Llywodraeth Cymru
Welsh Government

Science Evidence Advice

Weekly Surveillance Report

14 January 2025

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Science Evidence Advice (SEA)

Providing evidence and advice for Health and Social Services Group on behalf of the Chief Scientific Advisor for Health

Science Evidence Advice: Weekly Surveillance Report

A. Top Line Summary (as at week 1 2025, up to 5th January 2025)

- Overall, COVID-19 confirmed case admissions to hospital **increased** slightly in the most recent week.
- COVID-19 cases who are inpatients have **decreased** in the most recent week.
- RSV activity in children under 5 years has **decreased** in the most recent week.
- Influenza in-patient cases and admissions have **increased** in the latest week.
- Whooping Cough notifications have **increased** in the most recent week.
- Scarlet Fever notifications **decreased** in the most recent week.
- Norovirus confirmed cases have **increased** in the most recent reporting week.

B. Acute Respiratory Infections Situation Update

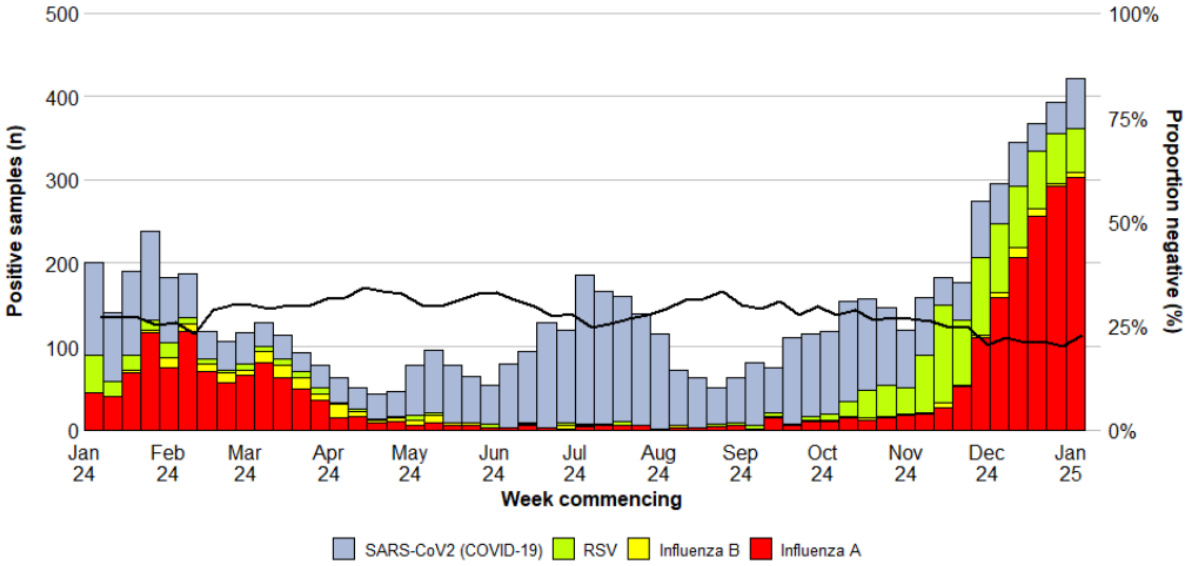
B1. COVID-19 Situation Update

COVID-19 case numbers have remained stable in recent weeks.

- At a national level, the weekly number of confirmed cases of community-acquired admissions to hospital have remained stable and the number of cases who were inpatients have decreased in week 1 2025 (to 5th January 2025).
- As at 5 January 2025 (week 1), the number of confirmed cases of community acquired COVID-19 admitted to hospital increased to **33** from **27** in the previous week and there were **176** in-patient cases of confirmed COVID-19, **1** of whom was in critical care compared to **200** and **4** in the previous week.
- The overall proportion of samples testing positive in hospitals and sentinel GP practices decreased to **1.8%** in the most recent week (week 1) compared with 2.8% in the previous week. Consultations with sentinel GPs for ARI increased in the most recent week (week 1) and confirmed cases of COVID-19 in sentinel GP patients are increasing.
- During week 1, according to European Mortality Monitoring (EuroMoMo) methods, 'no excess deaths' were reported in the weekly number of deaths from all causes in Wales.
- In the last four reporting weeks, **Omicron XEC** is the most dominant COVID-19 variant in Wales, accounting for **38.3**% of all sequenced cases.
- The number of Ambulance calls recorded referring to syndromic indicators decreased from **2,565** in the previous week to **2,354** in the latest reporting week (week 1).
- During week 52, 2024, **14** ARI outbreaks were reported to the Public Health Wales Health Protection Team. Two were Covid-19, two were 'influenza', eight were Influenza A, one

was influenza A & Covid19, and one was influenza Like Illness. All 14 outbreaks were in residential homes.

Figure 1: Samples from hospital patients submitted for RSV, Influenza and SARS-CoV2 testing only, by week of sample collection, Week 1, 2024 to Week 1, 2025. (source: PHW)



COVID-19 Short Term Projections

The Science Evidence Advice team at Welsh Government have produced short term projections (STPs) for COVID-19 which can be produced nationally and at the Local Health Board unit. STPs project 2 weeks forward from 8 weeks of current data, and do not explicitly factor in properties of the infectious disease, policy changes, changes in testing, changes in behaviour, emergence of new variants or rapid changes in vaccinations.

The COVID-19 STPs uses admissions data from PHW until 4 January 2025 to make short term projections for COVID-19 two weeks forward (18 January 2025). The black dots show the actual data points while the white line is the best fit from the most recent projection. The colour shadings represent the 95% confidence interval of the projections with light purple showing the most recent projection and the dark purple showing the oldest. The STPs for Wales show that COVID-19 admissions are projected to continue to decrease over the next two week period (Figure 2). Figure 3 shows that COVID-19 admissions are projected to decrease across all health boards over the next two weeks.

Figure 2: Short Term Projections for COVID-19 hospital admissions in Wales (data until 4 January 2025)

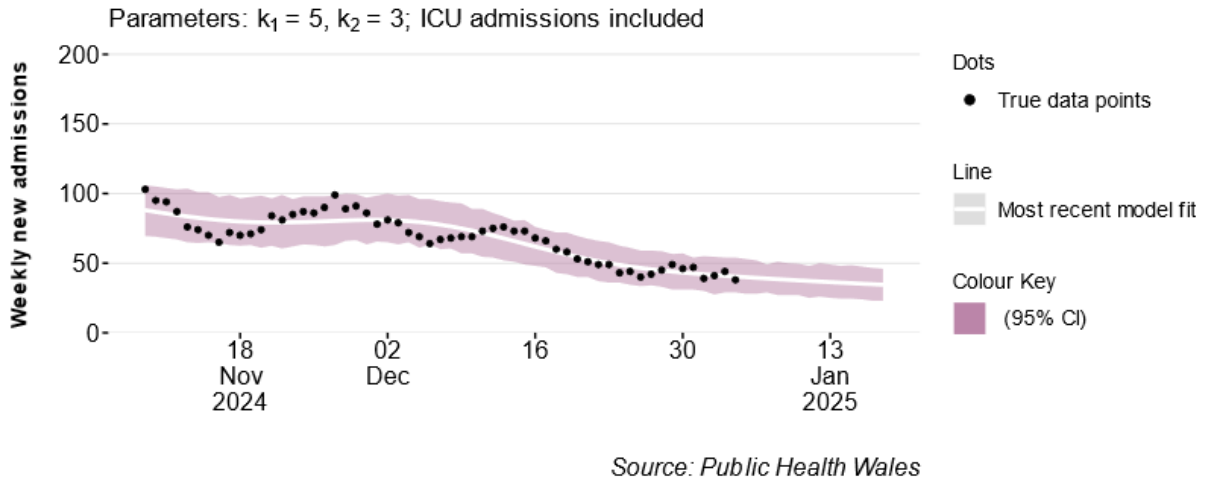
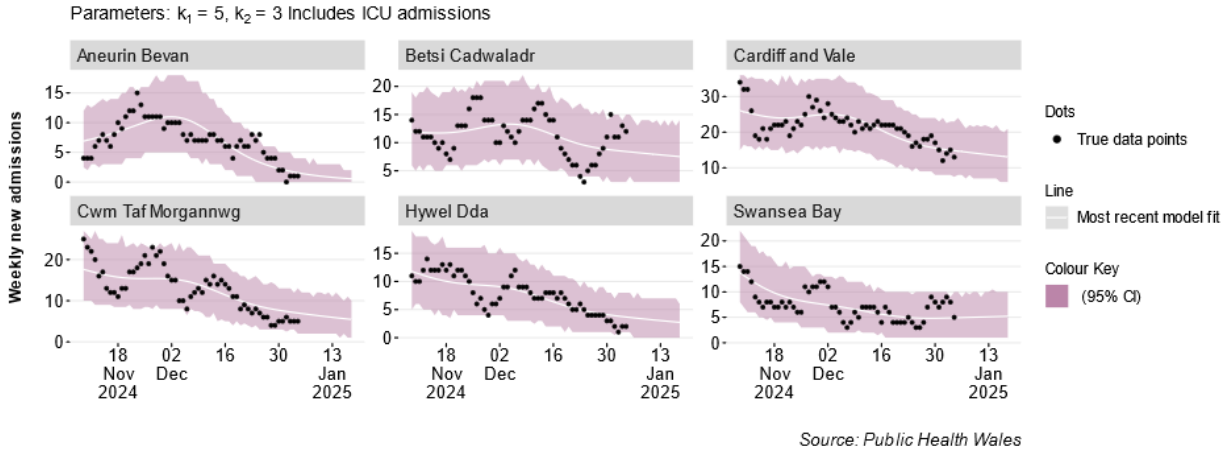


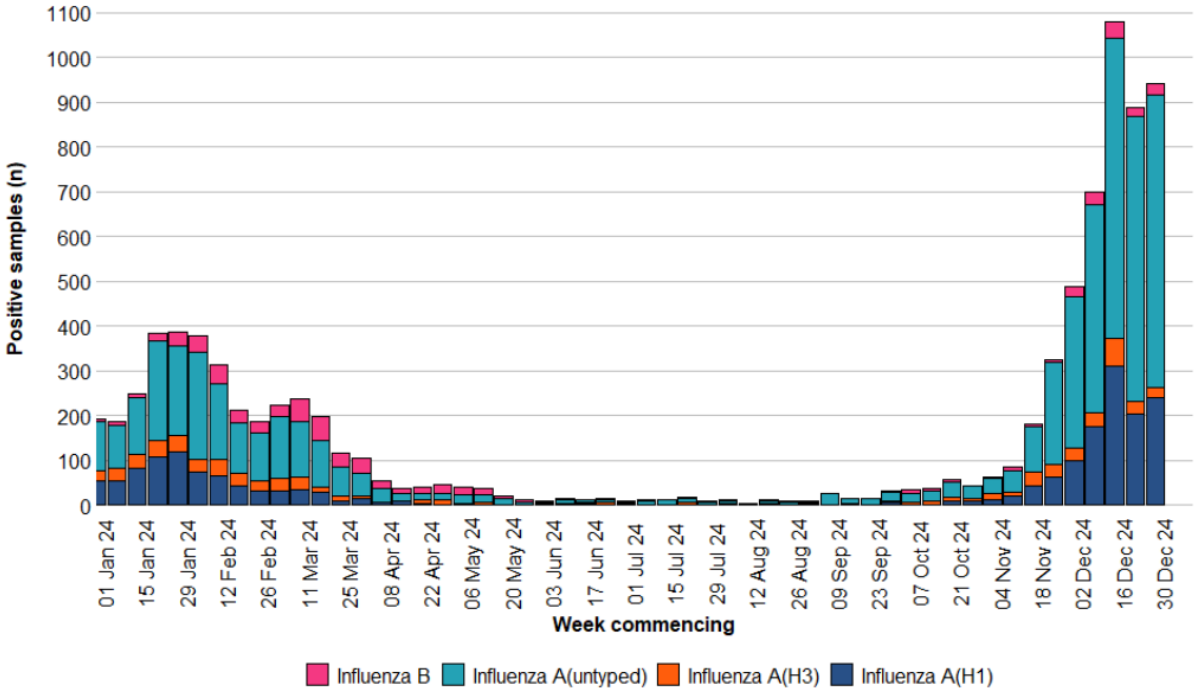
Figure 3: Short Term Projections for COVID-19 hospital admissions in Wales Health Boards (data until 4 January 2025)



B2. Influenza Situation Update

PHW report that Influenza continues to circulate, and we are approaching the peak of the season. During the week ending 5 January the number of confirmed cases of community acquired influenza admitted to hospital increased to **281** and there were **628** in-patient cases of confirmed influenza, **45** of whom were in critical care (compared to **488** and **25** in the previous week). In week 1 2025, there were 22 confirmed cases of influenza A(H3N2), 241 cases of influenza A(H1N1)pdm09, 654 influenza A untyped and 26 influenza B. (Figure 7).

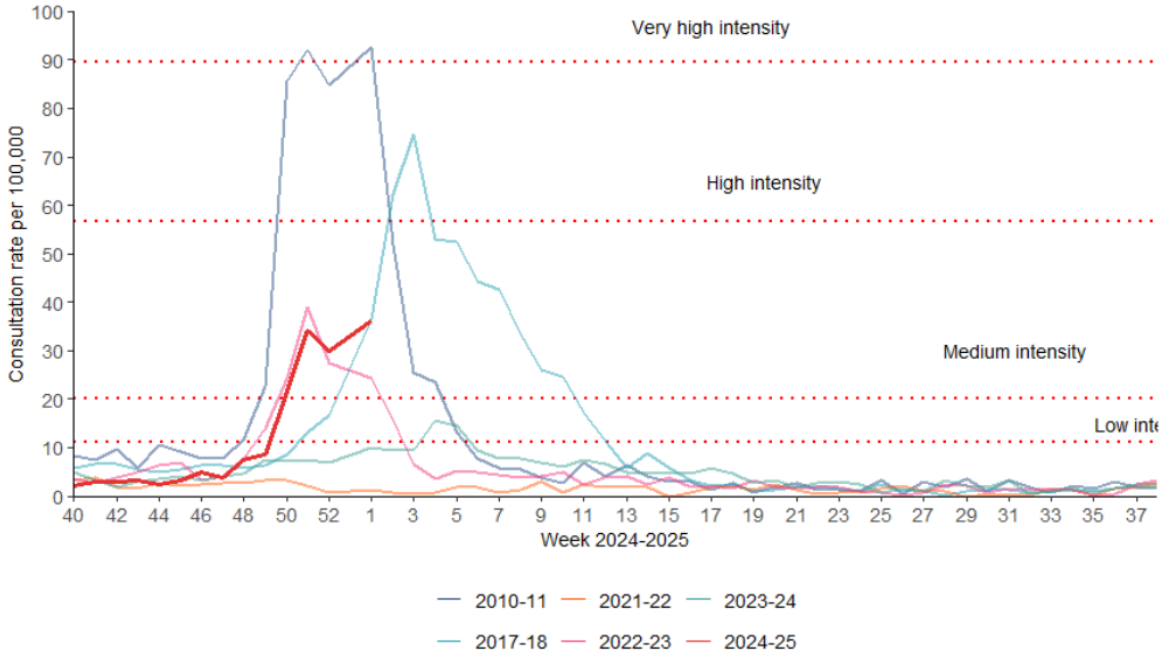
Figure 4: Influenza subtypes based on samples submitted for virological testing by Sentinel GPs and community pharmacies, hospital patients, and non-Sentinel GPs, by week of sample collection, Week 1, 2024 to Week 1, 2025 (source: PHW)



Consultations for influenza-like illness (ILI) with sentinel GPs are likely stable compared to the previous week and is at medium intensity. There were 36.2 ILI consultations per 100,000 practice population in the most recent week, an increase compared to the previous week (30 consultations per 100,000).

In the most recent week, using all available data from general practices, there were 47.7 ARI consultations per 100,000 practice population, an increase from 46.3 in the previous week. The highest rates were found in people aged under 1 year (1525) followed by people aged 1 to 4 (604.8) and people aged 75+ (449). Surveillance indicators for acute respiratory infections in GP consultation data in Wales are increasing in people aged under 5 years

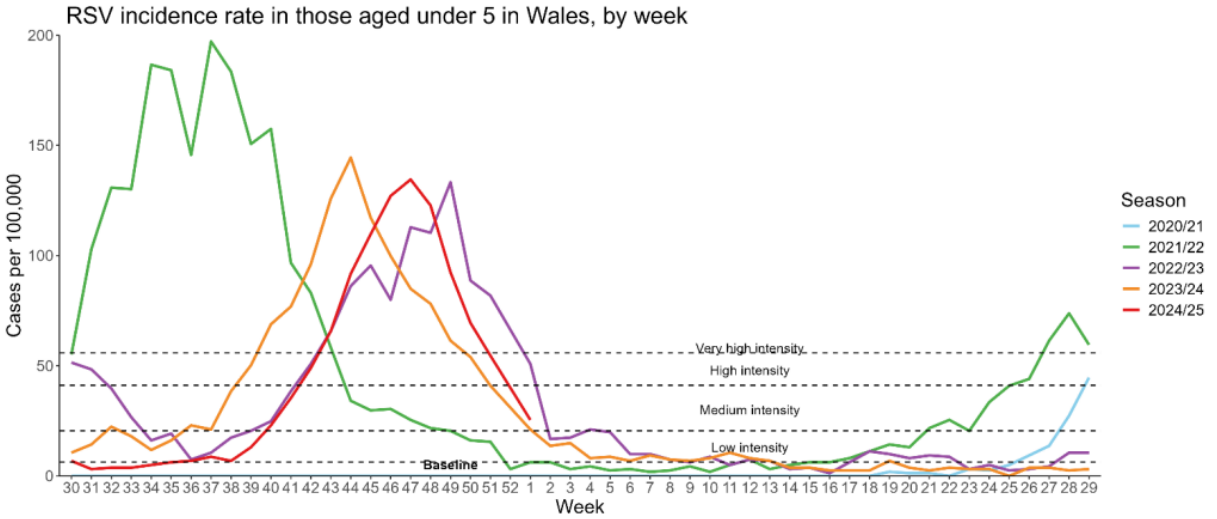
Figure 5: Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (source: PHW)



B.3. Respiratory Syncytial Virus (RSV) update

RSV is decreasing from its peak and activity is now at medium intensity levels in children aged up to 5 years old (week 1 2025). Incidence per 100,000 population in children aged up to 5 years decreased to **25.4** in the most recent week (**34.1** in the previous week). The number of confirmed cases of community acquired RSV admitted to hospital remained stable at **60** in the most recent week (**87** in the previous week).

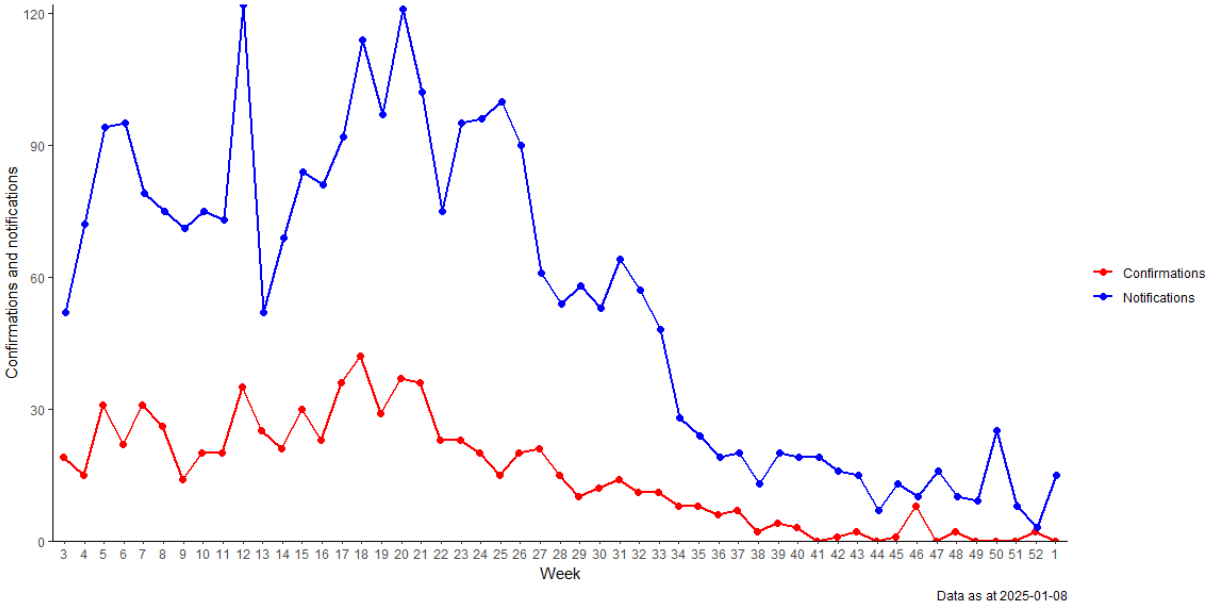
Figure 6: RSV Incidence Rate per 100,000 population under 5 years, weeks 30 2020 to week 52 2024 (source: PHW)



B4. Whooping Cough (Pertussis)

Figure 7 below shows that whooping cough notifications up to the end of week 1 increased, but remains at relatively low levels. Lab confirmations continue to be at very low levels.

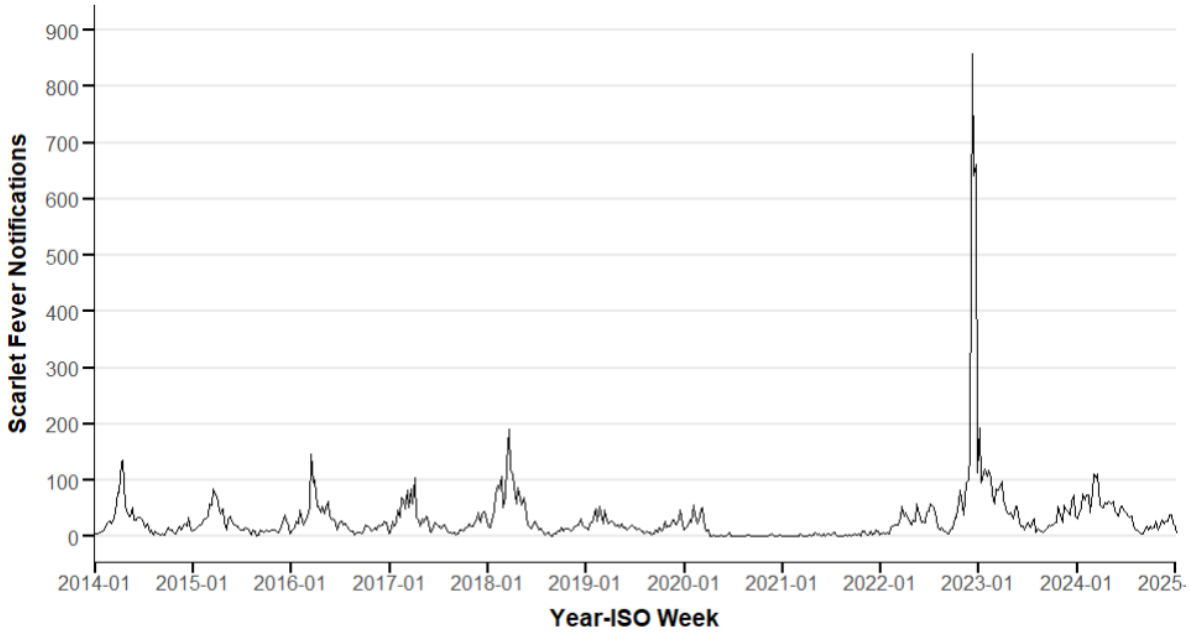
Figure 7: Weekly notifications and confirmations of Pertussis/Whooping Cough in Wales. (Source: PHW)



B.5 iGAS and Scarlet Fever

The number of iGAS notifications are currently low, remaining at seasonally expected levels. Scarlet Fever notifications have **decreased** in the most recent week (week 1) as shown in the figure below (up to 5 January 2025).

Figure 8: Rolling 3 Week Average Scarlet Fever Notifications, 2014-2025, Wales (source: PHW)



C. Science Evidence Advice Winter Modelling

The Science Evidence Advice (SEA) team in Welsh Government have published modelled scenarios for COVID-19, RSV and Influenza for Winter 2024-25. This uses analysis of historical data used to project forward to estimate what we may see in winter 2024/25, contributing to winter planning for NHS Wales. The aim is to estimate the pressures that could be seen by an increase in respiratory viruses and other factors which are typically more prevalent in the winter months than other times of the year. The charts that follow show the scenarios for each disease and plot these against actual data to reveal how well the scenarios are capturing the current pressures on the health system in Wales.

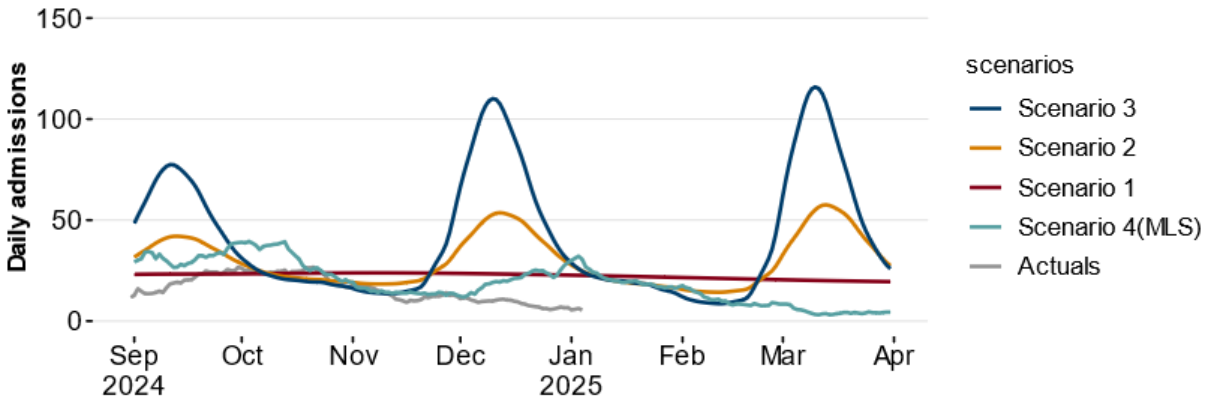
Note that, the modelling is an estimate of what may happen, not a prediction of what will happen.

Our winter modelling uses hospital admissions data from the Patient Episode Data for Wales (PEDW) dataset provided by Digital Health and Care Wales (DHCW). However, due to a lag in clinical coding and receiving PEDW data from DHCW, we use ICNET admissions data provided by Public Health Wales (PHW) for our actuals. The data sources differ for a few reasons: the flu and RSV data from PHW includes lab-confirmed results only and includes inpatients only. The PEDW data from DHCW is based on International Classification of Diseases version 10 (ICD-10) codes and the definitions may go wider than those used by PHW (e.g. our flu modelling using DHCW's data includes codes for both flu and pneumonia). Therefore, we account for these differences by multiplying the PHW data by the average of the differences in daily sums between the two data sources (3.92 for flu, 4.09 for RSV) for hospital admissions between 1 September and 31 December 2023.

COVID-19

COVID-19 actuals are currently tracking below scenario 4 which is the Most Likely Scenario (MLS). Following a slight uptick in admissions in October 2024, there has been a downward trend into November and December which has continued into January.

Figure 9 Daily COVID-19 Winter 2024-5 admissions scenarios, data until 4 January 2025



Source: Swansea University modelling (Scenarios 1, 2 3), actuals underlying the MLS to 31 March 2024 provided by DHCW, projected MLS scenarios from 1 September 2024 to 31 March 2025 from SEA.

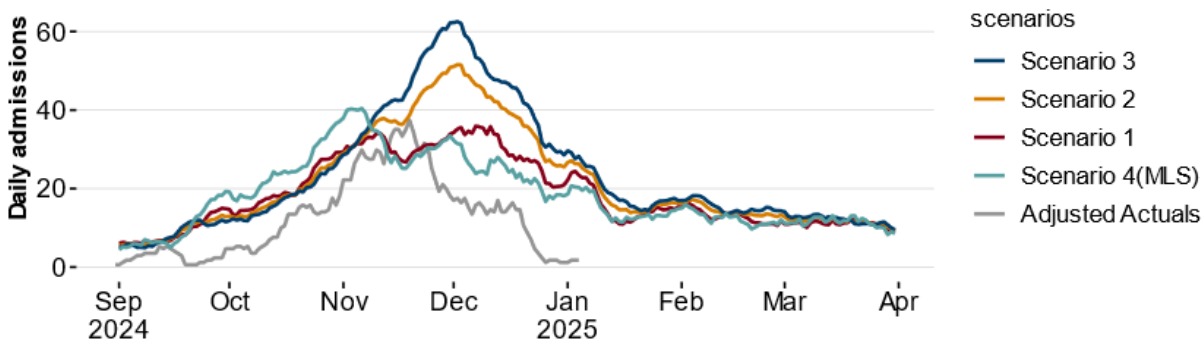
Notes

COVID-19 admissions and occupancy scenarios were created by Swansea University where a new variant emerges gradually every 3 months. The degrees of immune evasion from the variant is given by the scalar value 1, 1.2 and 1.5 and represented as scenarios 1-3. Scenario 4 is the repeat of last year's data from Digital Health and Care Wales. Includes ICD-10 codes U071, U072, U099, U109.

RSV

Adjusted RSV actuals are currently tracking below the MLS and this reflects the decrease in the number of RSV admissions in recent weeks.

Figure 10: Daily RSV Winter 2024-25 paediatric (ages 0-4) admissions scenarios data until 4 January 2025



Source: Raw data to 31 March 2024 provided by DHCW, projected scenarios from 1 September 2024 to 31 March 2025 from SEA

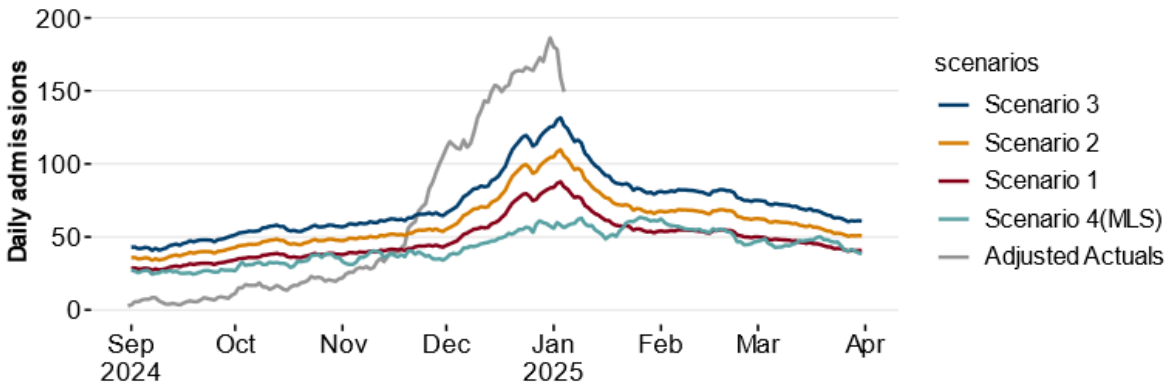
Notes

Scenario 1 reflects trends in the last two years. Scenario 3 assumes pre-pandemic patterns (from 2017/18, 2018/19 and 2019/20). Scenario 2 combines elements from both Scenario 1 and 3 (2017/18, 2018/19, 2019/20, 2022/23 and 2023/24. Scenario 4 is a repeat of last year's data (2023/24). Data includes diagnosis codes J21 to J22 from the ICD-10.

Influenza and Pneumonia

Adjusted Influenza and pneumonia actuals have been tracking above Scenario 3, reflecting the increase in flu admissions as we have moved into the flu season, but have slightly decreased in the most recent reporting period.

Figure 11: Daily flu and pneumonia Winter 2024-5 admissions scenarios, data until 4 January 2025



Source: Raw data to 31 March 2024 provided by DHCW, projected scenarios from 1 September 2024 to 31 March 2025 from SEA

Notes: Based on the previous seven years of historical data,[1] the following scenarios were created for flu admissions and occupancy: Scenario 1 represents the average of non-pandemic years (2017/18, 2018/19, 2019/20, 2022/23 and 2023/24). Scenarios 2 and 3 are obtained by multiplying Scenario 1 by scalars 1.25 and 1.5. Finally, scenario 4, which repeats last year's admissions, is considered the most likely scenario (MLS). Data includes diagnosis codes J09 to J18 (flu and pneumonia) from ICD-10. The adjusted actuals for flu admissions are currently tracking below the most likely scenario.

D. Communicable Disease Situation Update (non-respiratory)

D.1 Norovirus

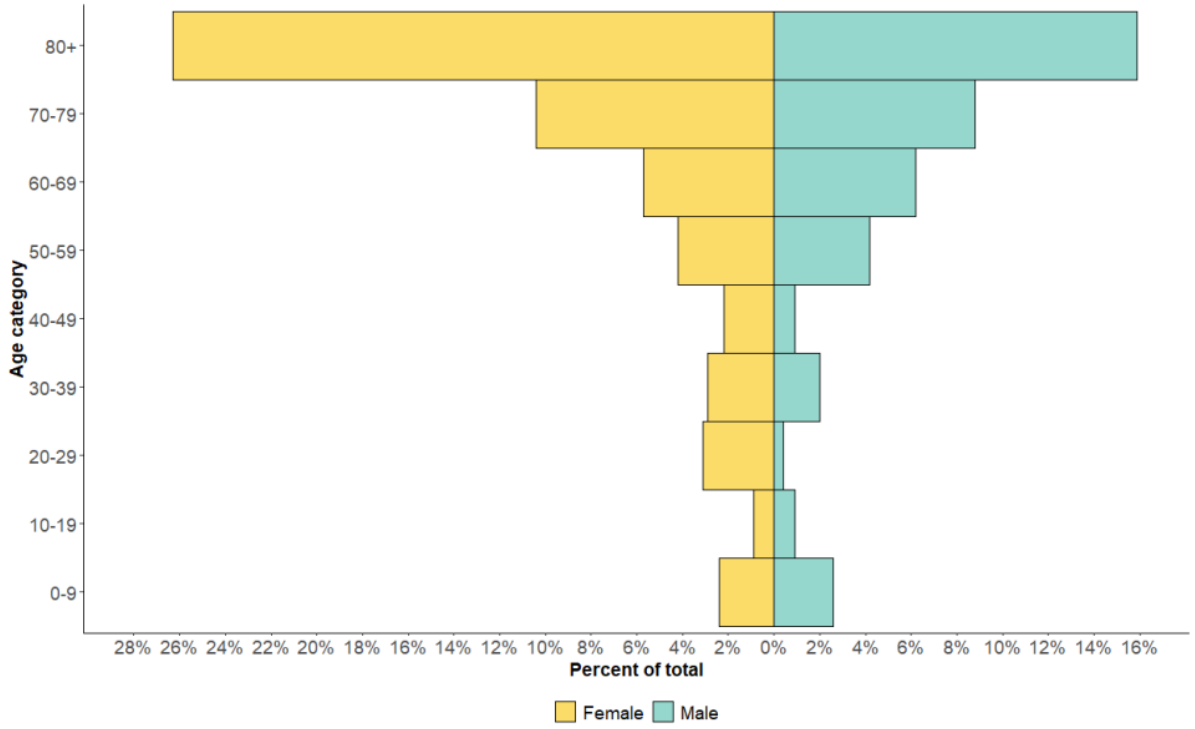
In the current reporting week (week 1 2025), a total of **47** Norovirus confirmed cases were reported in Welsh residents. This is an increase (95.8%) in reported cases compared to the previous reporting week (week 52 2024), where **24** Norovirus confirmed cases were reported.

In the last 12 week period (14/10/2024 to 05/01/2025) a total of **454** Norovirus confirmed cases were reported in Welsh residents. This is an increase (14.9%) in reported cases compared to the same 12 week period in the previous year (14/10/2023 to 05/01/2024) where **395** Norovirus confirmed cases were reported

In the last 12 weeks (14/10/2024 to 05/01/2025) **263** (57.9%) confirmed Norovirus cases were female and **190** (41.9%) confirmed cases were male. The age groups with the most cases were the 80+ (191 cases) and 70-79 (87 cases) age groups. Sex data was not available for 1 case.

[1] Admissions during the pandemic years were not included in the scenarios due to very low numbers.

Figure 12: Age and sex distribution of confirmed Norovirus cases in the last 12 weeks (14/10/2024 to 05/01/2025)



Notes: This data from PHW only includes locally-confirmed PCR positive cases of Norovirus in Wales within the 12 week period up until the end of the current reporting week, **week 1 2025** (14/10/2024 to 05/01/2025). Under-ascertainment is a recognised challenge in norovirus surveillance with sampling, testing and reporting known to vary by health board. In addition, only a small proportion of community cases are confirmed microbiologically.

E. International Surveillance Update

E.1 Mpox Clade 1b: Updated guidance from ECDC

Eleven individuals with MPXV clade I have been reported in the EU/EEA since August 2024. One case was reported by Sweden in August 2024, seven by Germany (one in October, five in December 2024 and one in January 2025), two cases by Belgium in December 2024 and one case by France in January 2025. The disease was mild in all individuals.

Among the cases in Germany, a cluster reported in December 2024 included an individual who had travelled to an affected area and three of their household members, including children, who had not travelled abroad recently. There was no reported transmission beyond the household. In Belgium, one affected child was a household contact of an affected individual with a travel history to an affected country. Besides the cases reported in the EU/EEA, several countries outside the African continent have also reported travel-associated cases.

Only the United Kingdom and China have reported secondary transmission of mpox due to MPXV clade I outside the EU/EEA and Africa. Updated information on the epidemiology and transmission patterns of mpox due to clade I can be found in the weekly Communicable Diseases Threats Report.

In response to the increased transmission of MPXV clade I in the Democratic Republic of the Congo and neighbouring countries, ECDC published a rapid risk assessment on mpox caused by MPXV clade I in August 2024, highlighting the possibility of cases in the EU/EEA following travel to affected countries in Africa, and further cases due to close contact with such imported cases.

Although significant uncertainties exist about the severity of mpox caused by MPXV clade I, most people experience mild to moderate symptoms, followed by a full recovery. It is important to note that close physical (skin-to-skin) contact or touching virus-contaminated materials is necessary to transmit MPXV.

During periods of extensive international travel, EU/EEA countries may consider raising awareness among travellers to/from areas with ongoing MPXV transmission and among primary and other healthcare providers who may be consulted by such patients. People planning to travel to regions with ongoing MPXV transmission should consult their healthcare provider or travel health clinic for general advice and their eligibility for vaccination against mpox.

Travellers to areas where the virus is circulating are at a higher risk of becoming infected if they are in close contact with people who may have mpox, potentially infected, sick or dead animals, and do not practice good hand hygiene. To ensure early diagnosis, treatment, and isolation to avoid further spread, travellers to areas with ongoing MPXV transmission should closely monitor their health during their visit and for 21 days after returning and contact healthcare services should they develop mpox symptoms (such as a rash, fever, headache, and muscle pain).

If mpox is detected, contact tracing, partner notification and post-exposure preventative vaccination of eligible individuals are important public health response measures. When possible, and certainly for clade I, contacts of a case need to be followed up by public health authorities or their healthcare provider 21 days after the last potential infectious exposure.

E.2 Communicable Disease Centre (CDC) USA – Avian Flu update

December 18, 2024-- A patient has been hospitalized with a severe case of avian influenza A(H5N1) virus ("H5N1 bird flu") infection in Louisiana. This marks the first instance of severe illness linked to the virus in the United States. The case was confirmed by the Center for Disease Control and Prevention (CDC) on Friday, December 13. Since April 2024, there have been a total of 61 reported human cases of H5 bird flu reported in the United States.

Partial viral genome data of the H5N1 avian influenza virus that infected the patient in Louisiana indicates that the virus belongs to the D1.1 genotype related to other D1.1 viruses recently detected in wild birds and poultry in the United States and in recent human cases in British Columbia, Canada, and Washington state. This H5N1 bird flu genotype is different than the B3.13 genotype detected in dairy cows, sporadic human cases in multiple states, and some poultry outbreaks in the United States. Additional genomic sequencing and efforts to isolate virus from clinical specimens from the patient in Louisiana are underway at CDC.

While an investigation into the source of the infection in Louisiana is ongoing, it has been determined that the patient had exposure to sick and dead birds in backyard flocks. This is the first case of H5N1 bird flu in the U.S. that has been linked to exposure to a backyard flock. A sporadic case of severe H5N1 bird flu illness in a person is not unexpected; avian influenza A(H5N1) virus infection has previously been associated with severe human illness in other countries during 2024 and prior years, including illness resulting in death. No person-to-person spread of H5 bird flu has been detected. This case does not change CDC's overall assessment of the immediate risk to the public's health from H5N1 bird flu, which remains low.