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

Wednesday 3rd May 2023 (covering Week 17 2023)

GIG CYMRU NHS WALES | Iechyd Cyhoeddus Cymru Public Health Wales

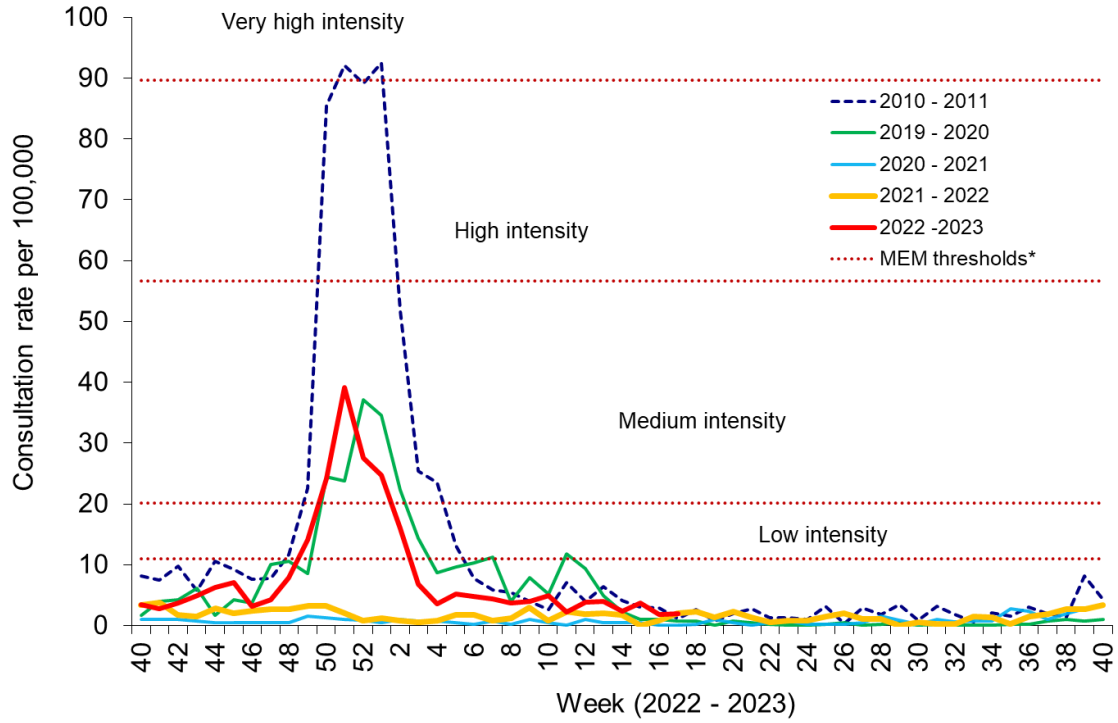
Current level of influenza activity: Baseline
Influenza activity trend: Stable
Confirmed influenza cases since 2022 Week 40: **7772** *(3050 influenza A(H3N2), 1624 influenza A(H1N1)pdm09, 2655 influenza A(not subtyped) and 443 influenza B)*

During Week 17 (ending 30/04/2023) there were 14 cases of influenza, with a further two cases from previous weeks. Overall influenza activity has decreased since February, but small numbers of influenza B and influenza A cases continue to be detected. COVID-19 cases continue to be detected in 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 baseline levels. SARS-CoV-2, rhinovirus, parainfluenza, 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 17, was 2.0 consultations per 100,000 practice population (Table 1). This is an increase compared to the previous Week (1.8 consultations per 100,000. Figure 1).
- The **Sentinel GP consultation rate for Acute Respiratory Infections (ARI)** was 152.9 per 100,000 practice population during Week 17 (Table 2 and Figure 3). This is an increase compared to the previous week (151.6 per 100,000). Weekly consultations for Lower Respiratory Tract Infections (at 51.1 per 100,000) decreased and Upper Respiratory Tract Infections (104.1 per 100,000) increased compared to the previous week.
- The percentage of calls to **NHS Direct Wales** which were 'influenza-related' (cold/flu, cough, fever, headache, and sore throat) during Week 17 decreased to 16.2% (Figure 12).
- During Week 17, 1,240 specimens received multiplex respiratory panel testing, from patients attending hospitals. These results do not include samples tested solely for SARS-CoV-2. There were **11 samples positive for influenza**, of which ten were influenza B and one was influenza A (not typed). Overall influenza positivity increased to 0.9% across all age groups; to 0.6% in those aged 18 years and over; and to 1.6% in those aged under 18 years. In addition, there were 202 rhinovirus, 176 SARS-CoV2, 99 parainfluenza, 63 adenovirus, 49 seasonal coronaviruses, 14 enterovirus, 10 HMPV, 13 RSV, and one mycoplasma positive samples (Figure 5). Additionally, 274 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 274 samples, 54 were positive for SARS-CoV-2, three for influenza B and one for RSV (Figure 7). Furthermore, during Week 17, 62 respiratory specimens were tested from patients in intensive care units (ICU) of which one was positive for influenza (Figure 8).
- There were 35 surveillance samples from patients with ILI symptoms collected by **sentinel GPs and community pharmacies** during Week 17. Of the 35 samples, five tested positive for rhinovirus, three for parainfluenza, three for SARS-CoV-2, two for enterovirus and one for bocavirus (as at 03/05/2023) (Figure 4).
- From all samples submitted for influenza subtyping during week 17 (specimens receiving multiplex respiratory panel testing, from patients attending hospitals, and surveillance samples collected by sentinel GPs and community pharmacies), 10 were influenza B and one was influenza A untyped (Figure 6).
- **In week 17 there were 6.2 confirmed cases per 100,000 in this age group.** This was an increase from the previous week, and activity is now at low levels. The baseline MEM threshold in Wales for RSV activity in children younger than five years is 6.3 confirmed cases per 100,000 (Figure 9).
- 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) increased to three during Week 17 (from two during the previous week). The 7-day rolling sum of cases hospitalised within 28 days of an RSV positive test result in the community (or up to two days post-admission) remained stable at three during week 17 (Figures 10 & 11).
- During week 17, nine **ARI outbreaks** were reported to the Public Health Wales Health Protection team. Eight outbreaks were reported as COVID-19 and one as influenza B. Nine **ARI outbreaks** were reported in residential care homes and one in community or other setting.
- According to **EuroMoMo** analysis, all-cause deaths in Wales were not in excess during week 16.

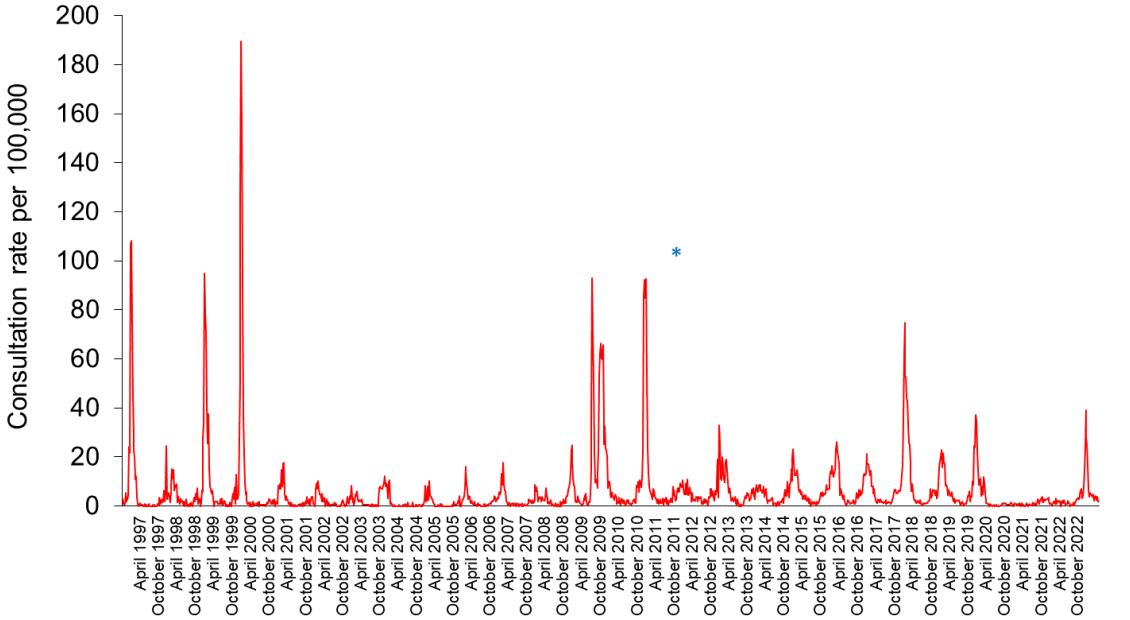
Respiratory infection activity in Wales

Figure 1. Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (as of 30/04/2023)



* 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 17 2023)



* Reporting changed to Audit+ surveillance system

Table 1. Age-specific consultations (per 100,000) for ILI in Welsh sentinel practices, Week 12 – Week 17 2023 (as of 30/04/2023)

Age group	12	13	14	15	16	17
< 1	0.0	0.0	0.0	0.0	0.0	0.0
1 - 4	0.0	0.0	6.5	0.0	0.0	0.0
5 - 14	4.7	8.6	0.0	0.0	0.0	0.0
15 - 24	2.2	8.4	4.2	2.1	0.0	2.2
25 - 34	4.0	5.5	1.9	3.7	2.0	0.0
35 - 44	7.9	3.6	3.6	7.3	4.0	3.8
45 - 64	3.8	1.8	2.7	7.1	2.0	3.7
65 - 74	0.0	0.0	0.0	0.0	2.4	2.2
75+	4.6	4.3	2.1	2.1	2.5	0.0
Total	**3.8**	**4.0**	**2.3**	**3.7**	**1.8**	**2.0**

Table 2. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, Week 12 – Week 17 2023 (as of 30/04/2023)

Age group	12	13	14	15	16	17
< 1	1100.4	1196.9	944.9	1007.9	775.2	665.1
1 - 4	834.0	838.8	572.2	520.2	473.7	522.8
5 - 14	293.9	267.3	183.2	131.5	132.0	230.6
15 - 24	152.6	140.3	100.5	115.1	142.9	141.8
25 - 34	160.0	127.4	99.7	149.6	115.9	115.4
35 - 44	169.2	125.3	132.6	121.7	143.0	115.6
45 - 64	105.4	131.8	115.9	118.5	127.3	112.6
65 - 74	122.6	168.1	117.7	126.1	126.8	144.7
75+	165.8	191.7	132.1	157.6	166.5	124.0
Total	**187.8**	**189.8**	**146.0**	**149.3**	**151.6**	**152.9**

Figure 3. Age-specific consultations (per 100,000) for ARI in Welsh sentinel practices, Week 17 2022 – Week 17 2023 (as of 30/04/2023).

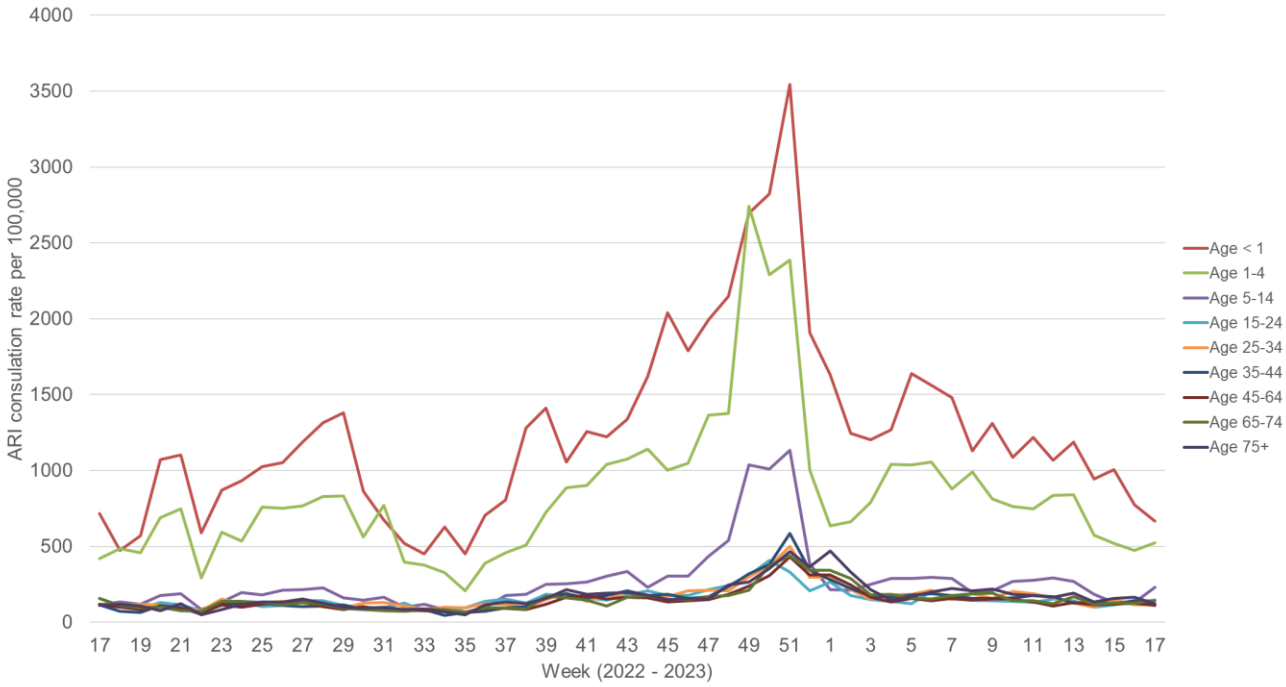
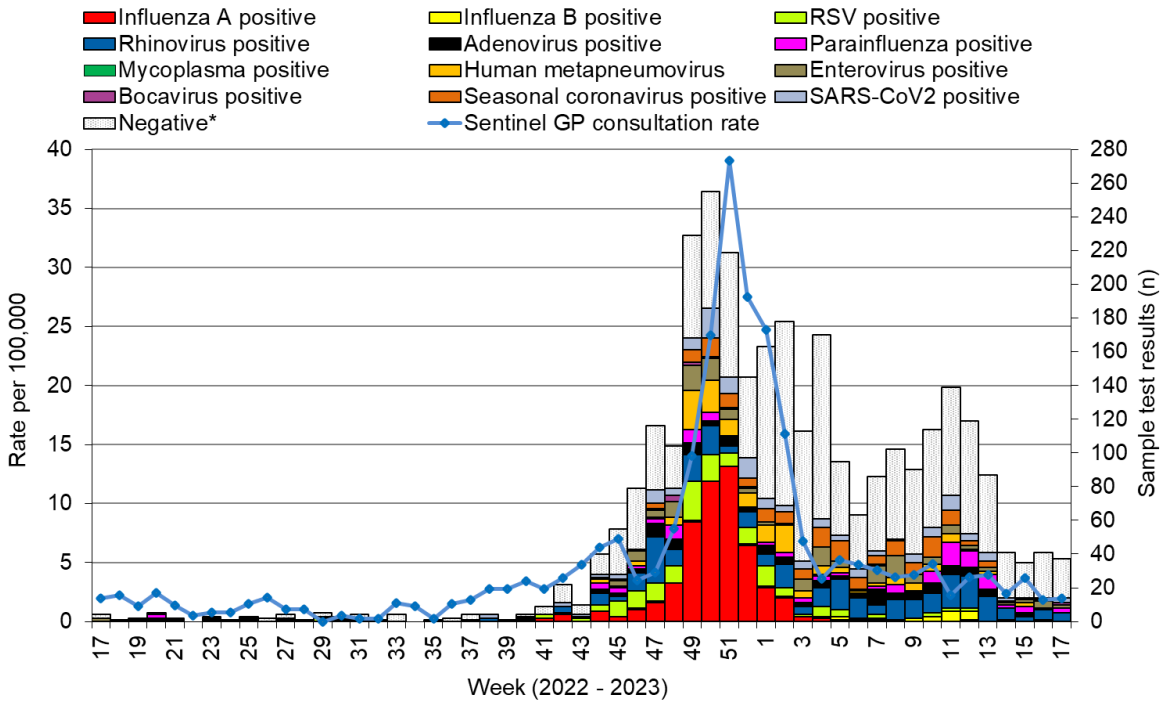
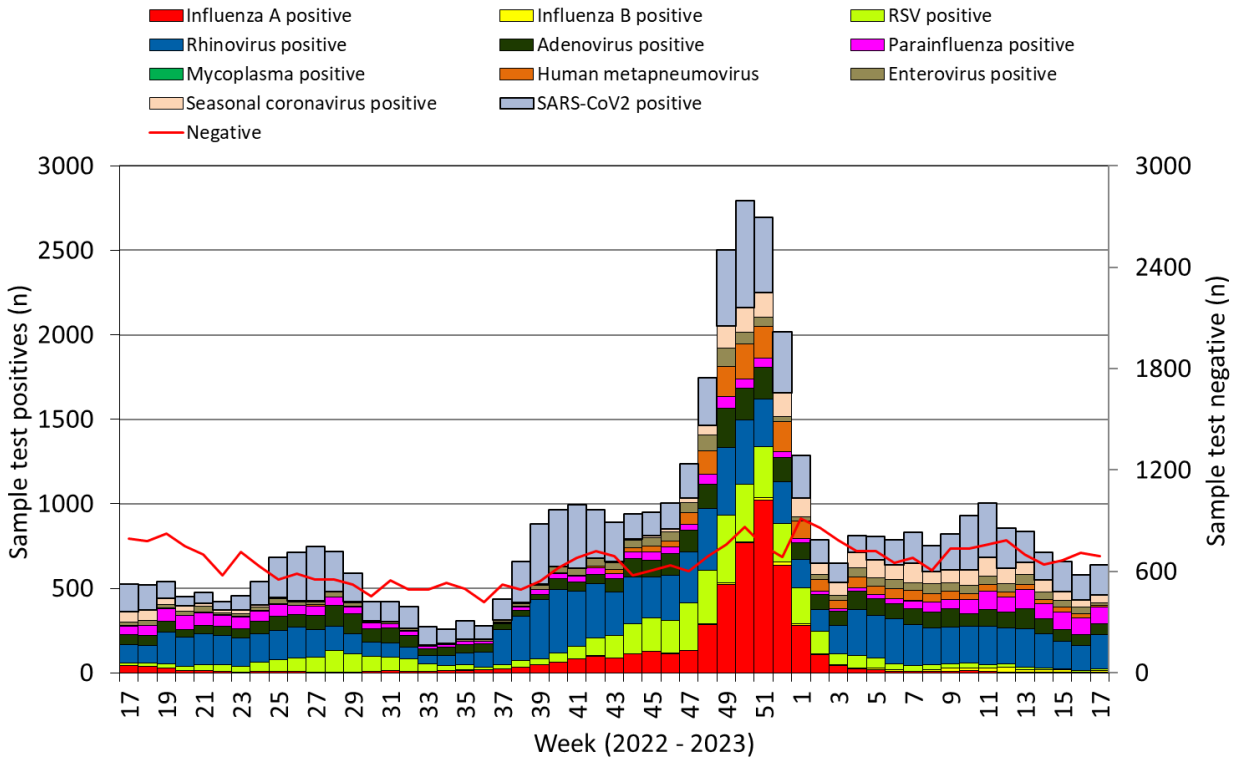


Figure 4. Specimens submitted for virological testing by sentinel GPs and community pharmacies as of 30/04/2023, by week of sample collection, Week 17 2022 to Week 17 2023.



* 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 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 30/04/2023 by week of sample collection, Week 17 2022 to Week 17 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 30/04/2023 by week of sample collection, Week 40 2022 to Week 17 2023.

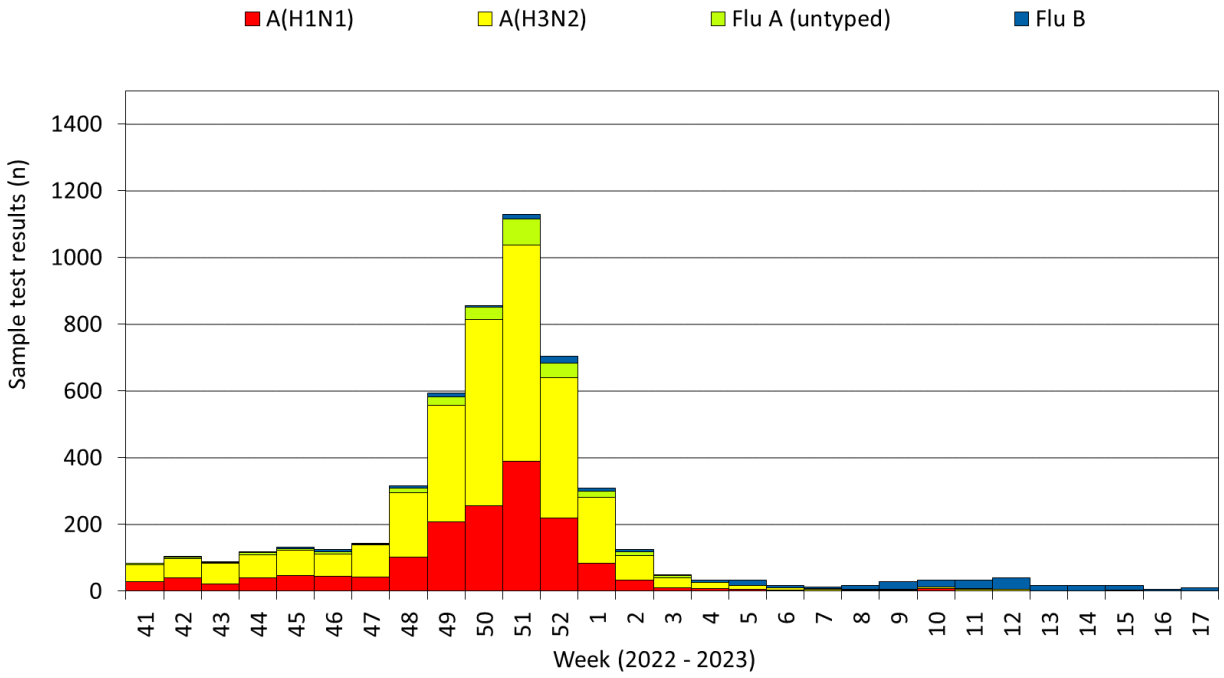


Figure 7. Specimens from hospital patients submitted for RSV, Influenza and SARS-CoV2 testing only, as of 30/04/2023 by week of sample collection, Week 17 2022 to Week 17 2023.

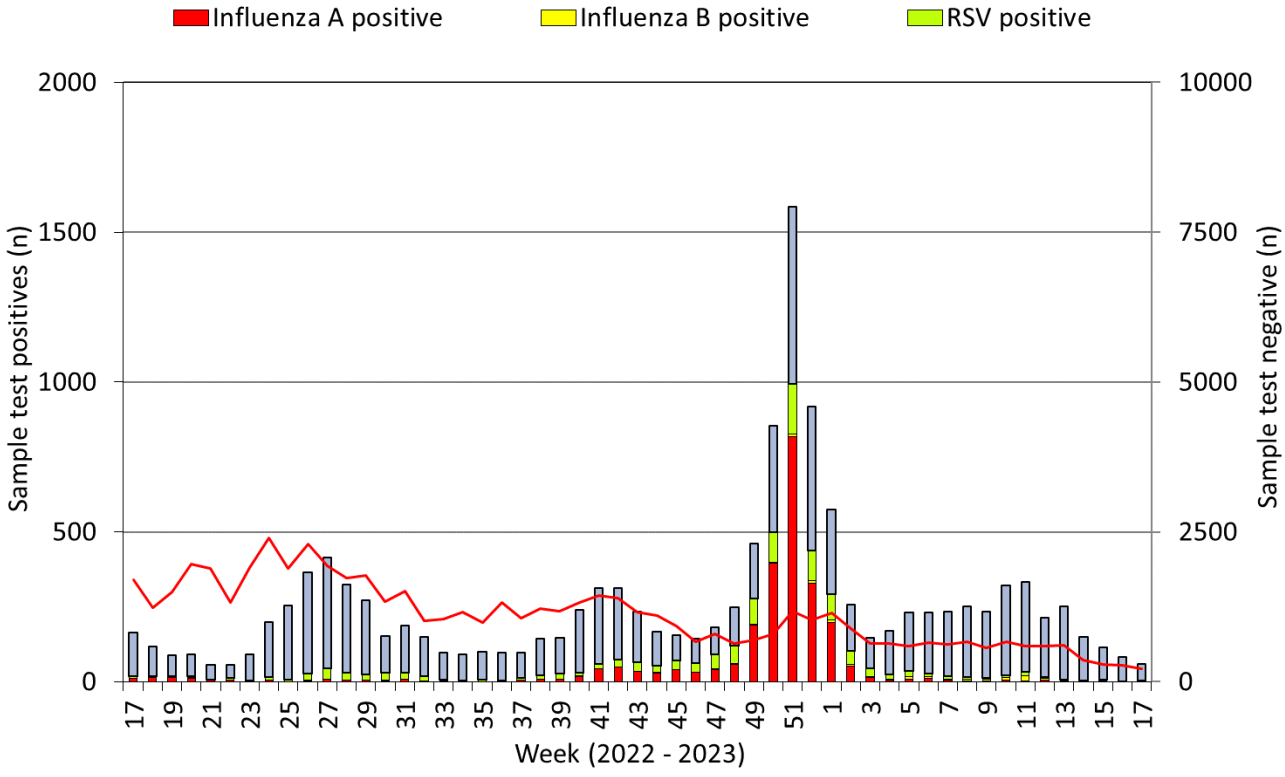
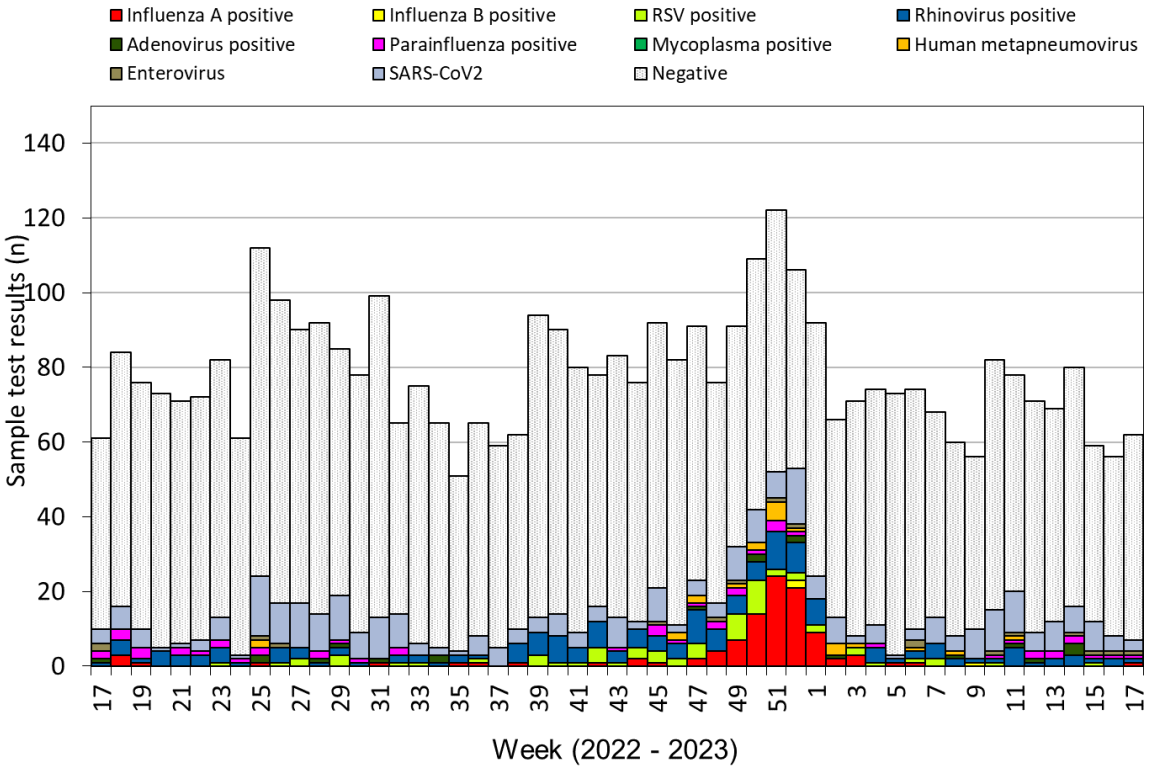
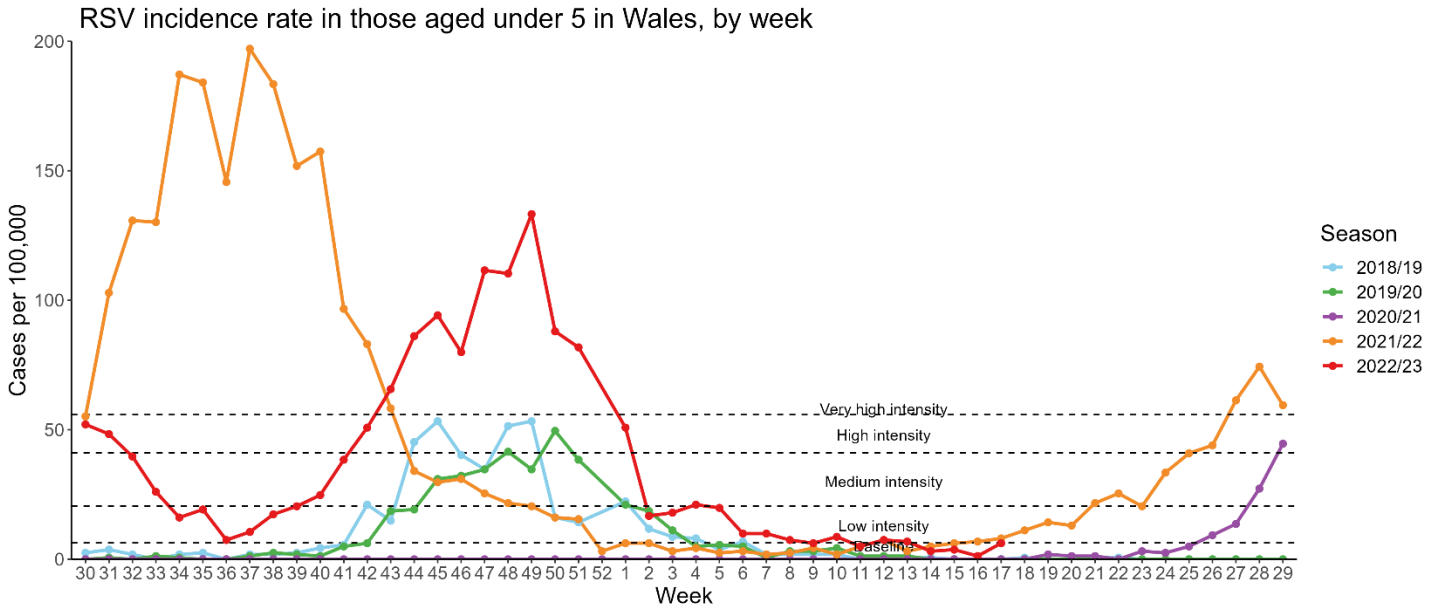


Figure 8. Specimens submitted for virological testing for ICU patients, by week of sample collection, Week 17 2022 to Week 17 2023.



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 2018 to Week 17 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 23/04/2023 – latest data available.

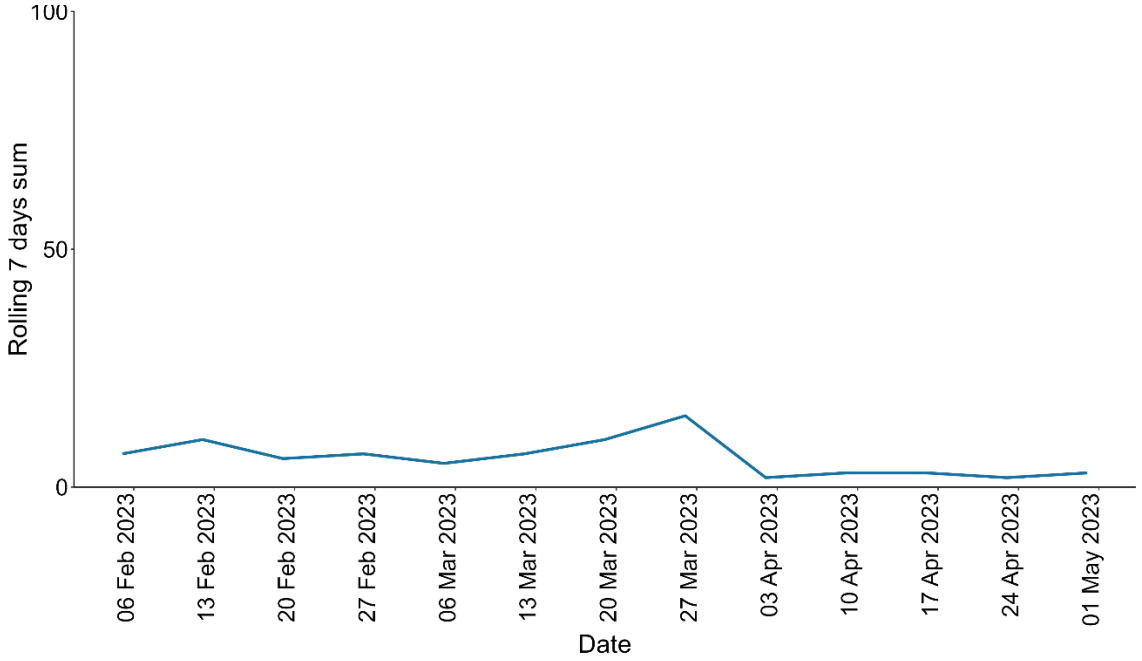
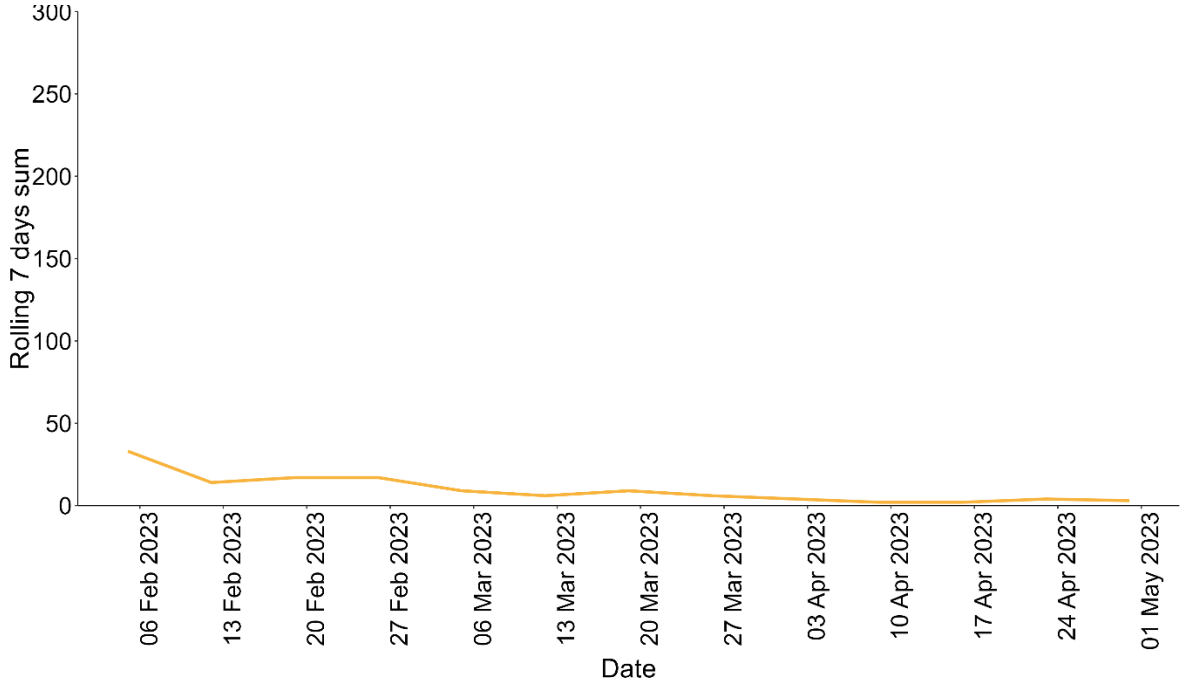
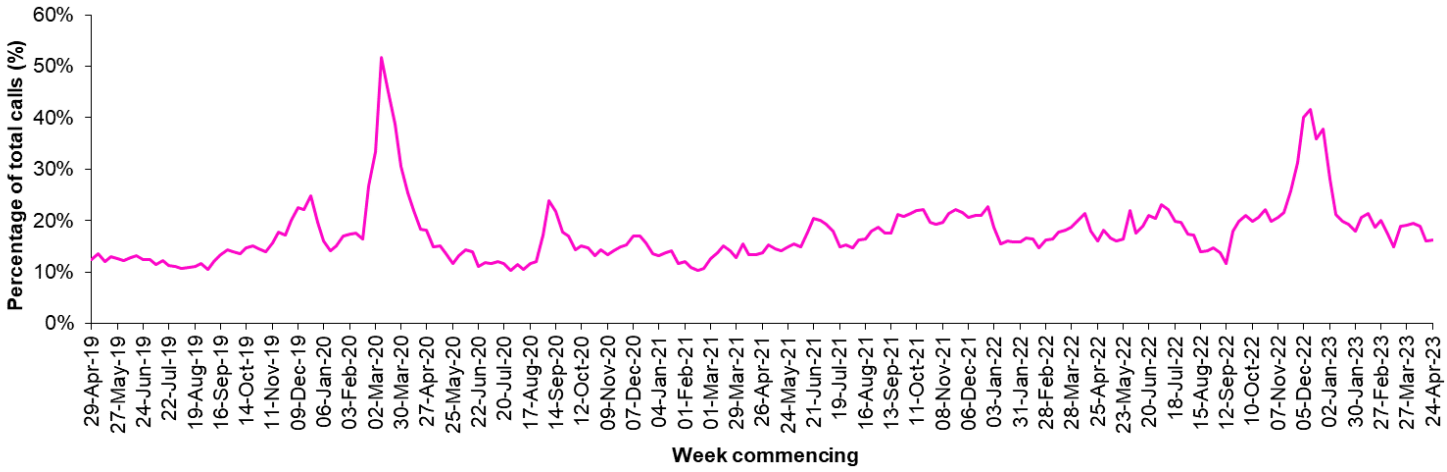


Figure 11. Seven day rolling sum of cases hospitalised in Wales within 28 days of an RSV positive test result in the community (or up to 2 days post-admission), as of 23/04/2023 – latest data available.



Calls to NHS Direct Wales

Figure 12. Influenza related calls to NHS Direct Wales[1] (as a percentage of total calls) from Week 17 2019 - Week 17 2023 (as of 30/04/2023).



[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 2022/23 (as of 25/04/2023).

Influenza immunisation uptake in the 2022/23 season	
People aged 65y and older	76.3%
People younger than 65y in a clinical risk group	44.2%
Children aged two & three years	44.0%
Children aged between four & ten years	63.9%
Children aged between 11 & 15 years	54.4%
Total NHS staff	46.2%
NHS staff with direct patient contact	46.7%

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 16, GP ILI consultations decreased in Northern Ireland to 0.7 per 100,000, andincreased in England to 1.8 per 100,000 and in Scotland to 3.5 per 100,000.
- During Week 16, 38 samples testing positive for influenza were reported in England (ten A(not subtyped), one influenza A(H3N2) and 27 influenza B). Overall influenza positivity remained low and stable at 0.9 % in Week 16. 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 16, 15 countries reported baseline activity, 18 countries reported low-intensity, three reported medium-intensity and one high-intensity. From the 36 countries reporting, five reported no activity, nine reported sporadic spread, six reported local spread, seven reported regional spread, and nine reported widespread activity (across the Region). During Week 16, 171 (9%) of samples from patients presenting to all sentinel primary care centres with ILI or ARI symptoms tested positive for influenza. This is a decrease from the previous week and the positivity is now below the threshold for epidemic activity (10%). Of sentinel specimens that tested positive for influenza for the season to date, 14% were influenza A (10% H3, and 90% A(H1N1)pdm09) and 86% were influenza B. **Source:** Flu News Europe: http://www.flunewseurope.org/

- The WHO reported on 17/04/2023, based on data up to 02/04/2023, that globally, influenza has decreased following a peak in late 2022, with influenza A predominating, with a slightly larger proportion of Influenza A(H3N2) viruses detected among the subtyped influenza A viruses. Since January, influenza B and A(H1N1)pdm09 detections increased, however they have started to decrease in the most recent weeks.
- Influenza A(H1N1)pdm09 predominates in the USA, while influenza B predominates in Canada, although influenza indicators are at levels typically observed at this time of year. In Europe, influenza B detections predominated after an initial influenza A wave. Most detections have now decreased or stable across most European counties apart from Norway and Lithuania where very slight increases were reported.
- In the temperate zones of the southern hemisphere, influenza activity remained low however activity increased in Chile of influenza A(H1N1)pdm09) with a cocirculation of both influenza A(H3N2) and Influenza B and positivity rose above the epidemic threshold. Australia reported a rise in influenza A and some detections but remains low overall. SARI decreased in New Zealand and returned to below baseline levels, however influenza SARI rate and ILI increased above baseline. ILI activity also increased across the Pacific Islands. Influenza activity remained at interseasonal levels in South Africa and RSV detection rate in children under 5 years rose to very high levels.
- In tropical Central and South America, influenza detections remained low across the subregion with all seasonal subtypes detected. Of the influenza detected, B/Victoria virus was predominant. Increasing trends were reported in Brazil and Peru however activity remained low.
- In Western Africa, influenza A(H1N1)pdm09 detections predominated. Increasing levels of the A(H1N1)pdm09 were detected in Guinea and elevated levels were detected in Niger. Activity was lower elsewhere with Burkina Faso reporting decreasing detections. In Middle Africa, sporadic influenza B/Victoria activity was reported in Cameroon.
- In Southern Asia, influenza activity remained low with influenza A(H3N2) and B/Victoria lineage viruses predominating.
- In Northern Africa, influenza activity was at very low levels across reporting countries.
- In Central Asia, sporadic influenza detections were reported in Kazakhstan (influenza A(H1N1)pdm09) and Tajikistan.
  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 18/04/2023), during the period from 20/03/2023 – 02/04/2023, National Influenza Centres and other national influenza laboratories from 120 countries, areas or territories reported influenza surveillance data. The WHO Global Influenza Surveillance and Response System laboratories tested more than 381,110 specimens during that period, of which 40,010 were positive for influenza viruses, 30,057 (75.12%) of those positive for influenza were typed as influenza A (of the subtyped influenza A viruses, 18,779 (70.42%) were influenza A(H1N1)pdm09 and 7,890 (29.58%) were influenza A(H3N2). Of the 46,911 samples tested positive for influenza viruses, 9,953 tested positive for Influenza B (24.88%) and of the characterised B viruses, 1163 (100%) was B-Victoria lineage. **Source:** Flu Net: https://www.who.int/tools/flunet

Australia and New Zealand update

- In New Zealand, during the week ending 23/04/2023, community influenza-like illness activity (ILI) GP consultations were at 8.06 per 100,000. The SARI hospitalisation rate was above the seasonal threshold and higher than the rate seen at a similar time interval last year. The influenza-positive SARI hospitalisation rate was at low-activity levels which implies an early start of the seasonal influenza activity.
  Source: Institute of Environmental Science & Research, New Zealand

- In Australia, according to the latest available update (fortnight ending 16/04/2023), influenza-like illness (ILI) activity in the community this year has gradually increased since March 2023. To date, the majority of nationally reported laboratory-confirmed influenza cases were influenza A (77%).
  Source: Australian Influenza Surveillance Report and Activity Updates.

Respiratory syncytial virus (RSV) in New Zealand

- In New Zealand the RSV positivity rate was 16.3% in the week ending 23/4/2023, which is a decrease from the previous week (23.6%).
  Source: Institute of Environmental Science & Research, New Zealand

COVID-19 – UK and international summary

- As of 26/04/2023, there were eight new positive PCR episodes per 100,000 population in Wales, for the most recent 7-day reporting period. There were 14 suspected COVID-19 deaths with a date of death in the most recent 7-day reporting period, reported to Public Health Wales. There were 23 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. No further cases or deaths were reported during week 9. WHO Global Alert and Response website: https://www.who.int/emergencies/disease-outbreak-news
- As of 11/04/2023 no MERS-COV cases with the date of onset in 2023 have been reported by health authorities worldwide or by the WHO. No new MERS-COV death shave been reported since the 28th February 2023. 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