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

Wednesday 13th November 2023 (covering Week 49 2023)

GIG CYMRU NHS WALES | Iechyd Cyhoeddus Cymru Public Health Wales

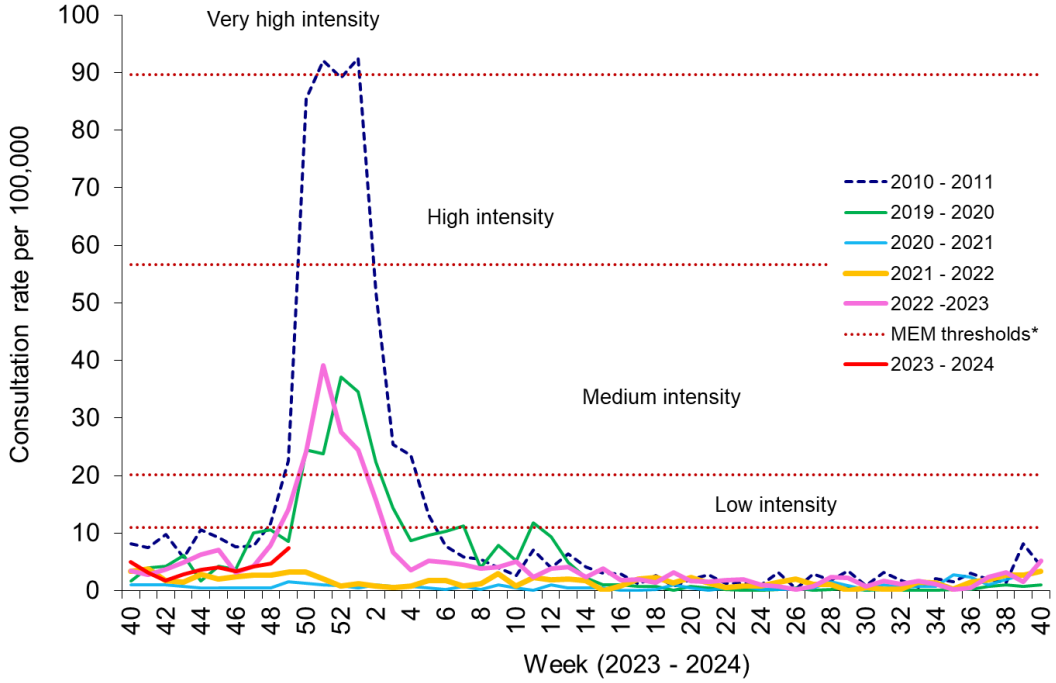
Current level of influenza activity: Baseline
Influenza activity trend: Increasing
Confirmed influenza cases since 2023 Week 40: **297***(30 influenza A(H3N2), 54 influenza A(H1N1)pdm09, 170 influenza A untyped and 43 influenza B)*

During Week 49 (ending 11/12/2023) there were 94 cases of influenza. While overall influenza activity remains at baseline levels, there is an upward trend in recent weeks. *On average, influenza seasons in Wales begin around mid-December*. COVID-19 cases have decreased but continue to be detected. RSV activity in children under 5 years decreased but remains at 'very high' intensity levels. Rhinovirus, RSV, SARS-CoV-2, hMPV, enterovirus, and adenovirus are the most commonly detected other causes of Acute Respiratory Infection (ARI).

- The **Sentinel GP consultation rate for influenza-like illness (ILI)** in Wales during Week 49, was 7.4 consultations per 100,000 practice population (Table 1). This is an increase compared to the previous week (4.8 consultations per 100,000. Figure 1).
- The **Sentinel GP consultation rate for Acute Respiratory Infections (ARI)** was 256.0 per 100,000 practice population during Week 49 (Table 2 and Figure 3). This is an increase compared to the previous week (242.9 per 100,000). During week 49 Lower Respiratory Tract Infections increased to 107.26 per 100,000 and Upper Respiratory Tract Infections decreased to 151.11 per 100,000 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 49 increased to 21.2% (Figure 13).
- During Week 49, 1,355 specimens received multiplex respiratory panel testing from patients attending hospitals. **60 tested positive for influenza (27 for influenza A(not subtyped), 23 for influenza A(H1N1), seven for influenza A(H3) and three for influenza B).** Overall influenza test-positivity increased to 4.4%, increased to 3.2% in under 18's and to 5% in over 18's. In addition, there were: 234 rhinovirus, 157 RSV, 118 SARS-CoV2, 58 hMPV, 47 adenovirus, 30 mycoplasma,18 enterovirus, 15 parainfluenza and seven seasonal coronaviruses positive samples (Figure 5). Additionally, 546 samples from patients were tested for influenza, RSV and SARS-CoV-2 only. Of the 546 samples there were 74 positives for SARS-CoV-2, 71 for RSV, **34** influenza A, and **two** influenza B (Figure 7). Furthermore, during week 49, 64 respiratory specimens were tested from patients in intensive care units (ICU) of which one was positive for influenza A(H1N1(pdm09), and one was positive for influenza A(not subtyped) (Figure 8).
- There were 197 surveillance samples from patients with ILI symptoms collected by **sentinel GPs and community pharmacies** during Week 49. Of the 197 samples, 42 tested positive for rhinovirus, 21 RSV, 12 mycoplasma, 12 sars-CoV2, eight hMPV, five adenovirus, five seasonal coronaviruses, three parainfluenza, three enterovirus, two bocavirus, two influenza A(H3), one influenza A(not subtyped) and one influenza B (as at 13/12/2023) (Figure 4).
- From all samples where influenza subtyping information was available during week 49 (specimens receiving multiplex respiratory panel testing, from patients attending hospitals, and surveillance samples collected by sentinel GPs and community pharmacies) 27 were influenza A(not subtyped), seven influenza A(H3), 23 influenza A(H1N1) and four were influenza B (Figure 6).
- **Confirmed RSV case incidence in children aged under 5 further decreased in the most recent week but remains at very high intensity levels (compared to historic levels before 2021).** In week 49 there were 58.3 confirmed cases per 100,000 in this age group (Figure 9).
- The 7-day rolling sums of cases hospitalised within 28 days of an influenza or RSV positive test result in the community (or up to two days post-admission) were 29 and 71 respectively during Week 48 (Figures 10 & 11) and 60 for SARS-CoV-2 during week 48 (Figure 12).
- During week 49, seven **ARI outbreaks** were reported to the Public Health Wales Health Protection team. All seven outbreaks were reported as COVID-19 and were in residential homes.
- According to **EuroMoMo** analysis, all-cause deaths in Wales were not in excess during week 49.
- As at 21/11/2023, uptake of influenza vaccination was 68.2% in adults aged 65 years and older, 33.8% in those aged 6 months to 64 years at clinical risk, 36.6% in two- and three-year-old children, 60.6% in children aged four to 10 years and 46.6% in children aged 11 to 15 years (Table 3).

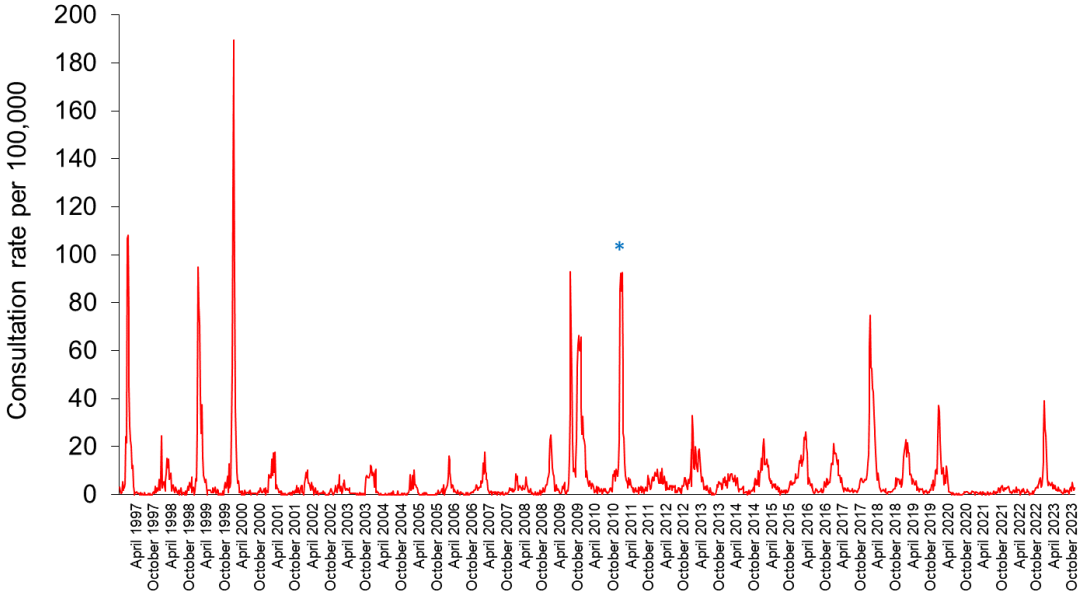
Respiratory infection activity in Wales

Figure 1. Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (as of 10/12/2023)



* 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 49 1996 – Week 49 2023)



* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for ILI in Welsh sentinel practices, Week 44 – Week 49 2023 (as of 10/12/2023)

Age group	44	45	46	47	48	49
< 1	0.0	0.0	0.0	0.0	0.0	0.0
1 - 4	6.7	0.0	0.0	0.0	0.0	0.0
5 - 14	2.2	2.5	0.0	5.2	0.0	4.4
15 - 24	2.1	4.9	4.3	0.0	0.0	4.3
25 - 34	3.8	4.5	1.9	6.7	9.6	15.3
35 - 44	5.5	10.8	9.2	10.8	7.4	7.4
45 - 64	5.5	3.1	4.5	2.1	3.6	10.9
65 - 74	2.2	0.0	0.0	5.0	2.2	4.3
75+	0.0	2.4	2.2	2.5	12.9	2.2
Total	**3.6**	**3.8**	**3.3**	**4.2**	**4.8**	**7.4**

Table 2. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, Week 44 – Week 49 2023 (as of 10/12/2023)

Age group	44	45	46	47	48	49
< 1	1733.3	2189.8	1423.8	1763.3	1457.0	1655.6
1 - 4	1223.8	893.5	923.1	957.7	1098.3	815.3
5 - 14	247.8	240.7	287.9	365.5	380.7	429.4
15 - 24	172.6	159.5	187.7	140.5	188.0	173.0
25 - 34	166.0	168.1	166.2	158.2	166.2	214.0
35 - 44	145.1	148.6	167.1	153.4	167.1	203.9
45 - 64	149.1	161.0	160.9	139.1	166.3	173.6
65 - 74	178.8	155.1	178.9	145.9	174.6	204.8
75+	187.6	210.2	258.1	182.0	236.6	255.9
Total	**220.9**	**214.1**	**227.8**	**213.6**	**242.9**	**256.0**

Figure 3. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, Week 49 – Week 49 2023

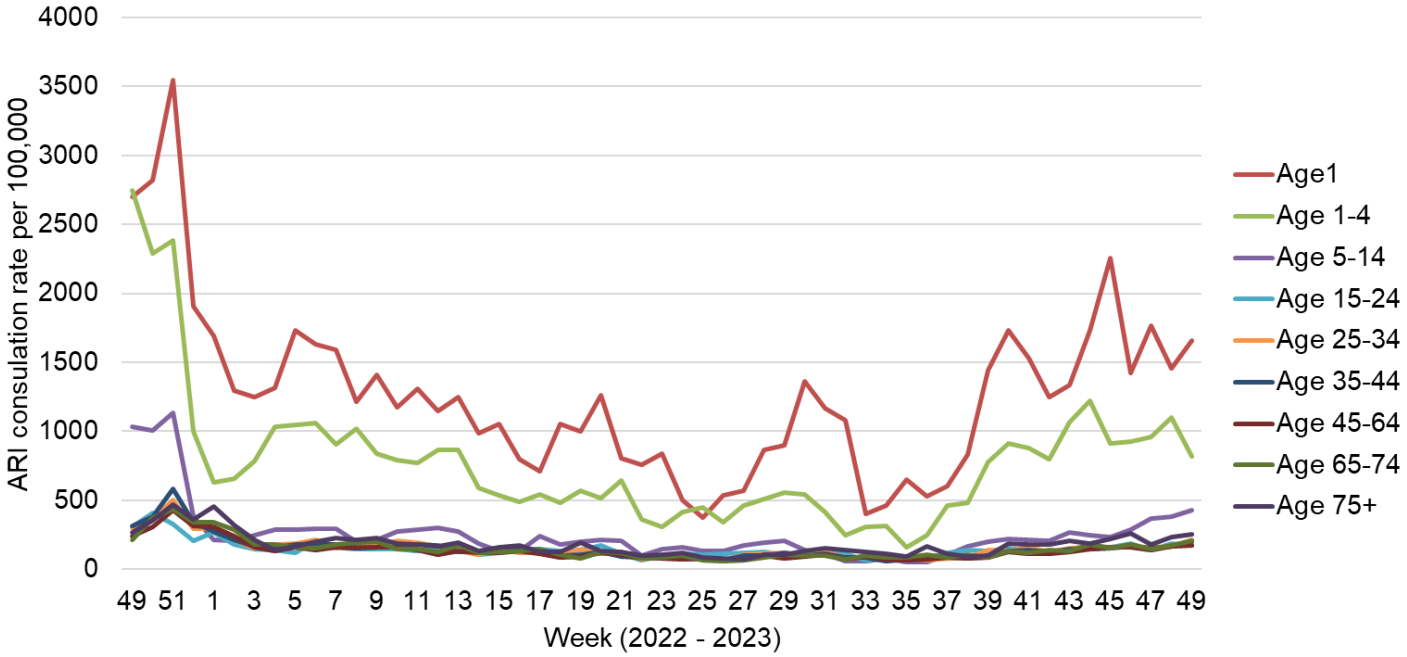
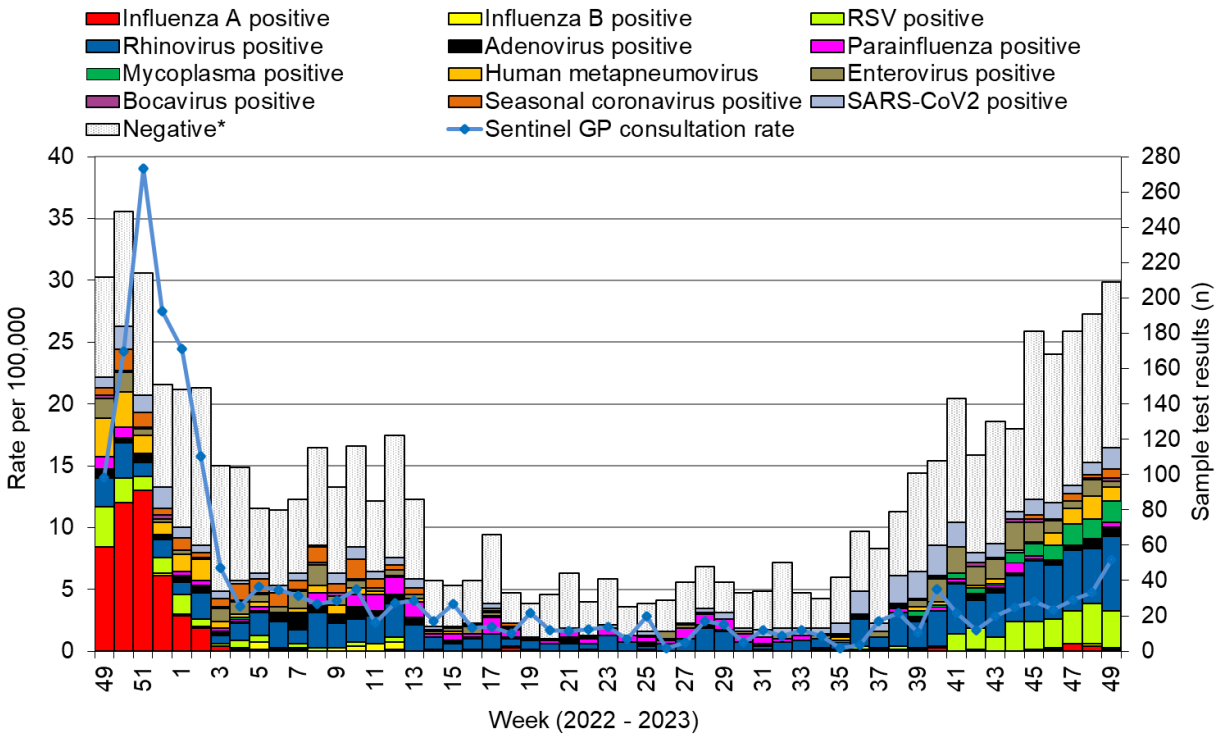
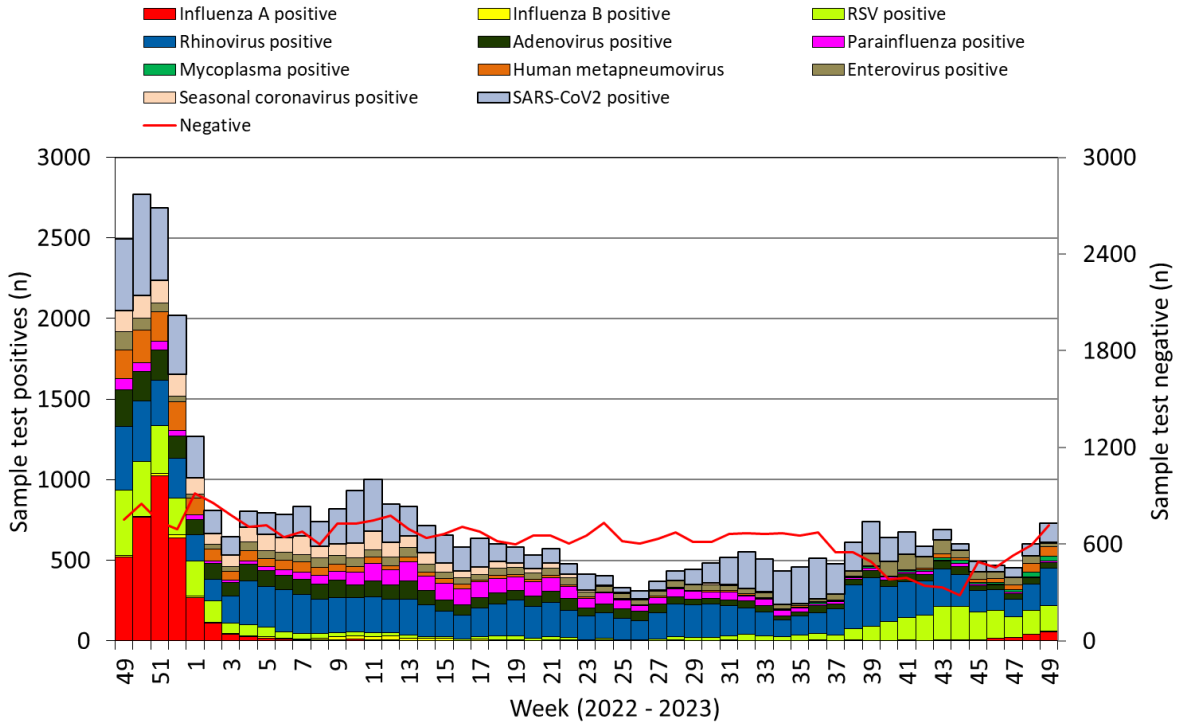


Figure 4. Specimens submitted for virological testing by sentinel GPs and community pharmacies as of 11/12/2023, by week of sample collection, Week 49 2022 to Week 49 2023



* 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. **Results for the latest week will underestimate activity as not all samples will have been received, tested and authorised at time of writing this report.**

Figure 5. Specimens submitted for virological testing for hospital patients and non-sentinel GPs as of 11/12/2023 by week of sample collection, Week 49 2022 to Week 49 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. Flu subtypes based on specimens submitted for virological testing by sentinel GPs and community pharmacies, hospital patients, and non-sentinel GPs, as of 11/12/2023 by week of sample collection, Week 49 2022 to Week 49 2023.

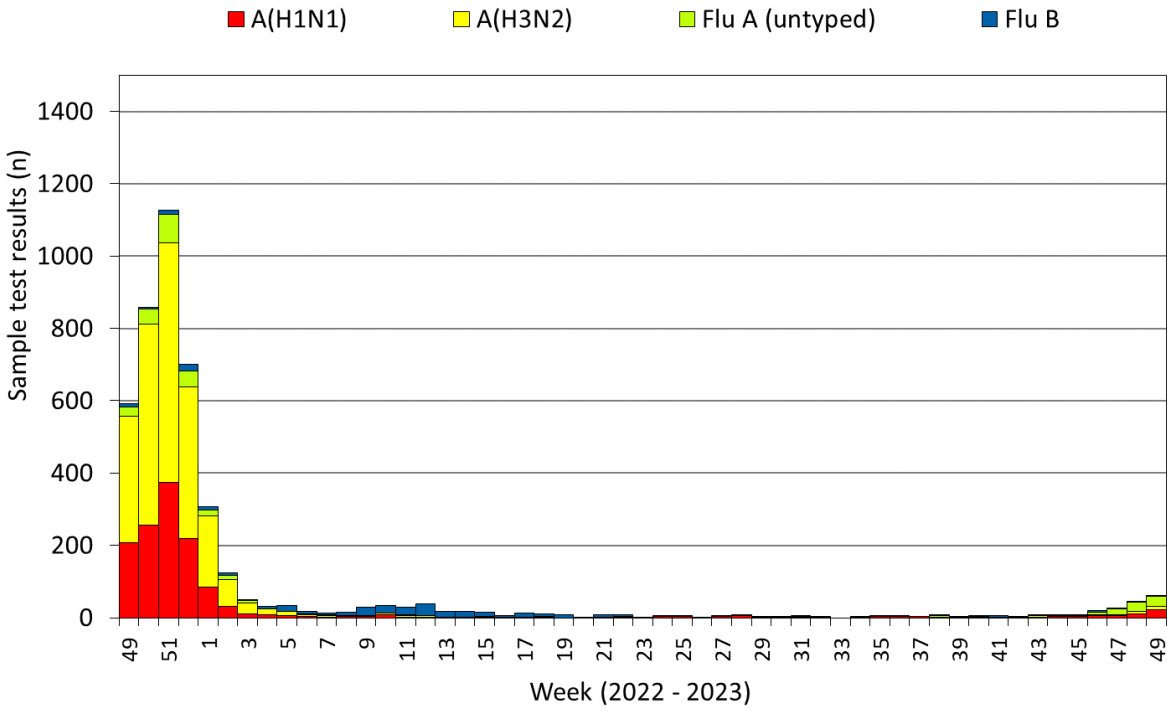


Figure 7. Specimens from hospital patients submitted for RSV, Influenza and SARS-CoV2 testing only, as of 11/12/2023 by week of sample collection, Week 49 2022 to Week 49 2023.

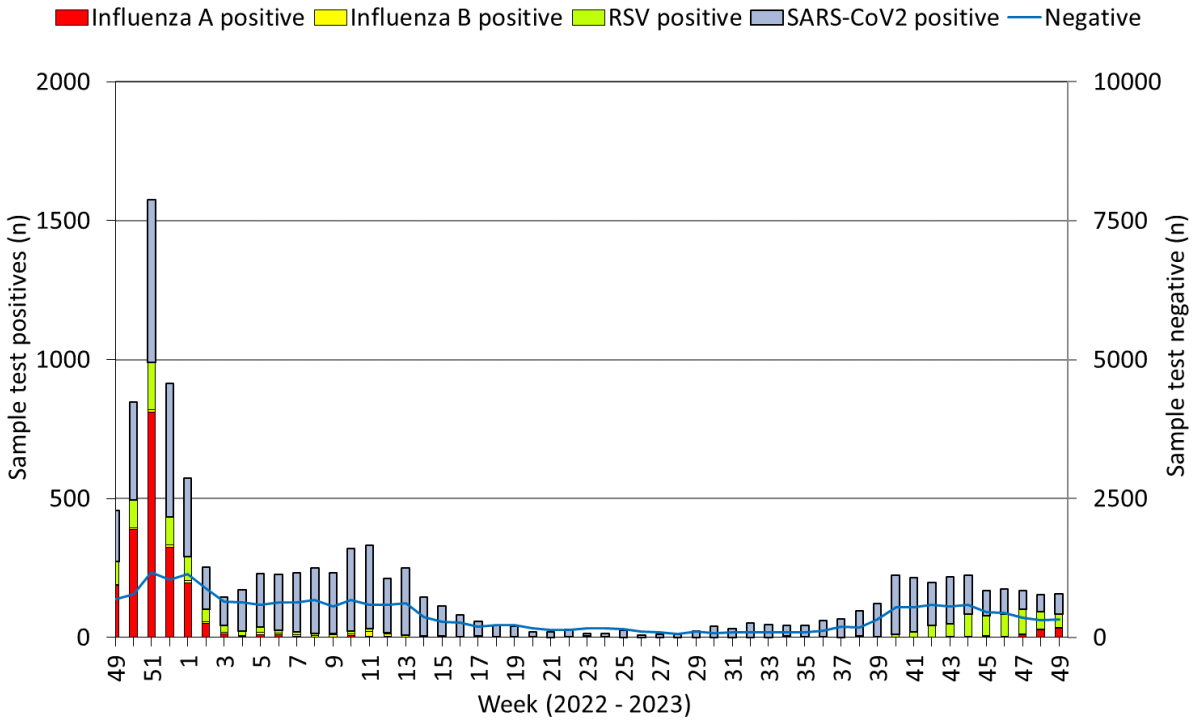
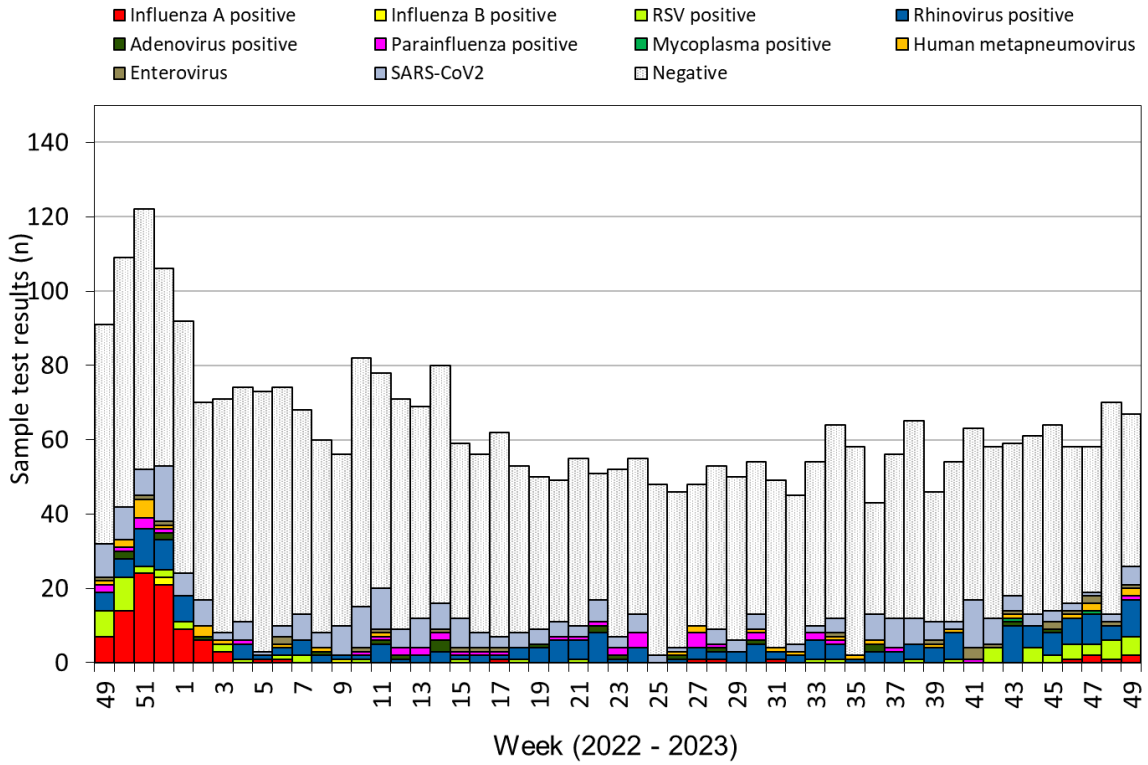
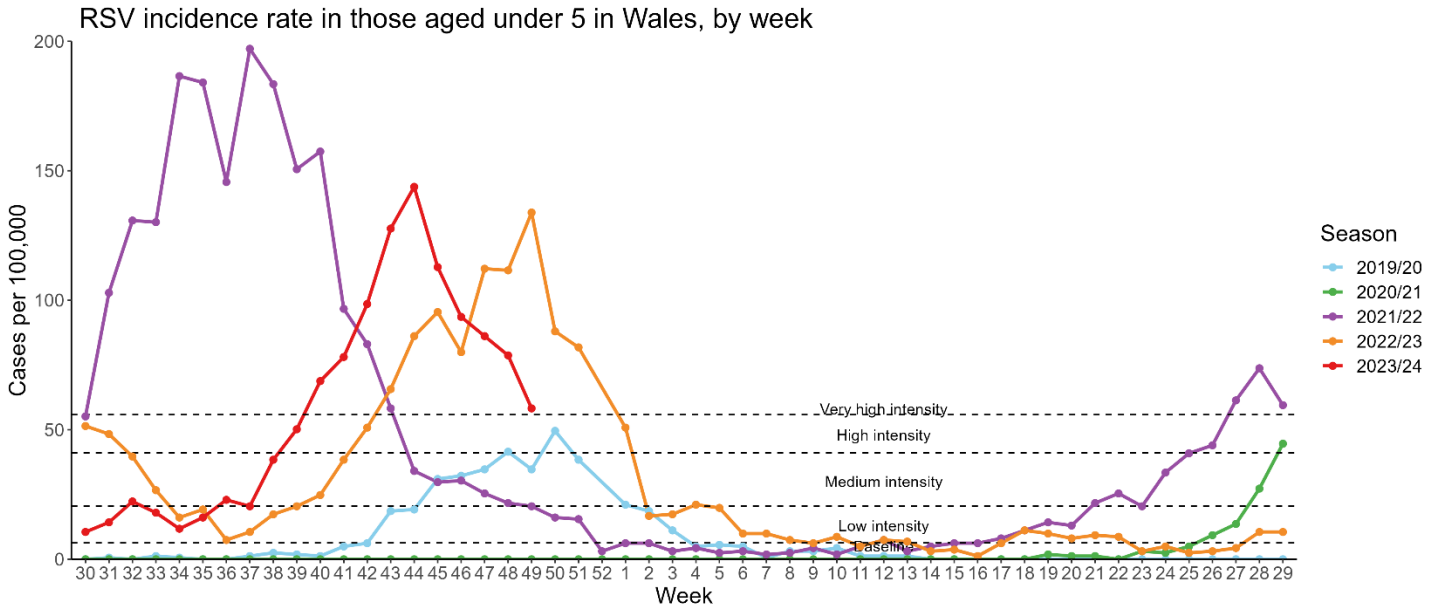


Figure 8. Specimens submitted for virological testing for ICU patients, by week of sample collection, Week 49 2022 to Week 49 2023.



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 9. RSV incidence rate per 100,000 population aged under five years, week 30 2019 to Week 49 2023.



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

ARI – Hospital admissions

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 11/12/2023.

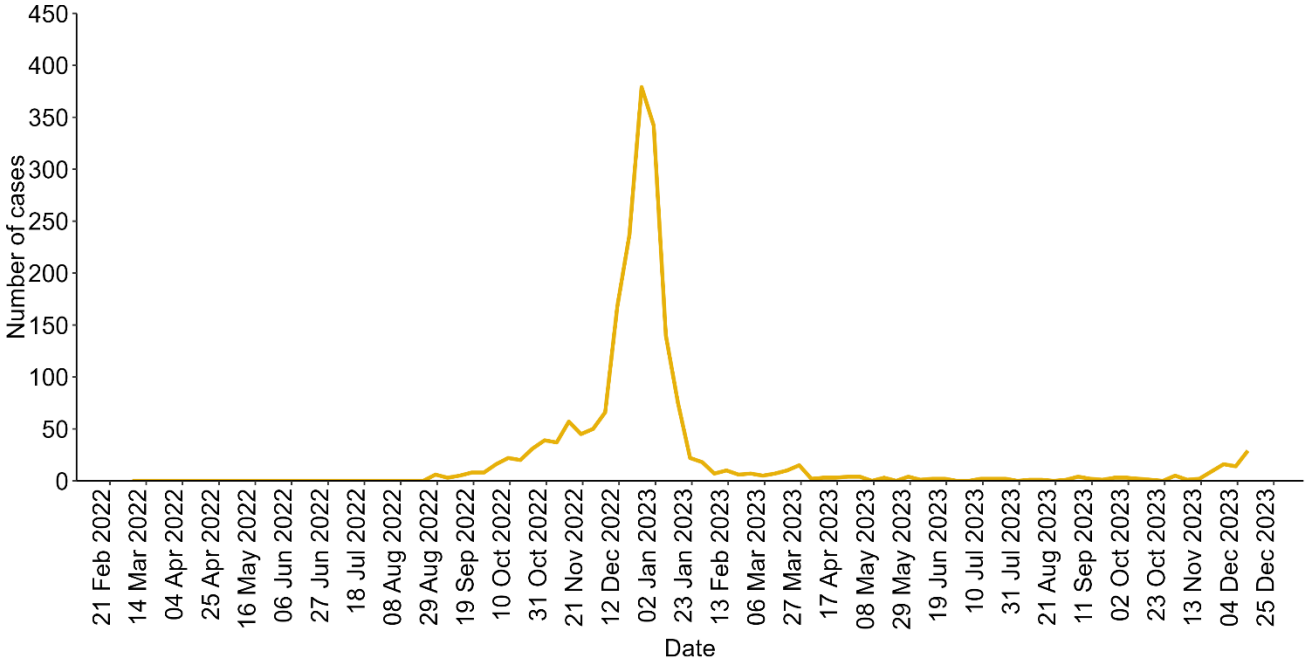


Figure 11. Seven day rolling sum of cases hospitalised in Wales within 28 days of an RSV positive test result in the community (or up to 2 days post-admission), as of 11/12/2023.

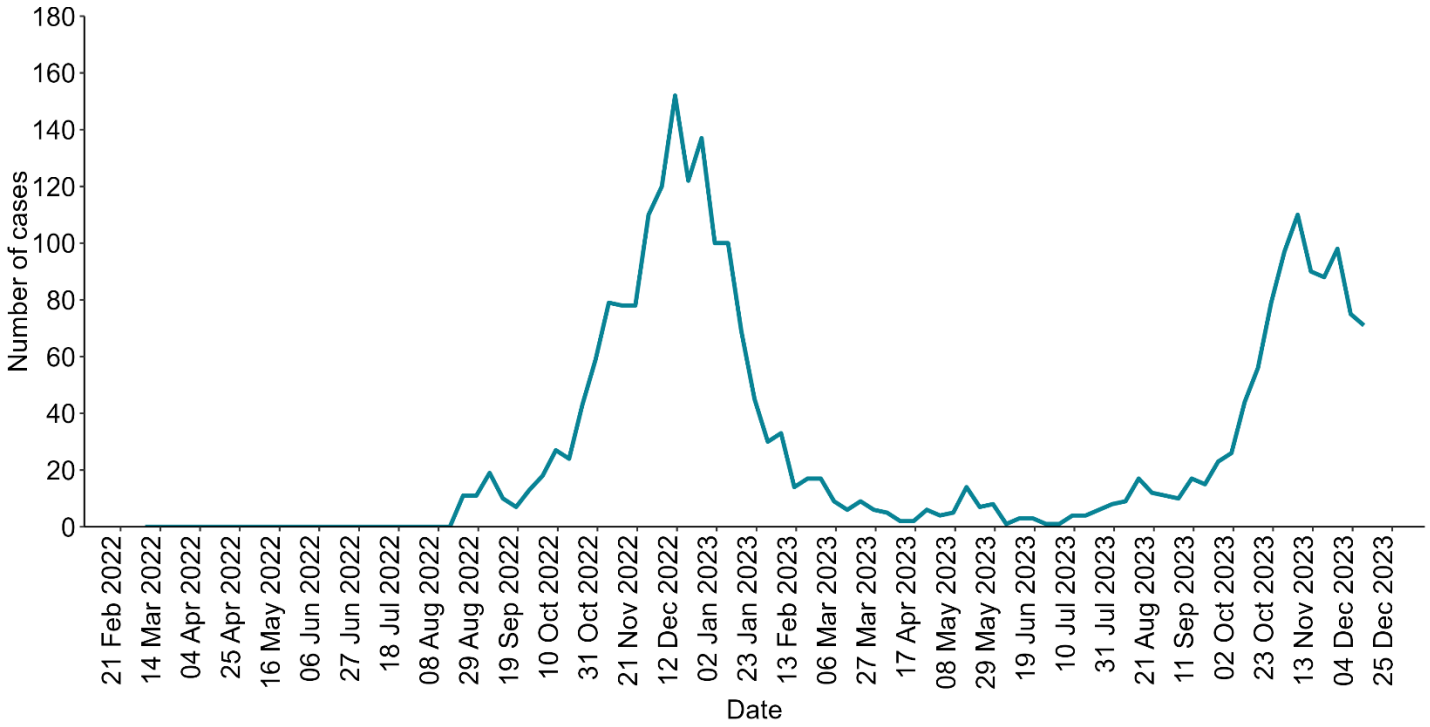
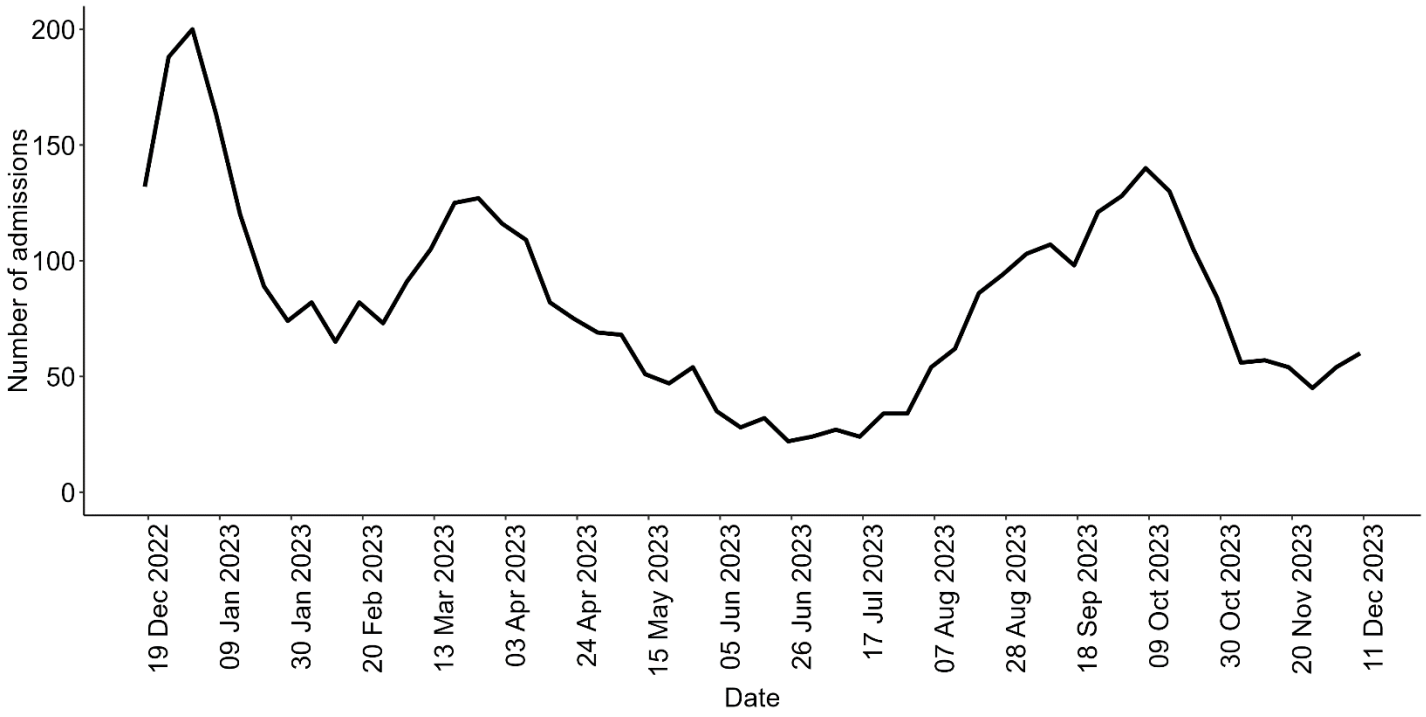
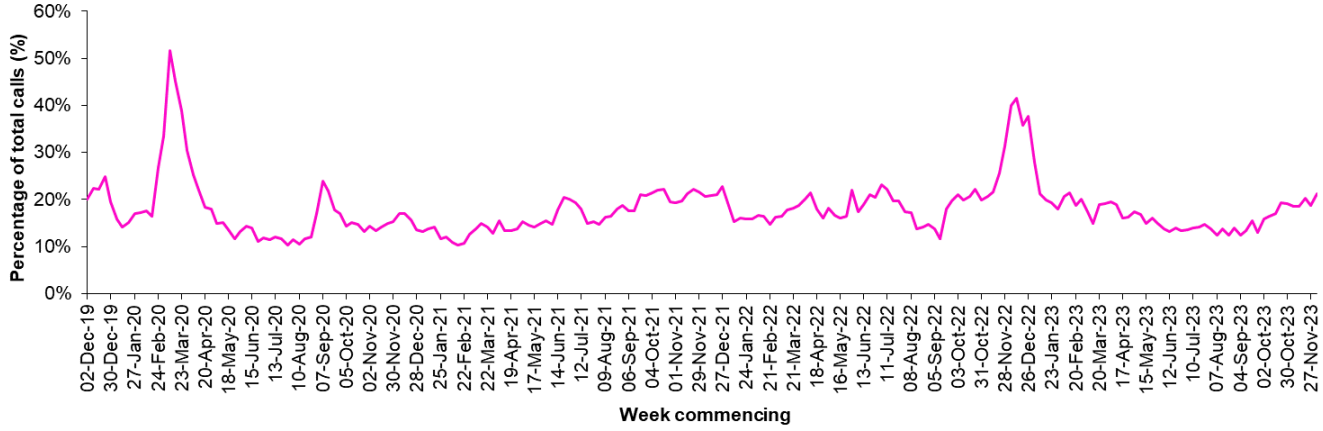


Figure 12. Seven day rolling sum of cases hospitalised in Wales within 28 days of an Covid-19 positive test result in the community (or up to 2 days post-admission), as of 11/12/2023.



Calls to NHS Direct Wales

Figure 13. Influenza related calls to NHS Direct Wales[1] (as a percentage of total calls) from Week 49 2019 - Week 49 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.

Influenza Vaccine Uptake in Wales

Table 3. Uptake of influenza immunisations in GP Practice patients in Wales 2023/24 (as of 05/12/2023).

Influenza immunisation uptake in the 2022/23 season	
People aged 65y and older	68.2%
People younger than 65y in a clinical risk group	33.8%
Children aged two & three years	36.6%
Children aged between four & ten years	60.6%
Children aged between 11 & 15 years	46.6%
Total NHS staff	25.8%
NHS staff with direct patient contact	25.0%

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 48, GP ILI consultations increased to 4.6 per 100,000, in England, and 4.3 per 100,000 in Scotland.
- During Week 48, 124 samples testing positive for influenza were reported in England (88 influenza A(not subtyped), 19 influenza A(H3N2), nine influenza A(H1N1(pdm09) and eight were influenza B). Overall influenza positivity increased slightly to 2.3%.
- In England, RSV hospitalisations in the under 5-year-olds increased to 37.9 per 100,000 in week 48. In Scotland, RSV hospitalisations in the under 1-year olds was 233.0 per 100,000. UK summary data are available from the UKHSA Influenza and COVID-19 Surveillance Report and Viral respiratory diseases (including influenza and COVID-19) in Scotland.

- The WHO and the European Centre for Disease Prevention and Control (ECDC) reported that influenza positivity is still bellow seasonal epidemic activity threshold which is set at 10% during week 48. Of 40 countries and areas reporting on influenza intensity, six reported medium intensity, 12 reported low intensity and the remainder reported baseline intensity. Of 37 countries and areas reporting on geographic spread of influenza viruses within a country or area, six reported widespread, five reported regional, 15 reported sporadic, three reported local and the remainder reported no activity. As of week 48, there were 123 confirmed influenza virus infection detections reported from sentinel primary care. 95% were type A viruses (36% influenza A(H1N1)pdm09 and 64% influenza A(H3)).
  Source: European Respiratory Virus Surveillance Summary (ERVISS): https://erviss.org/

- The WHO reported on 11/12/2023, based on data up to 26/11/2023 that globally, influenza detections increased due to increases in parts of the Northern Hemisphere, including parts of Europe and Central Asia, North America and Eastern and Western Asia.
- In the countries of North America, influenza detections increased, and activity was above the seasonal baselines expected for this time of the year. Influenza A(H1N1(pdm09) viruses were predominant.
- In South Africa, low numbers of influenza B detections were reported but remained below the seasonal threshold.
- In Europe and Central Asia, in the most recent week, influenza activity remained low overall but has been increasing over the last few weeks. Influenza A viruses predominated in primary care sentinel surveillance.
- In East Asia, influenza activity continued to increase mainly due to activity in China and the Republic of Korea, with influenza A(H3N2) and A(H1N1)pdm09 viruses more frequently detected, respectively.
- In Western Asia, influenza activity continued to increase in some countries of the Arab Peninsula and remained low in other reporting countries.
- In the Central American and Caribbean countries, influenza activity remained moderate in the Caribbean with detections of influenza A(H1N1(pdm09) predominant and remained low but increased in Central America with detection of primarily influenza B predominant.
- In the temperate zones of the northern hemisphere, indicators of influenza activity increased and was above the seasonal baseline for this time of year.
- In tropical Africa, influenza detections decreased in Western Africa but increased in Eastern and Middle Africa. Influenza A(H3N2) viruses were predominant but all seasonal influenza subtypes were reported.
- In Southern Asia, influenza activity driven predominantly by influenza A(H1N1)pdm09 decreased overall and mainly due to decreases in Iran (Islamic Republic of) and India.
- In South-East Asia, influenza activity driven predominantly by all seasonal subtypes decreased overall however influenza detections of all seasonal subtypes increased in Cambodia.
- In the temperate zones of the southern hemisphere, indicators of influenza activity were reported at low levels or below seasonal threshold in most reporting countries.

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 12/12/2023), during the period from 13/11/2023 – 26/11/2023 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 301,639 specimens during that period, of which 36,530 were positive for influenza viruses, 32,078 (87.8%) of those positive for influenza were typed as influenza A (of the subtyped influenza A viruses, 4,861 (18.6%) were influenza A(H1N1)pdm09 and 21,327 (81.4%) were influenza A(H3N2). Of the 36,530 samples testing positive for influenza viruses, 4,861 tested positive for Influenza B (12.2%). **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 influenza activity levels continued to increase across most parts of the country during week 48 (ending 02/12/2023). Nationally, 6,415 (6.8%) out of 93,944 specimens have tested positive for influenza in week 48 in clinical laboratories nationwide, of these positive samples, 5,152 (80.3%) were influenza A and 1,263 (19.7%) were influenza B. Further characterisation has been carried out on 2,828 specimens by public health laboratories, and 547 samples tested positive for influenza; 218 influenza A(H1N1)pdm09, 76 influenza A(H3N2), 143 influenza A(not subtyped) and 110 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 48, influenza activity continued to increase but remain within expected levels. During week 48, 3,077 influenza detections were reported: 3,009 influenza A, and 98 influenza B. The percentage of ILI visits was 1.7%. **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 that the RSV positivity rate decreased in the week beginning 02/12/2023.
  Source: CDC RSV national trends: https://www.cdc.gov/surveillance/nrevss/rsv/natl-trend.html

COVID-19 – UK and international summary

- As of 06/12/2023, there were 4.0 new positive PCR episodes per 100,000 population in Wales, for the most recent 7-day reporting period. There were four suspected COVID-19 deaths with a date of death in the most recent 7-day reporting period, reported to Public Health Wales. There were 20 COVID-19 death registrations recorded in ONS data for the latest data period reported. 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 10/07/2023 WHO were notified by the United Arab Emirates (UAE) of a case of MERS-CoV. In total, 2,605 laboratory-confirmed cases of locally acquired Middle East Respiratory Syndrome coronavirus (MERS-CoV) worldwide, including 937 deaths. WHO Global Alert and Response website: https://www.who.int/emergencies/disease-outbreak-news
- 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-2023-to-2024-season

Scotland seasonal respiratory surveillance:
https://www.publichealthscotland.scot/publications

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