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

Wednesday 09th November 2022 (covering week 44 2022)

Current level of influenza activity: Low
Influenza activity trend: Increasing
Confirmed influenza cases since 2022 week 40: **516** *(207 influenza A(H3N2), 120 influenza A(H1N1)pdm09, 180 influenza A(not subtyped) and 9 influenza B)*

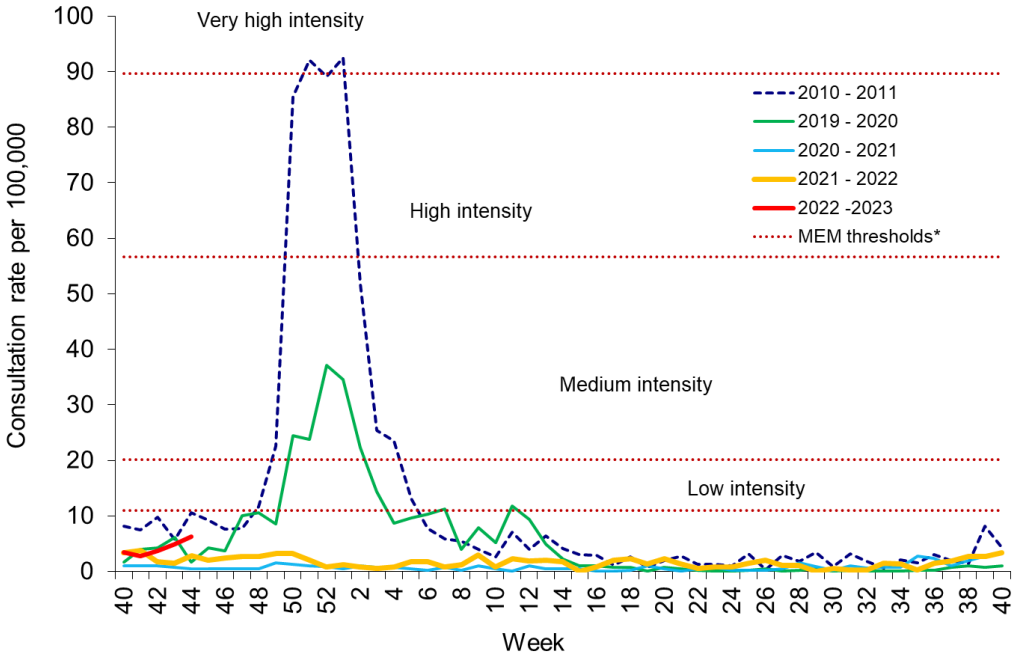
Key points – Wales

Confirmed influenza cases continue to increase, currently remaining at low levels, whereas RSV confirmed cases increased to very high levels. During Week 44 (ending 06/11/2022) there were 116 cases of influenza (an increase from the previous week), with a further two for previous weeks. COVID-19 cases continue to be detected in symptomatic patients in hospitals and in the community. RSV incidence in children under 5 years of age is currently at levels that would indicate very high levels of activity (compared to the 10 seasons leading up to 2020). Rhinovirus, adenovirus and RSV are the most commonly detected cause of non-COVID-19 Acute Respiratory Infection (ARI).

- The **Sentinel GP consultation rate for influenza-like illness (ILI)** in Wales during week 44, was 6.3 consultations per 100,000 practice population (Table 1). It increased compared to the previous week (4.9 consultations per 100,000) but remains below the baseline threshold for seasonal influenza activity (11.0 per 100,000 practice population) (Figure 1). 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.
- The **Sentinel GP consultation rate for Acute Respiratory Infections (ARI)** was 223.4 per 100,000 practice population during Week 44, this is a decrease compared to the previous week (235.4 per 100,000) (Table 2 and Figure 3). Weekly consultations decreased for both Lower Respiratory Tract Infections and Upper Respiratory Tract Infections 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 44 decreased to 19.9% (Figure 9).
- During Week 44, 1,360 specimens received multiplex respiratory panel testing mainly from patients attending hospitals. These results do not include samples tested solely for SARS-CoV2. There were 82 influenza (33 A(H1N1), 43 A(H3N2), five A(not typed), and one influenza B), 179 RSV, 42 parainfluenza, 294 rhinoviruses, 29 human metapneumonovirus, 109 adenoviruses, 31 enteroviruses, nine seasonal coronaviruses and 148 SARS-CoV2 detected in Week 44 (Figure 5). Additionally, 1,272 samples from patients were tested for influenza, RSV and SARS-CoV2 only, many of these tests may be associated with screening activities rather than diagnostic testing for patients presenting with ARI symptoms. Of these 1,272 samples, 27 were positive for influenza A, three for influenza B, 22 were positive for RSV and 112 were positive for SARS-CoV2 (Figure 6). Seventy seven respiratory specimens were tested from patients in intensive care units (ICU) and three were positive for influenza(Figure 7). For the latest COVID-19/ SARS-CoV2 surveillance data please see the **PHW daily dashboard**
- There were 36 surveillance samples from patients with ILI collected by **sentinel GPs** during Week 44. Of the 36 samples, one sample tested positive for influenza A(H1N1), three tested positive for influenza A(H3N2), four for RSV, seven for rhinovirus, two for adenovirus, four for parainfluenza, one for human metapneumovirus, one for enterovirus and 2 for SARS-CoV (as at 09/11/2022) (Figure 4).
- **Confirmed RSV case incidence in children aged under 5 has further increased, and is at very high intensity levels.** In week 44 there were 81.4 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.
- During Week 44, 16 **ARI outbreaks** were reported to the Public Health Wales Health Protection team, 16 of them were reported as COVID-19 and two as influenza A (two dual infections). All 16 **ARI outbreaks,** were reported in residential care homes.
- According to **EuroMoMo** analysis, all-cause deaths in Wales were not significantly in excess during week 43.

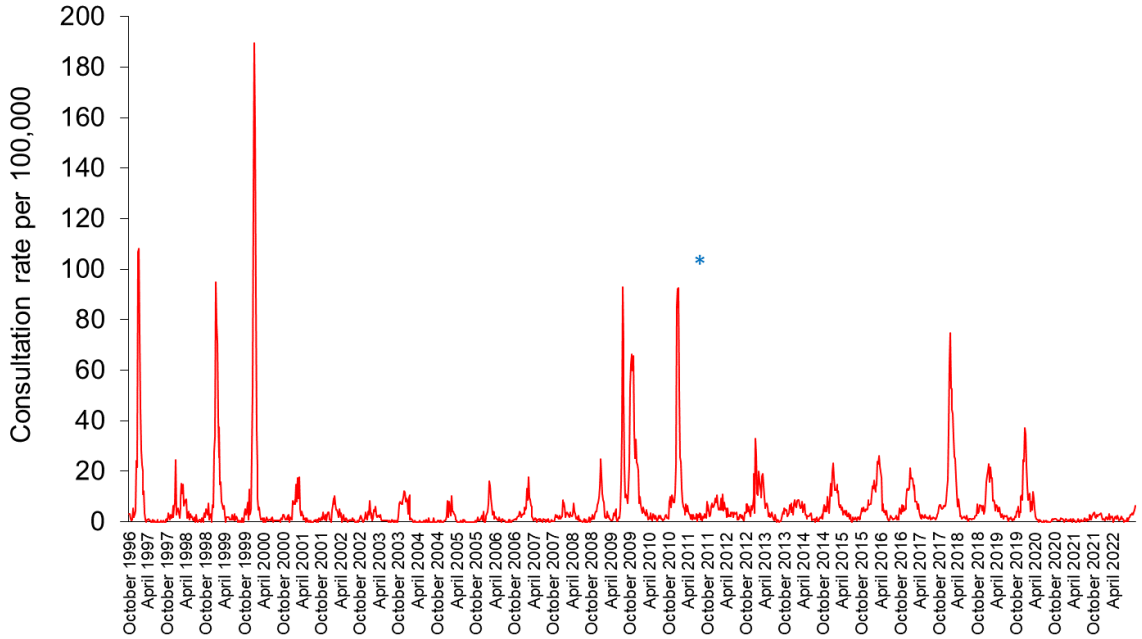
Figure 1. Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (as of 06/11/2022).

Respiratory infection activity in Wales



* 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 44 2022).



* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for ILI in Welsh sentinel practices, week 39 – week 44 2022 (as of 06/11/2022).

Age group	39	40	41	42	43	44
< 1	0.0	0.0	0.0	0.0	0.0	0.0
1 - 4	0.0	0.0	0.0	13.6	6.8	7.0
5 - 14	4.6	0.0	2.3	4.5	2.2	2.3
15 - 24	0.0	4.3	2.3	0.0	0.0	6.7
25 - 34	2.0	5.8	2.0	2.0	9.7	6.0
35 - 44	0.0	7.7	4.0	5.8	11.5	13.9
45 - 64	5.7	2.8	4.8	3.7	4.6	3.8
65 - 74	2.2	0.0	2.3	4.4	2.2	4.5
75+	2.3	4.5	0.0	2.3	2.3	9.2
Total	**2.8**	**3.4**	**2.8**	**3.7**	**4.9**	**6.3**

Table 2. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 39 – week 44 2022 (as of 06/11/2022).

Age group	39	40	41	42	43	44
< 1	1407.1	1048.7	1249.6	1209.7	1330.9	1532.1
1 - 4	725.3	886.5	902.9	1043.8	1076.2	1115.5
5 - 14	250.4	255.3	265.7	302.7	333.63	222.37
15 - 24	183.5	173.8	160.1	146.7	180.24	203.53
25 - 34	149.2	193.5	136.9	179.4	170.05	168.56
35 - 44	163.4	191.0	162.3	176.5	207.52	176.26
45 - 64	119.2	163.0	178.0	155.0	162.98	158.91
65 - 74	171.4	160.2	145.9	107.0	164.55	171.34
75+	157.6	213.8	184.5	192.1	195.46	184.81
Total	**191.7**	**219.6**	**210.0**	**214.6**	**235.4**	**223.4**

Figure 3. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, week 1 – week 44 2022 (as of 06/11/2022).

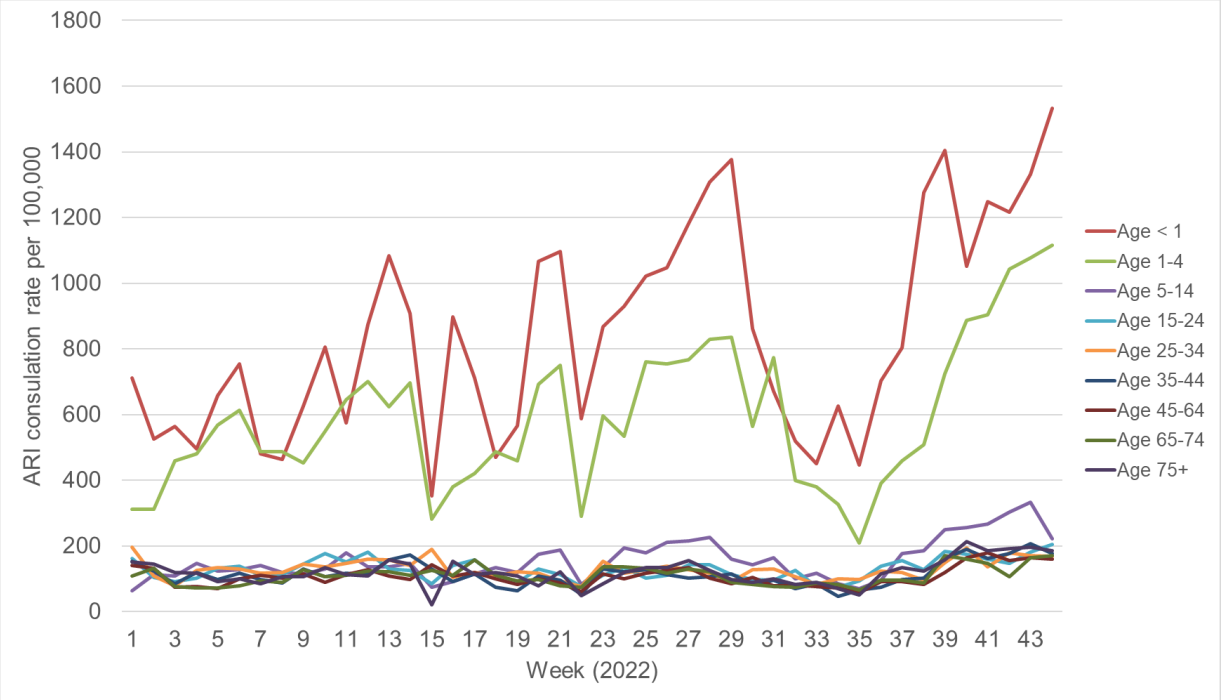
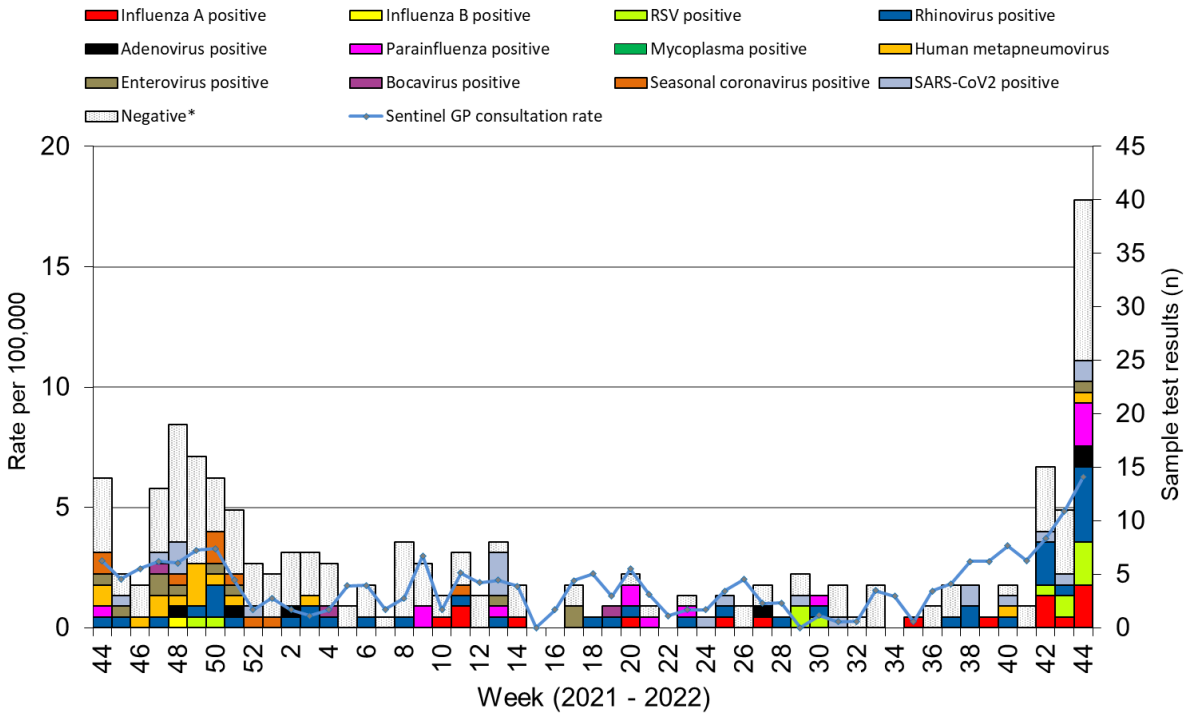
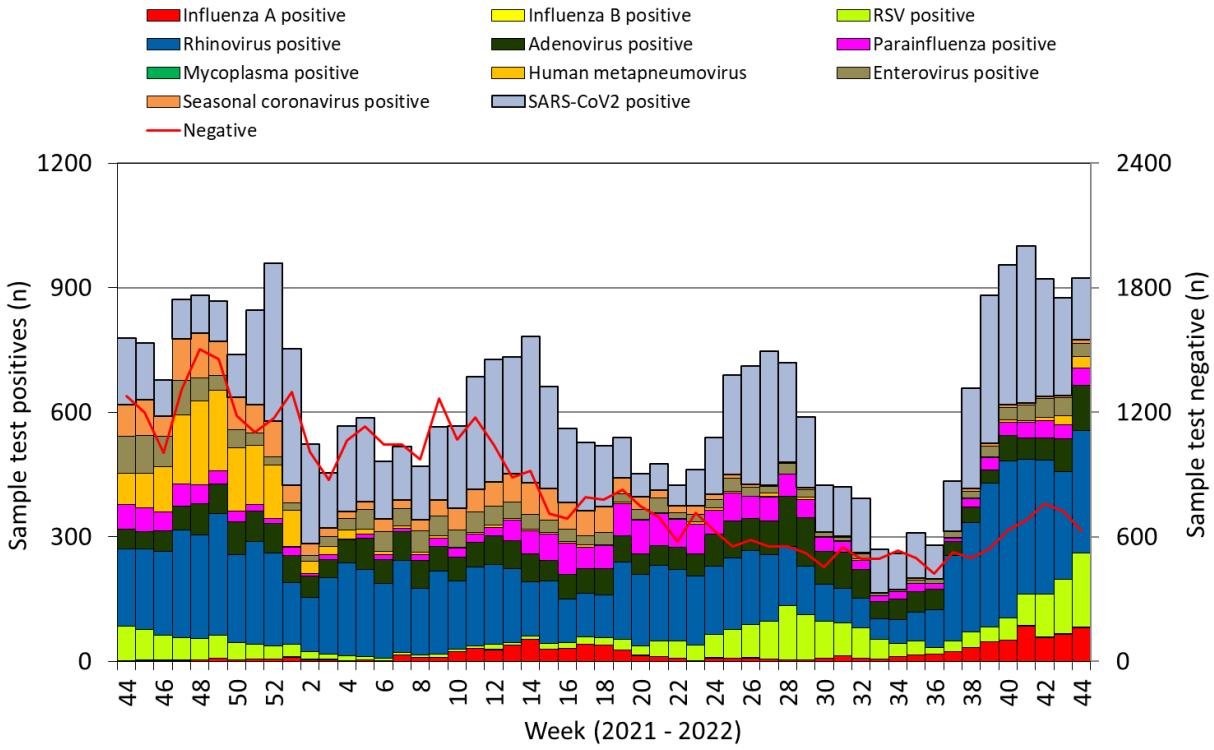


Figure 4. Specimens submitted for virological testing by sentinel GPs as of 06/11/2022, by week of sample collection, week 44 2021 to week 44 2022.



* 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 06/11/2022 by week of sample collection, week 44 2021 to week 44 2022.



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 06/11/2022 by week of sample collection, week 44 2021 to week 44 2022.

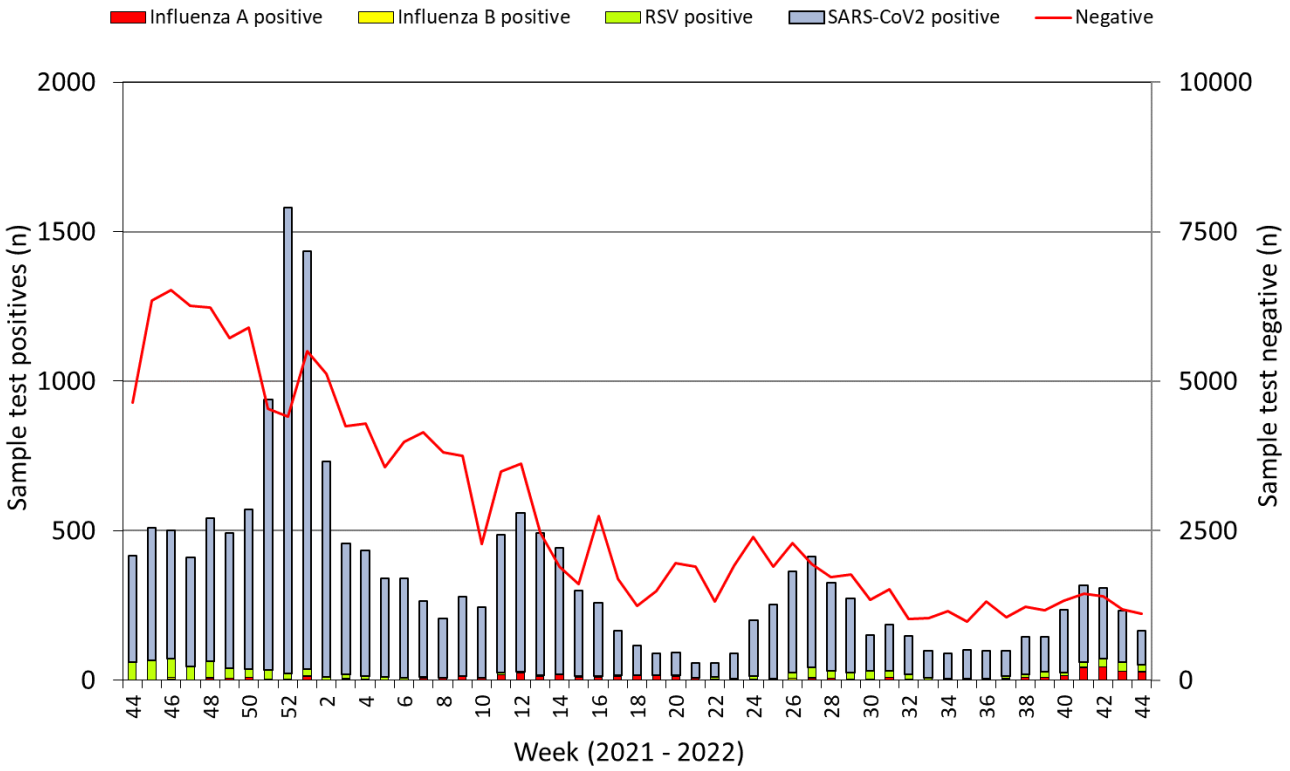
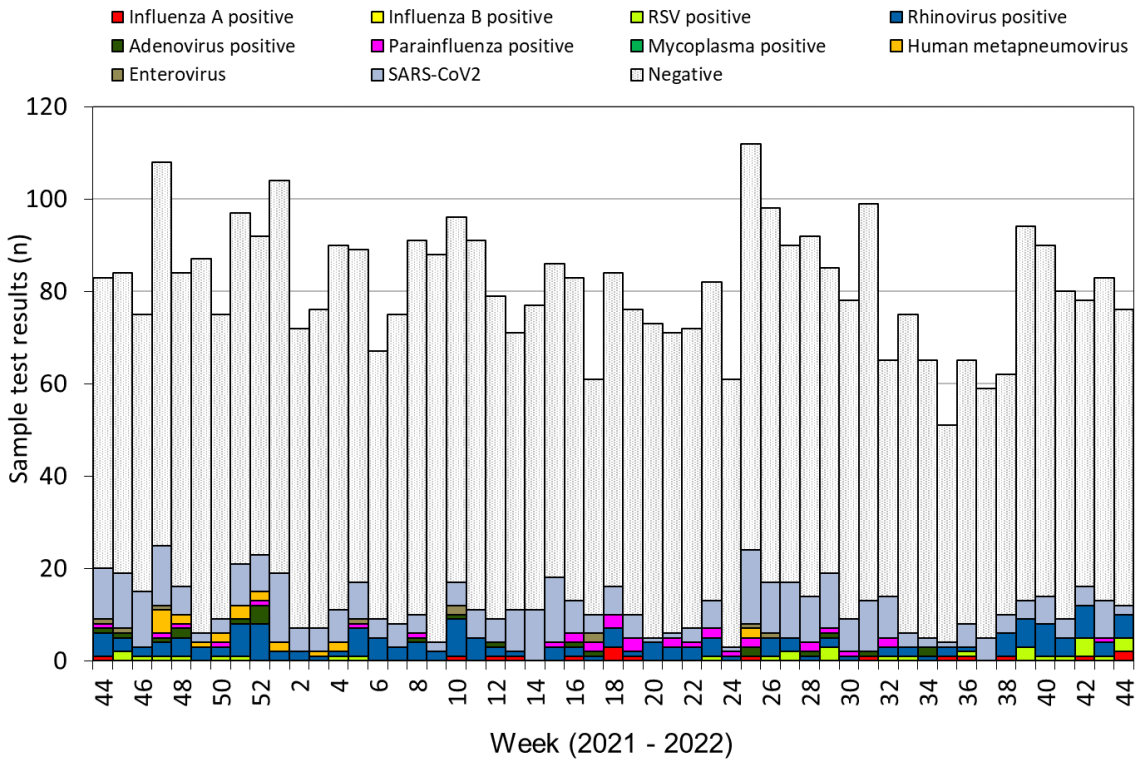
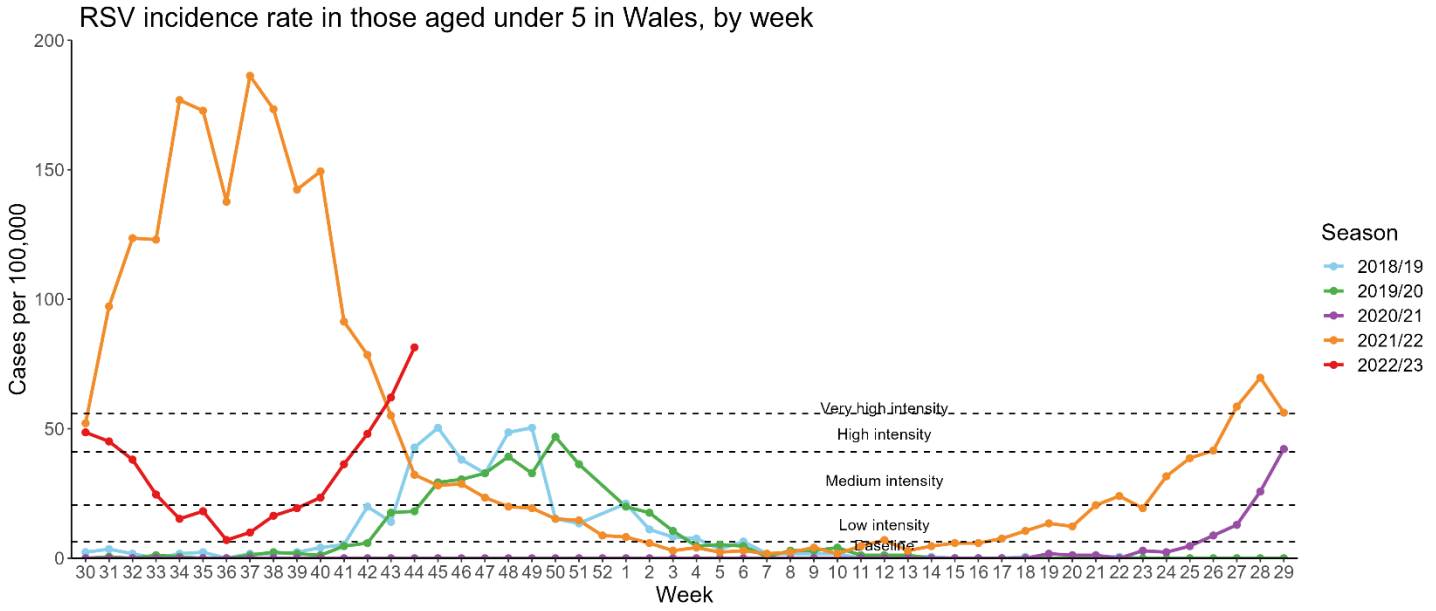


Figure 7. Specimens submitted for virological testing for ICU patients, by week of sample collection, week 44 2021 to Week 44 2022.



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 on pathogen will appear more than once in the chart.

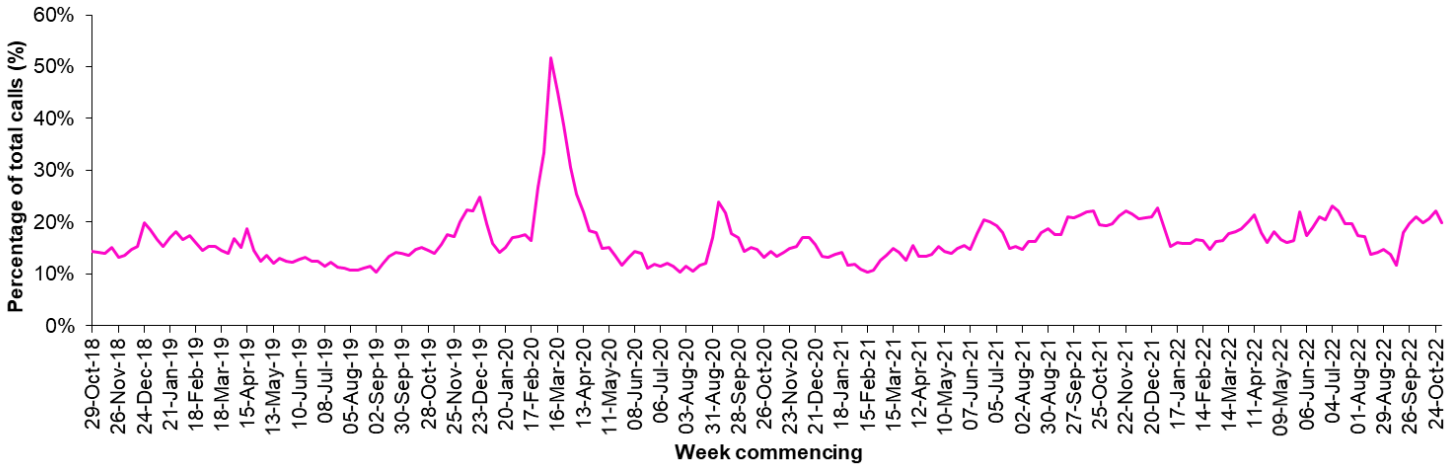
Figure 8. RSV incidence rate per 100,000 population aged under five years, week 30 2018 to Week 44 2022.



*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 Wales[1] (as a percentage of total calls) from week 44 2018 - Week 44 2022 (as of 06/11/2022).



[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 01/11/2022).

Influenza immunisation uptake in the 2022/23 season	
People aged 65y and older	56.8%
People younger than 65y in a clinical risk group	26.2%
Children aged two & three years	20.1%

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 43 community and syndromic influenza indicators remained low in the UK. GP ILI consultations decreased in Scotland to 3.8 per 100,000, and increased in Northern Ireland to 3.5 per 100,000 - well below the baseline intensity threshold. The weekly ILI GP consultation rate in England reported through the RCGP system increased to 3.6 per 100,000, below the MEM threshold for baseline activity (12.2 per 100,000).
- During week 44, 243 samples tested positive for influenza in England (including 4 A(H1N1)pdm09, 47 A(H3N2), 182 A(not subtyped) and 10 influenza B). Overall influenza positivity increased to is 6.1%. 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 its fourth weekly analysis of the season 2022-2023. During week 43, twenty five reported baseline-intensity, eleven reported low-intensity, and one reported high-intensity (Malta). Fifteen out of 37 reporting countries reported no influenza activity across the region, 16 reported sporadic spread, three reported regional spread, and two reported widespread activity (Kazakhstan and Portugal). During week 43, 149 of 1,821 (8%) samples from patients presenting to all sentinel primary care centres with ILI or ARI symptoms were tested positive for influenza. This is an increase of 2% from the previous week, but remains below the threshold for epidemic activity (10%). Above-threshold positivity has been reported in Germany at 23%, Kazakhstan 20%, Kyrgyzstan 31% and Spain 13% . Of sentinel specimens that tested positive for influenza, 83% were influenza A (91% H3, 9% A(H1N1)pdm09) and 17% were influenza B. **Source:** Flu News Europe: http://www.flunewseurope.org/

- The WHO reported on 31/10/2022, based on data up to 16/10/2022, that globally, influenza activity remains low, though an increasing trend has been observed in the northern hemisphere.
- In the temperate zones of the southern hemisphere, overall influenza activity has now plateaued. RSV activity has decreased across all regions.
- In temperate South America, influenza detections increased due to increased activity in Argentina and Chile of predominately A(H1N1)pdm09 among subtyped virus. Influenza positivity increased above the epidemic threshold in Venezuela and pneumonia cases increased in Colombia. RSV activity increased in Brazil and Colombia. In the Caribbean and Central American countries, influenza detections of predominantly A(H3N2) virus were reported but remained low.
- In tropical Africa, influenza activity remained low with predominantly influenza B/Victoria lineage and A(H3N2) viruses, although detections of A(H1N1)pdm09 were reported in a few countries.
- In Southern Asia, influenza detections of predominately A(H3N2) viruses, were low or generally decreasing. Detections of A(H1N1)pdm09 and influenza B viruses were also reported. In East Asia, influenza activity of predominantly influenza A(H3N2) continue to be reported. In Western Asia, influenza detections were elevated in some countries of the Arab Peninsula.
- In North America, influenza activity increased slightly. ILI activity in Canada was at levels normally seen this time of year whereas the USA, ILI visits surpassed the baseline. Influenza A(H3N2) predominated amongst the few subtyped viruses. In Europe, overall influenza activity remained at inter-seasonal levels, with a low yet increasing trend. Influenza A viruses predominated among reported detections, A(H3N2) accounting for the majority of subtyped detections. RSV activity increased in the USA and remained low in Canada. **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 28/10/2022), during the time period from 03/10/2022 – 16/10/2022, National Influenza Centres and other national influenza laboratories from 113 countries, areas or territories reported influenza surveillance data. The WHO Global Influenza Surveillance and Response System laboratories tested more than 311,623 specimens during that time period, of which 13,035 were positive for influenza viruses. 11,782 (90.39%) of those positive for influenza were typed as influenza A (of the subtyped influenza A viruses, 872 (18.05%) were influenza A(H1N1)pdm09 and 3,958 (81.95%) were influenza A(H3N2)) and 1,278 (9.8%) influenza B (of the 208 characterised influenza B viruses, all belonged to the B-Victoria lineage). **Source:** 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 there have been early increases in seasonal influenza activity in the United States during week 43 (ending 29/10/2022). Nationally, 7,504 (9.0%) out of 83,742 specimens have tested positive for influenza in week 43 in clinical laboratories nationwide, of these positives 7,422 (98.9%) were influenza A and 82 (1.1%) were influenza B. Further characterisation has been carried out on 8,187 specimens by public health laboratories, and 467 samples tested positive for influenza; 108 influenza A(H1N1)pdm09, 212 influenza A(H3N2), 146 influenza A(not subtyped) and one influenza B.
  Source: CDC Weekly US Influenza Surveillance Report: http://www.cdc.gov/flu/weekly/

- The Public Health Agency of Canada reported that between weeks 42-43, influenza activity increases steeply and has exceeded the seasonal positivity threshold. During weeks 42-43, 1,508 influenza detections were confirmed; 1,493 influenza A (predominantly A(H3N2) at 90%), and 26 influenza B. The percentage of ILI visits rose to 1.6%.
  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 an out of season increase in RSV activity, beginning in February 2022. This followed out-of-season activity also reported during 2021. RSV positivity rate decreased in the week beginning 29/10/2022.
  Source: CDC RSV national trends: https://www.cdc.gov/surveillance/nrevss/rsv/natl-trend.html

COVID-19 – UK and international summary

- As of 02/11/2022, the new positive PCR episodes for the most recent 7-day reporting period were 16 per 100,000 population in Wales. 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 40 COVID-19 death registrations in the last reporting period provided 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 28/04/2022 WHO reported an additional case of Middle East Respiratory Syndrome coronavirus (MERS-CoV) in Oman, this follows on from two laboratory-confirmed cases (including 1 death) reported from Qatar between 22/03/2022 to 03/04/2022. Since the beginning of 2022 and as of 03/10/2022 there have been three reported cases of MERS-CoV. As of 15/05/2022, 2,591 laboratory confirmed cases of human infection with MERS-CoV, including 894 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/

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