

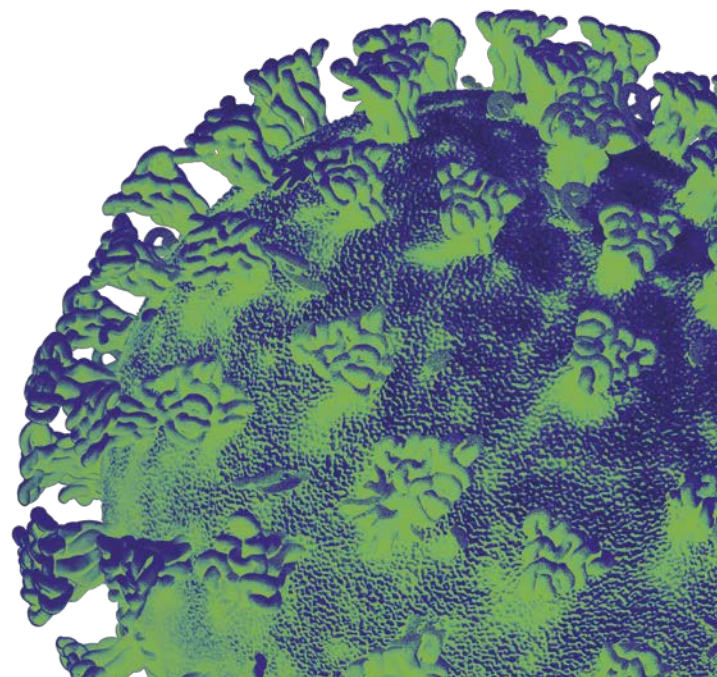
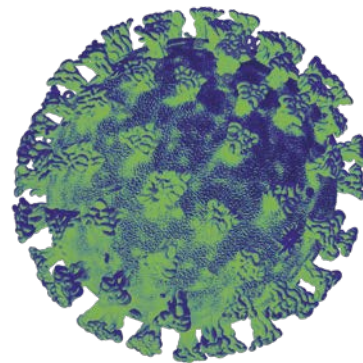
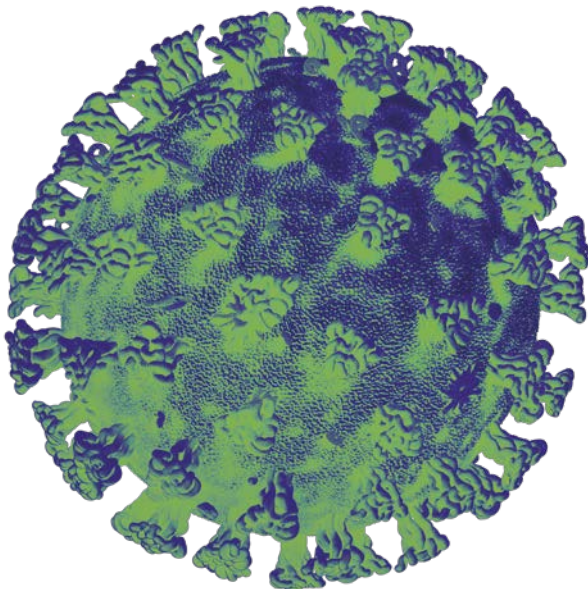


Llywodraeth Cymru  
Welsh Government

# Science Evidence Advice (SEA)

## Summary of Advice

21 April 2023



### Top Line Summary

- Levels of COVID-19 infections are generally stable; however, this is not consistent across all indicators.
- Deaths related to COVID-19 remain at low levels in Wales.
- Numbers of the XBB.1.16 variant remain low in the UK and preliminary data suggest no immediate concerns at this stage. The initial WHO XBB.1.16 risk assessment is expected to be published in the coming days.
- Influenza continues to be confirmed 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 returned at 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.
- Numbers of invasive Group A streptococcal (Strep A) infections have decreased to levels that are comparable to previous years.

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## 1. Wales COVID-19 Situation Update

- Levels of COVID-19 infections are generally stable; however, this 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 remain at low levels in Wales.
- Data from sequenced cases shows that XBB.1.5 is the most dominant variant in Wales accounting for 48.5% of cases.
- Numbers of the XBB.1.16 variant remain low in the UK and preliminary data suggest no immediate concerns at this stage. The initial WHO XBB.1.16 risk assessment is expected to be published in the coming days.

## 1.1. Wastewater surveillance

[Wastewater surveillance](#)<sup>1</sup> suggests the overall SARS-CoV-2 viral load has decreased across the country. However, the signal increased at Dee, Teifi and North Ceredigion and Usk, and remained level at Llŷn and Eryri and Wye.

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

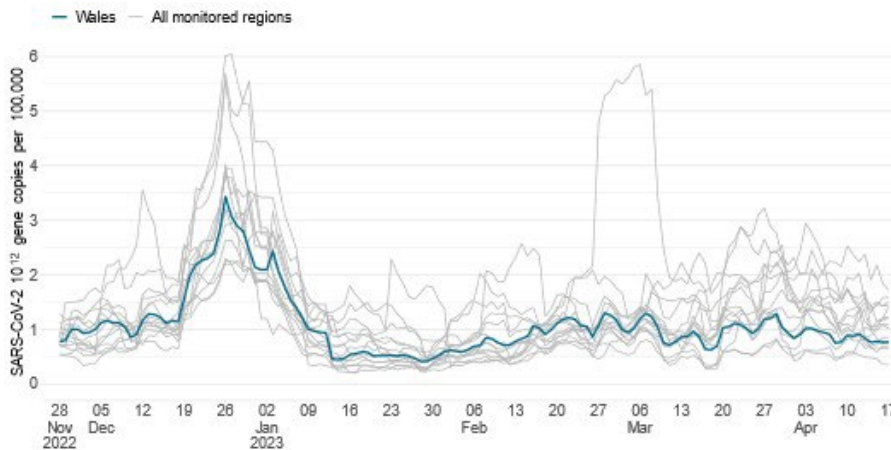
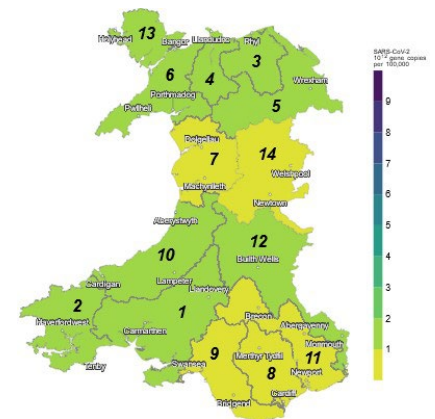


Figure 2 - National Heat Map showing Regional Mean Wastewater Signal



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

PHW most recent epidemiological report from 19 April 2023 [reports](#)<sup>2</sup> that there is a slightly mixed picture of COVID-19 infections. Some parameters have improved compared to the previous week in Wales, however, this is not consistent across all indicators.

PHW reports that confirmed PCR cases continue to remain generally stable, however there is a slight increase in those aged over 80.

The adjusted case episode rates (PCR +LFD episodes) are relatively stable and remain at low levels.

Compared to the previous week, LFT positivity rate was 33.20% in week 14 and increased to 35.71% in week 15. This increase was primarily seen in those aged less than 40. Incidence based on LFT testing was highest in the 40-59 age group.

## 1.3. Deaths

ONS published statistics on 18 April on [provisional weekly deaths](#)<sup>3</sup>, including deaths involving COVID-19, for the week ending 7 April 2023. The number of deaths registered in the weeks ending 7 April 2023 and 31 March will have been impacted by the bank holiday closures of registrations offices. The five-year average

<sup>1</sup> [Wastewater monitoring reports: coronavirus | GOV.WALES](#)

<sup>2</sup>

[https://public.tableau.com/app/profile/public.health.wales.health.protection/viz/PHWVirologyDashboard-Reportsandnotes\\_16535581718100/Notesondatainterpretationandreports](https://public.tableau.com/app/profile/public.health.wales.health.protection/viz/PHWVirologyDashboard-Reportsandnotes_16535581718100/Notesondatainterpretationandreports)

<sup>3</sup> [Deaths registered weekly in England and Wales, provisional - Office for National Statistics \(ons.gov.uk\)](#)

comparability will also have been impacted as the bank holidays do not occur in the same week every year.

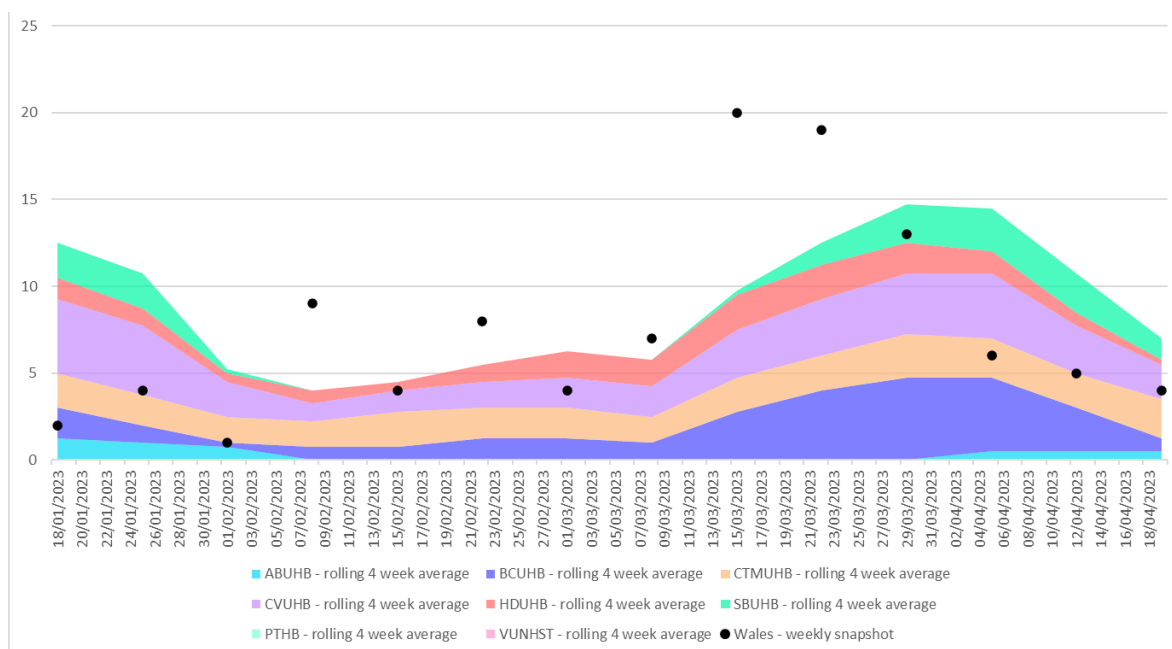
28 deaths involving COVID-19 were registered in the latest week. This was 4.5% of all deaths and 7 fewer than the previous week.

616 deaths from all causes were registered in the latest week. This was 92 fewer than the previous week and is 39 fewer than the five-year average for 2017-19 and 2021, 2022.

**1.4. NHS**

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

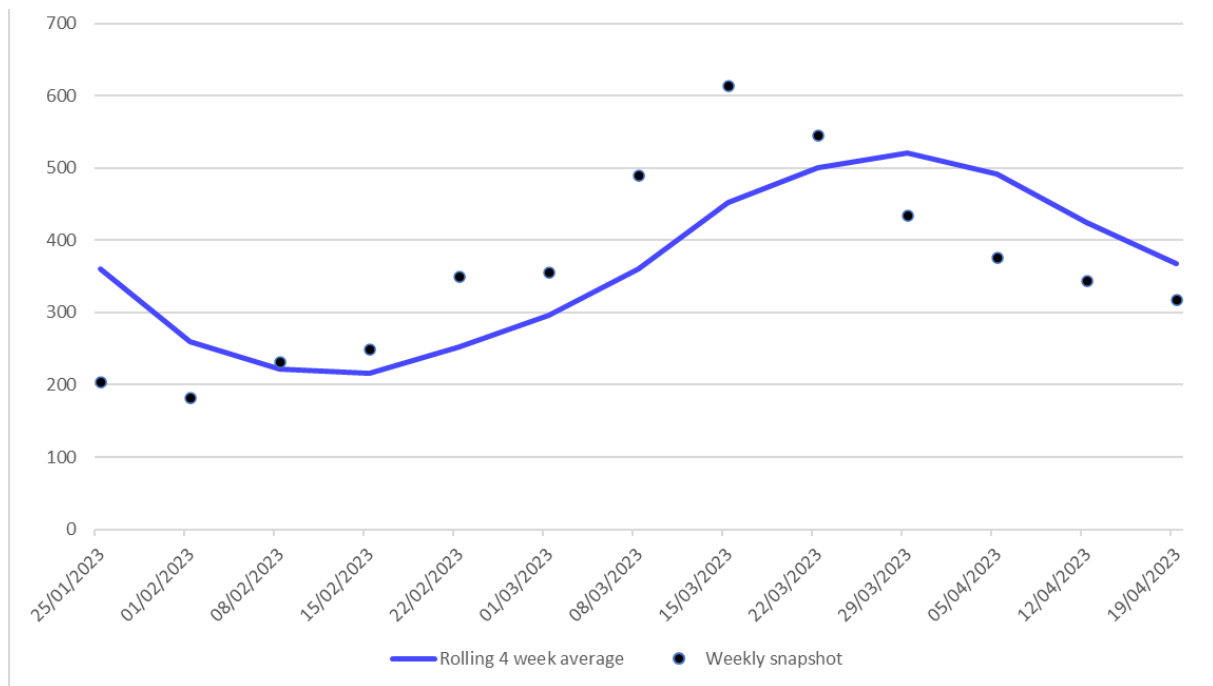
Figure 3 - Hospital admissions of suspected and confirmed COVID-19 positive patients.



As of 19 April 2023, the number of hospital bed occupancy of confirmed COVID-19 patients was 318 beds, a decrease from 344 beds reported on the previous Wednesday.

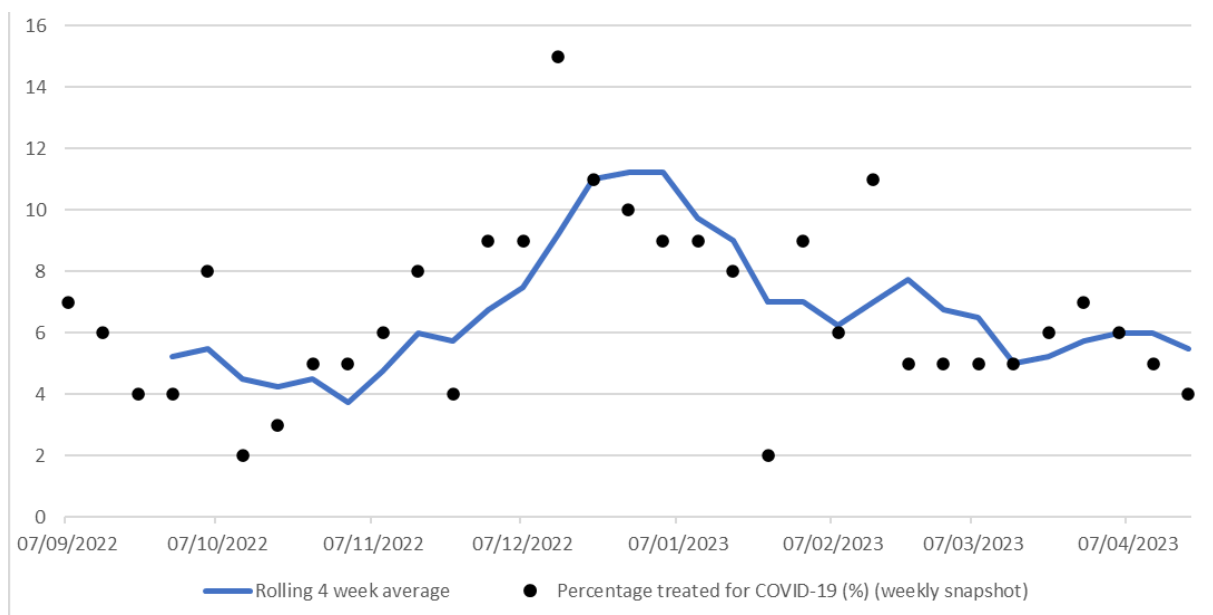
Hospital bed occupancy of confirmed COVID-19 patients had been increasing since early February, but has started decreasing since the middle of March when there was a peak of 614 beds occupied.

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



The proportion [of patients in hospital](#)<sup>4</sup> 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 12 April was 5% and the snapshot taken on 19 April 4%.

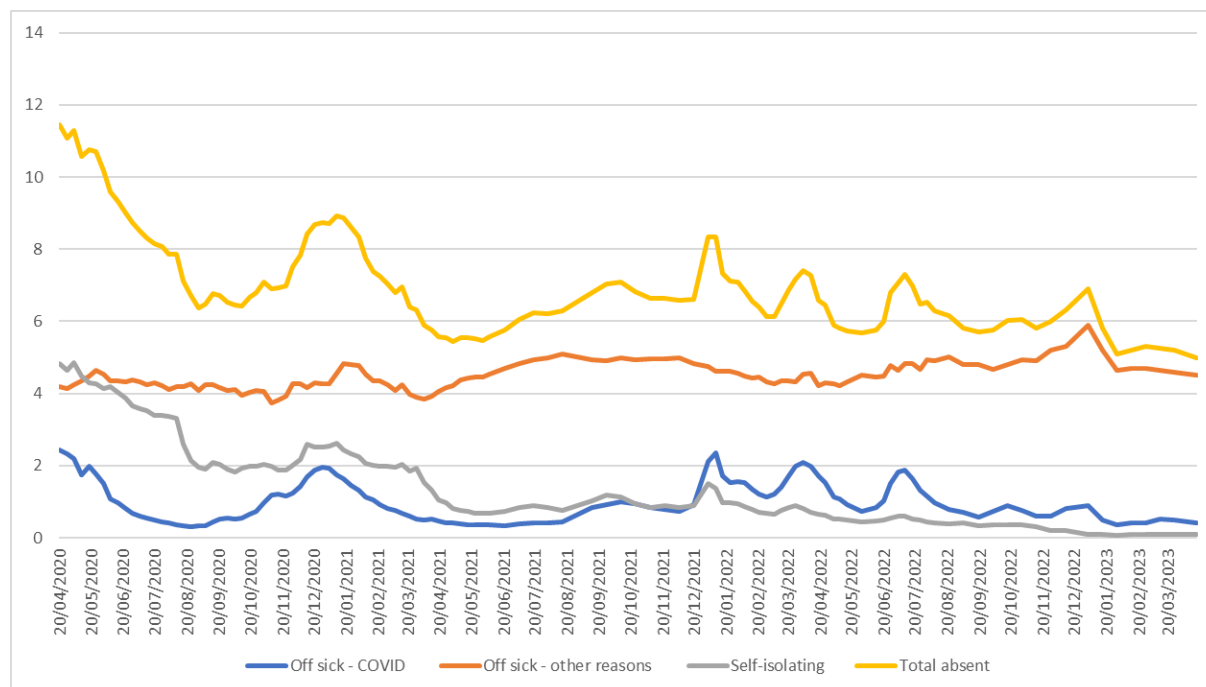
Figure 5 - Percentage of COVID-19 patients in acute hospitals actively treated for COVID-19 in Wales, StatsWales (%)



<sup>4</sup> [statswales.gov.wales](https://statswales.gov.wales)

As of 17 April 2023, [NHS staff absence due to self-isolation](#)<sup>5</sup> has remained the same as the period ending 27 March 2023, at 0.1%. Absence due to COVID-19 sickness has decreased to 0.4% from 0.5%.

Figure 6 - NHS staff absence and self-isolation



<sup>5</sup> [stats.wales.gov.wales](https://stats.wales.gov.wales)



## 1.5. Vaccines

The 2023 Spring COVID-19 booster vaccination programme is now under way. As of 13 April 2023, a total of 33,073 individuals had received a 2023 spring booster dose, equating to a percentage uptake of 7.78%.

### COVID-19 2023 Spring booster vaccination coverage in eligible groups

Risk group	Wales Resident (n)	Spring Booster vaccinated (n)	Spring Booster vaccinated (%)
Immunosuppressed	105,385	3,560	3.38
Care home residents	17,943	8,452	47.10
75 years and older	344,743	31,723	9.20
All Eligible	424,909	33,073	7.78

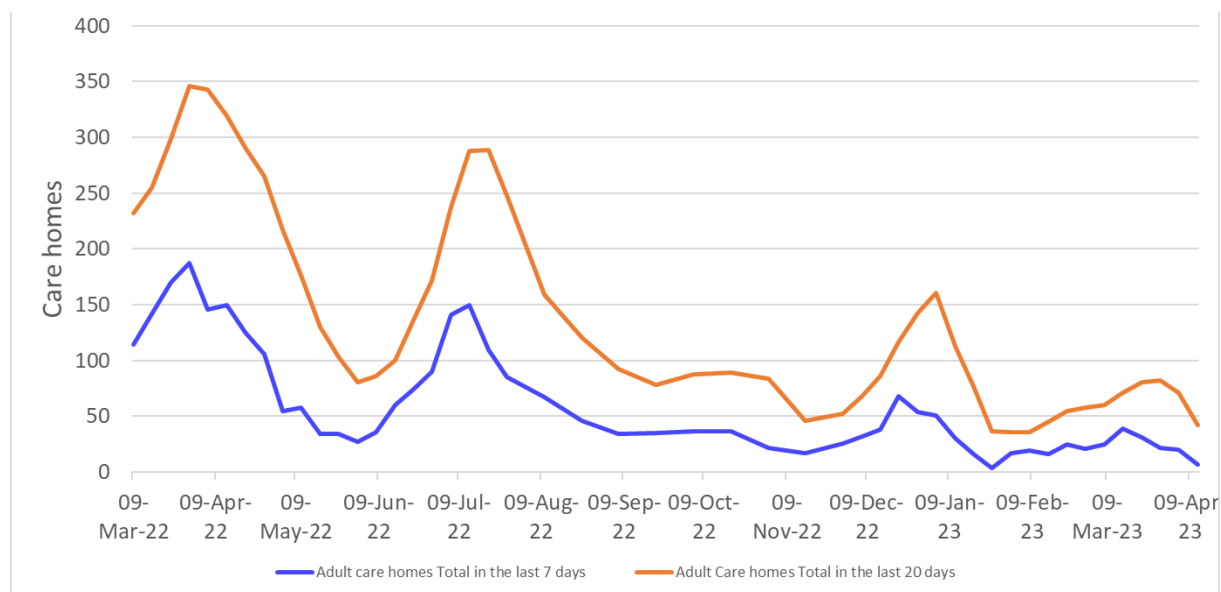
Source: [Public Health Wales](#)

Note: data extracted at 8am on 13/04/2023. 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 12 April 2023, the number of adult care homes in Wales that have [notified CIW](#)<sup>6</sup> 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 7 notifying, from 20 notifying. This figure for the last 20 days is at 42 (period ending 12 April 2023), from 71 (period ending 5 April 2023). In Wales there are 1,017 adult care homes in total.

Figure 7 - Number of adult care homes which have notified CIW of one or more confirmed cases of COVID-19 in staff or residents.



As of 12 April 2023, the [number of notifications to CIW of deaths of adult care home residents involving COVID-19](#)<sup>7</sup> (both confirmed and suspected) in the last 7 days has decreased from 7 in the previous week, to 1 death reported.

In total, CIW has been notified of 2,327 care home resident deaths with suspected or confirmed COVID-19 between 1 March 2020 and 12 April 2023. This makes up 11% of all adult care home resident reported deaths (21,293) during this period.

<sup>6</sup> [stats.wales.gov.uk](https://stats.wales.gov.uk)

<sup>7</sup> [stats.wales.gov.uk](https://stats.wales.gov.uk)

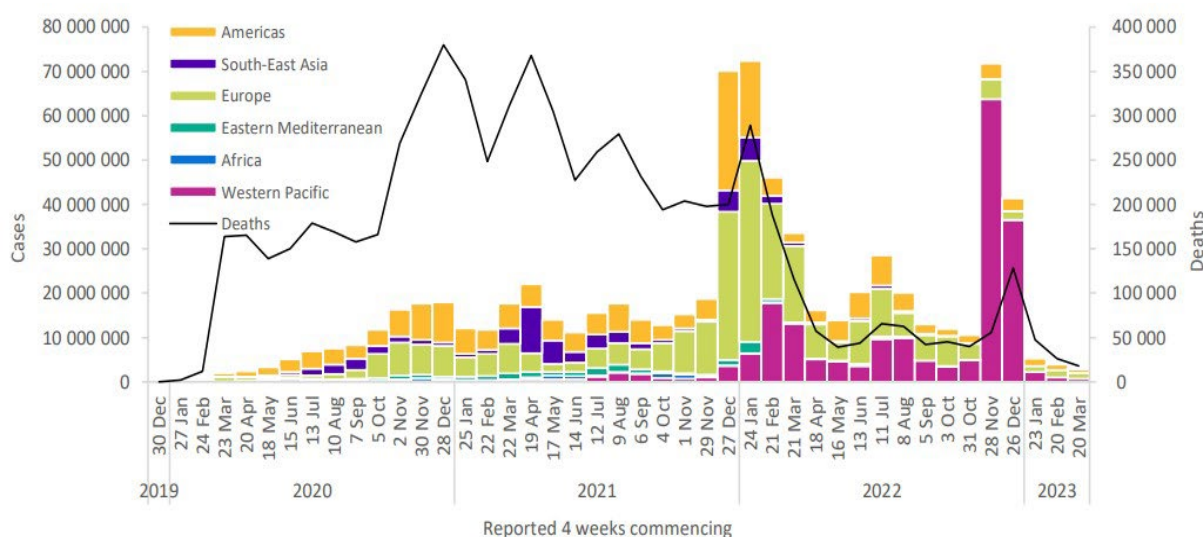
### 1.7. International overview – World Health Organisation update

As of 20 April 2023, the WHO reports<sup>8</sup> globally, over 2.8 million new cases and approximately 18 000 deaths were reported in the last 28 days (20 March to 16 April 2023), a decrease of 27% and 32%, respectively, compared to the previous 28 days (20 February to 19 March 2023).

Contrary to the overall trend, important increases in reported cases and deaths continued to be seen in the South-East Asia and Eastern Mediterranean regions and in several individual countries elsewhere.

As of 16 April 2023, over 763 million confirmed cases and over 6.9 million deaths have been reported globally.

Figure 8 - COVID-19 cases reported weekly by WHO Region, and global deaths, as of 16 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 (432 798 new cases; -45%), the Republic of Korea (286 182 new cases; +6%), the Russian Federation (259 138 new cases; -24%), France (219 428 new cases; +65%), and Brazil (212 578 new cases; +35%). The highest numbers of new 28-day deaths were reported from the United States of America (5559 new deaths; -32%), Brazil (1177 new deaths; -26%), the Russian Federation (994 new deaths; -4%), Germany (813 new deaths; -58%), and the Islamic Republic of Iran (754 new deaths; +193%).

<sup>8</sup> <https://www.who.int/emergencies/diseases/novel-coronavirus-2019/situation-reports>

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

As of 21 April 2023, [ECDC reports](#)<sup>9</sup> a general downward trend in the height of the associated peaks in reported cases, hospitalisations, ICU admissions, and deaths in this period.

The epidemiological picture over the past 12 months since the initial large Omicron peak has been characterised by periodic waves of infection, approximately every 2–3 months.

By the end of week 15 (ending 16 April 2023), decreasing or stable trends were observed in all EU/EEA indicators.

The COVID-19 death rate decreased compared to the previous week, with 654 deaths reported from 24 countries.

Figure 9 - EU/EEA weekly test positivity, 21 April 2023



Data source: [Weekly COVID-19 country overview \(europa.eu\)](#)

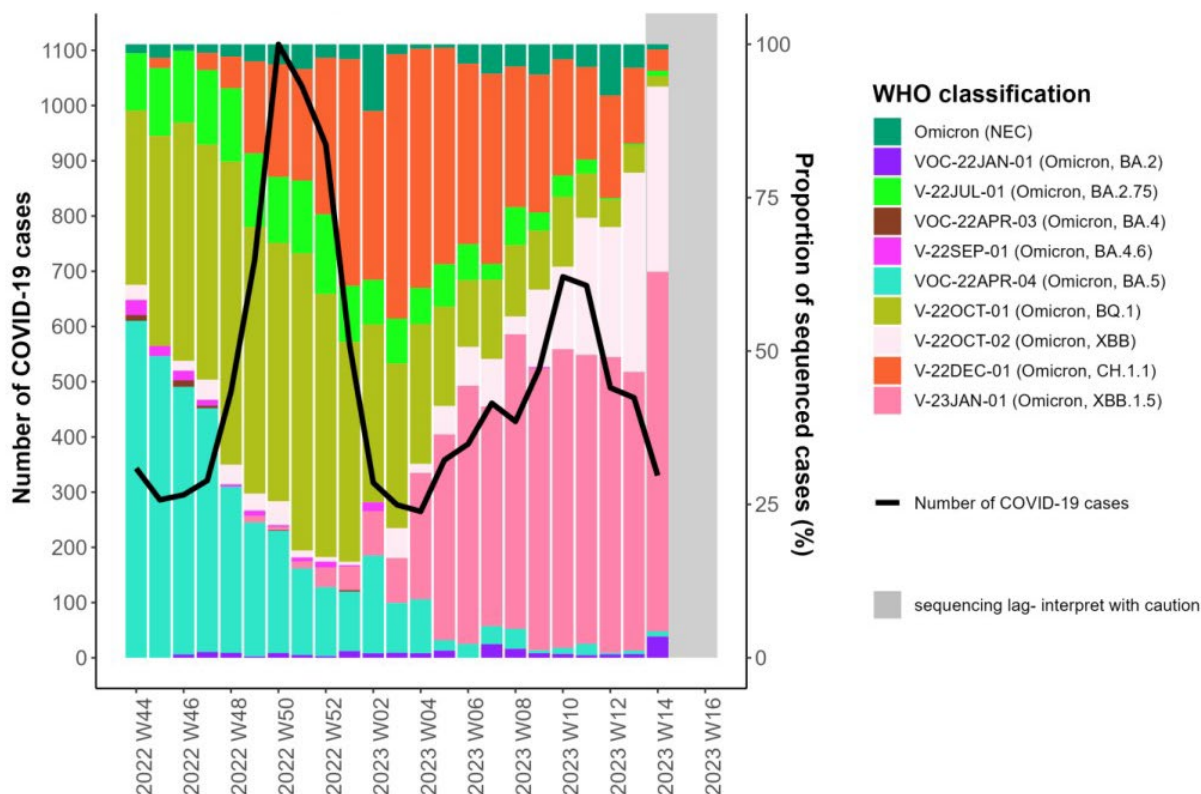
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<sup>9</sup> [COVID-19 situation updates \(europa.eu\)](#)

### 1.9. Variant of Concern update

As of 19 April 2023, [PHW report](#)<sup>10</sup> that in the last four reporting weeks, V-23JAN-01 (Omicron, XBB.1.5) has been the most dominant variant in Wales, accounting for 48.5% of all sequenced cases.

Figure 10 – Proportion of sequenced cases typed as each variant in the past six months in Wales (Data as of 18 April 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.

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

As of 18 April 2023, [PHW reports](#) there have been 57,114 cases of VOC-21NOV-01 (Omicron, BA.1), 29,301 cases of VOC-22JAN-01 (Omicron, BA.2), 1,192 cases of VOC22APR-03 (Omicron, BA.4), 7,456 cases of VOC-22APR-04 (Omicron, BA.5), 2,074 cases of V-22OCT-01 (Omicron, BQ.1), 1,312 cases of V-22DEC-01

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[https://public.tableau.com/app/profile/public.health.wales.health.protection/viz/PHWVirologyDashboard-Reportsandnotes\\_16535581718100/Notesondatainterpretationandreports](https://public.tableau.com/app/profile/public.health.wales.health.protection/viz/PHWVirologyDashboard-Reportsandnotes_16535581718100/Notesondatainterpretationandreports)

(Omicron, CH.1.1) and 1,515 cases of V-23JAN-01 (Omicron XBB.1.5) confirmed in Wales.

As of 20 April 2023, [WHO reports<sup>11</sup>](#) that it is currently tracking two variants of interest (VOIs): XBB.1.5 and XBB.1.16. On 17 April 2023, following a meeting of the Technical Advisory Group on Virus Evolution (TAG-VE), XBB.1.16 was added to the WHO list of VOIs. XBB.1.16 is a descendent lineage of XBB, which is a recombinant of two BA.2 descendent lineages. This variant was first reported in January 2023 and added to the WHO list of variants under monitoring (VUMs) on 22 March 2023.

Globally, XBB.1.5 has been reported from 96 countries. In epidemiological week 13 (27 March to 2 April 2023), XBB.1.5 accounted for 50.8% of sequences, which is an increase from 46.2% in week 9 (27 February to 5 March 2023).

XBB.1.16 has been reported in 31 countries. In week 13, XBB.1.16 accounted for 4.2% of submitted sequences, which is up from 0.5% in week 9.

Due to its estimated growth advantage and immune escape characteristics, XBB.1.16 may spread globally and contribute to an increase in case incidence. However, at present, there is no early signal of an increase in severity.

The initial XBB.1.16 risk assessment is ongoing and is expected to be published in the coming days.

As of 21 April 2023, [ECDC reports<sup>12</sup>](#) that among the three countries with an adequate volume of sequencing or genotyping for weeks 13–14 (27 March to 9 April 2023), the estimated distribution of variants of concern (VOC) or of interest (VOI) was 56.7% (56.5–82.2% from three countries) for XBB.1.5, 20.3% (2.4–32.2% from three countries) for XBB, 10.5% (4.6–19.8% from three countries) for BA.2.75, 3.8% (2.8–5.6% from three countries) for BQ.1, 0.4% (0.2–0.4%, 9 detections from three countries) for BA.5 and 0.2% (0.1–0.2%, 3 detections from two countries) for BA.2.

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<sup>11</sup> [Weekly epidemiological update on COVID-19 - 8 March 2023 \(who.int\)](#)

<sup>12</sup> <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.

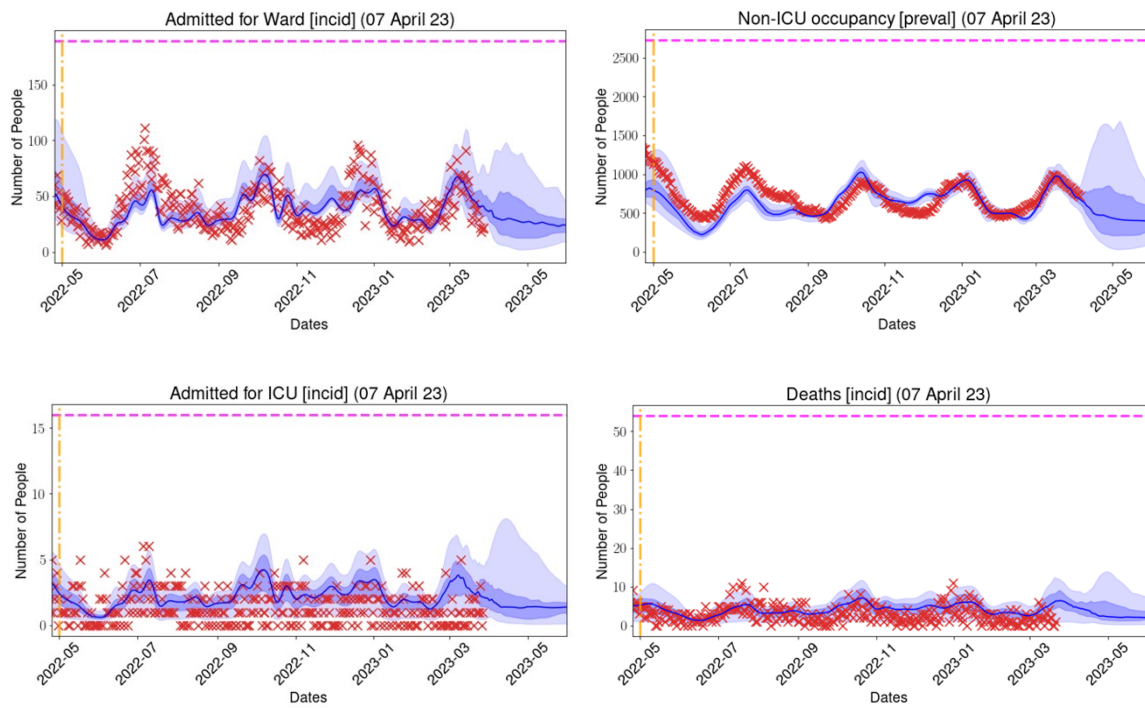
### 2.1. Swansea University MTPs, data to 7 April

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, based on data up to 7 April, show indicators have reached a peak and are continuing to follow a forecasted decline. There is significant uncertainty around the median estimates, however.

Figure 11 - Swansea University Medium Term Projections





### 3. Influenza Situation Update

- PHW report that influenza continues to be confirmed in Wales, although overall activity has decreased.
- UKHSA reports that influenza positivity remained low and stable.
- In [Europe](#) the percentage of influenza positivity decreased and it returned at the epidemic threshold (10%).
- 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 19 April 2023, [PHW report](#)<sup>13</sup> 20 cases of influenza. With a further 2 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.

The Sentinel GP consultation rate for influenza-like illness (ILI) in Wales during Week 15, was 3.9 consultations per 100,000 practice population. This is an increase compared to the previous Week (2.3 consultations per 100,000).

The Sentinel GP consultation rate for Acute Respiratory Infections (ARI) was 149.3 per 100,000 practice population during Week 15. This is an increase compared to the previous week (146.0 per 100,000).

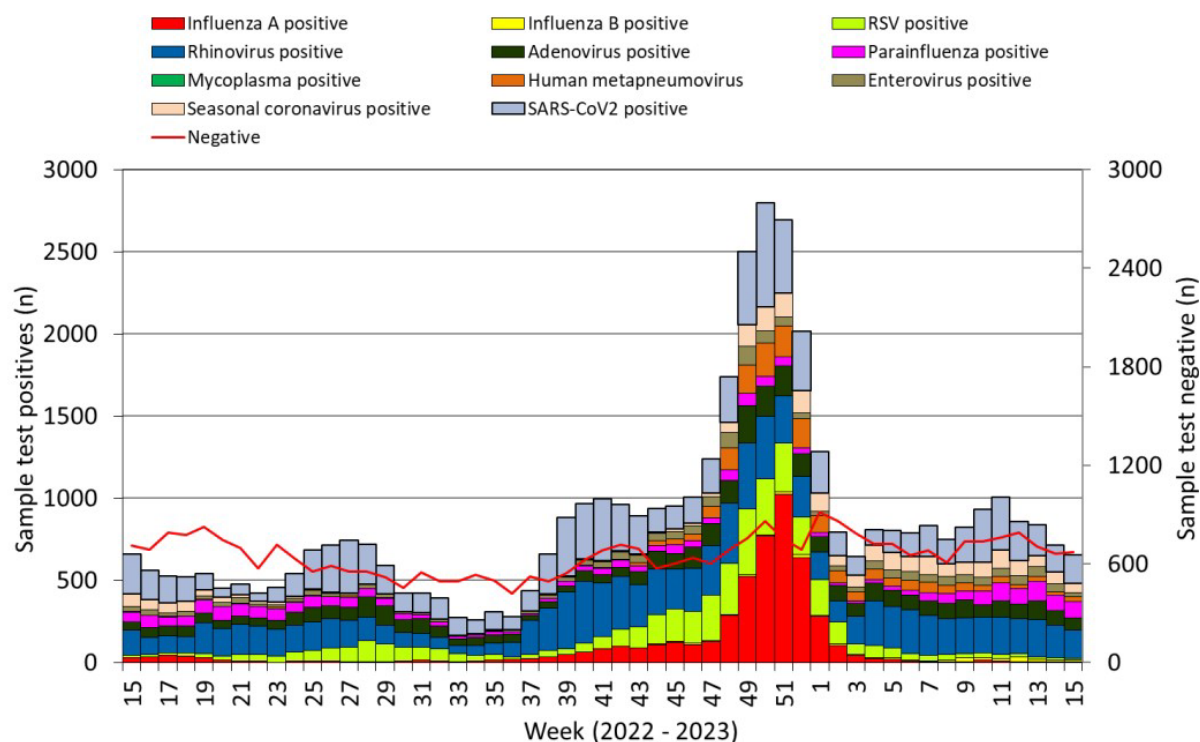
The percentage of calls to NHS Direct Wales which were ‘influenza-related’ (cold/flu, cough, fever, headache, and sore throat) during Week 15 decreased to 18.8%.

Figure 12 - Uptake of influenza immunisations in GP Practice patients in Wales

<b>Influenza immunisation uptake in the 2022/23 season</b>	
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	46.0%
NHS staff with direct patient contact	46.2%

<sup>13</sup> [Weekly Influenza and Acute Respiratory Infection Report - Public Health Wales \(nhs.wales\)](#)

Figure 13 - Specimens submitted for virological testing for hospital patients and non-sentinel GPs



Data Source: [PHW Weekly Influenza](#) & Acute Respiratory Infection Surveillance

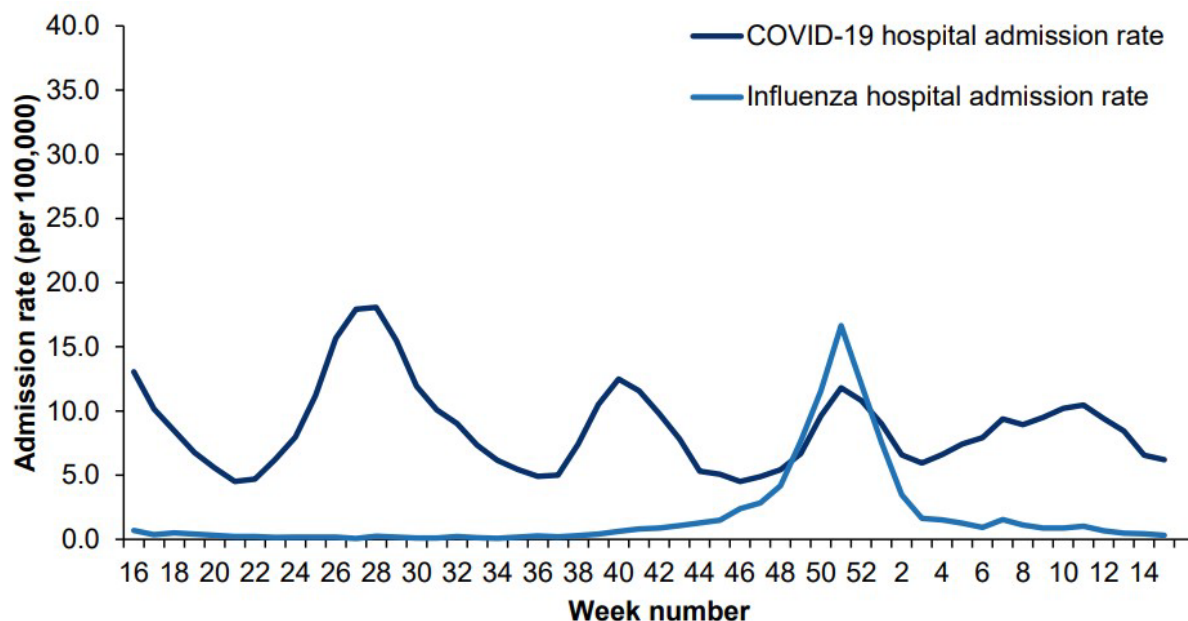
### 3.2. UKHSA Weekly national influenza surveillance report

As of 20 April 2023, [UKHSA reports](#)<sup>14</sup>, that influenza positivity remained low and stable at 1.1% in week 15 compared with 1.5% in week 14, with highest positivity seen in the 15 to 44 years old age group at 3.7%. Influenza B positivity remained low at 0.9% in week 15 compared with 1.4% in week 14. Through primary care surveillance, the influenza-like-illness consultations indicator decreased in week 14 compared with the previous week and was within the baseline activity level range.

No confirmed influenza outbreaks were reported in week 15 in England. Influenza hospital admissions decreased in week 15 compared with the previous week and is within the baseline range of activity. By UKHSA Centre, the highest hospitalisation rate was observed in the East of England. By age group, the highest hospital admission rate for influenza was in adults aged 85 years and over. Influenza ICU admissions remained stable in week 15 and remained within the baseline range of activity. Emergency department attendances for influenza-like illness remained stable nationally.

<sup>14</sup> <https://www.gov.uk/government/statistics/national-flu-and-covid-19-surveillance-reports-2022-to-2023-season>

Figure 14 - 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 15 (03 April – 09 April 2023), [Flu News Europe reports](#)<sup>15</sup> 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 10% in week 15/2023 from 15% in the previous week, returning at the epidemic threshold (10%).

6 of 38 countries or areas reported medium intensity and 13 of 37 countries across the Region reported widespread activity.

Of the 28 countries that reported sentinel primary care specimen influenza virus positivity above the 10% epidemic threshold, no countries reported activity above 40%.

### 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](#)<sup>16</sup> 7 April to 13 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 6 April 2023, a total of 240 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, 135 were fatal, resulting in a case

<sup>15</sup> [Flu News Europe | Home](#)

<sup>16</sup> <https://www.who.int/westernpacific/emergencies/surveillance/avian-influenza>

fatality rate (CFR) of 56%. The last case was reported from China, with an onset date of 22 September 2022 and died on 18 October 2022.

Figure 15 - World Health Organisation cumulative number of laboratory-confirmed human cases and deaths of influenza A(H5N1) virus infections.

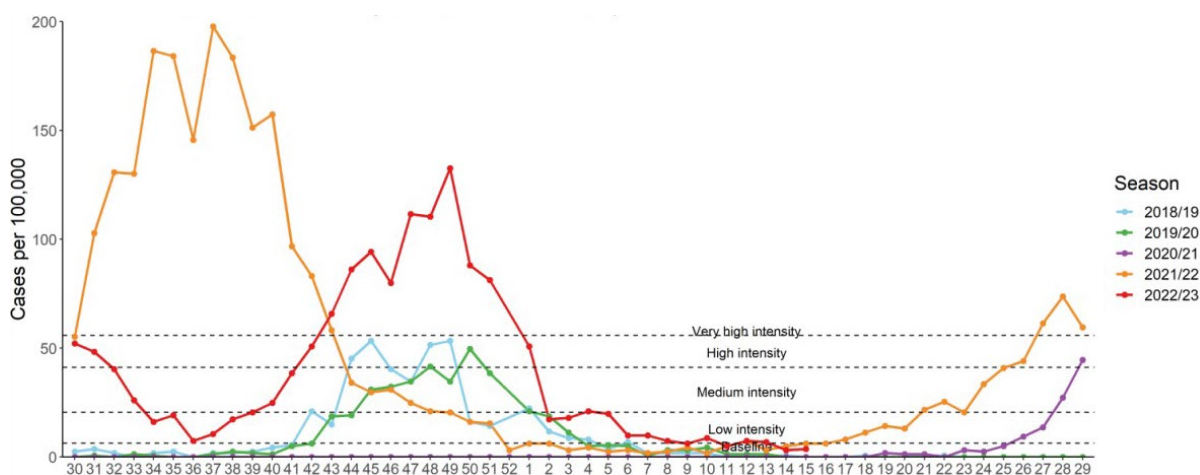
Country	2003-2009		2010-2014		2015		2016		2017		2018		2019		2020		2021		2022		2023		Total	
	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D	C	D
Cambodia	9	7	47	30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	37
China	38	25	9	5	6	1	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	54	32
Lao PDR	2	2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	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	0	0	0	0	127	64
<b>Total</b>	<b>161</b>	<b>91</b>	<b>71</b>	<b>42</b>	<b>6</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>240</b>	<b>135</b>

#### 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.
- Scarlet fever and iGAS notifications have decreased to levels that are comparable to previous years.

As of 19 April 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 16 - RSV Incidence rate in those aged under 5 in Wales, by week



As of 20 April 2023, [UKHSA reports](#)<sup>17</sup> the overall positivity for RSV remained low at 0.6%, with the highest positivity in those aged under 5 years at 2.5%. In week 15, the overall hospital admission rate for RSV remained low at 0.11 per 100,000. Emergency department attendances for acute bronchiolitis decreased nationally.

<sup>17</sup> [National flu and COVID-19 surveillance reports: 2022 to 2023 season - GOV.UK \(www.gov.uk\)](https://www.gov.uk/government/news/national-flu-and-covid-19-surveillance-reports-2022-to-2023-season)

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

As of 19 March 2023, PHW report that scarlet fever and iGAS notifications have decreased to levels that are comparable to previous years.

Figure 17 - PHW Scarlet Fever Notifications by year, 16 April 2023

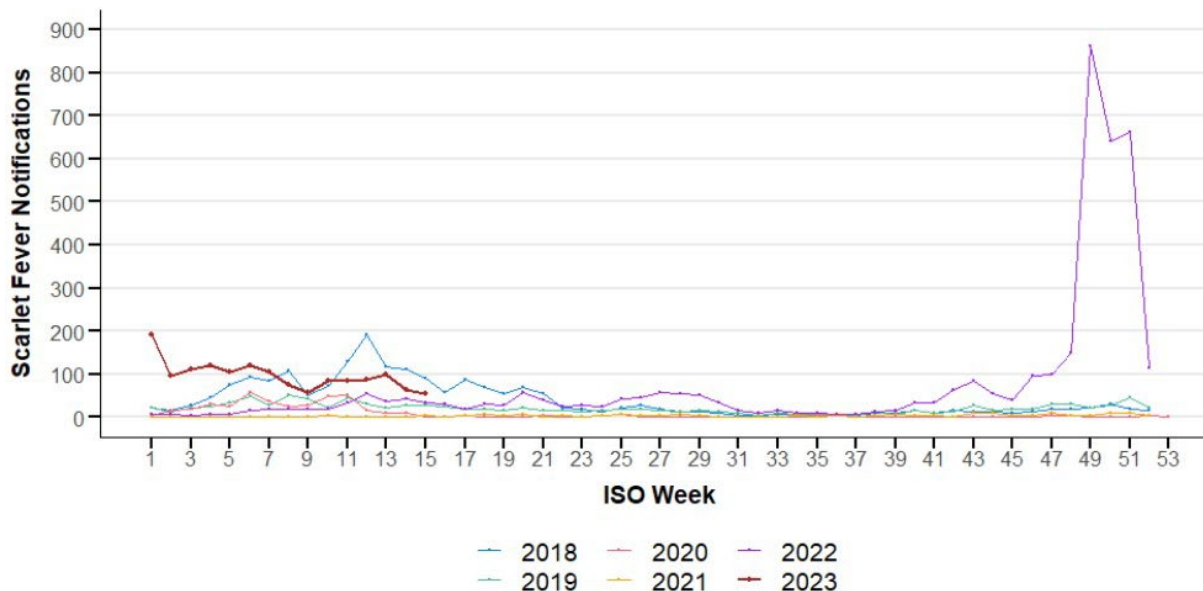


Figure 18 - PHW Lab Confirmed Invasive group A streptococcal infections, 16 April 2023

