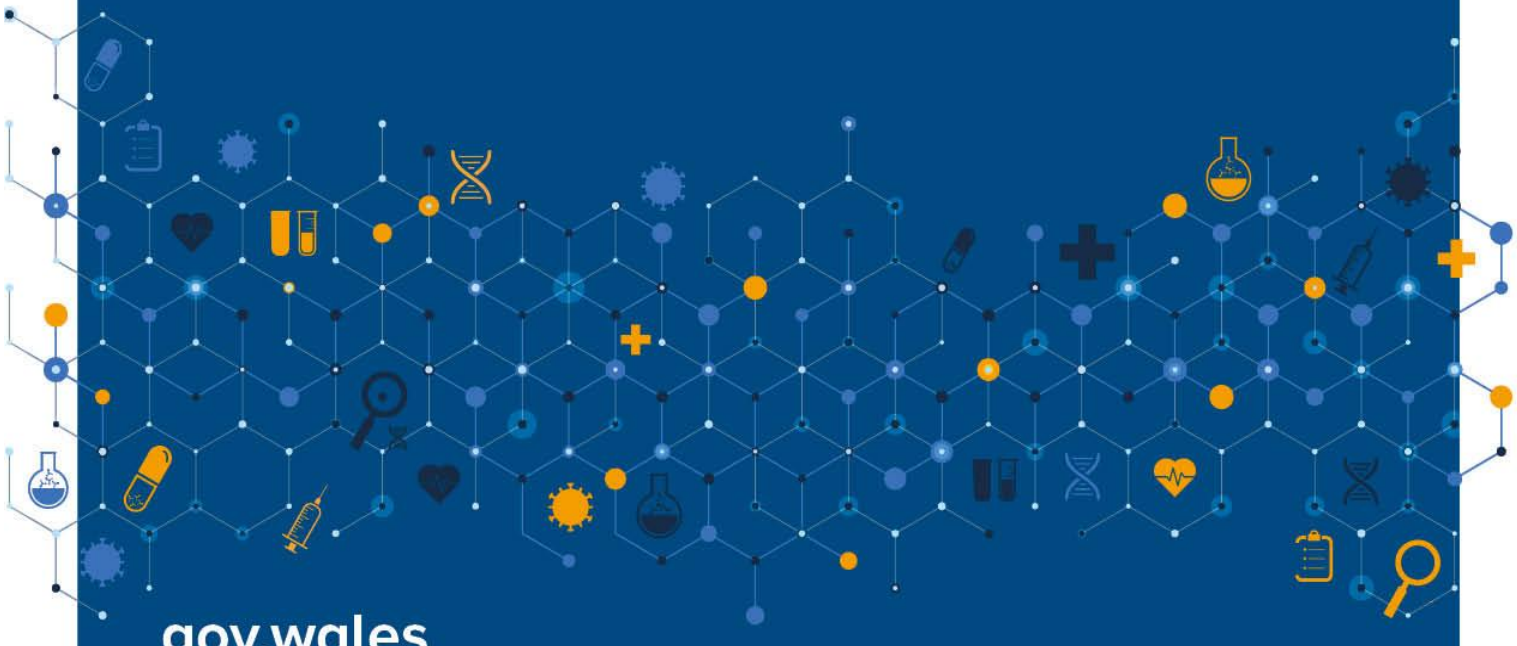
Llywodraeth Cymru
Welsh Government

# Science Evidence Advice (SEA)

# Summary of Advice
# 05 May 2023



gov.wales

**Top Line Summary**

- There is a slightly mixed picture of COVID-19 infections, which is not consistent across all indicators.
- Deaths related to COVID-19 are increasing.
- Case numbers are still too low in Wales to accurately determine the growth rate or advantage of XBB.1.16. Preliminary data suggest no immediate concerns at this stage.
- Influenza continues to be detected in Wales, although overall activity has decreased. UKHSA reports that influenza positivity remains low and stable. In Europe the percentage of influenza positivity decreased and it is below the epidemic threshold (10%).
- Avian influenza continues to be a risk, there is limited evidence that avian influenza virus is getting better at infecting humans or other mammals.
- RSV activity has decreased and it is currently at baseline levels.
- PHW report that iGAS notifications have increased slightly and case notifications of Scarlet fever are at baseline levels.

## 1. Wales COVID-19 Situation Update

- There is a slightly mixed picture of COVID-19 infections, which is not consistent across all indicators.
- Hospital bed occupancy of confirmed COVID-19 patients has been decreasing. Admissions to critical care wards based on the weekly number of confirmed cases have decreased.
- Deaths related to COVID-19 are increasing.
- Data from sequenced cases shows that XBB.1.5 is the most dominant variant in Wales accounting for 46.9% of cases.
- Case numbers are still too low in Wales to accurately determine the growth rate or advantage of XBB.1.16. Preliminary data suggest no immediate concerns at this stage.

### 1.1. Wastewater surveillance

Wastewater surveillance[1] suggests the overall SARS-CoV-2 viral load has increased across the country. However, the signal decreased at Cleddau and Pembrokeshire Coastal Rivers, and remained level at Clwyd, Conwy, Tawe to Cadoxton and Hafren Dyfrdwy.

Figure 1 - National (blue lines) and Regions (grey lines) wastewater signal for COVID-19 in Wales.

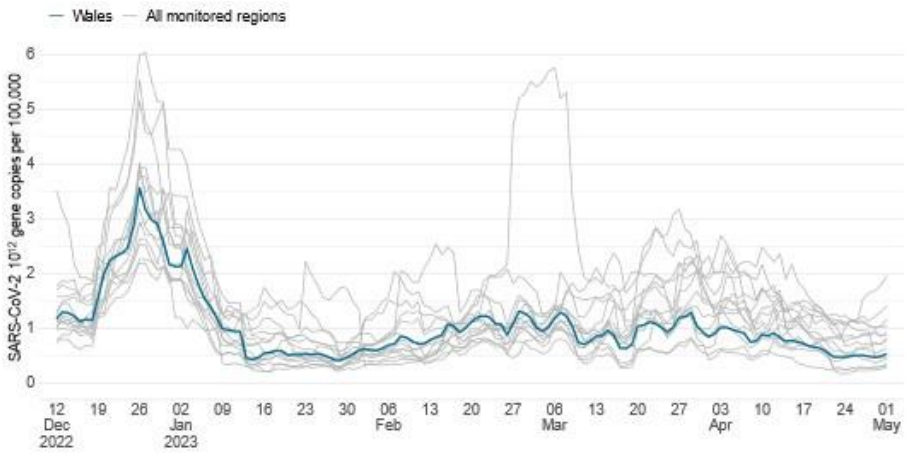
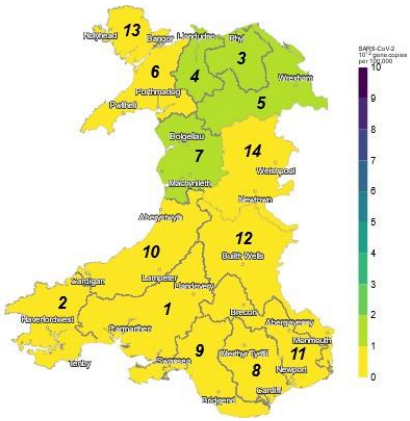



Figure 2 - National Heat Map showing Regional Mean Wastewater Signal




### 1.2. PHW Cases (PCR & LFD Testing)

PHW most recent epidemiological report from 03 April 2023 reports[2] a slightly mixed picture of COVID-19 infections. However, there is mainly a downward trend, but this is not consistent across all indicators.

PHW reports that confirmed PCR cases continue to remain generally stable, and the adjusted case episode rates (PCR +LFD episodes) have decreased slightly and remain at low levels.

Compared to the previous week, LFT positivity rate was 32.16% in week 16 and increased to 33.89% in week 17 (week ending 30 Apr). Incidence based on LFT testing was highest in the 40-59 age group.

### 1.3. Deaths

ONS published statistics on 3 May 2023 on provisional weekly deaths[3], including deaths involving COVID-19, for the week ending 21 April 2023. 30 deaths involving COVID-19 were registered in the latest week. This was 3.7% of all deaths and 7 more than the previous week.

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[1] Wastewater monitoring reports: coronavirus | GOV.WALES

[2] https://public.tableau.com/app/profile/public.health.wales.health.protection/viz/PHWVirologyDashboard-Reportsandnotes_16535581718100/Notesondatainterpretationandreports

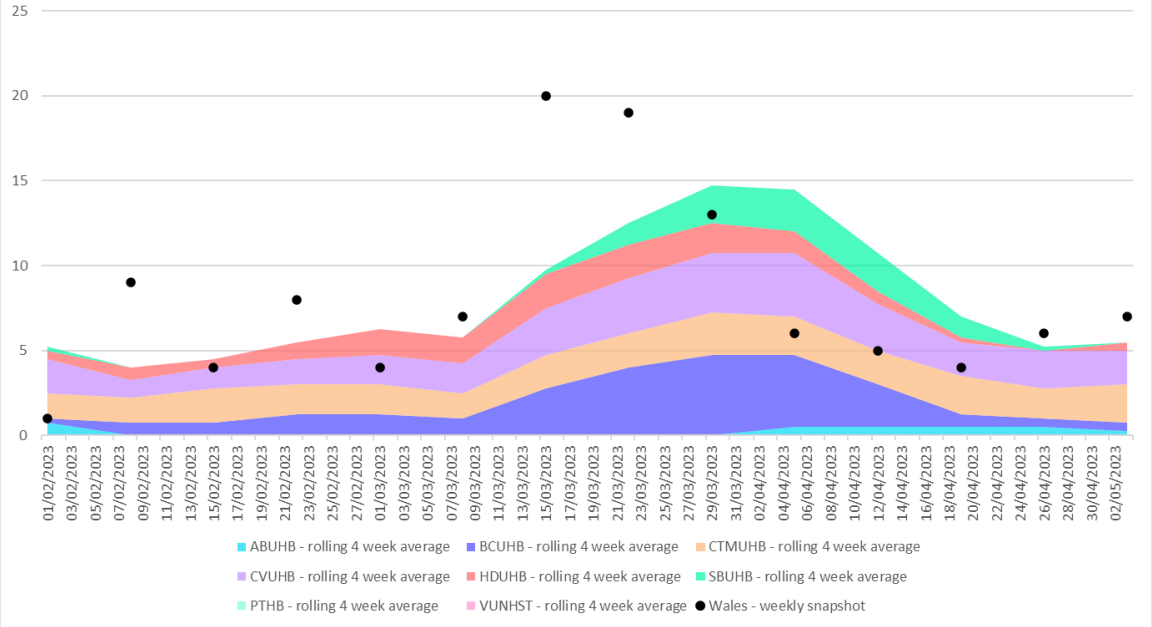
[3] Deaths registered weekly in England and Wales, provisional - Office for National Statistics (ons.gov.uk)

821 deaths from all causes were registered in the latest week. This was 243 more than the previous week and is 177 more than the five-year average for 2017-19 and 2021, 2022.

### 1.4. NHS

As of 3 May 2023, hospital admissions of suspected and confirmed COVID-19 positive patients were at 7 admissions. The data in included in this section has moved to a rolling 4-week average and weekly snapshot (Wednesday only data).

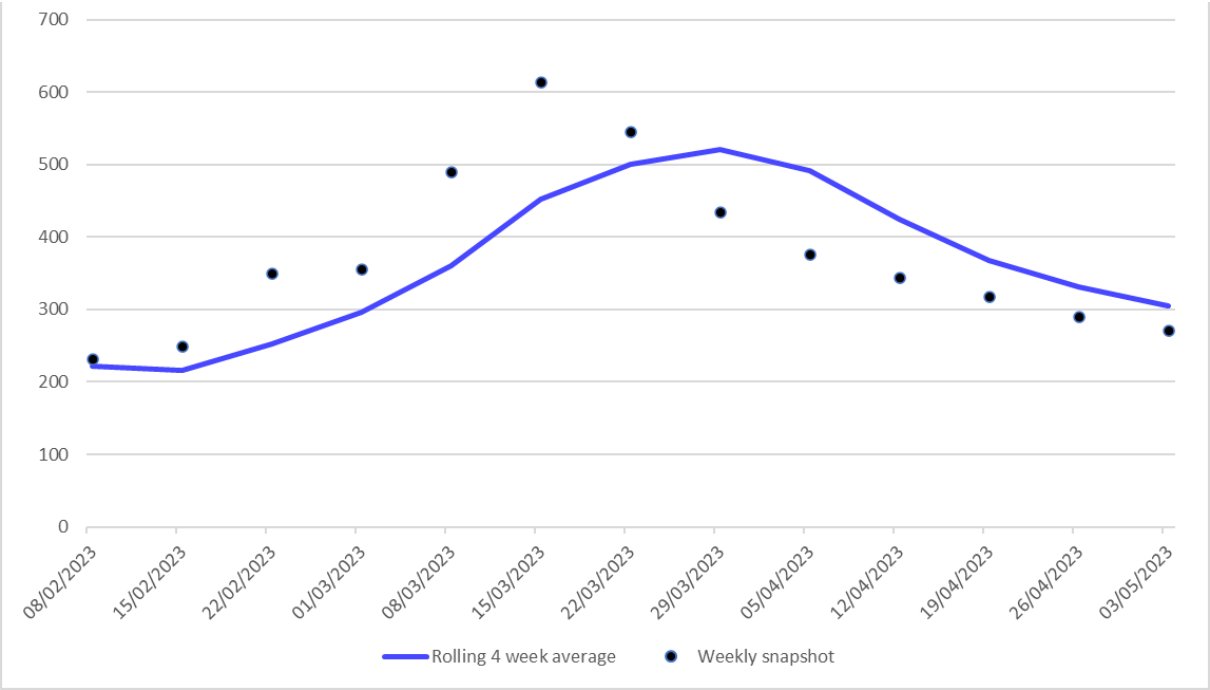
Figure 3 - Hospital admissions of suspected and confirmed COVID-19 positive patients.




As of 3 May 2023, the number of hospital bed occupancy of confirmed COVID-19 patients was 271 beds, a decrease from 290 beds reported on the previous Wednesday.

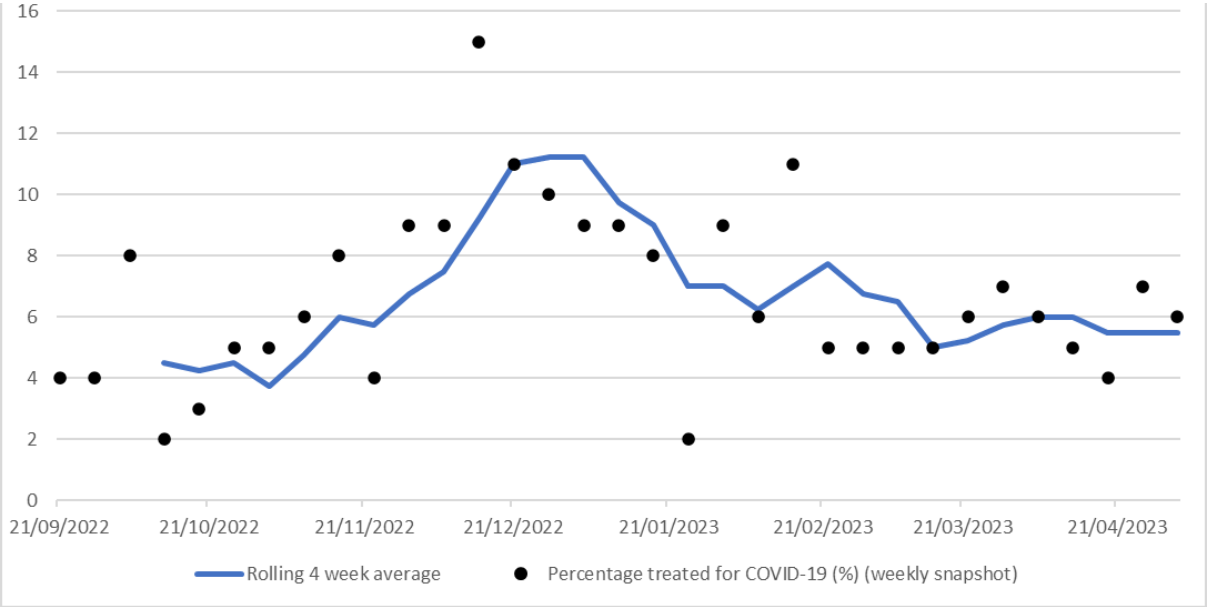
Hospital bed occupancy of confirmed COVID-19 patients had been increasing since early February but has been decreasing since the middle of March when there was a peak of 614 beds occupied.

Figure 4 - Average of hospital bed occupancy of confirmed COVID-19 patients




The proportion of patients in hospital[4] with COVID-19 who are being actively treated for COVID-19, as opposed to testing positive for COVID-19 but being primarily treated for other reasons, has been below 10% every reporting Wednesday in 2023, except for 15 February 2022 when this figure was 11%. More recent snapshots were lower - the snapshot taken on 26 April was 7% and the snapshot taken on 3 May 6%.

Figure 5 - Percentage of COVID-19 patients in acute hospitals actively treated for COVID-19 in Wales, StatsWales (%)




[4] statswales.gov.wales

## 1.5. Vaccines

The 2023 Spring COVID-19 booster vaccination programme is now under way. As of 27 April 2023, a total of 109,215 individuals had received a 2023 spring booster dose, equating to a percentage uptake of 25.76%.

COVID-19 2023 Spring booster vaccination coverage in eligible groups

| Eligibility group | Wales Resident (n) | Spring Booster vaccinated (n) | Spring Booster vaccinated (%) |
|---|---|---|---|
| Immunosuppressed | 105,104 | 9,191 | 8.74 |
| Care home residents | 18,310 | 12,170 | 66.47 |
| 75 years and older | 343,770 | 106,721 | 31.04 |
| All Eligible | 423,916 | 109,215 | 25.76 |

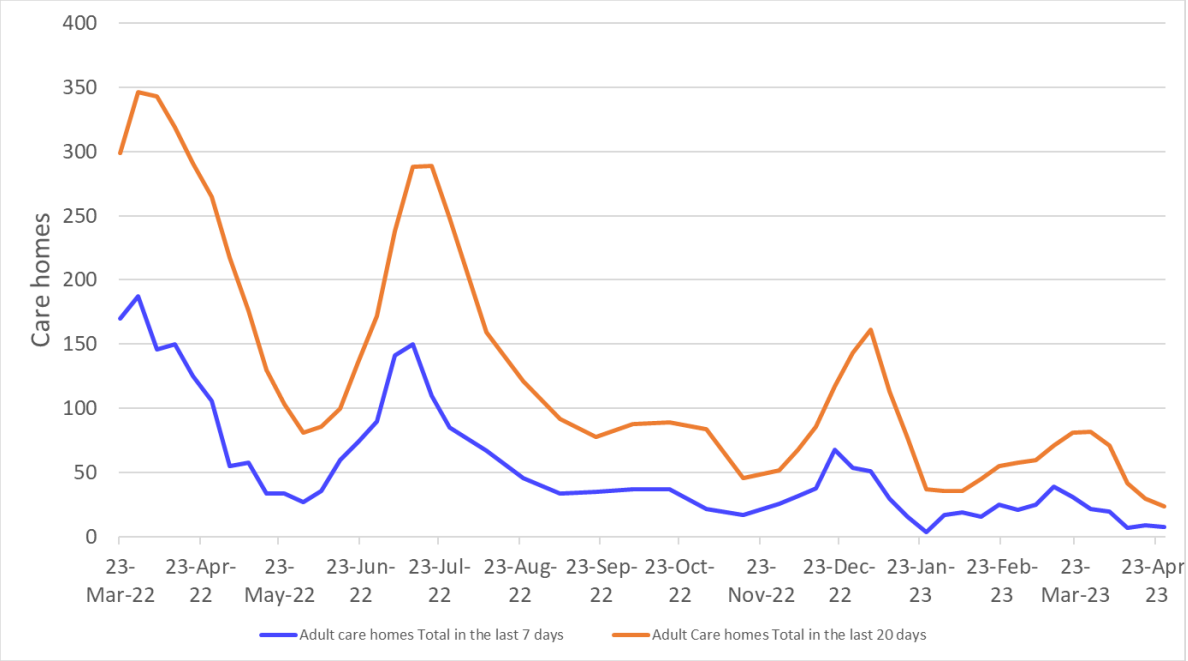
Source: Public Health Wales

Note: data extracted at 8am on 27/04/2023. In this table groups are not mutually exclusive. Individuals are counted in all the eligibility groups for which they meet the criteria. Both Wales residents and Spring Booster vaccinated totals exclude those who have died.

### 1.6. Care homes

As of 26 April 2023, the number of adult care homes in Wales that have notified CIW [5] of one or more confirmed cases of COVID-19 in staff or residents in the last 7 days has decreased since the previous week, to 8 notifying, from 9 notifying. This figure for the last 20 days is at 24 (period ending 26 April 2023), from 30 (period ending 19 April 2023). In Wales there are 1,016 adult care homes in total.

Figure 6 - Number of adult care homes which have notified CIW of one or more confirmed cases of COVID-19 in staff or residents.




As of 26 April 2023, the number of notifications to CIW of deaths of adult care home residents involving COVID-19 [6] (both confirmed and suspected) in the last 7 days has remained the same, at 1 death reported.

In total, CIW has been notified of 2,329 care home resident deaths with suspected or confirmed COVID-19 between 1 March 2020 and 26 April 2023. This makes up 11% of all adult care home resident reported deaths (21,527) during this period.

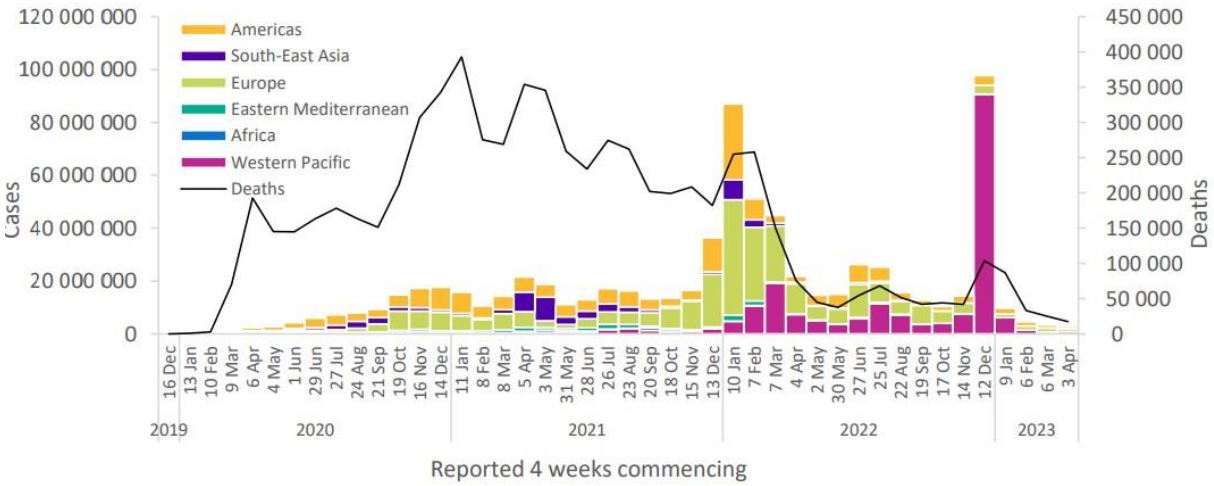
[5] statswales.gov.wales
[6] statswales.gov.wales

## 1.7. International overview – World Health Organisation update

As of 04 May 2023, WHO reports[7] that globally, nearly 2.8 million new cases and over 17 000 deaths were reported in the last 28 days (3 to 30 April 2023), a decrease of 17% and 30%, respectively, compared to the previous 28 days (6 March to 2 April 2023).

The picture is mixed at the regional level, with increases in reported cases and deaths seen in the South-East Asia, Eastern Mediterranean, and Western Pacific regions, and decreases in other regions. As of 30 April 2023, over 765 million confirmed cases and over 6.9 million deaths have been reported globally.

Figure 7 - COVID-19 cases reported weekly by WHO Region, and global deaths, as of 30 April 2023




Source: *WHO Weekly Epidemiological Update on COVID-19*

The highest numbers of new 28-day cases were reported from the United States of America (392 480 new cases; -37%), the Republic of Korea (330 509 new cases; +22%), Japan (251 158 new cases; +24%), India (222 784 new cases; +540%), and France (197

[7] Weekly epidemiological update on COVID-19 - 8 March 2023 (who.int)

190 new cases; +2%). The highest numbers of new 28-day deaths were reported from the United States of America (5263 new deaths; -29%), Brazil (1255 new deaths; +30%), the Russian Federation (993 new deaths; -2%), France (871 new deaths; +39%), and the Islamic Republic of Iran (762 new deaths; +82%).

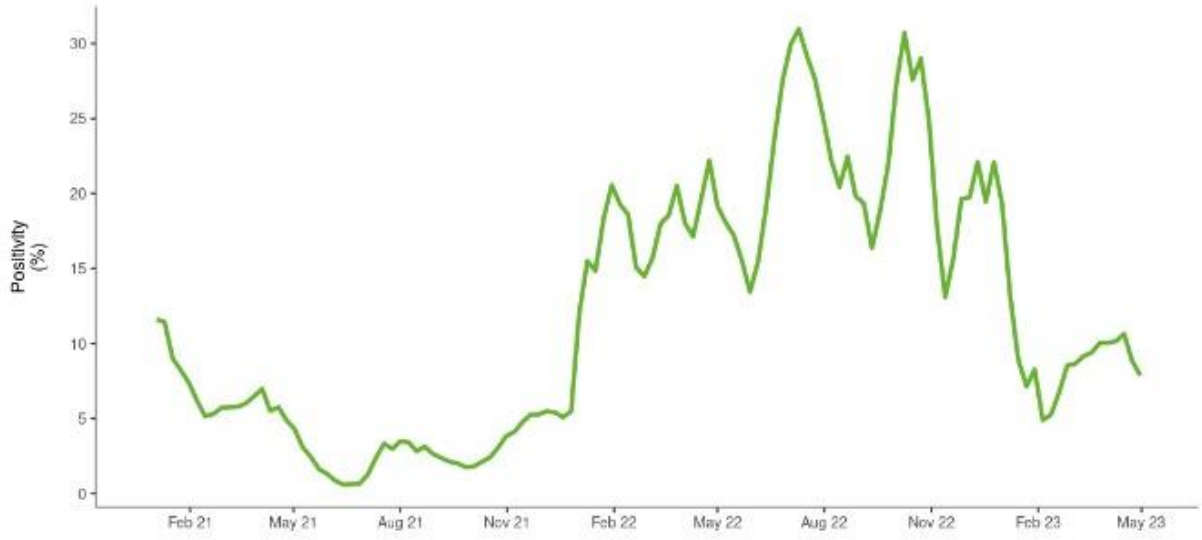
### 1.8. European Centre for Disease Prevention and Control (ECDC)

As of 05 May 2023, ECDC reports[8] that decreasing or stable trends were observed in EU/EEA indicators in all age groups, a continuation of the pattern observed in the last month. There were 531 deaths reported from 18 countries in week 17 (ending 20 April 2023).

The epidemiological picture in the EU/EEA from the last 12 months continues to be characterised by periodic waves of infection approximately every 2–3 months. There has been a general downward trend in the height of the associated peaks in reported cases, hospitalisations, ICU admissions, and deaths in this period.

A small number of countries reported increases in these indicators, including four countries with increasing death rates in some age groups. Among 16 countries with data on hospital or ICU admissions/occupancy up to week 17, only one reported an increasing trend in at least one of these indicators compared with the previous week. All reported increases were recent (of 1–2 weeks' duration) and values of indicators remain relatively low.

Figure 8 - EU/EEA weekly test positivity, 05 May 2023



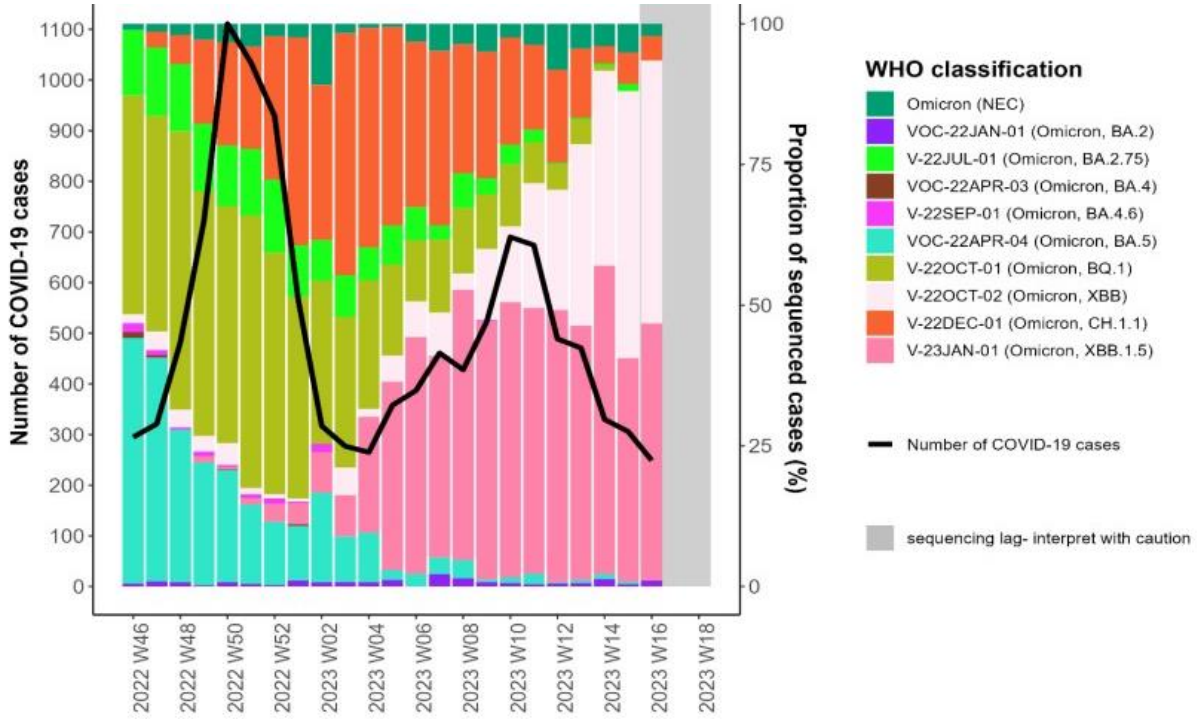

Data source: Weekly COVID-19 country overview (europa.eu)

[8] COVID-19 situation updates (europa.eu)

### 1.9. Variant of Concern update

As of 03 May 2023, PHW report [9] that in the last four reporting weeks, V-22DEC-01 (Omicron, XBB.1.5) has been the most dominant variant in Wales, accounting for 46.9% of all sequenced cases.

Figure 9 – Proportion of sequenced cases typed as each variant in the past six months in Wales (Data as of 02 May 2023)




Source: Public Health Wales COVID-19 genomic surveillance

There has been a rapid rise of XBB.1.16 in India, experiencing the highest level of infection since August 2022, accounting for >50% of cases. The cause for the rise in XBB.1.16 in India is thought to be attributed to higher pathogenicity, low booster rates, duration since their last wave in August 2022 and limited exposure to XBB.1.5.

Case numbers are still too low in Wales to accurately determine the growth rate or advantage of XBB.1.16.

Numbers of the XBB.1.16 variant remain low in the UK and preliminary data suggest no immediate concerns at this stage.

As of 02 May 2023, PHW reports that there have been 57,114 cases of VOC-21NOV-01 (Omicron, BA.1), 29,302 cases of VOC-22JAN-01 (Omicron, BA.2), 1,192 cases of VOC22APR-03 (Omicron, BA.4), 7,458 cases of VOC-22APR-04 (Omicron, BA.5), 2,072 cases of V-22OCT-01 (Omicron, BQ.1), 1,331 cases of V-22DEC-01

9 https://public.tableau.com/app/profile/public.health.wales.health.protection/viz/PHWVirologyDashboard-Reportsandnotes_16535581718100/Notesondatainterpretationandreports

(Omicron, CH.1.1) and 1,706 cases of V-23JAN-01 (Omicron XBB.1.5) confirmed in Wales.

As of 17 April 2023, the initial WHO risk assessment[10] reports that evidence does not suggest that XBB.1.16 has additional public health risk relative to XBB.1.5 and the other currently circulating Omicron descendent lineages.

XBB.1.16 may become dominant in some countries and cause a rise in case incidence due to its growth advantage and immune escape characteristics.

Reports from India and other countries illustrate that no early signals of increases in severity have been observed. As XBB.1.16 has spread to 33 countries, disease severity is being monitored carefully.

Due to this variant's growing international prevalence, XBB.1.16 has been designated as a variant (V-23APR-01) by the UK Health Security Agency as of the 19th of April.

As of 05 May 2023, ECDC reports[11] that among the six countries with an adequate volume of sequencing or genotyping for weeks 15–16 (10 April to 23 April 2023), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 81.2% (62.7–93.9% from five countries) for XBB.1.5, 10.8% (2.1–83.0% from six countries) for BA.2.75, 3.6% (1.6–16.7% from five countries) for BQ.1, 1.1% (0.7–1.4% from four countries) for BA.2, 1.0% (0.2–4.3% from five countries) for XBB, and 0.8% (0.1–16.3%, 77 detections from six countries) for BA.5.

[10] https://www.who.int/docs/default-source/coronaviruse/21042023xbb.1.16ra-v2.pdf?sfvrsn=84577350_1
[11] https://www.ecdc.europa.eu/en/covid-19/country-overviews

## 2. COVID-19 Medium Term Projections

- The most recent medium-term projections show a plateau in the coming weeks. However, the numbers for admitted to ward projections do show a small uptick in numbers in early March with a steeper decline than the other projections, before reaching a plateau.

Swansea University (SU) regularly produces medium-term projections (MTPs) for Wales. The SU projections are also combined with other models to go into a consensus MTP for admissions which is agreed every two weeks by the UKHSA Epidemiological Modelling Review Group (EMRG), which has taken over from COVID-M-O in agreeing these MTPs.

The SU projections are typically more up to date but may be less robust as they are based on one model only. Both MTPs are based on projecting forward from current data and do not explicitly factor in policy changes, changes in testing, changes in behaviour, or rapid changes in vaccinations.

These MTPs for COVID-19 are not forecasts or predictions. They represent a scenario in which the trajectory of the epidemic continues to follow the trends that were seen in data available at the time.

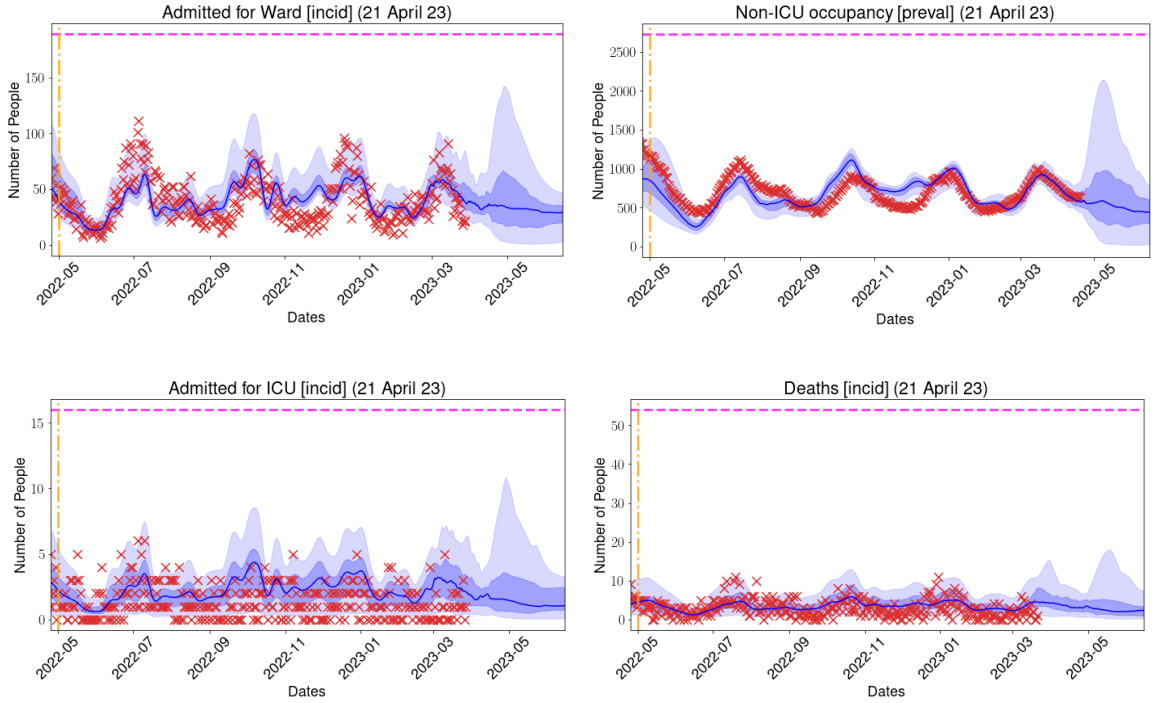
### 2.1. Swansea University MTPs, data to 21 April

In the charts below, red crosses represent actual Omicron data, which the model is fitted to fit is weighted to data points after the vertical orange line to represent the characteristics of emergent strains.

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 The pink dotted line represents pre-Omicron peaks.

This set of projections is based on data up to 21 April and shows indicators have reached a peak and are continuing to follow a forecasted slow decline and are showing signs of starting to taper off. However, there is significant uncertainty around the median estimates.

Figure 10 - Swansea University Medium Term Projections



## 3. Influenza Situation Update

- PHW report that influenza continues to be detected in Wales, although overall activity has decreased.
- UKHSA reports that influenza positivity remained low and stable.
- In Europe the percentage of influenza positivity decreased below the epidemic threshold.
- Avian influenza continues to be a threat and whilst high levels of transmission in wild birds present a constant risk, there is limited evidence that avian influenza virus is getting better at infecting humans or other mammals. Additional research and development is required to understand the impact of human to human transmission of H5N1 is required.

### 3.1. Weekly Influenza and Acute Respiratory Infection Report – PHW

As of 03 May 2023, PHW report[12] 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. This is an increase compared to the previous Week (1.8 consultations per 100,000).

The Sentinel GP consultation rate for Acute Respiratory Infections (ARI) was 152.9 per 100,000 practice population during Week 17. 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.

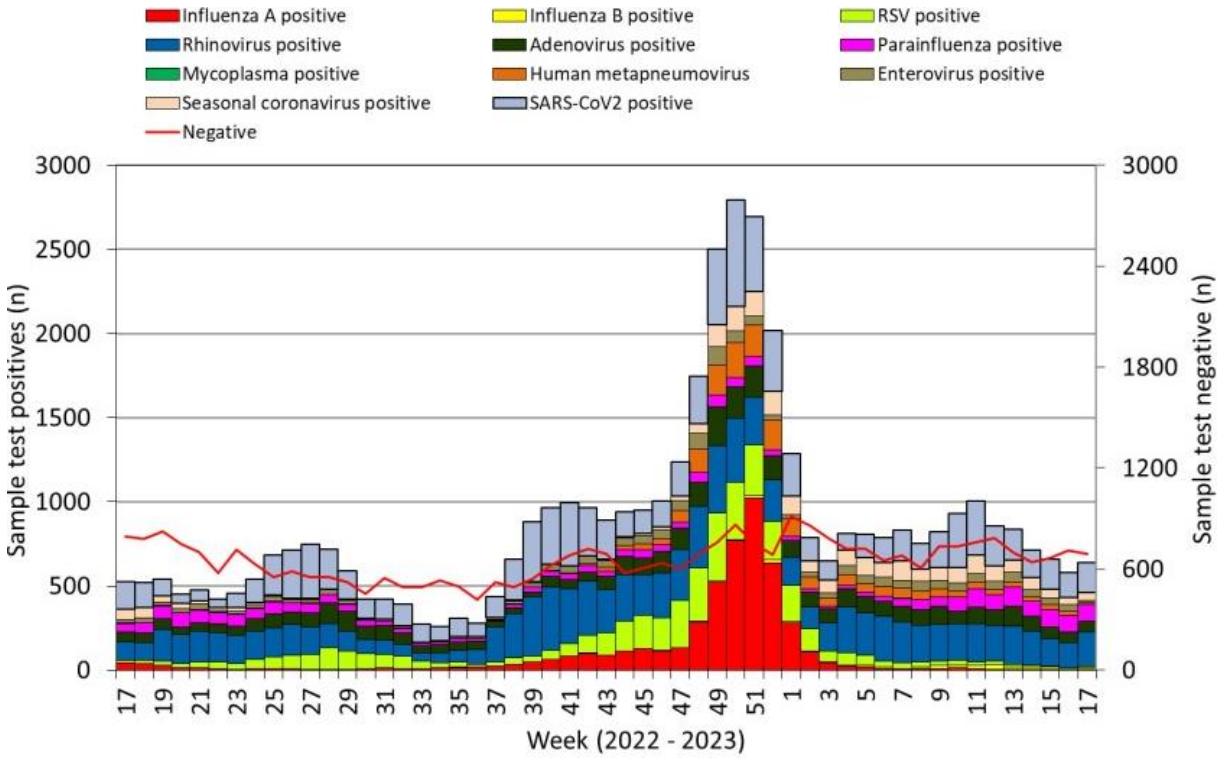
The percentage of calls to NHS Direct Wales which were ‘influenza-related’ (cold/flu, cough, fever, headache, and sore throat) during Week 17 decreased to 16.2%.

[12] Weekly Influenza and Acute Respiratory Infection Report - Public Health Wales (nhs.wales)

Figure 11 - Uptake of influenza immunisations in GP Practice patients in Wales

| 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% |

Figure 12 - Specimens submitted for virological testing for hospital patients and non-sentinel GPs




Data Source: PHW Weekly Influenza & Acute Respiratory Infection Surveillance

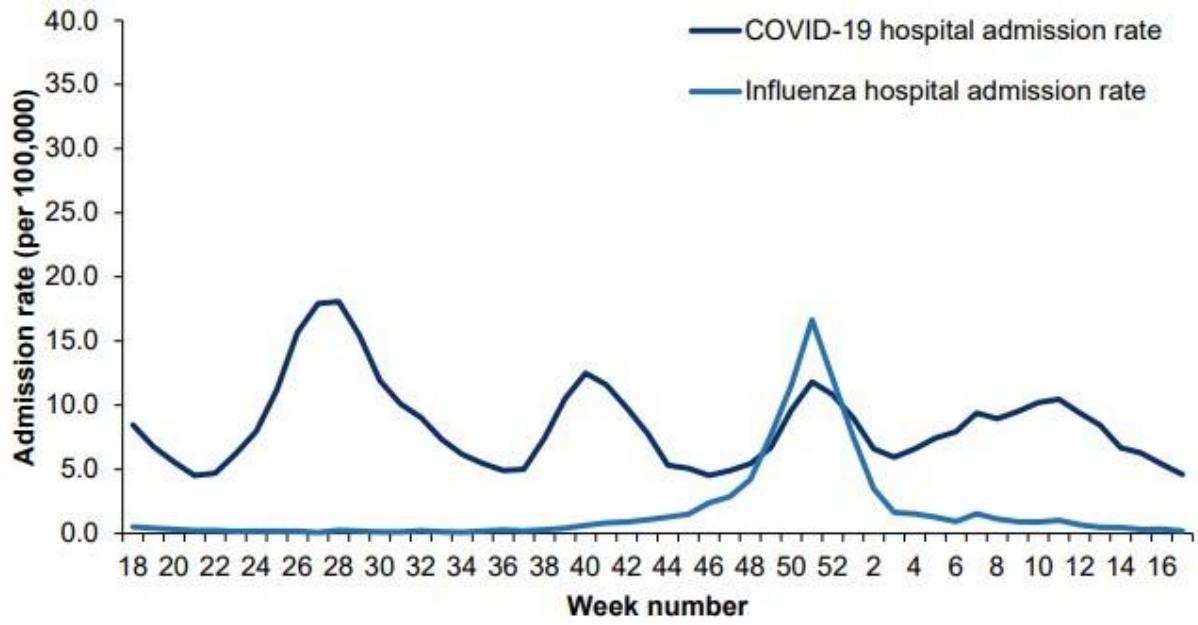
### 3.2. UKHSA Weekly national influenza surveillance report

As of 4 May 2023, UKHSA reports[13], that influenza positivity remained low and stable at 1.0% in week 17 compared with 1.1% in week 16. Highest positivity was seen in those aged 15 to 44 years at 2.6%. Influenza B positivity remained low at 0.9% in week 17 compared with 0.8% in week 16. Through primary care surveillance, the influenza-like-illness consultations indicator remained stable in week 17 compared with the previous week and was within the baseline activity level range.

There was one confirmed influenza outbreak reported in week 17 in England. The influenza hospital admission rate decreased in week 17 compared with the previous week and is within the baseline range of activity. By UKHSA Centre, the highest hospitalisation rate was observed in the London region. By age group, the highest hospital admission rate for influenza was in adults aged 85 years and older. Influenza ICU admissions remained stable in week 17 and remained within the baseline range of activity. Emergency department attendances for influenza-like illness decreased nationally.

[13] https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2022-to-2023-season

Figure 13 - Weekly overall hospital admission rates of new COVID-19 and influenza positive cases per 100k population, England




### 3.3. Joint ECDC WHO/Europe influenza update

As of week 17 (24 April – 30 April 2023), Flu News Europe reports[14] the percentage of all sentinel primary care specimens from patients presenting with ILI or ARI symptoms that tested positive for an influenza virus decreased to 7% from 9% in the previous week, which is below the epidemic threshold set at 10%.

Only one country or area reported medium and 23 of 42 countries or areas reported low intensity. Nine of 41 countries across the Region reported widespread activity.

Ten countries with more than ten specimens tested reported sentinel primary care specimen influenza virus positivity above the 10% epidemic threshold.

### 3.4. Avian Influenza

UKHSA works with partners including the Animal and Plant Health Agency (APHA) to assess the risk to human health from avian influenza and improve the understanding of the virus. While the very high levels of transmission in wild birds present a constant risk, there is no evidence so far that the virus is getting better at infecting humans or other mammals.

WHO reports[15] 21 April to 27 April 2023, no new cases of human infection with avian influenza A(H5N1) virus were reported to WHO in the Western Pacific Region.

As of 24 April 2023, a total of 244 cases of human infection with avian influenza A(H5N1) virus have been reported from four countries within the Western Pacific Region since January 2003. Of these cases, 136 were fatal, resulting in a case fatality rate (CFR) of 56%. The most recent cases in the WPR were reported from

[14] Flu News Europe | Home
[15] https://www.who.int/westernpacific/emergencies/surveillance/avian-influenza

Cambodia on 23 and 24 February 2023, in an 11-year-old girl who died and her father who survived.

Figure 14 - World Health Organisation cumulative number of laboratory-confirmed human cases and deaths of influenza A(H5N1) virus infections.

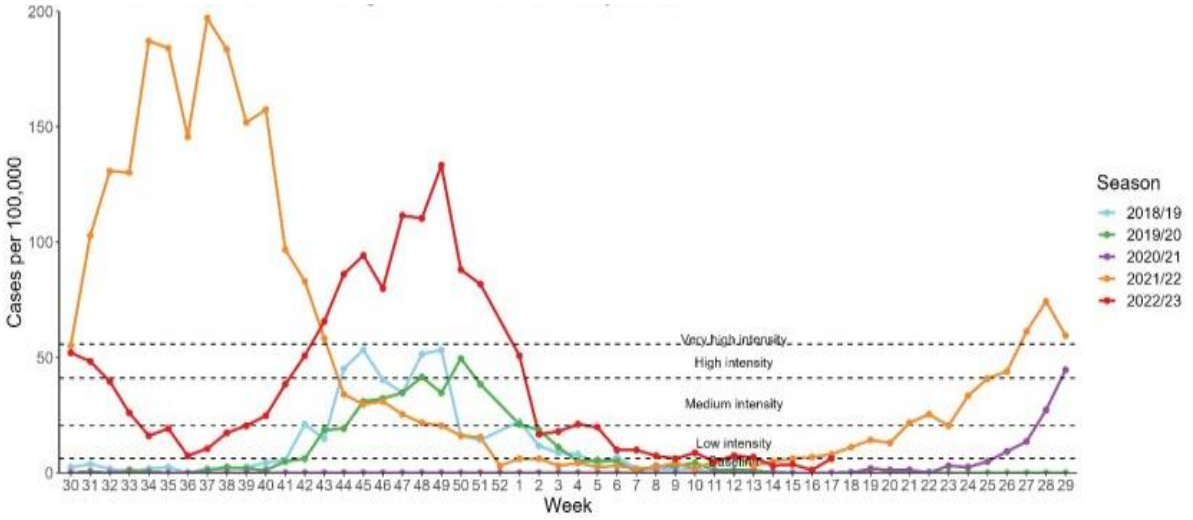
| Country | 2003-2009 | | 2010-2014 | | 2015 | | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | | 2021 | | 2022 | | 2023 | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D | C | D |
| Cambodia | 9 | 7 | 47 | 30 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 1 | 58 | 38 |
| China | 38 | 25 | 9 | 5 | 6 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 55 | 32 |
| Lao PDR | 2 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 2 |
| Viet Nam | 112 | 57 | 15 | 7 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 128 | 64 |
| **Total** | **161** | **91** | **71** | **42** | **6** | **1** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **0** | **1** | **0** | **0** | **0** | **2** | **1** | **3** | **1** | **244** | **136** |

## 4. Respiratory Syncytial Virus (RSV) and Invasive Group A streptococcal Situation

- PHW report that RSV incidence in children under five years of age has decreased and it is currently at baseline levels.
- UKHSA reports that the overall positivity for RSV remained low.
- PHW report that iGAS notifications have increased slightly and case notifications of Scarlet fever are at baseline levels.

As of 03 May 2023, PHW report that RSV incidence in children under five years of age has decreased from peak levels seen in December and is currently at baseline levels.

Figure 15 - RSV Incidence rate in those aged under 5 in Wales, by week




As of 04 May 2023, UKHSA reports[16] the overall positivity for RSV remained low at 0.3%, with the highest positivity in those aged under 5 years at 1.7%. In week 17, the overall hospital admission rate for RSV remained low at 0.03 per 100,000. Emergency department attendances for acute bronchiolitis remained stable nationally.

### 4.1. Incidence data for Strep A and Scarlet Fever

As of 30 April 2023, PHW report an increase in the rolling 3 week average of iGAS cases, with case numbers in April similar to (just slightly lower than) in January. The cases seem to mainly be in the older age groups with a few sporadic cases in the 1-4years age group. Scarlet fever notifications are at baseline levels.

[16] National flu and COVID-19 surveillance reports: 2022 to 2023 season - GOV.UK (www.gov.uk)

Figure 16 - PHW Scarlet Fever Notifications by year, 30 April 2023

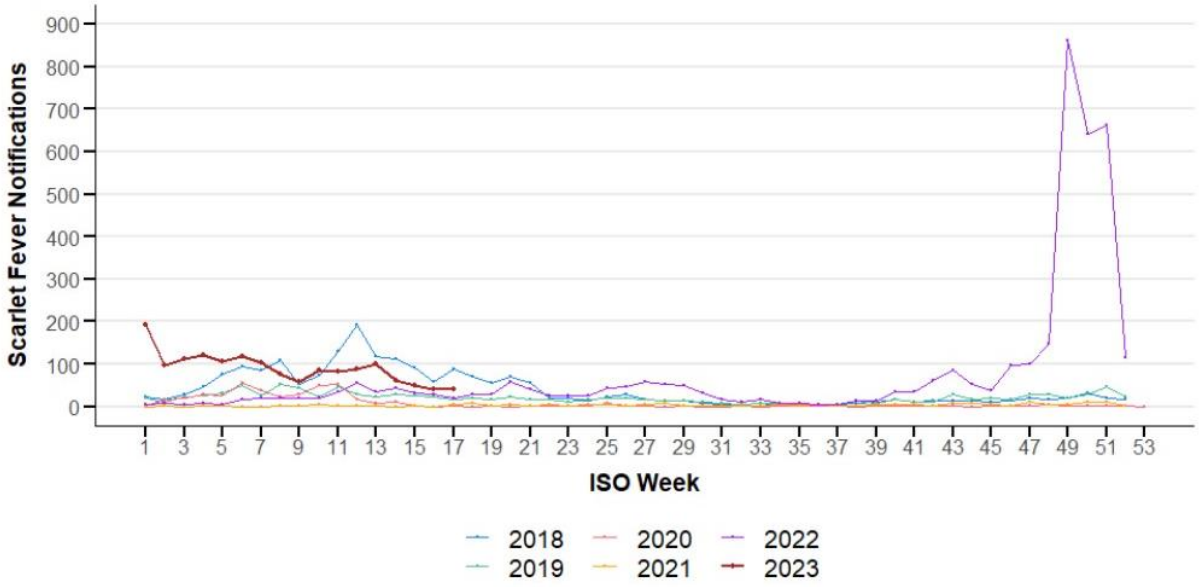



Figure 17 - PHW Lab Confirmed Invasive group A streptococcal infections, 30 April 2023