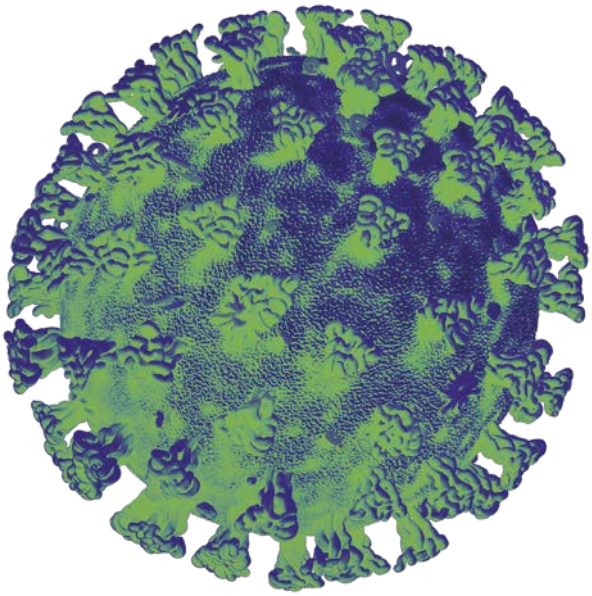
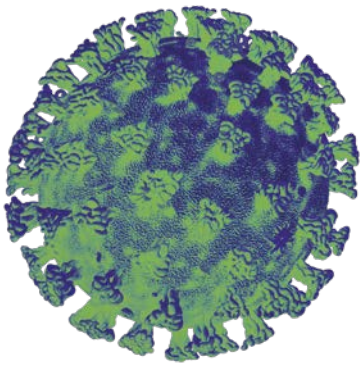
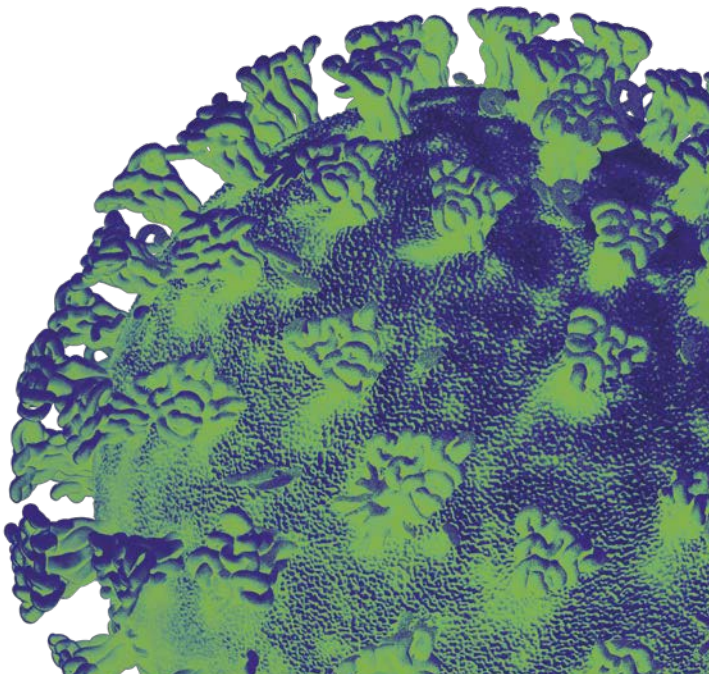
Llywodraeth Cymru
Welsh Government

Technical Advisory Cell
Summary of Advice

26 August 2022







This advice has been drafted based on the available evidence at the time of writing and has been assembled to support policy colleagues and Welsh ministers. The purpose of scientific advice is to provide an overview of what we know from scientific and technical investigations, what we can infer indirectly from the evidence base or by a consensus of expert opinion. This is advice, not Welsh Government policy. Reporting has now returned to fortnightly rather than weekly briefings.

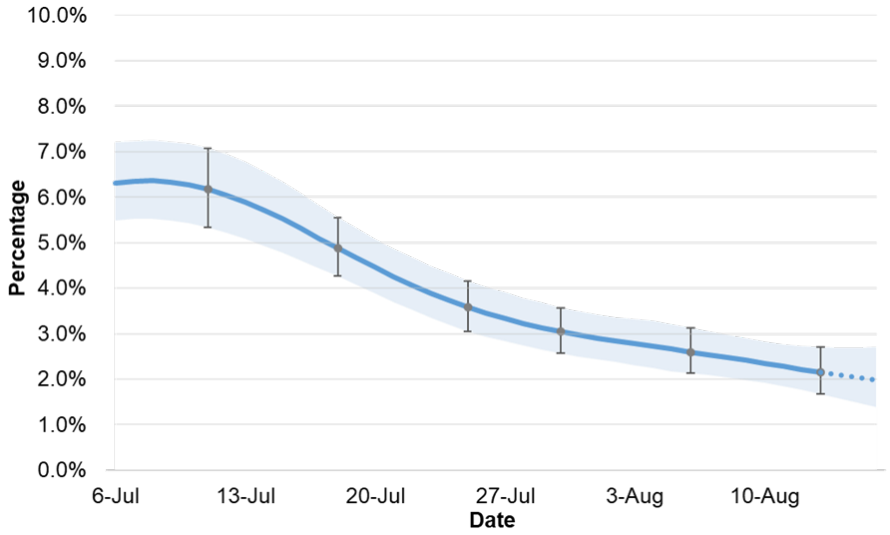
Top Line Summary

- *In the latest update, ONS positivity has decreased for the fifth successive week to 1 in 45 people in Wales.* ONS analysis of the percentage of people testing positive for COVID-19 for Wales reports a decline in all age groups; confidence intervals have also narrowed and are more reliable compared to previous estimates.
- *Wastewater surveillance indicates the overall SARS-CoV-2 viral load has decreased across Wales for the third successive week. The signal decreased in 10 regions, increased in 2 regions and remained level in 2 regions.*
- *PHW lateral flow test data in the latest week* (15/08/2022 to 21/08/2022) *shows the number of reported tests decreased from 39,417 in the previous week to 37,751, whilst the number of positive testing episodes decreased from 2,693 in the previous week to 2,063 in the latest reporting week.*
- *As of 23 August 2022, after reaching a peak of 25 admissions per day in mid-July, suspected and confirmed admissions (7-day average) have decreased to around 9 admissions a day.*
- *COVID-19 deaths have decreased in the last week, to 30 (down from 39 the previous week), following the high prevalence that was observed in late June and early July.*
- *ONS antibody data indicates that the 2022 Spring booster has successfully maintained high antibody levels in vulnerable, older populations.*
- *The PHW COVID-19 variants update (23 August) noted that in the latest four reporting weeks Omicron BA.5 remained dominant in Wales, accounting for 85.4% of sequenced cases.*
- *The latest Medium-Term Projections (using data to 19 August) project that NHS pressures are currently decreasing and will continue to decrease, though significant uncertainty is projected, with the upper bound representing a scenario of worst-case waning immunity.*
- *Data at GB level suggest concern about Coronavirus is now at its lowest level since data were first collected, while the proportions reporting personal protective behaviours has remained stable in recent weeks, albeit substantially lower than spring 2022.*

1. Wales Situation Update

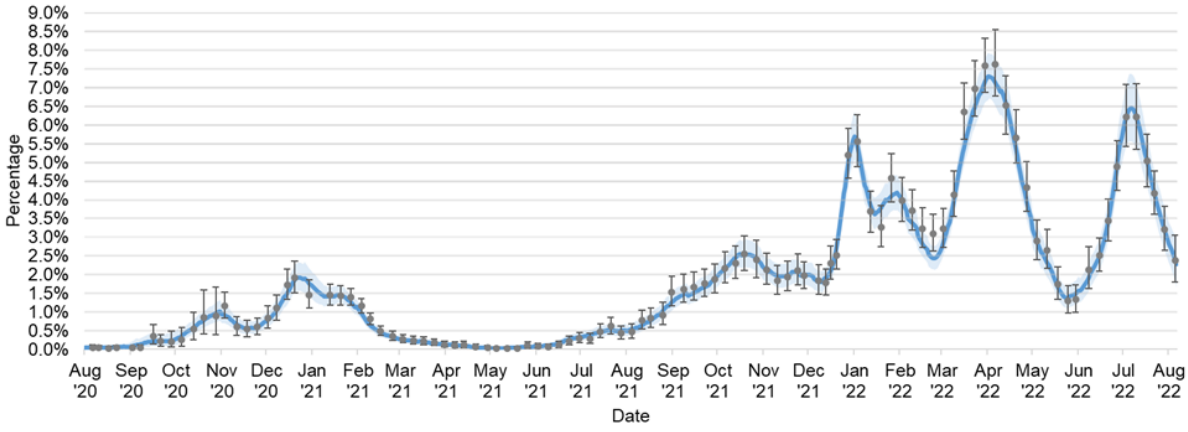
Infections

- According to the ONS Coronavirus Infection survey, the trend in the percentage of people testing positive for COVID-19 in Wales has decreased in the week ending 16 August. During this period, it is estimated that 2.15% of the community population had COVID-19 (95% credible interval: 1.68% to 2.70%). This equates to approximately 1 person in every 45 (95% credible interval: 1 in 60 to 1 in 35), or 65,500 people during this time (95% credible interval: 51,100 to 82,000); a decrease from 1 in 40 in the previous week.
- Caution should be taken in over-interpreting any small movements and credible intervals are provided to indicate the range within which we may be confident the true figure lies.

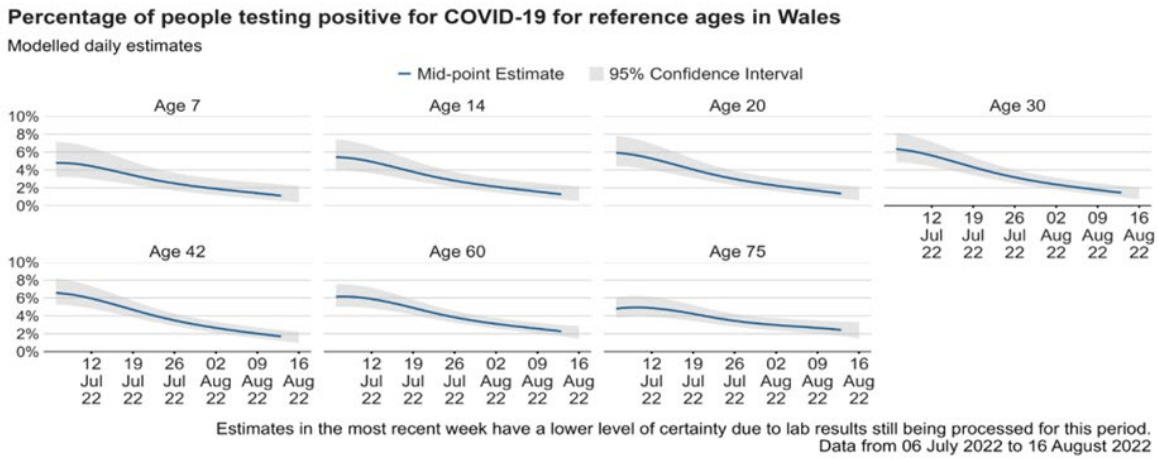


Wales, estimated % testing positive for Covid 19 since August 2020

Source: Coronavirus (COVID-19) Infection Survey, ONS, 24/08/22

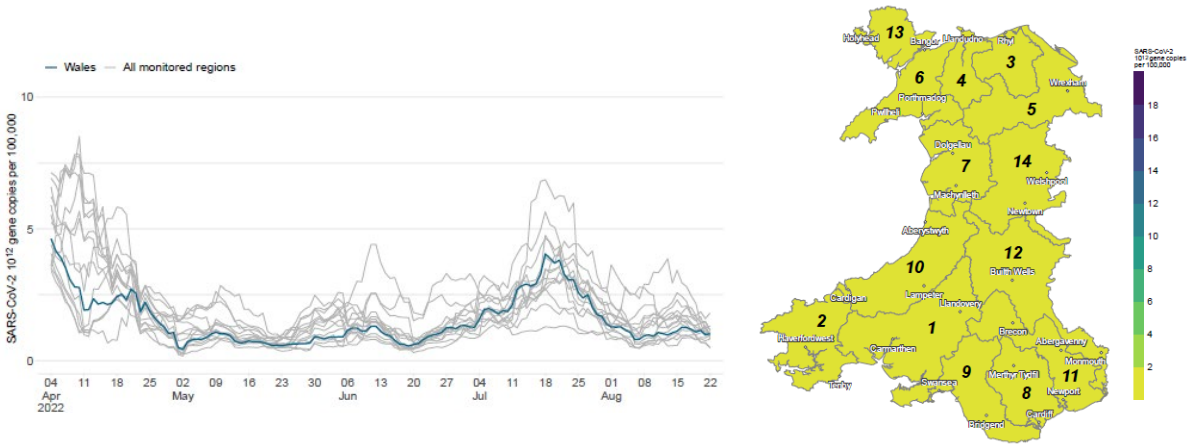


- ONS analysis of the percentage of people testing positive for COVID-19 for Wales reports a decline in all age groups; confidence intervals have also narrowed and are more reliable compared to previous estimates.



Wastewater surveillance

- Wastewater surveillance suggests the overall SARS-CoV-2 viral load has remained roughly stable at a national level. The signal increased at South East Valleys and Wye, and decreased at Carmarthen Bay and the Gower, Clwyd, Conwy, Dee, Llŷn and Eryri, Merionnydd, Tawe to Cadoxton, Teifi and North Ceredigion, Ynys Môn and Hafren Dyfrdwy.



PHW Lateral Flow Testing Surveillance

- *As of 1 August 2022, free NHS lateral flow tests (LFTs) in Wales have not been available to members of the public showing symptoms of coronavirus or who are visiting someone eligible for new COVID-19 treatments. As a result, testing data will be incomplete and should be interpreted with caution, although it may still be useful to signal wider trends.*

- In the latest reporting week (15/08/2022 to 21/08/2022) the number of LFTs reported decreased from 39,417 in the previous week to 37,751. The number of positive testing episodes decreased from 2,693 in the previous week to 2,063 in the latest reporting week.

- The episode positivity rate decreased from 10.62% in the previous week to 8.40% in the latest reporting week, with the highest positivity rate by age group recorded in the under 20 age group at 18.63%. The 40-59 age group recorded the highest incidence rate of 98.9 positive testing episodes per

100,000 population, compared to an average of 65.1 across the whole population.

Deaths

- The most recent PHW COVID-19 weekly surveillance and epidemiological summary reports that deaths in confirmed COVID-19 cases in hospital, reported by clinicians through PHW mortality rapid surveillance, remain at lower levels compared to previous waves.
- ONS surveillance data had indicated that since the start of 2022, the numbers of deaths from any cause were oscillating around the five-year (2016 to 2019 and 2021) average. This began to change in March and April, when deaths were above the five-year average, though smaller than the number of COVID-19 deaths. In May and June excess deaths were running above 6% even after subtracting COVID-19 deaths:

Table 1: Age-standardised [1] mortality rates by, deaths registered in January to July 2022, Wales

Monthly mortality analysis, England and Wales - Office for National Statistics (ons.gov.uk)

Period	Persons (Deaths)	Average Deaths (same month from 2016 to 2019 and 2021 averaged)	Excess (if any)	Excess as % of 2022 deaths	Deaths with COVID on the death certificate	Excess remaining (if any) once COVID deaths removed	Remaining excess as % of 2022 deaths
January 2022	3,262	3,664	*-402*				
February 2022	2,730	2,997	*-267*				
March 2022	3,203	3,065	138	4.3%	195		
April 2022	2,894	2,781	113	3.9%	261		
May 2022	2,992	2,663	329	11.0%	106	223	7.5%
June 2022	2,740	2,505	235	8.6%	66	169	6.2%
July 2022	2,638	2,530	108	4.1%	189		

[1] age-standardisation adjusts for changes in population & age - Wales has an ageing population, age-standardisation removes that effect.

- Since COVID-19 does not explain all the recent excess we need to look at other explanations. Some commentators have suggested the ongoing crisis in emergency care[1] as a cause, although there is a high degree of uncertainty.

[1] The NHS is being squeezed in a vice | Financial Times (ft.com)
Why have there been excess deaths this summer? - UK in a changing Europe (ukandeu.ac.uk)
UK health officials analyse recent rise in excess deaths | The BMJ

This has been apparent in ambulance data throughout the period, though no worse in May than in other months. June did show poorer red call response times:

Table 2: Ambulance calls, also responses to red [1] calls, Wales

Emergency ambulance calls and responses to red calls, by LHB and month (gov.wales)

Period	Red [1] calls	Red [1] calls	Amber [2] calls	Green [3] calls	Total (Red, Amber, Green)
January 2022	3,381	52.5%	25,528	7,999	36,908
February 2022	2,932	55.0%	24,797	6,654	34,383
March 2022	3,583	51.1%	27,999	7,362	38,944
April 2022	3,609	51.2%	27,263	6,990	37,862
May 2022	3,599	54.5%	26,906	6,920	37,425
June 2022	3,728	50.8%	27,033	6,706	37,467
July 2022	4,130	52.0%	28,106	7,093	39,329

[1] Immediately life-threatening (someone is in imminent danger of death, such as a cardiac arrest). Target for 65 per cent of these calls to have a response within 8 minutes.

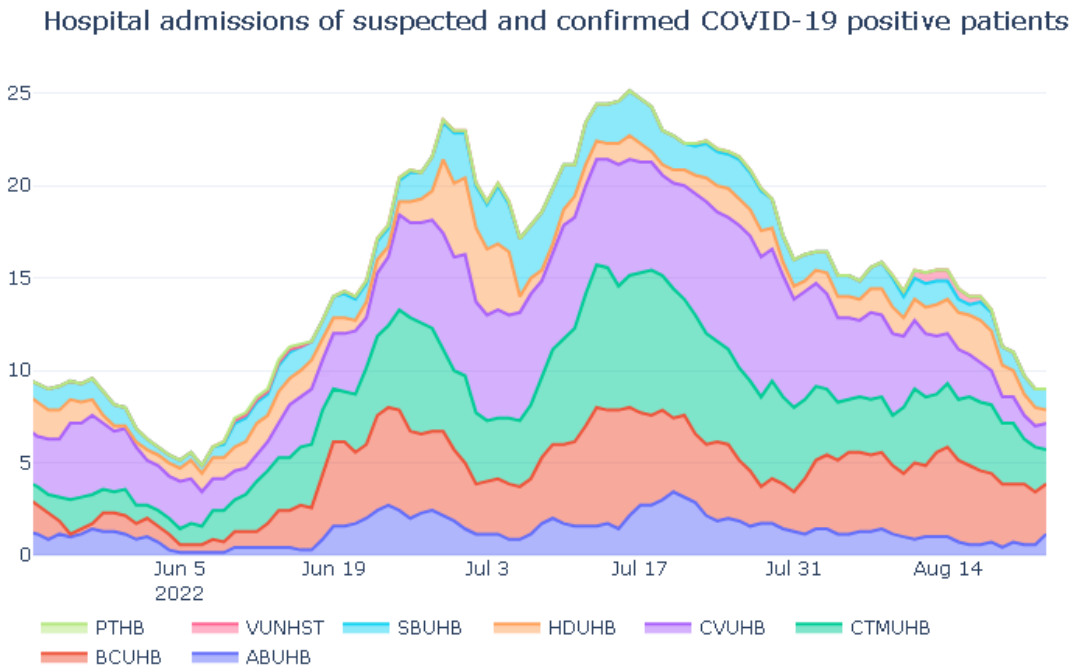
[2] Serious but not immediately life-threatening (patients who will often need treatment to be delivered on the scene and may then need to be taken to hospital).

[3] Non urgent (can often be managed by other health services) and clinical telephone assessment.

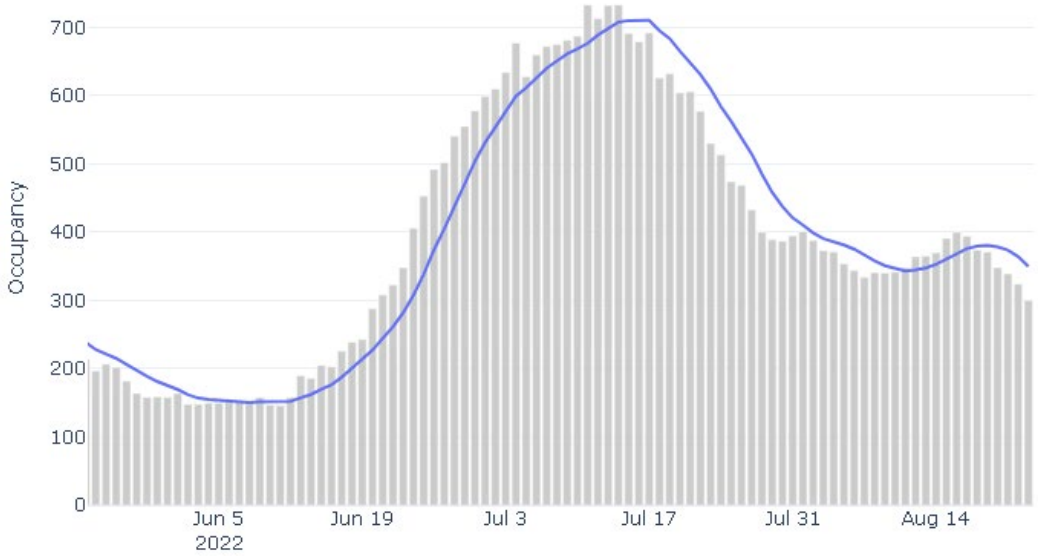
- The Office for National Statistics (ONS) published statistics on 23 August on provisional weekly deaths, including deaths involving COVID-19, for the week ending 12 August 2022. The cumulative number of deaths involving COVID-19 in Wales, occurring throughout the pandemic up to the latest week, was 10,685.
- 661 deaths from all causes were registered in the latest week. This was 3 more than the previous week, and 73 more than the five-year average for 2016-2019 and 2021.
- 30 deaths involving COVID-19 were registered in the latest week. This was 4.5% of all deaths, and 9 fewer than the previous week.

NHS

- As of 23 August 2022, after reaching a peak of 25 admissions per day in mid-July, suspected and confirmed admissions (7-day average) have decreased to around 9 admissions a day.

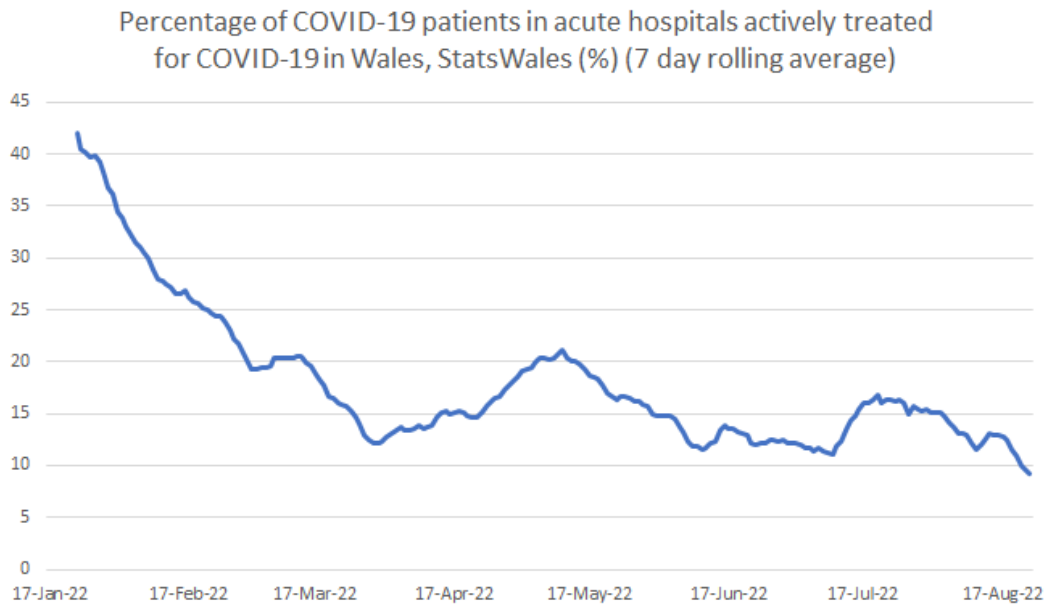


- Confirmed COVID-19 hospital occupancy in Wales (7-day average) reached a peak of over 700 in mid-July, roughly three quarters of the maximum occupancy peak level in March 2022 when BA.1 was dominant. Since then, occupancy has decreased until mid-August, after which point it has fluctuated between around 340 to 400. As of 23 August 2022, the 7-day average was 350 beds.



- The proportion of patients in hospital 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, increased after 10 July but has since stabilised and has been decreasing since the start of August[2].

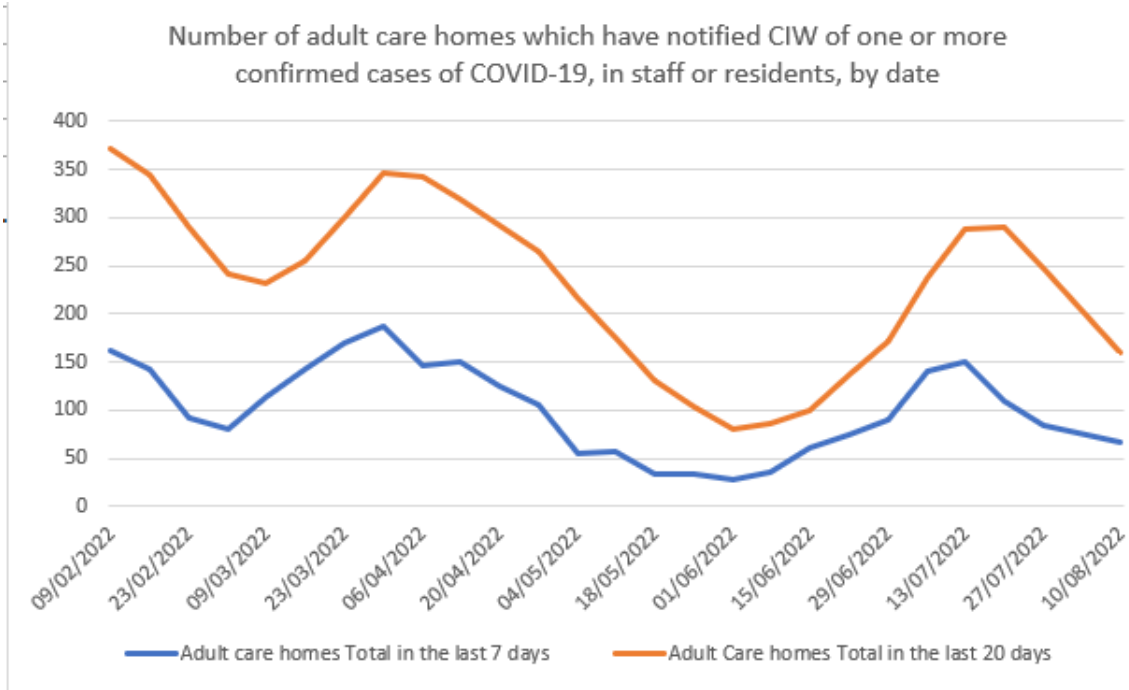
[2] COVID-19 patients in acute hospitals actively treated for COVID-19 in Wales by date (gov.wales)



- NHS staff absence figures up to 22 August 2022 show absence due to self-isolation has remained the same as the previous week at 0.4%, whilst absence due to COVID-19 sickness has decreased to 0.8%.

Care homes

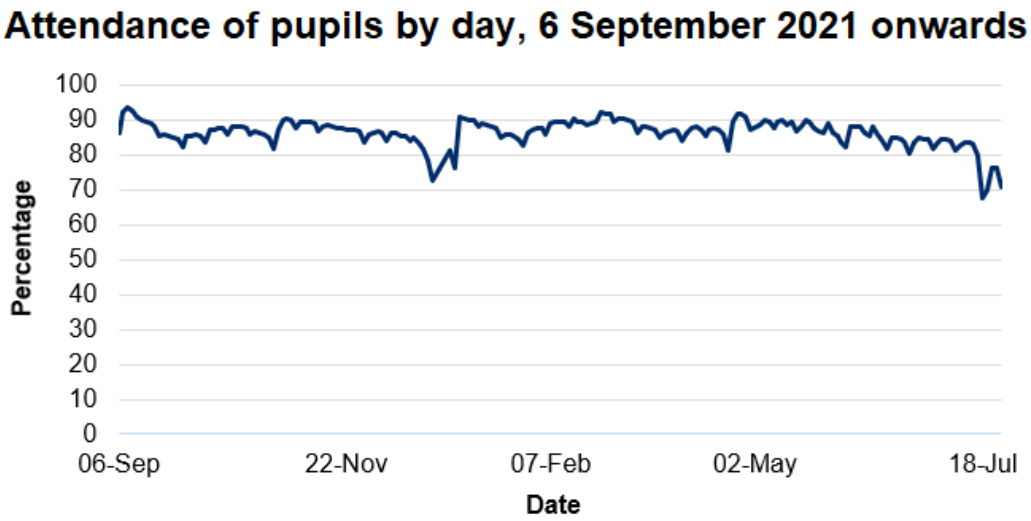
- Going forward care home data will be reported fortnightly rather than weekly. As of 10 August 2022, the number of adult care homes in Wales that have notified CIW of one or more confirmed cases of COVID-19 in staff or residents in the last 7 days has continued to decrease. The most recent data shows a steady decrease of 22% to 67 care homes, compared to 85 in the previous week. This figure for the last 20 days has decreased to 159, down from 248 in the previous week. There are 1,029 adult care homes in total in Wales.



- As of 10 August 2022, the number of notifications to CIW of deaths of adult care home residents involving COVID-19 (both confirmed and suspected) in the last 7 days has increased slightly to 4, compared to 3 in the previous week.
- In total, CIW has been notified of 2,216 care home resident deaths with suspected or confirmed COVID-19 between 1 March 2020 and 10 August 2022. This makes up 12.5% of all adult care home resident reported deaths (17,706) during this period.

School attendance (6 September 2021 to 22 July 2022)

- An average of 72.1% of all pupils were in attendance in school over the week of 18 to 22 July 2022, down from 82.7% in the previous week. The figure for 11 to 15 July 2022 has been revised down from 83.2%. Data for the latest two weeks is provisional.
- 1.7% of pupils were absent due to a known COVID-19 related reason over the week of 18 to 22 July 2022, up from 1.3% the previous week.
- An average of 0.7% of all primary pupils and 3.5% of all secondary pupils were absent due to a known COVID-19 related reason between 18 to 22 July 2022.
- 27.2% of pupils (131,041 pupils) have missed more than a week of face-to-face learning due to a known COVID-19 related reason since 6 September 2021 (5.5 days or more) and 88.5% of pupils (426,783 pupils) have missed more than a week for any reason since 6 September 2021.



Source: Schools in Wales

Vaccinations

- As of 22 August 2022, 7,241,459 COVID-19 vaccinations had been given in Wales (this total includes those who are alive and resident in Wales at the time of reporting).
- Delivery of the 2022 Spring booster continues, although the number vaccinated each week has slowed since early July as the pool of eligible individuals decreases and walk-in sessions ended on 30 June. As of 22 July 2022, uptake was 85% for those aged 75 years and older, 84% for people living in residential care homes for older adults and 60.5% of people who are immunosuppressed. *Please note that due to the required interval between doses, some of those who are severely immunosuppressed and recently vaccinated may not be eligible for a Spring booster.*
- There is evidence that delivery of the 2022 Spring booster has successfully maintained high antibody levels in vulnerable populations. Comparing March and July 2022 antibody levels for 70 to 74-year-olds (ineligible by age criteria alone) and 75 to 79-year-olds (eligible for 2022 Spring booster), ONS reported that antibody prevalence remained high in 75 to 79-year-olds, compared with a decrease in antibody prevalence in 70 to 74-year-olds.

Table 3: Modelled percentage of adults (aged 16 years and over) estimated to have antibodies against SARS-CoV-2 (above 179 ng/ml antibody level threshold), ONS

	Age group	
Date	70 – 74 years	75 – 79 years
07 to 13 March 2022	98.2%	97.7%
11 to 17 July 2022	94.0%	98.1%

- Vaccine uptake by priority group and age, counting individuals in all groups in which they belong (non de-deduplicated) – PHW Covid-19 Vaccination Tableau

Group	Group size (n)	Received 1st dose (n)	Completed primary course* (n)	Received booster dose** (n)	First dose uptake (%)	Primary course uptake* (%)	Booster dose uptake** (%)
Severely Immunosuppressed	51,489	51,014	48,302	42,031	99.1%	93.8%	81.6%
Care home residents	13,310	13,122	13,055	12,670	98.6%	98.1%	95.2%
Care home worker	38,357	36,361	35,741	29,900	94.8%	93.2%	78.0%
80 years and older	172,827	166,563	165,720	161,262	96.4%	95.9%	93.3%
Health care worker	141,048	137,566	136,239	123,116	97.5%	96.6%	87.3%
Social care worker		44,982	44,648	39,911			
Aged 75-79 years	142,799	138,635	138,057	134,599	97.1%	96.7%	94.3%
Clinically extremely vulnerable aged 16-69..	75,407	72,083	71,238	62,314	95.6%	94.5%	82.6%
Aged 70-74 years	176,893	170,422	169,494	164,364	96.3%	95.8%	92.9%
Aged 65-69 years	182,432	173,472	172,127	165,343	95.1%	94.4%	90.6%
Clinical risk groups aged 5-64 years	341,931	306,147	297,613	257,671	89.5%	87.0%	75.4%
Aged 60-64 years	211,539	197,860	195,725	185,134	93.5%	92.5%	87.5%
Aged 55-59 years	235,419	216,275	213,504	197,858	91.9%	90.7%	84.0%
Aged 50-54 years	227,239	204,541	201,195	181,750	90.0%	88.5%	80.0%
Aged 40-49 years	393,528	335,488	326,530	276,528	85.3%	83.0%	70.3%
Aged 30-39 years	436,290	348,937	332,919	249,416	80.0%	76.3%	57.2%
Aged 18-29 years	490,543	396,762	368,440	251,958	80.9%	75.1%	51.4%
Aged 16-17 years	70,966	54,649	46,665	26,156	77.0%	65.8%	36.9%
Aged 12-15 years	149,109	92,666	75,391		62.1%	50.6%	
Aged 5-11 years	260,612	55,269	22,991		21.2%	8.8%	

Weekly Influenza and Acute Respiratory Infection Report – PHW

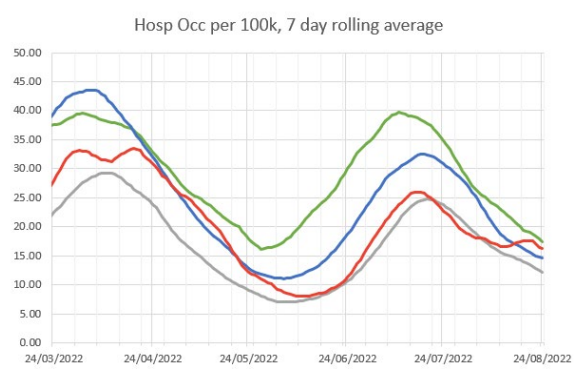
- As at 24 August, PHW report that confirmed influenza cases in Wales continue to be seen at low levels, whilst RSV confirmed cases in children under 5 have decreased to medium intensity levels (compared to the 10 seasons leading up to 2020). During Week 33 (ending 21/08/2022) there were 7 cases of influenza.
- Rhinovirus, RSV and adenovirus are the most commonly detected cause of non-COVID-19 Acute Respiratory Infection (ARI), with decreasing confirmed cases in recent weeks. The percentage of calls to NHS Direct Wales which were 'influenza-related' (cold/flu, cough, fever, headache and sore throat) during Week 33 continued to decrease to 13.9%
- As of week 32, community and syndromic influenza indicators remain low in the UK. GP influenza-like illness (ILI) consultations, decreased in Northern Ireland to 0.2, and remained stable in Scotland at 0.4 per 100,000 - well below the baseline intensity threshold. The WHO and the European Centre for Disease Prevention and Control (ECDC) have entered a monthly reporting cycle for influenza and reported that activity across Europe remained at inter-seasonal levels during weeks 26-30. The WHO reported on 07/08/2022 that globally, influenza activity has steadily decreased, following a peak in March 2022. However, influenza detections in South-East Asia have increased.

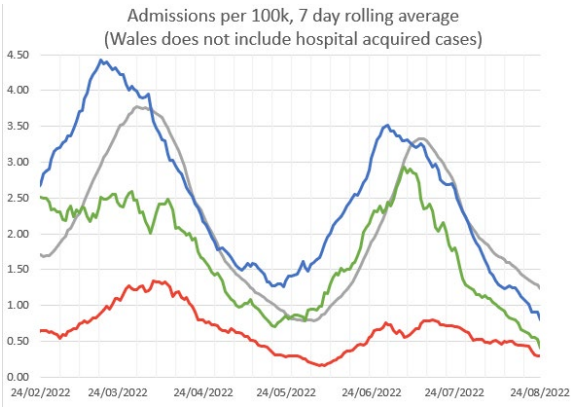
2. Situation in the UK and international comparators

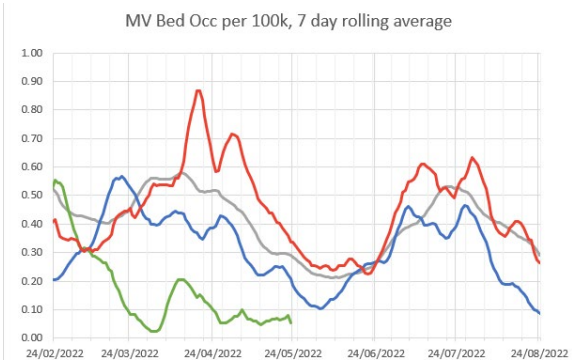
UK Overview

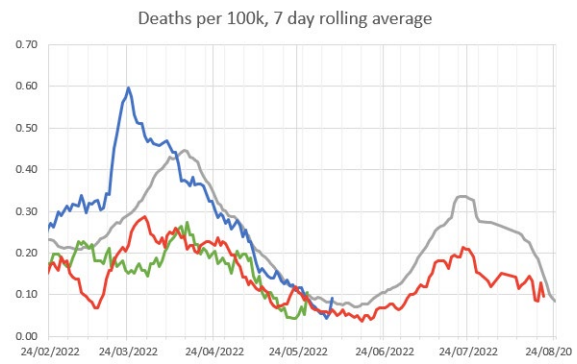
UK COVID-19 dashboard data

- Surveillance data for the four nations is summarised below. (Data source: UK Summary | Coronavirus (data.gov.uk)).
- **Note that this data is classified as management information rather than official statistics and there may be differences in methodology between the nations**. As a result, caution should be taken when interpreting this data. Full documentation is available at Metrics documentation | Coronavirus in the UK (data.gov.uk). Case data is no longer included in this analysis due to the decreased level of community testing reducing this data's value.
- Recent data suggests all UK nations have continued to observe decreases in the number of admissions after reaching a peak in July. *Note that Wales admissions includes suspected cases and does not include hospital acquired infections, so **caution should be taken in comparisons with the other UK nations**.*
- Hospital occupancy data also shows a continued decrease all four nations, although in Wales there was a temporary increase in the previous week.
- ICU/Mechanically ventilated bed occupancy has continued to decrease in England, Wales and Scotland after reaching a peak in mid to late July. Northern Ireland no longer reporta this data.
- The number of deaths remains low relative to previous waves and has decreased in England, while fluctuating in Wales at a lower level. Scotland and Northern Ireland no longer report this data.







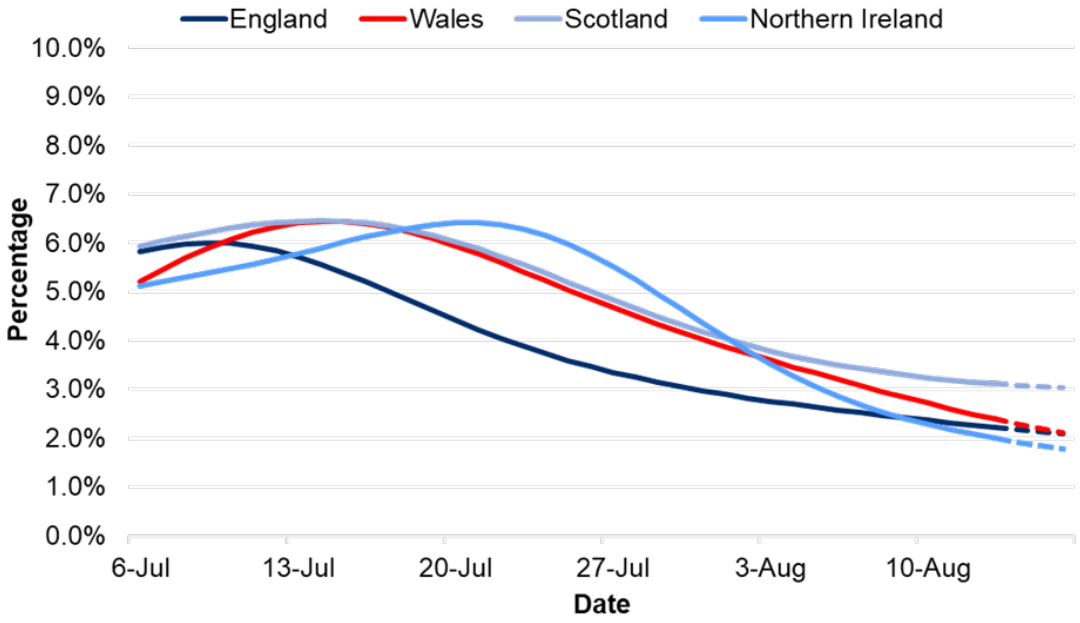


UK Infection positivity – ONS Coronavirus Infection Survey, 10 to 16 August

- According to the ONS Coronavirus Infection survey, the percentage of people testing positive for coronavirus (COVID-19) has decreased in all four UK nations. The estimated percentages of the community population with COVID-19 ranged from 1.44% in Northern Ireland to 2.56% in Scotland.
- During the most recent period, it is estimated that around 1 in 45 people in Wales had COVID-19. This compares to around 1 in 45 people in England, around 1 in 70 in Northern Ireland and around 1 in 40 people in Scotland.

  Note since these estimates are based on a relatively low number of positive tests, there is some uncertainty and the results should be interpreted with caution. The survey recently moved to an online data collection method, with postal returns for swabs and blood samples.

Positivity rates (%) across UK countries 6 July to 16 August 2022

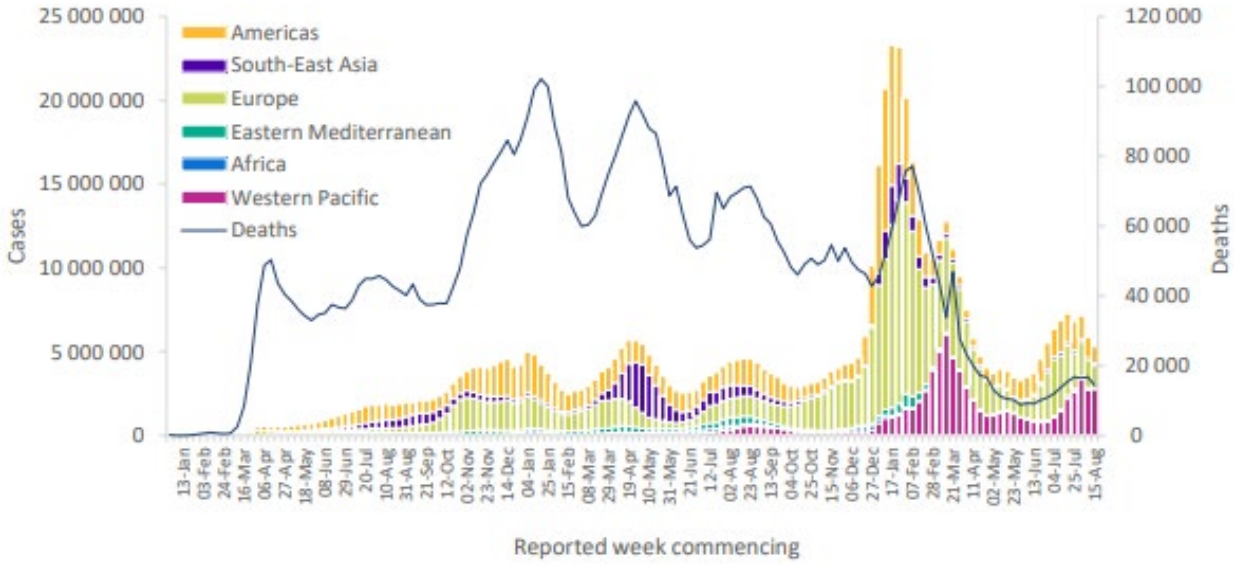


Long Covid

- As reported previously, an estimated 89,000 people in Wales (2.9% of the population) had self-reported long COVID as of 2 July 2022.
- Across the UK, fatigue continued to be the most common symptom reported as part of individuals' experience of long COVID (54% of those with self-reported long COVID), followed by shortness of breath (31%), loss of smell (23%) and muscle ache (22%). The full report is available here.

International overview – World Health Organisation update

- The WHO reports that globally, the number of new weekly cases decreased by 9% during the week of 15 to 21 August 2022, as compared to the previous week, with over 5.3 million new cases reported. The number of new weekly deaths decreased by 15%, as compared to the previous week, with over 14,000 fatalities reported. As of 21 August 2022, 593 million confirmed cases and 6.4 million deaths have been reported globally.
- At the regional level, the number of reported new weekly cases decreased or remained stable across all six regions: the African Region (-25%), the European Region (-20%), the Region of the Americas (-18%), the South-East Asia Region (-17%), the Eastern Mediterranean Region (-13%), and the Western Pacific Region (+2%). The number of new weekly deaths increased in the African Region (+183%) and the Western Pacific Region (+8%), while it decreased or remained stable in the European Region (-30%), the Region of the Americas (-15%), the South-East Asia Region (-11%), and the Eastern Mediterranean Region (+3%).



Source: Weekly Epidemiological Update on COVID-19

3. Variant of Concern update

- BA.5 remains the dominant variant across Wales and the wider United Kingdom. According to PHW, in the latest four reporting weeks (2022 week 30 to 2022 week 33):
    - Omicron (NEC) accounted for 3% of all sequenced variant cases
    - VOC-22JAN-01 (Omicron, BA.2) accounted for 1.2% of all sequenced variant cases
    - VOC-22APR-03 (Omicron, BA.4) accounted for 10% of all sequenced variant cases

  - VOC-22APR-04 (Omicron, BA.5) accounted for 85.4% of all sequenced variant cases

- Globally, from 22 July to 22 August 2022, the WHO reports 162,215 SARS-CoV-2 sequences were shared through GISAID. Among these, 160,716 sequences were the Omicron Variant of Concern (VOC), accounting for 99% of sequences reported globally in the past 30 days.

- A comparison of sequences submitted to GISAID in epidemiological week 32 (7 to 13 August 2022) and week 31 (31 July to 6 August 2022) shows that BA.5 Omicron descendent lineages continue to be dominant globally, with an increase in weekly prevalence from 71% to 74%. There is increasing diversity within BA.5 descendent lineages, with additional mutations in the spike and non-spike regions and a rise in prevalence among some lineages. Notably, BA.5.1 (22.3% in week 32 as compared to 18.6% in week 31), BA.5.2 (20.3% in week 32 as compared to 16.8% in week 31) are rising in prevalence, while BA.5.2.1 remained stable (21% in weeks 32 and 31).

- The prevalence of BA.2 descendent lineages (BA.2.X) and BA.4 descendent lineages (BA.4.X) has been on a continuous decline for several weeks. As of week 32, the prevalence of BA.2.X and BA.4.X is 5.6% and 6.1%, respectively. Additional Omicron descendent lineages (e.g., BA.5.2.1.7) account for 14% of prevalence as of week 32, a rise from 11% of prevalence as of week 31.

- The BA.2.75 variant, previously highlighted in the TAC brief, is now dominant in India at 75% of sequenced cases, although spread internationally remains very low with the variant reflecting only 0.3% of all sequenced cases in the UK according to GISAID as of 8 August. This supports previous suggestions that the rise of this variant is likely related to India's lack of population immunity following a BA.5 variant wave, unlike the UK.

4. COVID-19 Medium-Term Projections

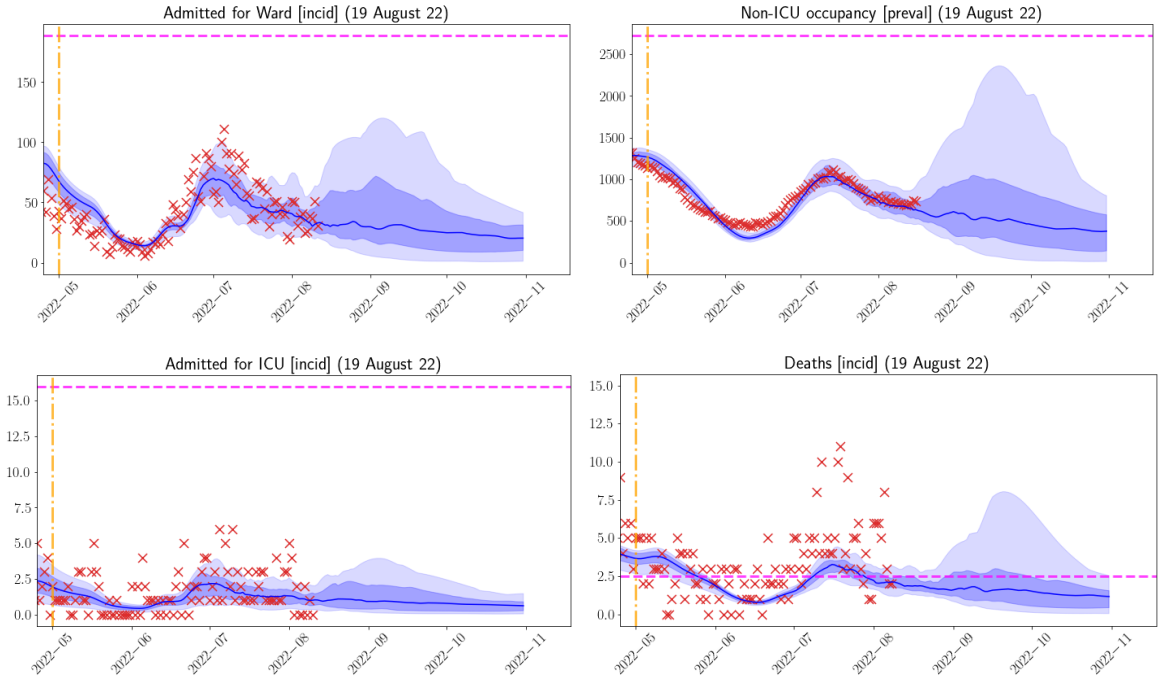
- Swansea University (SU) regularly produces medium-term projections (MTPs) for Wales. The SU projections are also combined with other models to go into a consensus MTP for admissions and deaths which is agreed every two weeks by the UKHSA Epidemiological Modelling Review Group (EMRG), which has taken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

Swansea University MTPs, data as at 19 August

- 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.
- NHS pressures are currently decreasing, though significant uncertainty is projected, with the upper bound representing a scenario of worst-case waning immunity.
- Hospital admissions decreased throughout July but appear to have plateaued in recent weeks. Admissions are projected to continue decreasing from late August, though there is a fair amount of uncertainty (confidence intervals are wide).
- Bed occupancy levels are closely following the MTP projection, which projects levels have passed the peak and are projected to continue decreasing – this trend is fairly uncertain, however.
- ICU occupancy levels are also closely following the MTP projection and are expected to remain at a low plateau. ICU admissions and deaths continue to fluctuate at low levels.



UKHSA EMRG Consensus MTPs

- Swansea University (SU) projections are usually combined with other models to go into a consensus MTP for admissions and deaths which is agreed every two weeks by the UKHSA Epidemiological Modelling Review Group (EMRG). This time there was an insufficient number of models available and so a combined projection could not be produced.

5. Behavioural data

- The ONS continues to collect GB level data via the Opinions and Lifestyle Survey, although content now reflects other societal issues, notably cost of living. The most recent findings for the period 3 to 14 August 2022 suggest that concern about Coronavirus is now at its lowest level since data were first collected, with three in 10 (31%) very or somewhat worried. In comparison, three in four (74%) reported being worried about the cost of living. COVID-19 personal protective behaviours, including handwashing, use of a face mask and social distancing, remained stable in recent weeks, albeit the proportions reporting these behaviours are substantially lower than spring 2022.

6. Other health protection issues

Monkey Pox

- As of 22 August, UKHSA reports 3,340 confirmed or highly probable cases of monkey pox have been reported in the UK (+145 since previous week):
    - 44 confirmed cases are in Wales (+1).
    - 3,191 (+141) are in England; of which 2,232 (70%) are in London (+91)
    - 78 confirmed cases are in Scotland (+3)
    - 27 cases are in Northern Ireland (0)
- Of these, the vast majority (98.7%) are male, with 42 female cases reported. The highest number of confirmed cases are among men aged 25 to 44 years. The median age of confirmed and highly probable cases in the UK was 36 years (interquartile range/spread of 31 to 44).
- Following agreement at a UK CMO level, in the short term the Monkeypox vaccine stock held by UKHSA will be used primarily to respond to rising cases in the London area and other areas with outbreaks. This means further supply of vaccine will be available only to areas in Wales where there has been an outbreak.

6. Evidence roundup- summary:

This section aims to summarise a selection of the recent COVID-19 and relevant communicable disease papers, reports and articles that are relevant to a Welsh context or contain new data, insights or emerging evidence. It may contain pre-print papers, which should be interpreted with caution as they are often not yet peer-reviewed and may be subject to change when published. The exclusion of any publication in this section should not be viewed as a rejection by the Technical Advisory Cell.

Paper 1 - The continuing impact of COVID-19 on health and inequalities

A recent paper from the Health foundation reports that inequalities in COVID-19 mortality persist with mortality rates 3 to 4 times higher in the most deprived areas. The authors report that vaccination uptake is low in people living in poorer areas and people from some minority ethnic groups. Data from the report suggests that the significant deterioration in mental health during the first year of the pandemic has been reversing but has not entirely returned to pre-pandemic levels. People are likely to be less resilient with the stress associated with financial strain in the growing cost-of-living crisis. Long-term health conditions are keeping a significant number of people out of work, representing an ongoing challenge for government and the economy, as well as for individuals. There has been a failure to act on education gaps due to lost learning time in the pandemic. The authors report that a cohort of 'left-behind' children face significant risks to their long-term health and living standards, as well as causing a long-term economic cost to the country.

Paper 2 - Psychological inoculation improves resilience against misinformation on social media

A recent publication reports that online misinformation continues to have adverse consequences for society. The authors report that inoculation theory has been put forward as a way to reduce susceptibility to misinformation by informing people about how they might be misinformed. Five short videos that inoculate people against manipulation techniques commonly used in misinformation were developed as part of the study. The findings suggest that these videos improve manipulation technique recognition, boost confidence in spotting these techniques, increase people's ability to discern trustworthy from untrustworthy content, and improve the quality of their sharing decisions. The report suggests that psychological inoculation campaigns on social media are effective at improving misinformation resilience at scale.

Paper 3 - Public attitudes to social care in Wales following the COVID-19 pandemic

A recent mixed-methods study in Wales focused on perceptions of social care, including whether people have accessed services when needed, whether they were satisfied with care received, and whether they feel social care should be reformed,

valued more, and how much they feel it has been impacted by the pandemic. The study's key findings suggest that four-in-ten of those who felt that they or someone in their household/close family needed social care during the past two years did not receive or make use of it. The overall satisfaction with social care was variable and the vast majority of respondents felt that the social care system in Wales was in need of reform. A large majority of respondents felt that reducing the costs of social care for those that need it should be a priority for the UK and Welsh Governments.

Paper 4 - Monkeypox virus shows potential to infect a diverse range of native animal species across Europe, indicating high risk of becoming endemic in the region

A recent publication reports that monkeypox virus has persisted via human-to-human transmission, across all major continents and for longer than any previous record. This unprecedented spread creates the potential for the virus to 'spillback' into local susceptible animal populations. Persistent transmission amongst such animals raises the prospect of monkeypox virus becoming enzootic in new regions. The full and specific range of potential animal hosts and reservoirs of monkeypox remains unknown. The study findings suggest the number of potentially susceptible species is currently underestimated. The authors report that the European red fox and brown rat have established interactions with potentially contaminated urban waste and sewage, which provides a mechanism for potential spillback. The results also indicate the potential of domesticated cats and dogs being susceptible to monkeypox virus, and hence support many health organisations' advice for infected humans to avoid physical interaction with pets.

Paper 5 - Effectiveness of fourth dose COVID-19 vaccine against the Omicron variant compared to no vaccination

A recent study estimated vaccine effectiveness for third and fourth doses of mRNA COVID-19 vaccine against Omicron, by clinical outcome. Waning COVID-19 vaccine effectiveness and the capacity of the Omicron SARS-CoV-2 variant to evade pre-existing immunity have been major impediments to COVID-19 control efforts worldwide. Several countries have rolled out third and fourth dose COVID-19 vaccination programs. The study findings suggest that a fourth dose of an mRNA vaccine appears to restore protection conferred by a third dose at the same time since vaccination. The fourth dose boosting effect may even exceed the third dose for any infection and symptomatic infection, however, uncertainty intervals overlap.

Paper 6 - Symptom presentation among SARS-CoV-2 positive cases and the impact of COVID-19 vaccination; three prospective household cohorts

A recent study compared the symptom burden of the wild-type and Alpha variant infected individuals versus the Omicron BA.1 and BA.2 infected individuals across paediatric and adult age-groups. The household transmission study was conducted during the wild-type and Alpha period (April 2020 to April 2021) and the early Omicron BA.1 and BA.2 dominant periods. The findings from the study report that unvaccinated children <12 years experienced more symptoms and higher maximum

and cumulative severity scores during the Omicron compared to the wild-type/Alpha period. The authors report that in children, the Omicron variant causes higher symptom burden compared to the wild-type/Alpha. Adults experienced a lower symptom burden possibly due to prior vaccination. A shift in most frequently reported symptoms occurred with a marked reduction in loss of smell or taste during the Omicron period. An additional effect of booster vaccination on symptom severity in infected adults compared to primary series only, could not be demonstrated.