



Llywodraeth Cymru  
Welsh Government

# Science Evidence Advice

Weekly Surveillance Report

17 December 2024



Science Evidence Advice (SEA)

gov.wales

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

- Overall, COVID-19 confirmed case admissions to hospital **decreased** 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 cases have **increased** in the latest week.
- Whooping Cough notifications have **remained stable** in the most recent week.
- Scarlet Fever notifications **remained stable** in the most recent week.
- Norovirus confirmed cases have **increased** in the most recent reporting week.

### B. Acute Respiratory Infections Situation Update

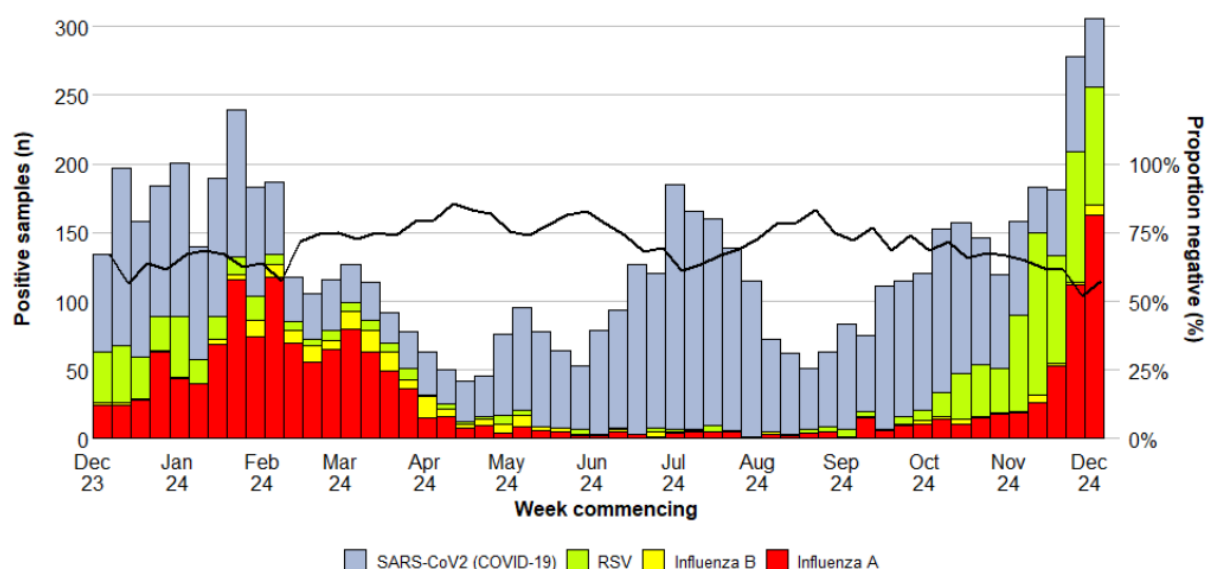
#### B.1 COVID-19 Situation Update

COVID-19 case numbers have decreased in recent weeks.

- At a national level, the weekly number of confirmed case admissions to hospital decreased and the number of cases who are inpatients has also decreased in week 49.
- As at 8 December 2024 the number of confirmed cases of community acquired COVID-19 admitted to hospital decreased to **27** from **36** in the previous week and there was an increase to **245** in-patient cases of confirmed COVID-19, **3** of whom were in critical care compared to **251** and **4** in the previous week.
- The overall proportion of samples testing positive in hospitals and sentinel GP practices decreased to **4.5%** in the most recent week (5.8% in the previous week). Consultations with sentinel GPs for ARI decreased in the most recent week and confirmed cases of COVID-19 in sentinel GP patients also decreased.
- During week 49, according to European Mortality Monitoring (EuroMoMo) methods, 'no excess deaths' were reported in the weekly number of deaths from all causes in Wales.
- Between weeks 43 and 48, KP.3\* from the Pango lineage was the most dominant variant in Wales, accounting for **43.7%** of all sequenced cases. The emerging XEC variant is second highest accounting for **27.3%** of cases.
- The number of Ambulance calls recorded referring to syndromic indicators decreased from **2,363** in the previous week to **2,066** in the latest reporting week.

- During week 49, 2024, 3 ARI outbreaks were reported to the Public Health Wales Health Protection Team: one was Covid-19, one was confirmed influenza, and one was influenza-Like Illness. All three were in a residential home setting.

**Figure 1: Samples from hospital patients submitted for RSV, Influenza and SARS-CoV2 testing only, by week of sample collection, Week 49, 2023 to Week 49, 2024 (source: [PHW](#))**

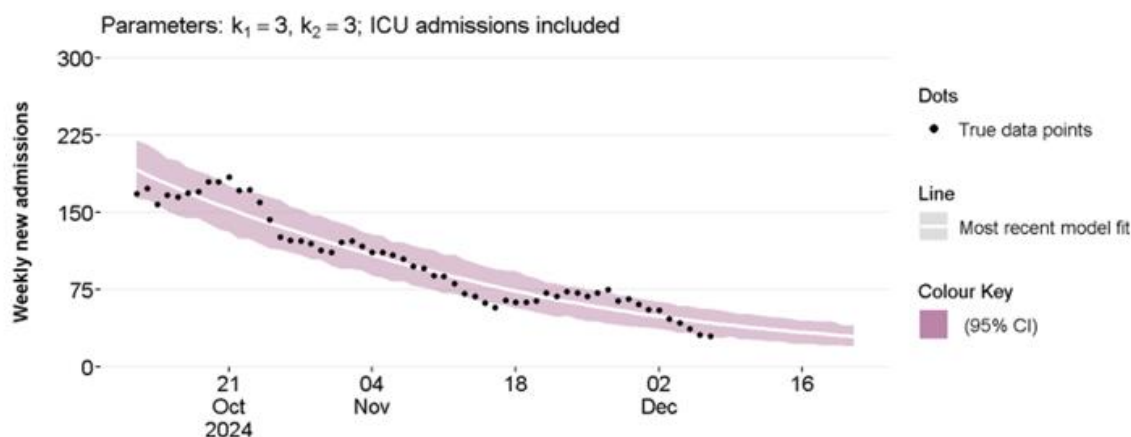


### COVID-19 Short Term Projections

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.

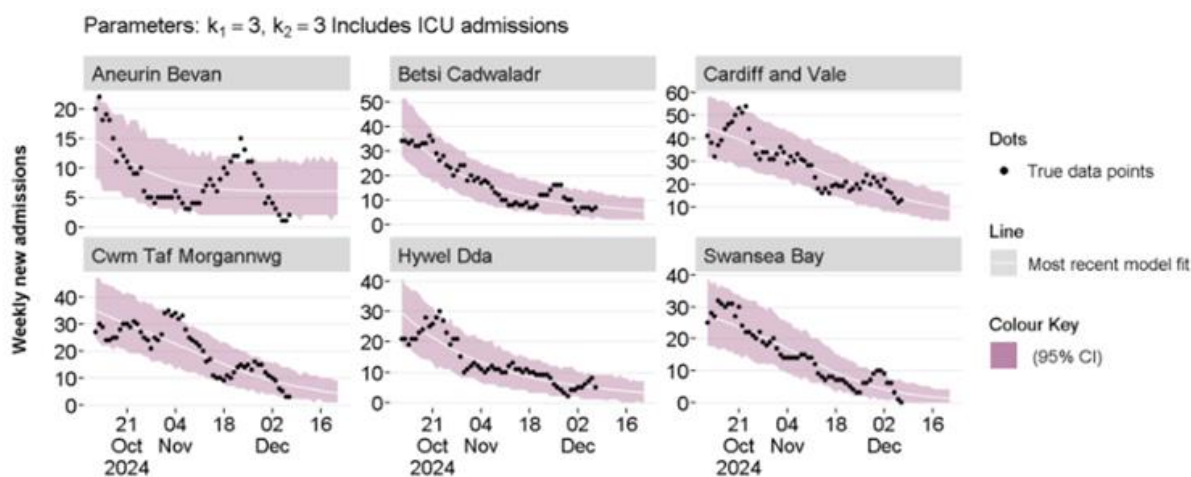
The COVID-19 STPs uses admissions data from PHW until 7 December 2024 to make short term projections for COVID-19 two weeks forward (21 December 2024). The black dots show the actual data points while the white line is the best fit from the most recent projection. The colour shadings represent the 95% 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 7 December 2024)**



Source: Public Health Wales

**Figure 3: Short Term Projections for COVID-19 hospital admissions in Wales Health Boards (data until 7 December 2024)**



Source: Public Health Wales

### Swansea University Mid Term Projections (MTPs) for COVID-19

The latest available Swansea University MTPs using data up to the end of January 2025 indicate a decline in COVID-19 non-ICU hospital admissions through to the end of November and into December and then plateauing into January 2025. ICU admissions are projected to remain at low levels as are deaths caused by COVID-19.

**Notes:** In the charts below, red crosses represent actual COVID-19 cases data. The blue line represents the central modelling estimate. The blue ribbon represents the confidence intervals, with the darker blue ribbon indicating the 25th to 75th percentiles, and the 95% confidence limits in the lighter ribbon.

Figure 4: Daily COVID-19 hospital admissions, projected to end January 2025

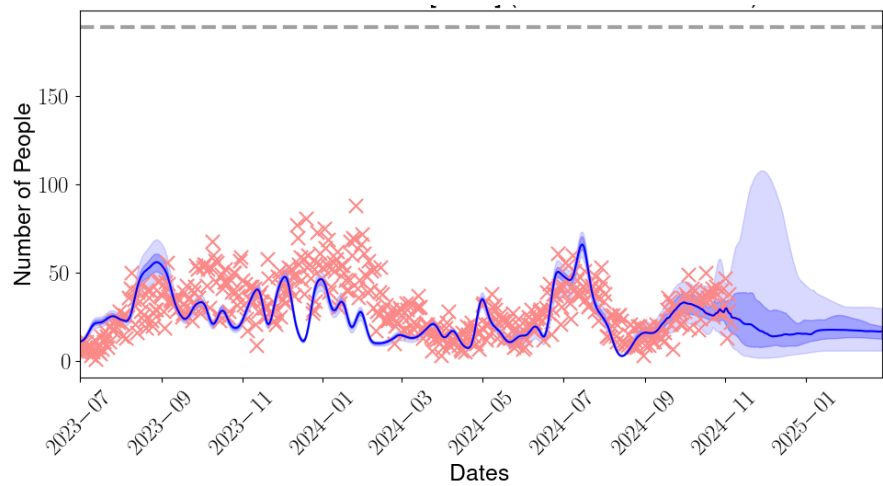


Figure 5: Daily COVID-19 ICU admissions, projected to end January 2025

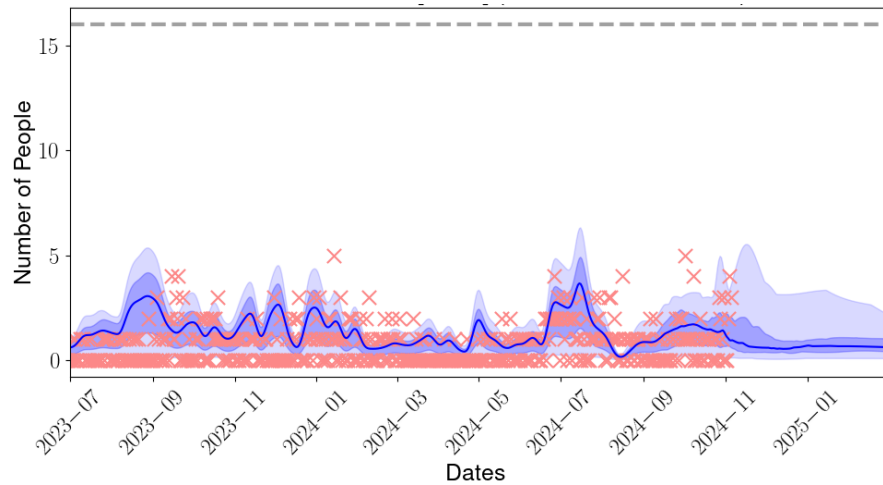
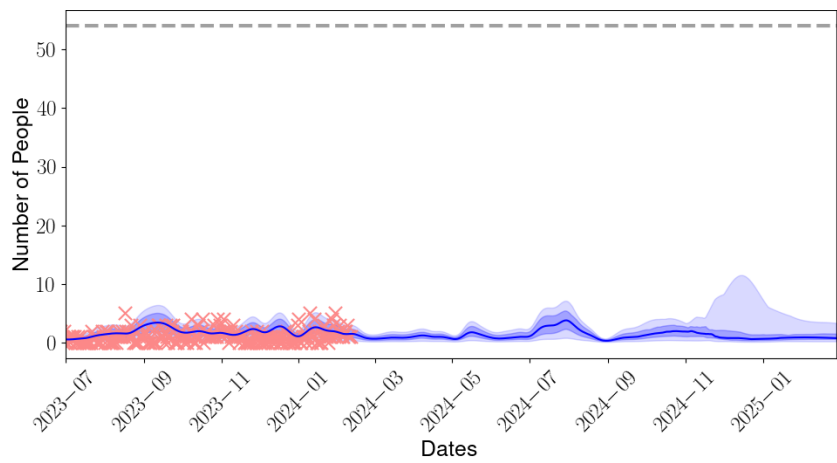


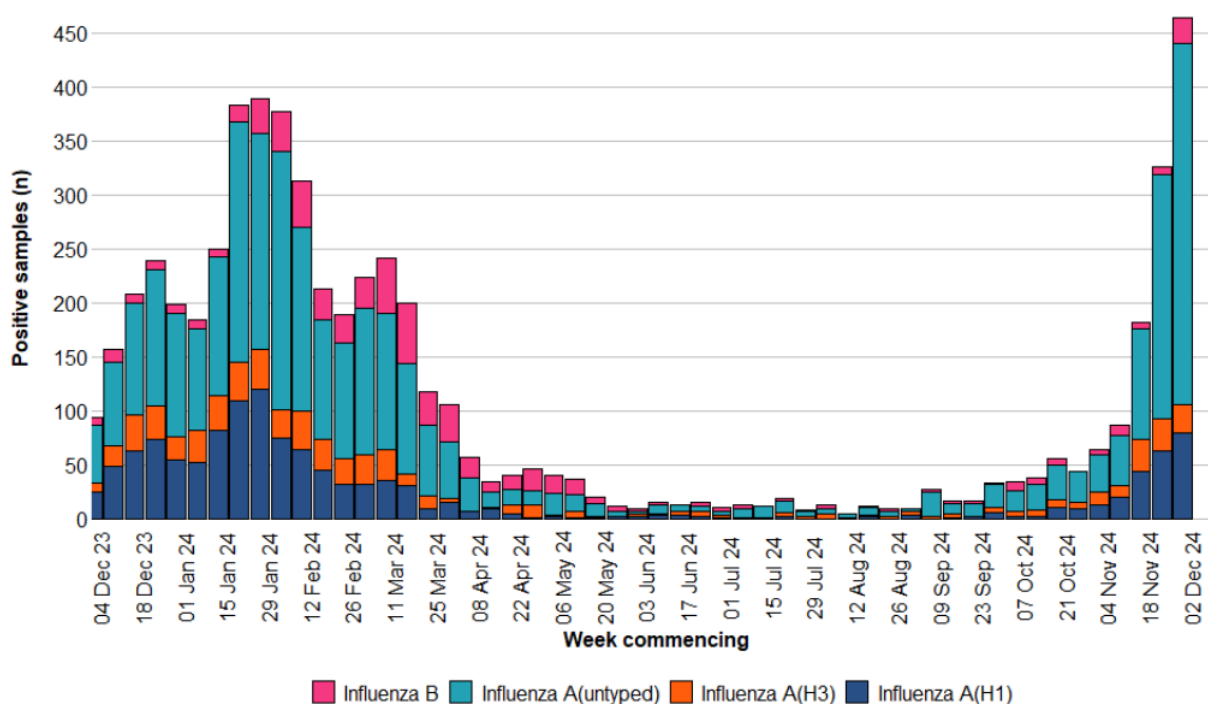
Figure 6: Daily COVID-19 deaths, projected to projected to end January 2025



## B.2 Influenza Situation Update

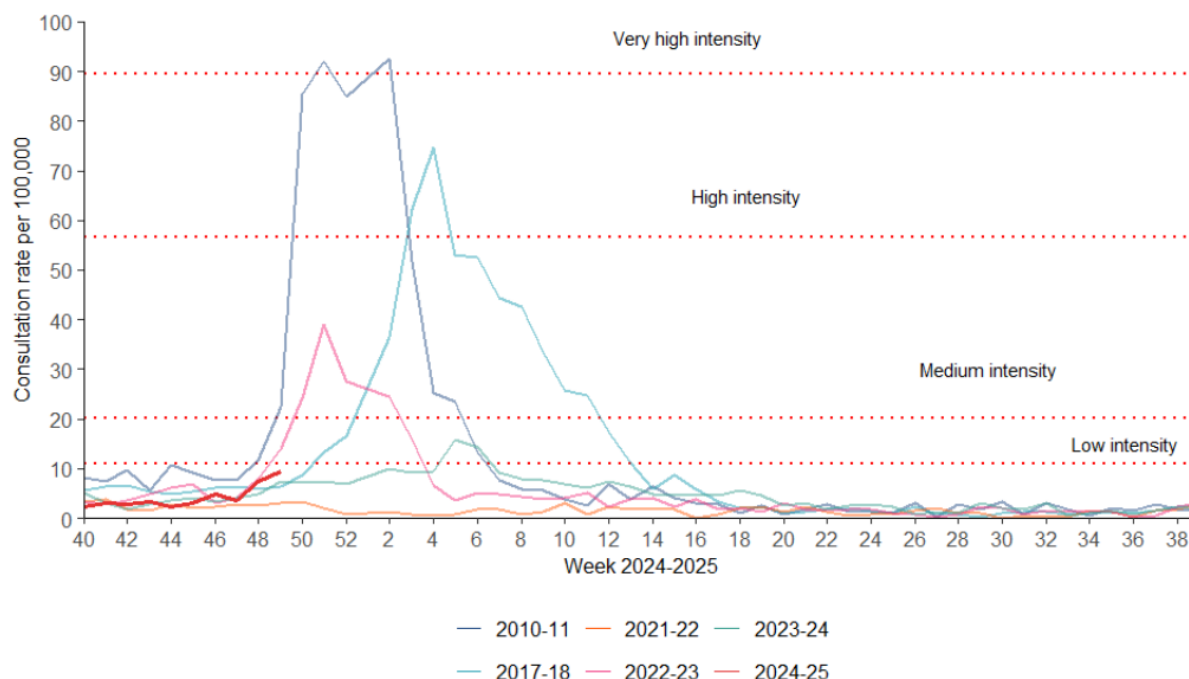
PHW report that **influenza** is circulating and we are at the start of the influenza season. The number of confirmed cases of community acquired influenza admitted to hospital increased to **135** in the most recent week (from **99** in the previous week). There were **257** hospital in-patient cases of confirmed influenza, **9** of whom were in critical care (compared to **176** and **11** in the previous week). In week 49 there were 26 confirmed cases of influenza A(H3N2), 79 cases of influenza A(H1N1)pdm09, 335 influenza A untyped and 24 influenza B. (Figure 7).

**Figure 7: 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 49, 2023 to Week 49, 2024 (source: [PHW](#))**



Consultations for influenza-like illness (ILI) with sentinel GPs increased compared to the previous week, and are approaching the low intensity threshold. There were 9.3 ILI consultations per 100,000 practice population in the most recent week, an increase compared to the previous week (7.5 consultations per 100,000) (Figure 8).

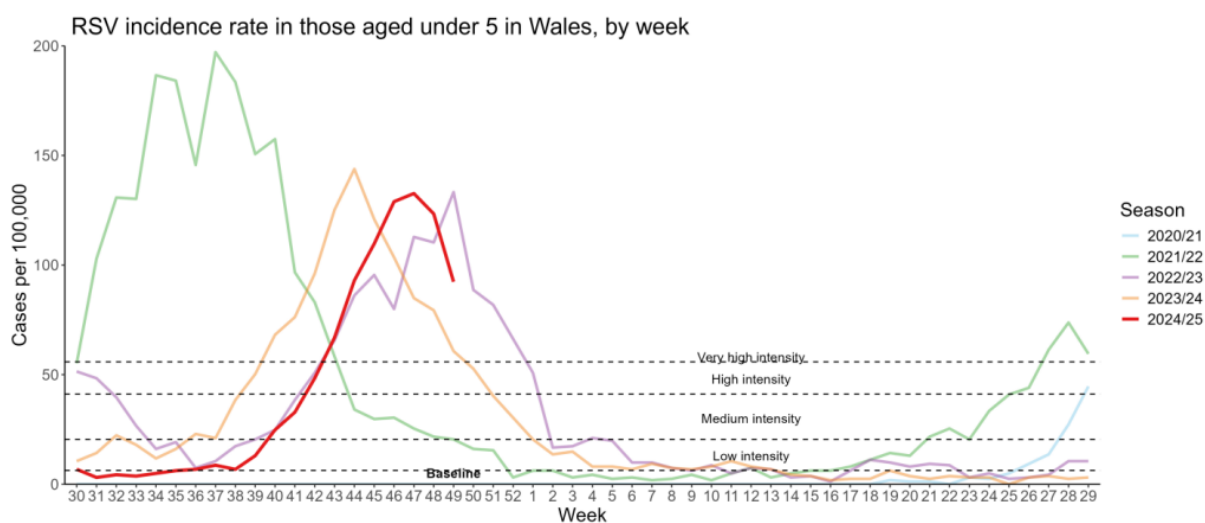
**Figure 8: Clinical consultation rate for ILI per 100,000 practice population in Welsh sentinel practices (source: [PHW](#))**



### B.3. Respiratory Syncytial Virus (RSV) update

RSV is circulating, with activity at **very high** intensity levels in children aged up to 5 years old. Incidence per 100,000 population in children aged up to 5y decreased to **92.4** in the most recent week (a decrease from **123.5** in the previous week). The number of confirmed cases of community acquired RSV admitted to hospital remained stable at **91** in the most recent week (**90** in the previous week). In the most recent week, there were **162** in-patient cases of confirmed RSV, **7** of whom were in critical care (**117** and **5** in the previous week).

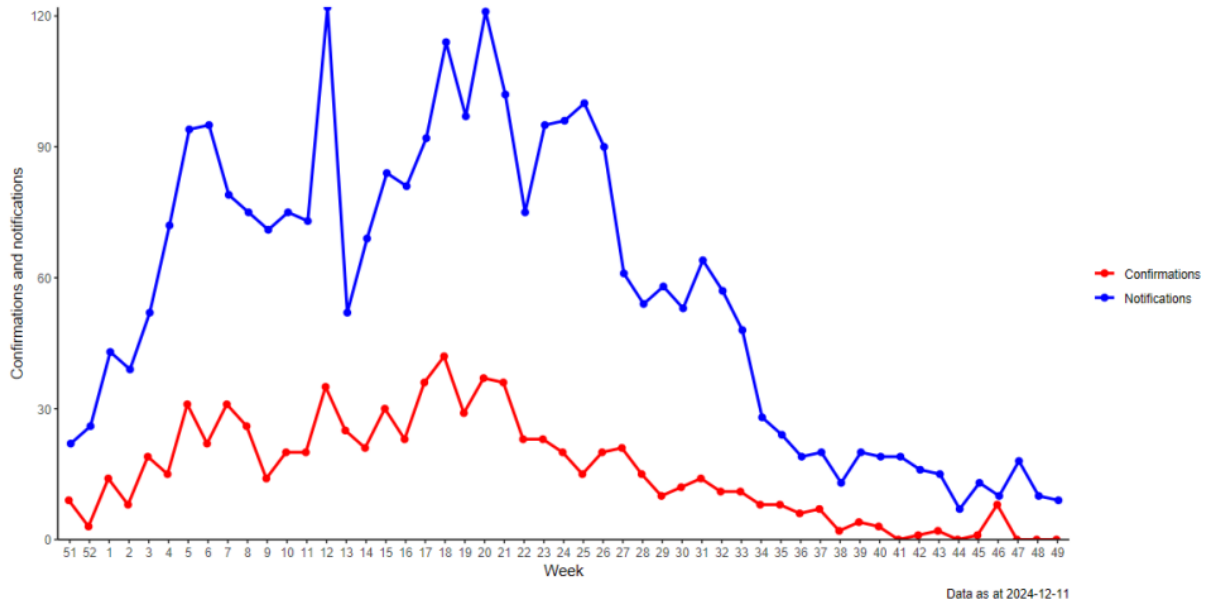
**Figure 9: RSV Incidence Rate per 100,000 population under 5 years, weeks 30 2020 to week 49 2024 (source: [PHW](#))**



#### B.4 Whooping Cough (Pertussis)

Figure 10 below shows that whooping cough notifications up to the end of week 49 decreased and remain at low levels. Lab confirmations continue to be at very low levels and have remained stable in the latest week.

**Figure 10: 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 **remained stable** in the most recent week (week 4) as shown in the figures below (up to 8 December 2024) with Figure 12 showing a stable picture overall for the current season (the bright red line on the chart). These notifications are now well below 100 a week compared to the peak of over 800 notifications in winter 2022-23.

Figure 11: Rolling 3 Week Average Scarlet Fever Notifications, 2014-2024, Wales (source: [PHW](#))

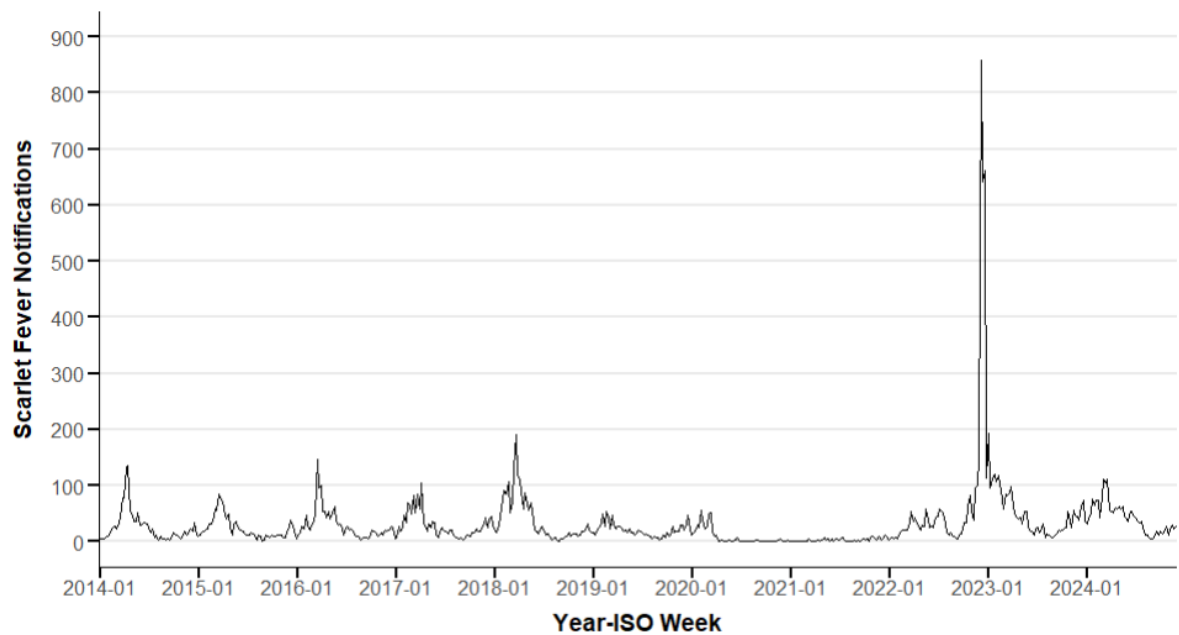
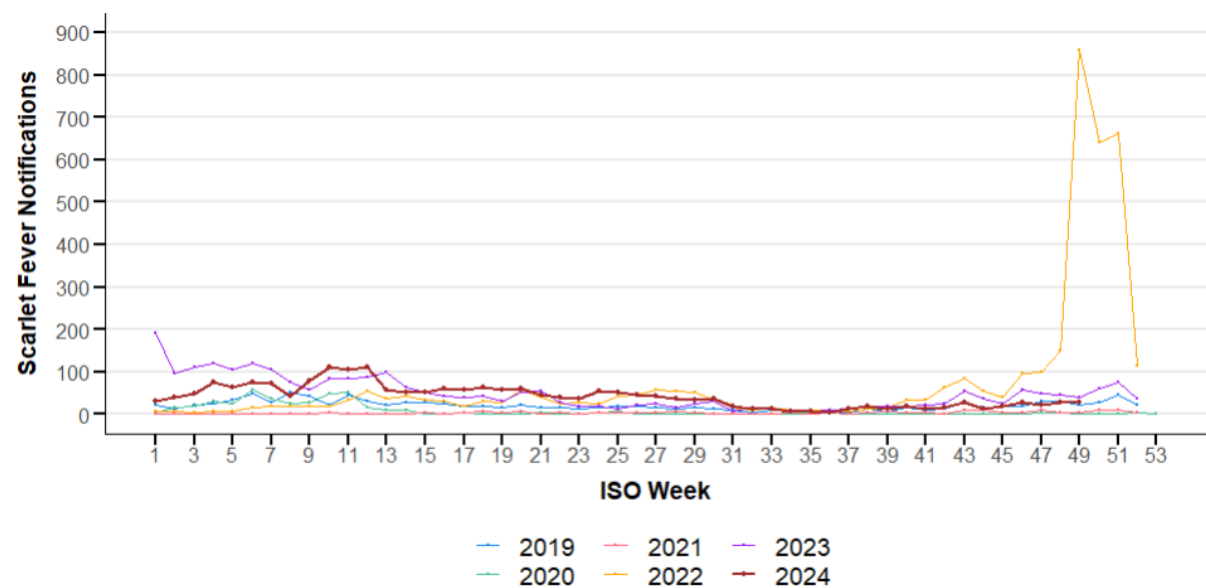


Figure 12: Rolling 3 Week Average Scarlet Fever Notifications, 2019-2024, Wales (Source: [PHW](#))



## 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.

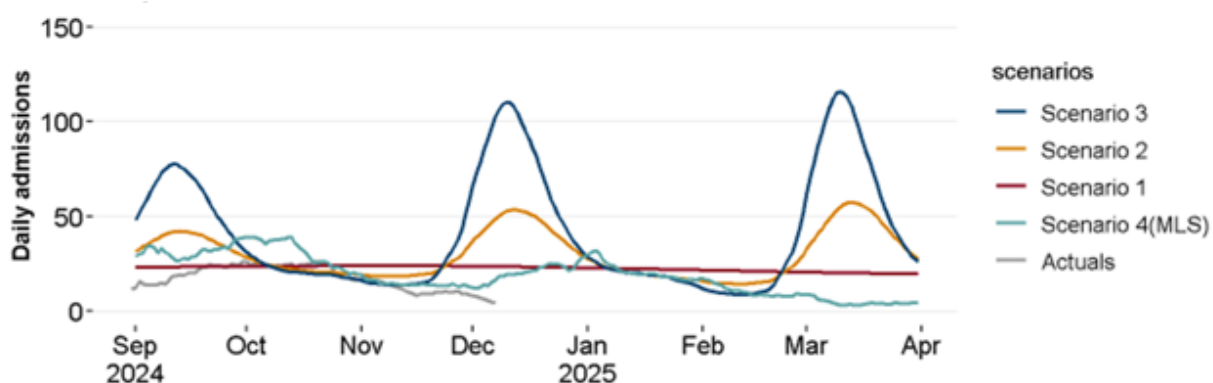
Note that, the modelling is an estimate of what may happen, not a prediction of what will happen.

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 INCET 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 vers. 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) last year for hospital admissions.

### COVID-19

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

**Figure 13 Daily COVID-19 Winter 2024-5 admissions scenarios, data until 7 December 2024**



**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.

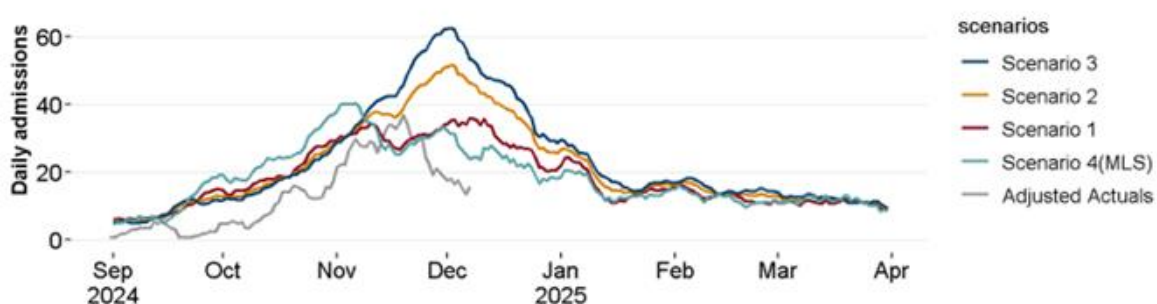
## Notes

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, 1.25 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 14: Daily RSV Winter 2024-5 admissions scenarios, data until 7 December 2024**



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

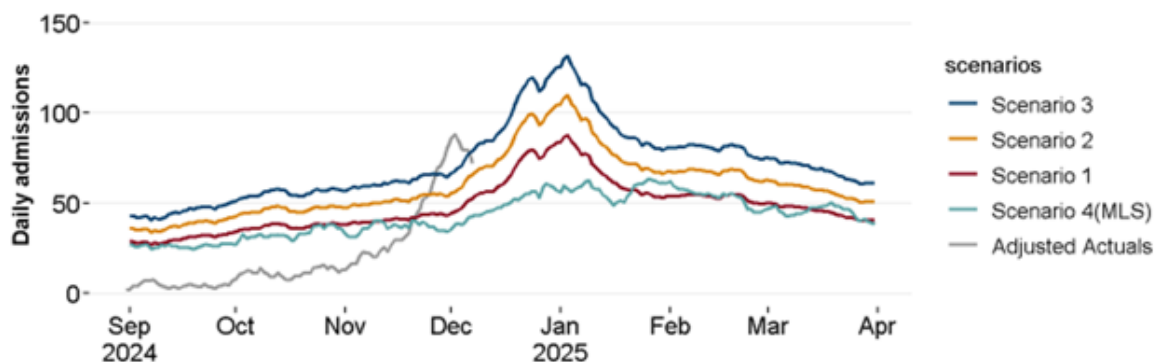
## Notes

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 15: Daily flu and pneumonia Winter 2024-5 admissions scenarios, data until 30 November 2024**



**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,<sup>1</sup> 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**

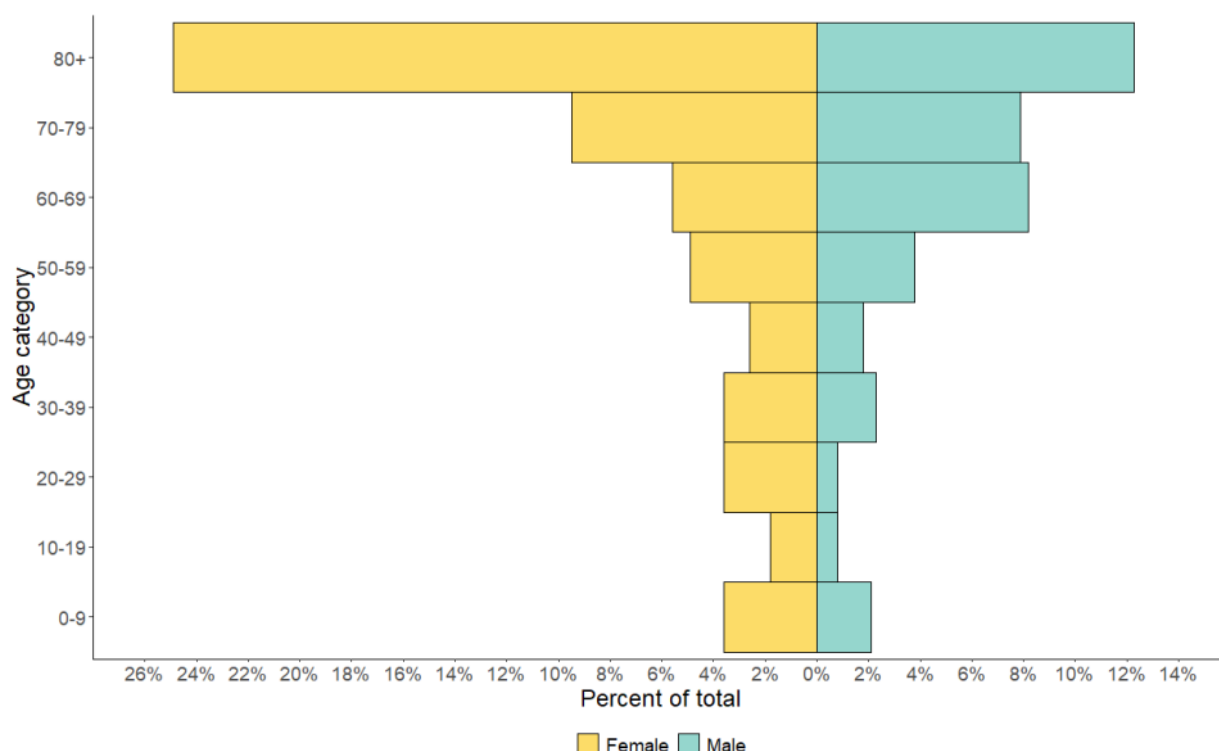
In the current reporting week (week 49 2024), a total of **59** Norovirus confirmed cases were reported in Welsh residents. This is an **increase** (15.7%) in reported cases compared to the previous reporting week (week 48 2024), where **51** Norovirus confirmed cases were reported.

In the last 12 week period (16/09/2024 to 08/12/2024) a total of **392** Norovirus confirmed cases were reported in Welsh residents. This is an **increase** (66.8%) in reported cases compared to the same 12 week period in the previous year (16/09/2023 to 08/12/2023) where **235** Norovirus confirmed cases were reported.

In the last 12 weeks (1) **234** (59.7%) confirmed Norovirus cases were female and **156** (39.8%) confirmed cases were male. The age groups with the most cases were the 80+ (145 cases) and 70-79 (68 cases) age groups. Sex data were not available for 2 cases.

<sup>1</sup> Admissions during the pandemic years were not included in the scenarios due to very low numbers.

**Figure 13: Age and sex distribution of confirmed Norovirus cases in the last 12 weeks (16/09/2024 to 08/12/2024)**



**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 49 2024 (16/09/2024 to 08/12/2024). 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 1 ([UKHSA Update](#))**

**November 29:** A new case of Clade Ib mpox has been detected in England, the UK Health Security Agency (UKHSA) can confirm.

The case was detected in Leeds and the individual is now under specialist care at Sheffield Teaching Hospitals NHS Foundation Trust. They had recently returned from Uganda, which is seeing community transmission of Clade Ib mpox. The UKHSA and NHS will not be disclosing any further details about the individual.

The risk to the UK population remains low. We expect to see the occasional imported case of Clade Ib mpox in the UK.

This is the fifth case of Clade Ib mpox confirmed in England in recent weeks. This case has no links to the previous cases identified. All 4 previous cases were from the same household and all have now fully recovered.

Close contacts of the case are being followed up by UKHSA and partner organisations. Any contacts will be offered testing and vaccination as needed and advised on any necessary further care if they have symptoms or test positive.

## **E.2 Communicable Disease Centre (CDC) USA – Avian Flu [update](#)**

**10 December, 2024:** CDC, in partnership with the California Department of Public Health (CDPH), confirmed a human infection with avian influenza A(H5N1) virus (H5N1 bird flu) in a child in California on November 22, 2024. The patient was initially detected as a suspected case of A(H5N1) through influenza testing and reported to CDPH through influenza surveillance, with initial subtyping conducted by the Stanford Medicine Clinical Virology Laboratory and presumptive positive test results reported by CDPH on November 19, [2024](#).

The initial sequence analysis, which was based on short fragments of the HA and NA genes, indicated that the virus was a clade 2.3.4.4b A(H5N1) virus similar to viruses causing outbreaks in dairy cattle and poultry in the United States. Upon obtaining full-length NA and NP genes, CDC was able to perform a comprehensive phylogenetic analysis, which showed that the virus was very similar to viruses detected in both dairy cattle and poultry as well as to A(H5N1) viruses from previous human infections in dairy workers in California. Although the genetic data generated were insufficient to classify the virus as a specific genotype, the NA and NP sequences shared close nucleotide identity and phylogenetic clustering with NA and NP genes from recent B3.13 viruses detected in California in humans, dairy cattle and poultry. Epidemiologic and environmental investigations did not clearly identify a possible source of exposure. Given that additional sequence data from the case could not be generated, it is unlikely that the source of the child's exposure to A(H5N1) virus will be identified, thus completing the investigation into genotype and exposure.