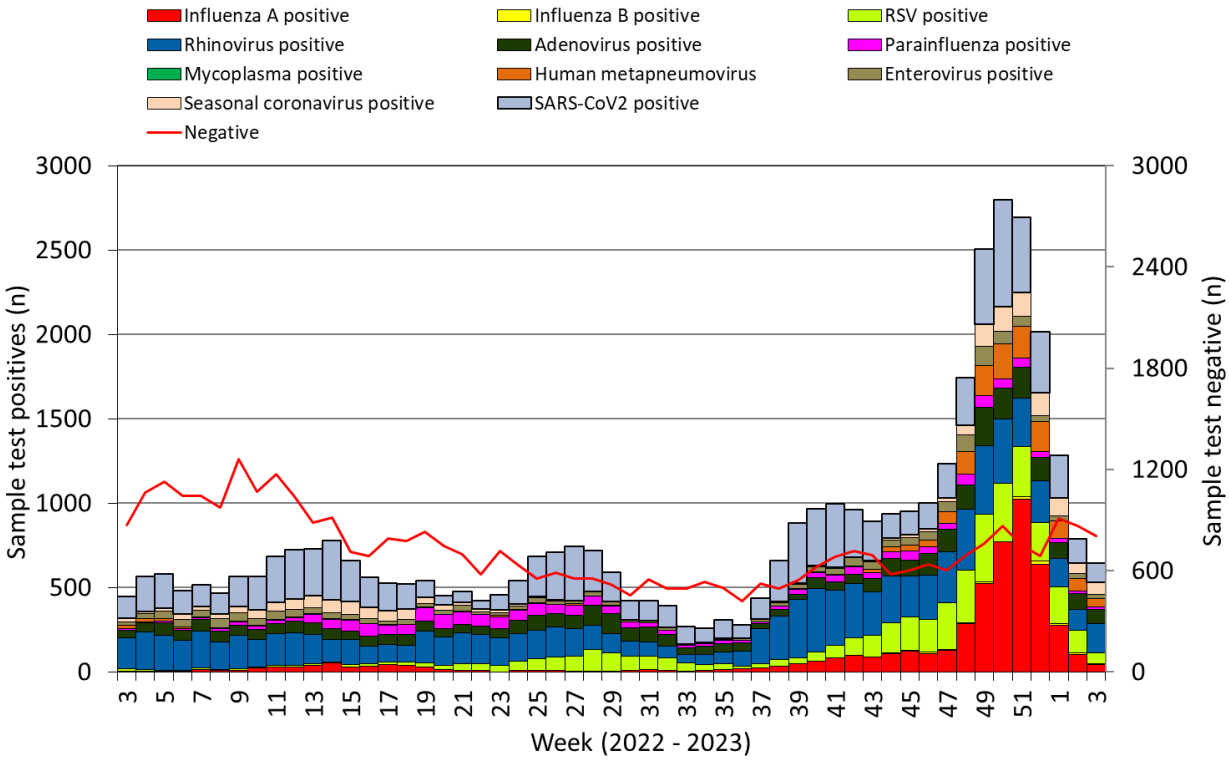


Figure 4. Specimens submitted for virological testing by sentinel GPs as of 22/01/2023, by week of sample collection, week 03 2022 to week 03 2023.



* 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 22/01/2023 by week of sample collection, week 03 2022 to week 03 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 22/01/2023 by week of sample collection, week 03 2022 to week 03 2023.

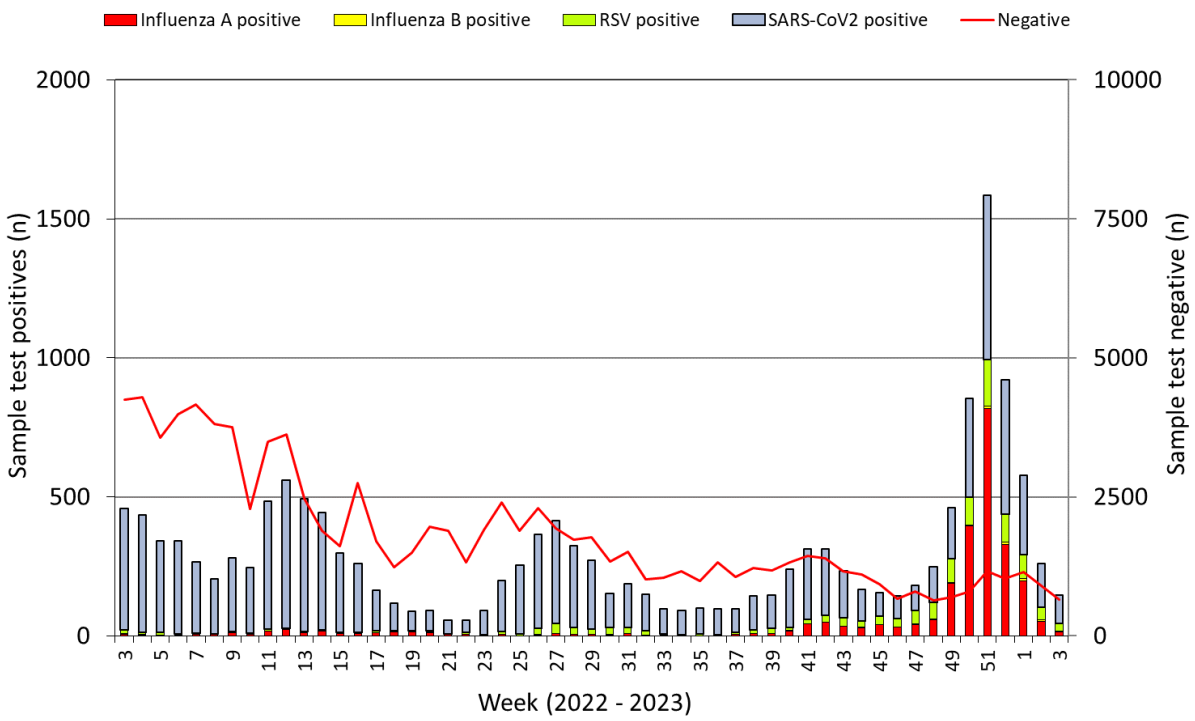
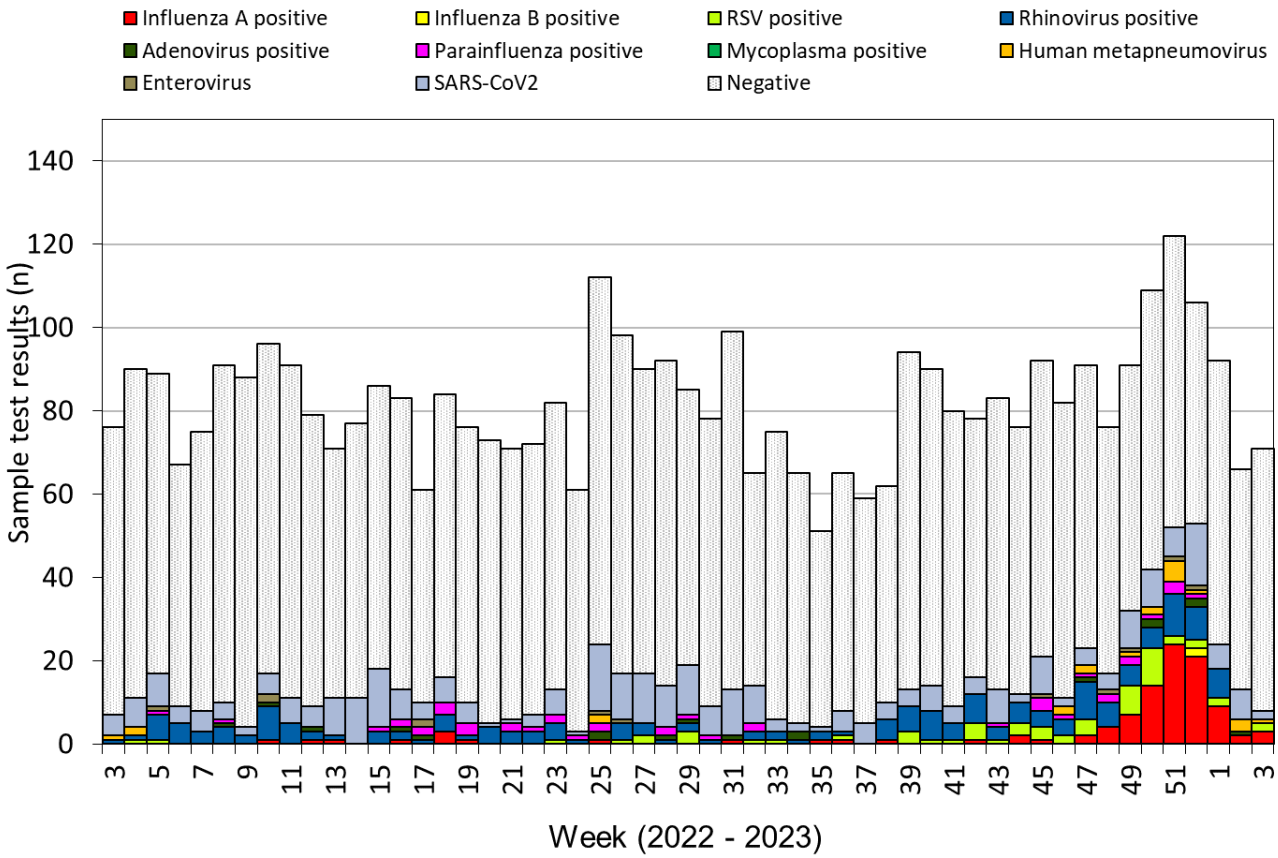
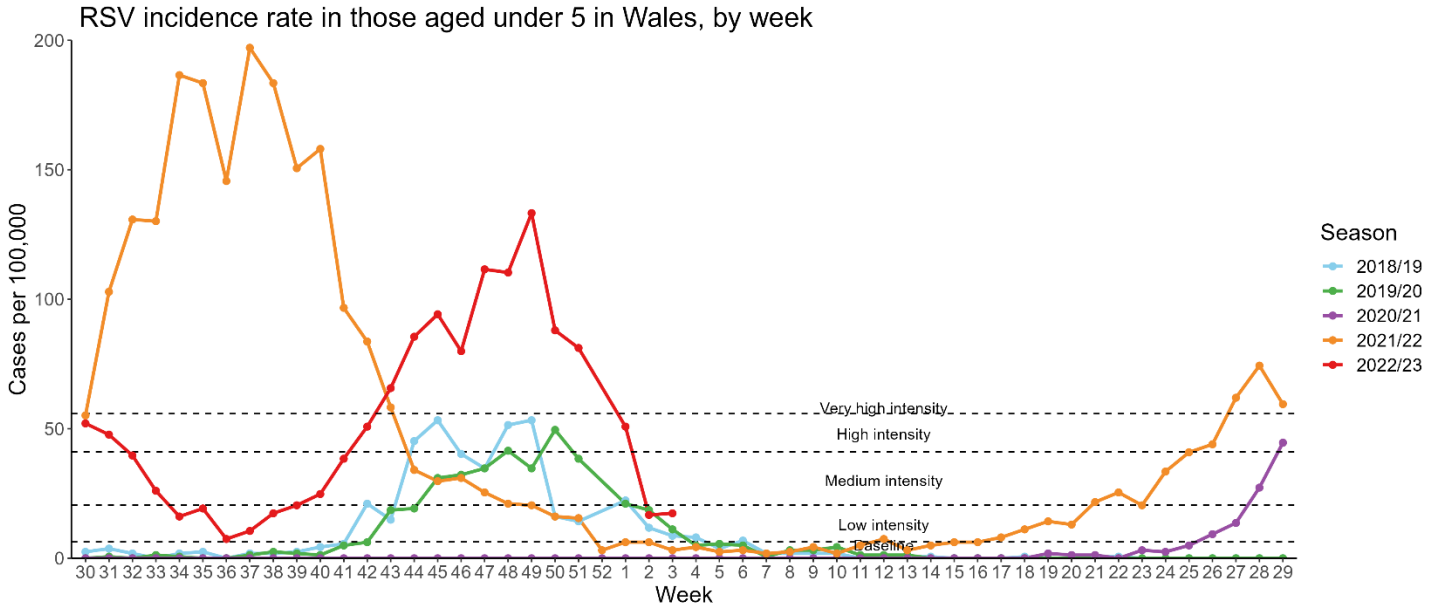


Figure 7. Specimens submitted for virological testing for ICU patients, by week of sample collection, week 3 2022 to Week 03 2023.



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.

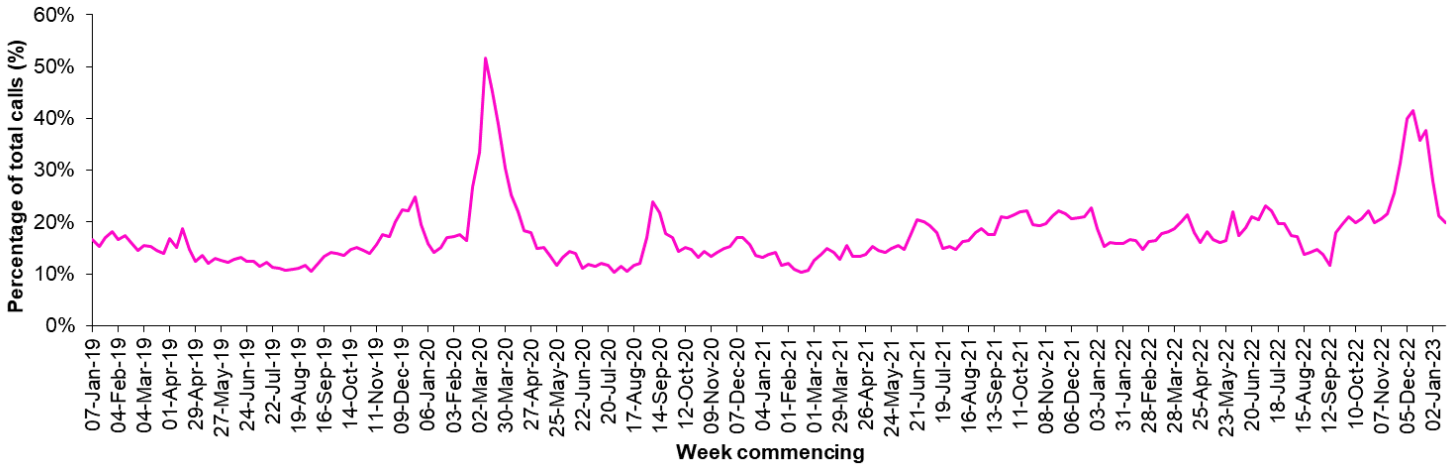
Figure 8. RSV incidence rate per 100,000 population aged under five years, week 30 2018 to Week 03 2023.



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

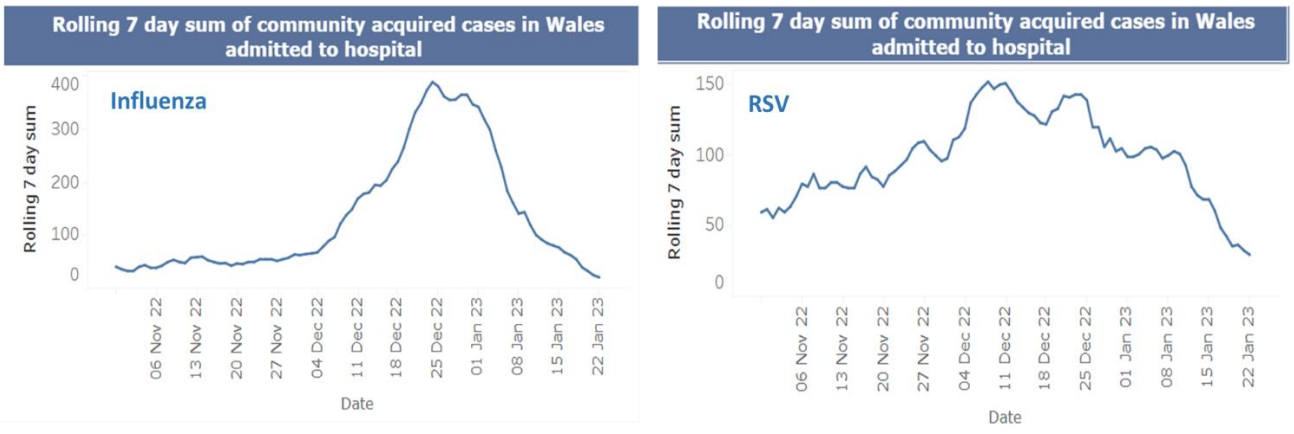
Calls to NHS Direct Wales

Figure 9. Influenza related calls to NHS Direct Wales[1] (as a percentage of total calls) from week 02 2019 - Week 03 2023 (as of 22/01/2023).



[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 22/01/2023).



Influenza Vaccine Uptake in Wales

Table 3. Uptake of influenza immunisations in GP Practice patients in Wales 2022/23 (as of 19/01/2023).

Influenza immunisation uptake in the 2022/23 season	
People aged 65y and older	75.2%
People younger than 65y in a clinical risk group	42.1%
Children aged two & three years	41.7%
Children aged between four & ten years	61.0%
Children aged between 11 & 15 years	50.6%
Total NHS staff	43.6%
NHS staff with direct patient contact	43.6%

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 2, GP ILI consultations decreased in Northern Ireland to 10.3 per 100,000. The weekly ILI GP consultation rate in England reported through the RCGP system decreased to to 12.9 per 100,000.
- During week 2, 555 samples tested positive for influenza were reported in England (including 87 A(H3), 13 A(H1N1)pdm09, 380 A(not subtyped) and 75 influenza B). Overall influenza positivity decreased to 6.0%. 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 2, four countries reported baseline activity, seven countries reported low-intensity, eighteen reported medium-intensity, nine reported high-intensity, and two reported very-high intensity. From the 40 countries reporting, three reported sporadic spread, two reported local spread, five reported regional spread, and thirty reported widespread activity (across the Region). During week 2, 822 of (22%) 3,679 samples from patients presenting to all sentinel primary care centres with ILI or ARI symptoms were tested positive for influenza. This is a decrease 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 (40% H3, and 60% A(H1N1)pdm09) and 13% were influenza B. **Source:** Flu News Europe: http://www.flunewseurope.org/

- The WHO reported on 09/01/2023, based on data up to 25/12/2022, that globally, influenza 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, overall influenza decreased. The majority of activity was reported in Chile, and Argentina where positivity decreased too low to low levels but remained above average levels for this time of year... RSV activity in South Africa remains low.
- In tropical South America, influenza detections of predominantly A(H3N2) virus decreased. Influenza positivity remained at a moderate level in Ecuador and SARI activity decreased but remained at moderate levels. SARI cases remain above the epidemic threshold Columbia. SARS-CoV-2 increased in several countries.
- In Western Africa, influenza activity remained low, although influenza B/Victoria and A(H3N2) detections were sporadically reported by Burkina Faso and Senegal. Guinea reported B/Victoria lineage and A(H1N1)pdm09. In Middle Africa, all seasonal subtypes were reported in the Democratic Republic of Congo.
- In Southern Asia, influenza detections of predominately A(H3N2) viruses decreased mainly due to a decrease in activity reported in Iran. Influenza In Afghanistan and Pakistan reported an increase of A(H1N1)pdm09. South-East Asia, influenza activity decreased apart from in Malaysia. Influenza B/Victoria lineage viruses predominated n Lao People's Democratic Republic and the Philippines. Whereas A(H3N2) viruses predominated in Singapore and Thailand.
- In Eastern Africa, all seasonal subtypes were detected with A(H1N1)pdm09 predominant. A(H1N1)pdm09 increased in Ethiopia and Mauritius. Elsewhere, detections where stable amongst reporting countries. Influenza epidemics continued in the French territories. Increased activity was reported in most except Mayotte where influenza activity decreased.
- In South East Asia, detections of predominantly influenza B reported from Malaysia remain elevated but remain low in other parts of the region. Lao People's Democratic Republic and the Philippines reported influenza activity by the Influenza B/Victoria virus lineage. Whilst A(H3N2) predominated in Singapore and Thailand.
- In Central Asia, specifically in Kazakhstan, Kyrgyztan,Tajistan and Uzbekistan influenza activity increased and remains relatively high of predominantly influenza B viruses and A(H1N1)pdm09.
  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 12/01/2023), during the period from 12/12/2022 – 25/12/2022, National Influenza Centres and other national influenza laboratories from 131 countries, areas or territories reported influenza surveillance data. The WHO Global Influenza Surveillance and Response System laboratories tested more than 604,408 specimens during that time period, of which 121,935 were positive for influenza viruses 117,840 (96.6%) of those positive for influenza were typed as influenza A (of the subtyped influenza A viruses, 10,108 (43.5%) were influenza A(H1N1)pdm09 and 113,123 (56.5%) were influenza A(H3N2)) and all 525 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 high levels, although is declining across the country during week 02 (ending 14/01/2023). Nationally, 3,498 (4.6%) out of 75,638 specimens tested positive for influenza in week 02 in clinical laboratories nationwide, of these positives, 3,403 (97.3%) were influenza A and 95 (2.7%) were influenza B. Further characterisation has been carried out on 6,315 specimens by public health laboratories, and 453 samples tested positive for influenza; 63 influenza A(H1N1)pdm09 (18.7%), 274 influenza A(H3N2) (81.3%), 105 influenza A(not subtyped) and 11 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 2, influenza activity continued to decline, and activity is now at levels typically seen in late spring/early summer. During week 2, 798 influenza detections were reported: 779 influenza A (predominantly A(H3N2) at 71%), and 19 influenza B. The percentage of ILI visits reduced to 1.4% in week 2.
  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 14/01/2023.
  Source: CDC RSV national trends: https://www.cdc.gov/surveillance/nrevss/rsv/natl-trend.html

COVID-19 – UK and international summary

- As of 18/01/2023, there were 10 new positive PCR episodes per 100,000 population in Wales, for the most recent 7-day reporting period. There were 26 suspected COVID-19 deaths with a date of death in the most recent 7-day reporting period, reported to Public Health Wales. There were 56 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 (12/11/2022 – 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/fluvaccine/

Advice on influenza immunisation (for intranet users)
Influenza (sharepoint.com)

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