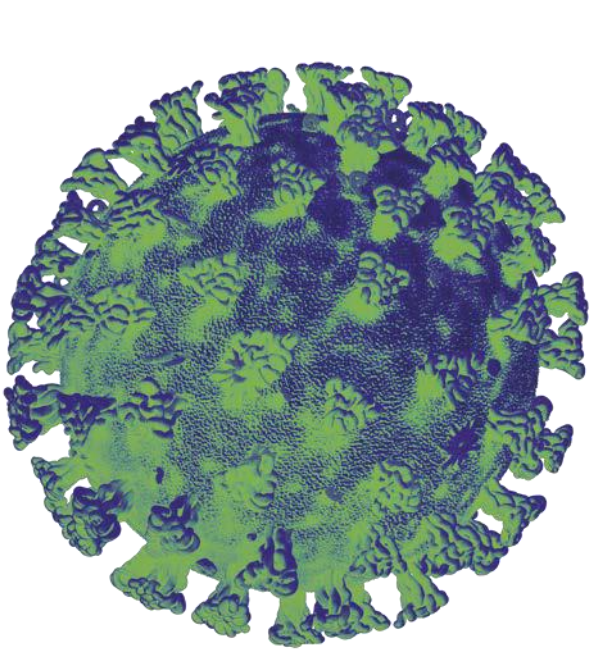
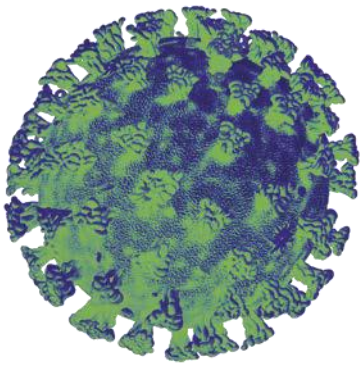
Llywodraeth Cymru
Welsh Government

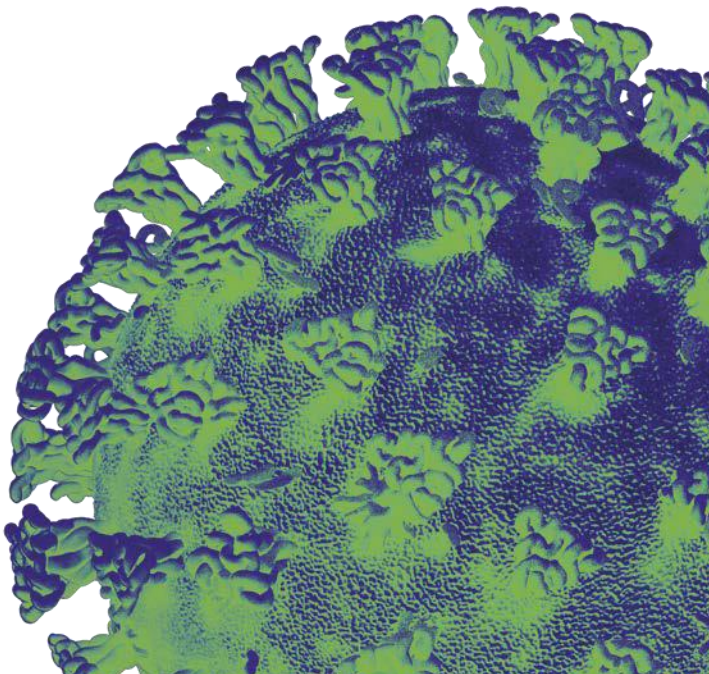
Technical Advisory Cell

Summary of Advice

29 July 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. Due to the current situation of increasing cases this report will be produced weekly going forward.

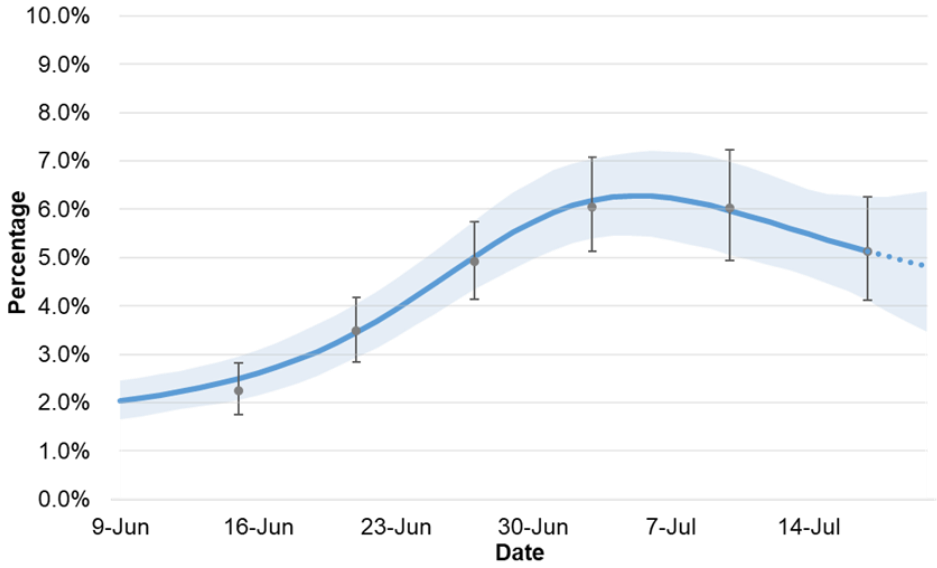
Top Line Summary

- *ONS positivity has fallen slightly from 1 in 17 to 1 in 19 people in Wales. ONS analysis of the percentage of people testing positive for COVID-19 by age group reports an uncertain trend across all age groups, with high uncertainty demonstrated by wide confidence intervals.*
- *Wastewater surveillance indicates the overall SARS-CoV-2 viral load has decreased across Wales. Whilst the wastewater signal has decreased compared with the previous week, the signal is still elevated.*
- *PHW lateral flow test data in the latest week* (11/07/2022 to 27/07/2022) *shows the number of reported tests decreased from 73,242 in the previous week to 58,684 in the latest reporting week, while the number of positive testing episodes decreased from 12,209 in the previous week to 7,287 in the latest reporting week.*
- *As of 26 July 2022, after reaching a peak of 25 admissions per day in mid-July, suspected and confirmed admissions (7-day average) are beginning to decrease, having decreased to around 22 admissions a day.*
- *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.*
- *COVID-19 deaths have increased in the last week, to 41 (from 23 the previous week) which is an indication of the high prevalence that was observed over the last 3-4 weeks.*
- *UKHSA reports that there is no evidence yet of the extent to which BA.2.75 has an impact on transmissibility and disease severity compared to other circulating lineages. UKHSA designated it as a Variant Under Investigation as of 18 July 2022.*
- *New Medium Term Projections are not yet available this week due to challenges with model fitting.*

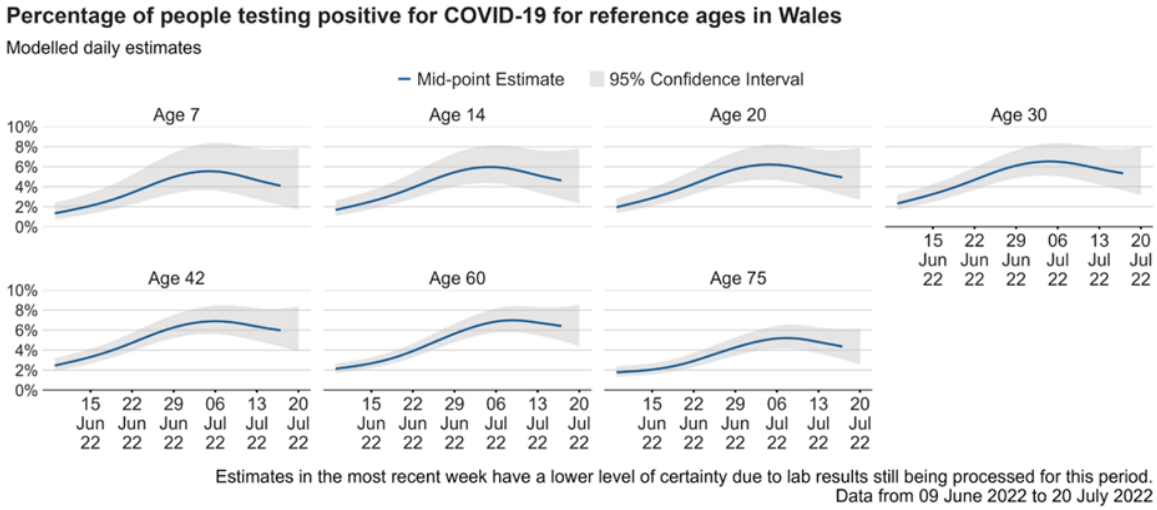
1. Wales Situation Update

Infections

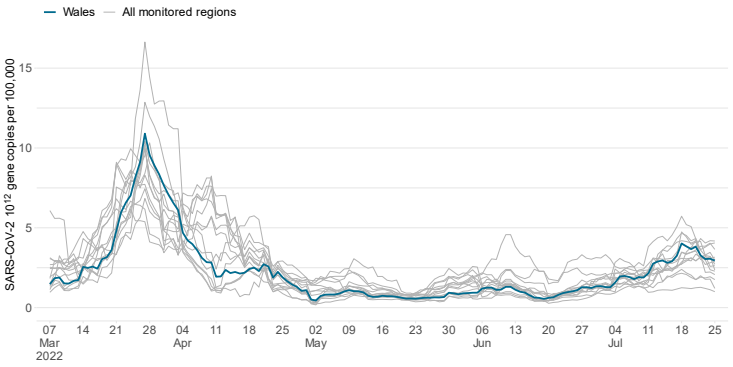
- The trend in the percentage of people testing positive for COVID-19 in Wales has decreased in the week ending 20 July. During this period, it is estimated that 5.14% of the community population had COVID-19 (95% credible interval: 4.11% to 6.26%). Caution should be taken in over-interpreting any small movements and credible intervals are provided to indicate the range within which we may be confident the true figure lies.
- This equates to approximately 1 person in every 19 (95% credible interval: 1 in 25 to 1 in 16), or 156,200 people during this time (95% credible interval: 125,200 to 190,400; down from 1 in 17 last week.

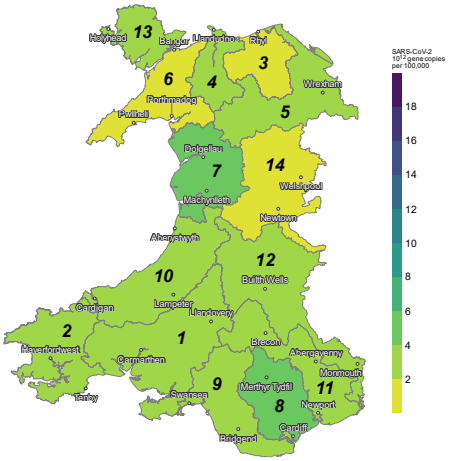


- Although ONS analysis of the percentage of people testing positivity for COVID-19 for Wales reports a decline, high uncertainty (shown by wide confidence intervals) leads to the trends by age group being uncertain for all ages.



- Wastewater surveillance suggests the overall SARS-CoV-2 viral load has decreased across the country in the latest week. The signal decreased in 9 regions, increased in 1 region, and remained level in 4 regions. Whilst the wastewater signal has decreased, the signal remains still elevated.





- Sequencing of wastewater samples continue to suggest BA.4 and BA.5 are the dominant variants (~80% of sequenced samples). AS of 13 July 2022, BA.2.75 has not been detected in Wastewater samples from Wales.
- *Since 1 April 2022, free NHS lateral flow tests (LFTs) in Wales are only available to members of the public that are showing symptoms of coronavirus or who are visiting someone eligible for new COVID-19 treatments. This is scheduled to end on 31 July 2022. 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 (11/07/2022 to 27/07/2022) the number of LFTs reported decreased from 73,242 in the previous week to 58,684. The number of positive testing episodes decreased from 12,209 in the previous week to 7,287 in the latest reporting week. The episode positivity rate decreased from 27.01% in the previous week to 19.73% in the latest reporting week. The 40-59 age group recorded the highest incidence rate of 331.4 positive testing episodes per 100,000 population. The Under 20 age group recorded the highest episode positivity rate of 35.49%.

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 indicate that since the start of 2022, the numbers of deaths from any cause have been oscillating around the 2015-2019 five-year average. In the most recent reporting period the numbers were level with the average.

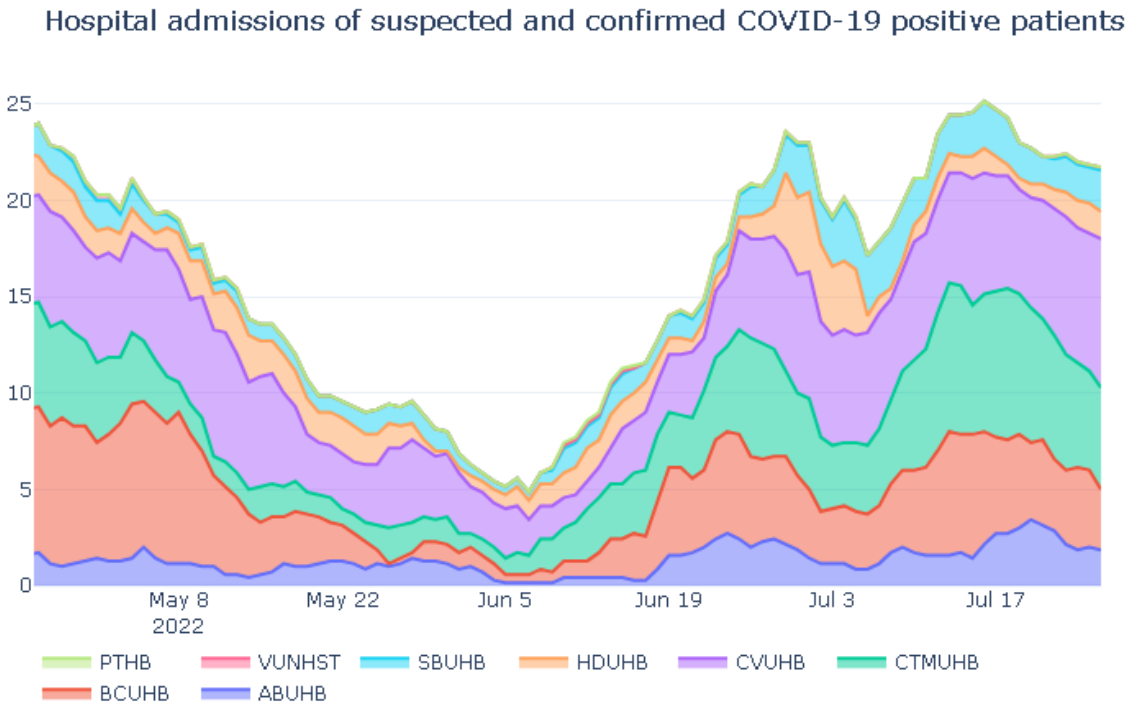
- The Office for National Statistics (ONS) published statistics on Tuesday 26th July on provisional weekly deaths, including deaths involving COVID-19, for the week ending 15 July 2022. The cumulative number of deaths involving COVID-19 occurring up to the latest week was 10,506.

  621 deaths from all causes were registered in the latest week. This was 12 more than the previous week, and 41 more than the five-year average for 2016-2019 and 2021.

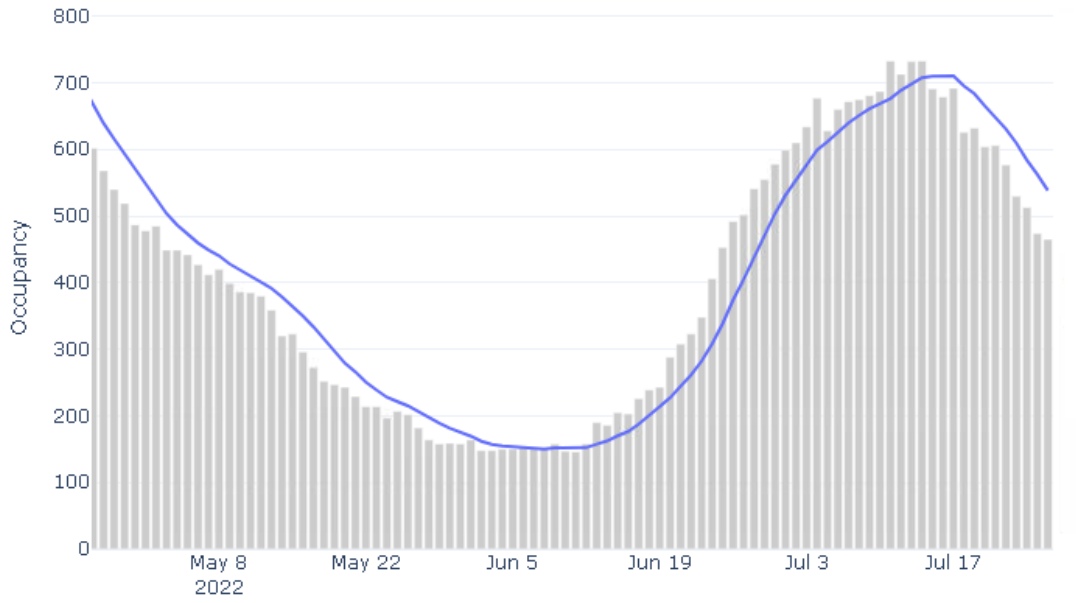
  41 deaths involving COVID-19 were registered in the latest week. This was 7% of all deaths, and 19 more than the previous week.

NHS

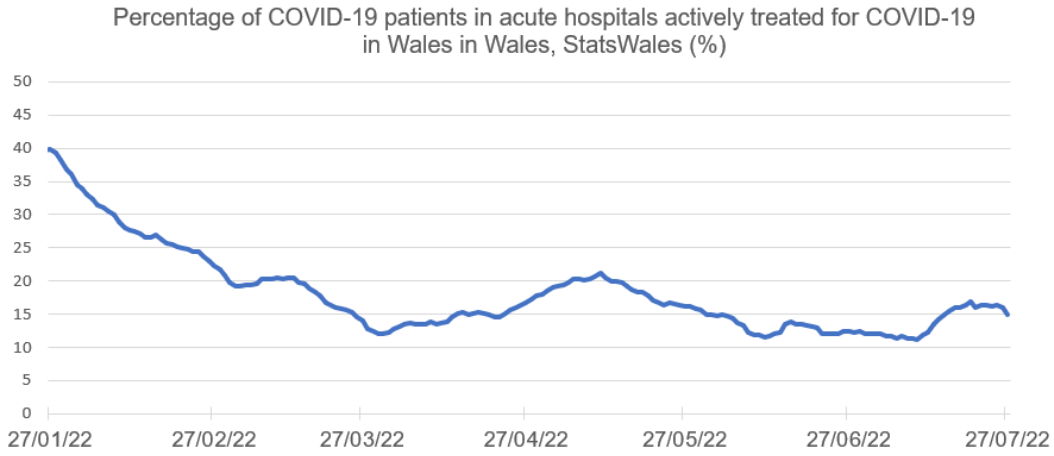
- COVID-19 admissions (suspected and confirmed) have fluctuated in Wales since the start of July, between 17 and 25 admissions a day. Admissions increased from 6 July 2022 to 16 July 2022. Admissions have appeared to be decreasing since then.
- As of 26 July 2022, after reaching a peak of 25 admissions per day in mid-July, suspected and confirmed admissions (7-day average) are beginning to decrease, having decreased to around 22 admissions a day. This level was last observed in late April, and is just over half the maximum number of admissions observed during the BA.2 wave in early April 2022.



- 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 and as of 26 July 2022, is at a weekly average of around 530 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[1].



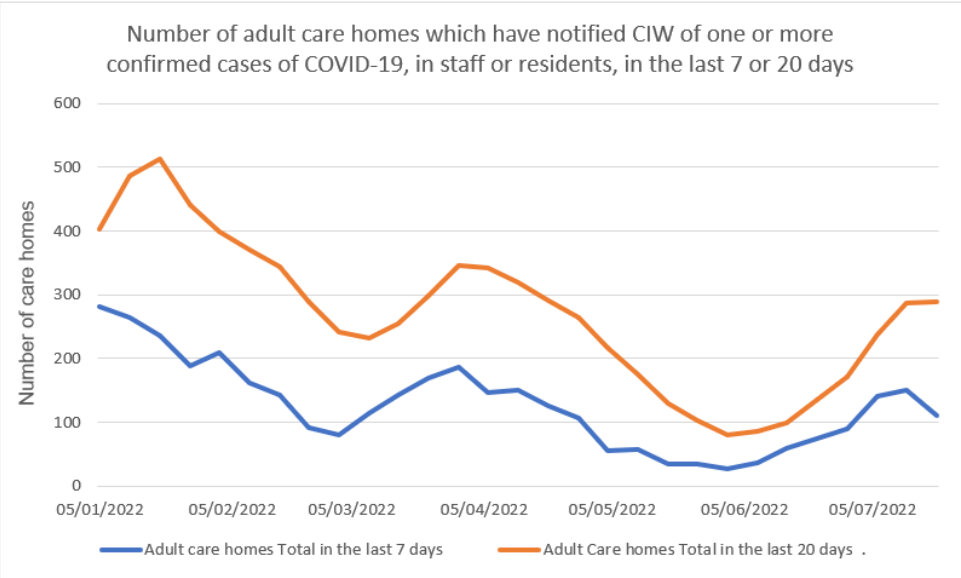
- NHS staff absence figures up to 25 July show absence due to self-isolation has remained the same as the previous week at 0.5%, whilst absence due to COVID-19 sickness has decreased to 1.3%.

Care homes

- As at 20 July 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 decreased for the first time since mid-May 2022. The most recent data shows a decrease of 26.7% to 110 compared to 150 in the previous week, while this figure for the last 20 days has remained stable at

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

289 compared to 288 in the previous week. There are 1,029 adult care homes in total in Wales.



- As at 20 July 2022, the number of notifications of deaths of adult care home residents involving COVID-19 (both confirmed and suspected) in the last 7 days has increased to 4, compared to 2 in the previous week.
- In total, CIW has been notified of 2,215 care home resident deaths with suspected or confirmed COVID-19 between 1 March 2020 and 20 July 2022. This makes up 12.7% of all adult care home resident reported deaths (17,422) during this period.

Schools (6 September 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.

Vaccinations

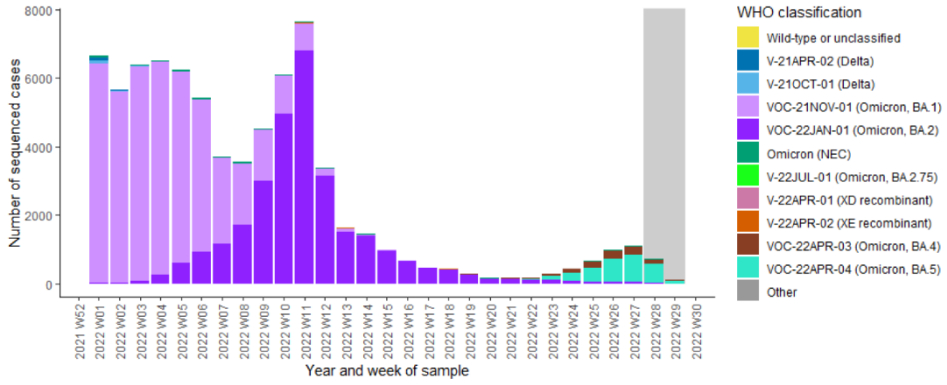
- The most recent COVID-19 weekly surveillance and epidemiological summary reports that, as of the week ending 20 July 2022, 7,224,634 COVID-19 vaccinations have been given in Wales.
- Uptake of the 2022 Spring booster has been high
- Delivery of the 2022 Spring booster is now underway. As at 20 July 2022, uptake was 85% for those aged 75y and older, 84% for people living in residential care homes for older adults and 60% of people who are immunosuppressed (the majority of immunosuppressed patients will only recently have been vaccinated with 2021/22 boosters, and will be called to receive a 2022 Spring booster dose when the appropriate interval has elapsed) The full vaccinations report can be accessed here

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

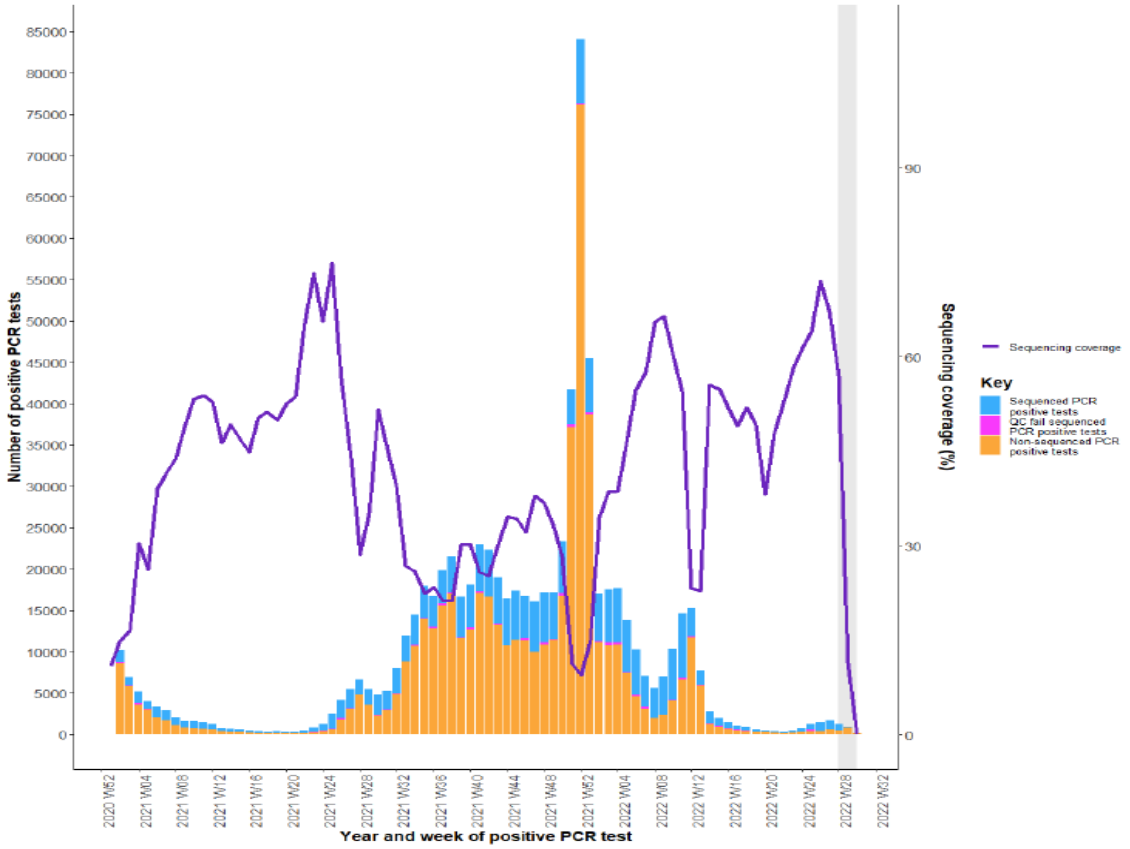
Group	Group size (n)	Received 1st dose (n)	Completed primary course* (n)	Received booster dose** (n)	First dose uptake (%)	Primary course uptake* (%)	Booster dose uptake** (%)
Severely Immunosuppressed	51,651	51,182	48,424	42,073	99.1%	93.8%	81.5%
Care home residents	13,201	13,015	12,943	12,547	98.6%	98.0%	95.0%
Care home worker	37,703	35,812	35,211	29,451	95.0%	93.4%	78.1%
80 years and older	174,173	167,881	166,999	162,476	96.4%	95.9%	93.3%
Health care worker	140,770	137,308	135,950	122,631	97.5%	96.6%	87.1%
Social care worker		44,980	44,645	39,853			
Aged 75-79 years	143,161	138,976	138,383	134,877	97.1%	96.7%	94.2%
Clinically extremely vulnerable aged 16-69..	75,580	72,241	71,380	62,351	95.6%	94.4%	82.5%
Aged 70-74 years	177,154	170,678	169,734	164,555	96.3%	95.8%	92.9%
Aged 65-69 years	182,601	173,628	172,262	165,418	95.1%	94.3%	90.6%
Clinical risk groups aged 5-64 years	350,605	313,829	304,742	263,431	89.5%	86.9%	75.1%
Aged 60-64 years	211,627	197,953	195,805	185,108	93.5%	92.5%	87.5%
Aged 55-59 years	235,489	216,349	213,541	197,759	91.9%	90.7%	84.0%
Aged 50-54 years	227,246	204,557	201,198	181,543	90.0%	88.5%	79.9%
Aged 40-49 years	393,512	335,493	326,457	275,928	85.3%	83.0%	70.1%
Aged 30-39 years	436,137	348,894	332,713	248,274	80.0%	76.3%	56.9%
Aged 18-29 years	490,263	396,620	367,906	249,749	80.9%	75.0%	50.9%
Aged 16-17 years	70,954	54,585	46,336	25,284	76.9%	65.3%	35.6%
Aged 12-15 years	149,088	92,141	73,536		61.8%	49.3%	
Aged 5-11 years	255,333	49,566	12,617		19.4%	4.9%	

Public Health Wales Variant Surveillance Update, 26 July

- As at 26 July 2022 (W30), PHW report the proportion of Omicron BA.5 has increased and continues to be the dominant variant, accounting for 77.4% of sequenced cases in the last 14 days.
- In the latest three reporting weeks (W27-30);
    - Omicron (Not Elsewhere Classified) accounted for 2.8% of all sequenced variant cases
    - VOC-22JAN-01 (Omicron, BA.2) accounted for 3.6% of all sequenced variant cases
    - VOC-22APR-03 (Omicron, BA.4) accounted for 18.8% of all sequenced variant cases
    - VOC-22APR-04 (Omicron, BA.5) accounted for 74.8% of all sequenced variant cases



Epicurve of all sequenced variant cases in Wales, data as at 26 July, Genomic Epidemiology Team, CDSC Weekly Wales Variant Summary



Sequencing coverage in Wales as at 26 July, Genomic Epidemiology Team, CDSC Weekly Wales Variant Summary

- (Please note data in the grey shaded region in the above charts is indicative of a lag in sequencing data and should be interpreted with caution as the data is likely to be incomplete.)

Weekly Influenza and Acute Respiratory Infection Report – PHW

- As at 27 July, PHW report that confirmed influenza cases in Wales continue to be seen at low levels, while RSV confirmed cases remain at high/ very high levels. During Week 29 (ending 24/07/2022) there were 7 confirmed cases of influenza. COVID-19 cases continue to be detected in symptomatic patients in hospital and in the community.
- RSV incidence in children under 5 years of age has decreased but remains at levels that would indicate very high levels of activity (compared to the 10 seasons leading up to 2020). Although there has been a genuinely early start to the RSV season this year, it is possible that higher numbers of cases are being detected this season, in part, due to increased testing activities. Rhinovirus, RSV and adenovirus are the most commonly detected cause of non-COVID-19 Acute Respiratory Infection (ARI), with increasing confirmed cases in recent weeks.
- PEDW data from DHCW, from 13th July shows admissions for bronchiolitis (typically caused by RSV) have been fluctuating between 0 and 10 per day throughout spring and summer, which is relatively similar to previous years, however the data is subject to delays in coding so may be retrospectively updated to be higher than this.
- As of 21 July, influenza surveillance indicators remain low in the UK. UK summary data are available from the UKHSA Influenza and COVID-19 Surveillance Report. The WHO and the European Centre for Disease Prevention and Control (ECDC) have reported that influenza activity across Europe remained at interseasonal levels during weeks 21-25. The WHO reported on 10/07/2022 that globally, influenza activity continued to decrease, following a peak in March 2022.

2. Situation in the UK and international comparators

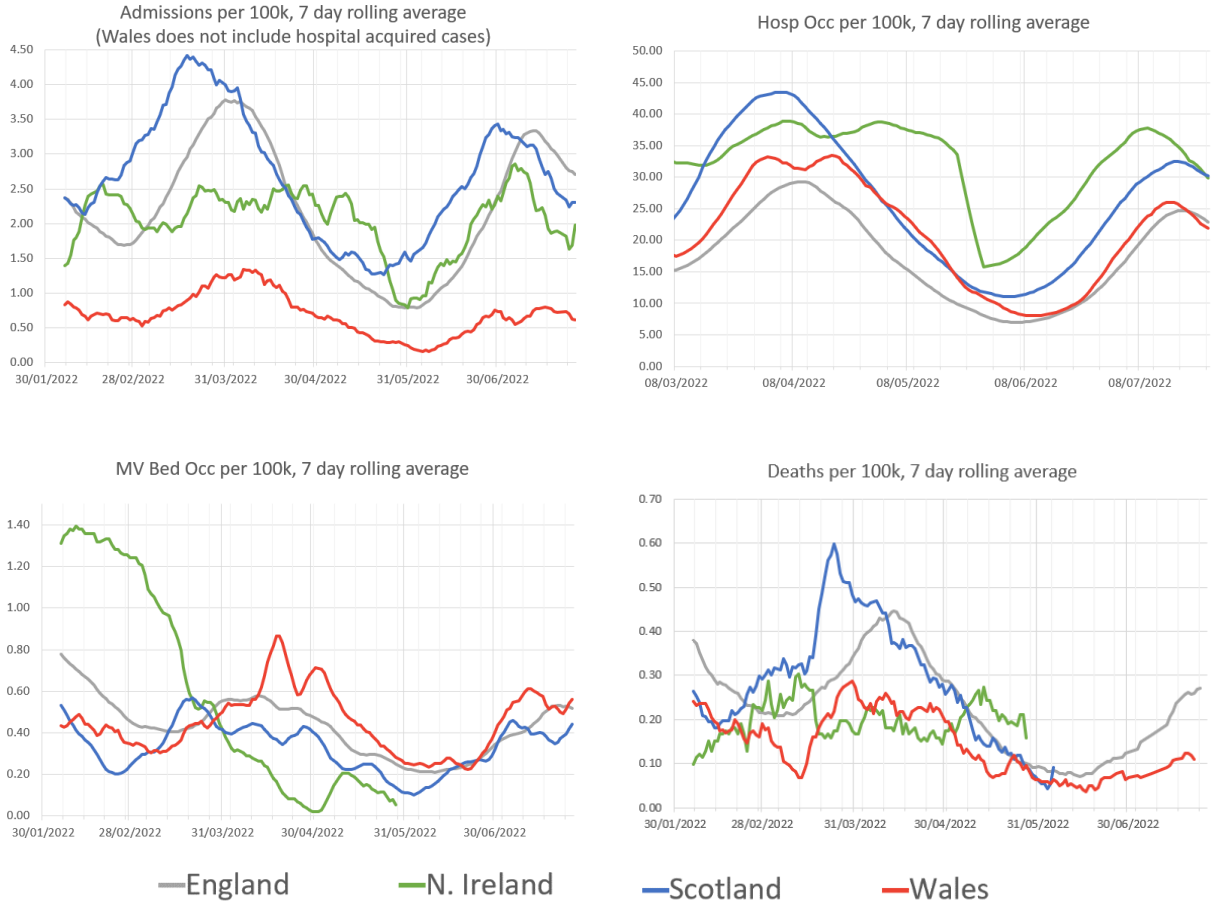
UK Overview

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 that admissions have peaked in Scotland and Northern Ireland, while the trend for England and Wales appears stable but uncertain. 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**.

- In terms of hospital occupancy, all nations appear to have peaked with decreasing numbers in all four nations.
- ICU/ Mechanically ventilated bed occupancy remains lower than previous waves and has increased in the most recent data for Scotland and Wales after temporarily decreasing. The trend for England is uncertain, with numbers broadly stable. Northern Ireland is not reporting this data.
- The number of deaths also remains very low relative to previous waves. After stabilising last week England appears to have increased, while Wales is more uncertain. Scotland and Northern Ireland no longer report this data.

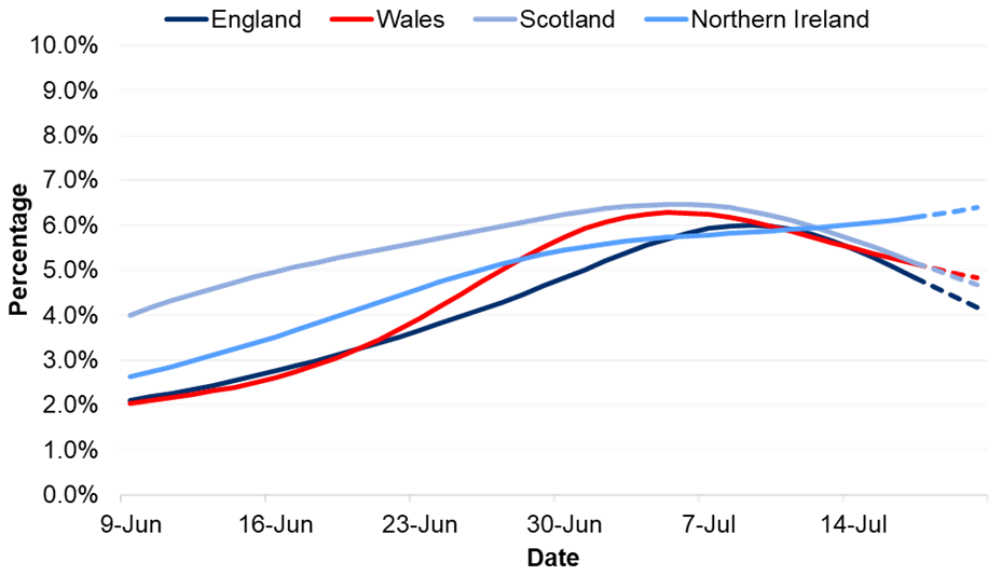


UK Infection positivity – ONS Coronavirus Infection Survey, 14 to 20 July 2022

- At the midpoint of the most recent week (14 to 20 July 2022), The percentage of people testing positive for COVID-19 has decreased in England, Wales, and Scotland and the trend is uncertain in Northern Ireland. The estimated percentages of the community population with COVID-19 ranged from 4.83% in England to 6.18% in Northern Ireland.
- During the most recent period, it is estimated that around 1 in 19 people in Wales had COVID-19. This compares to around 1 in 20 people in England, around 1 in 16 in Northern Ireland and around 1 in 19 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.

Positivity rates (%) across UK countries since 9 June 2022



Long Covid

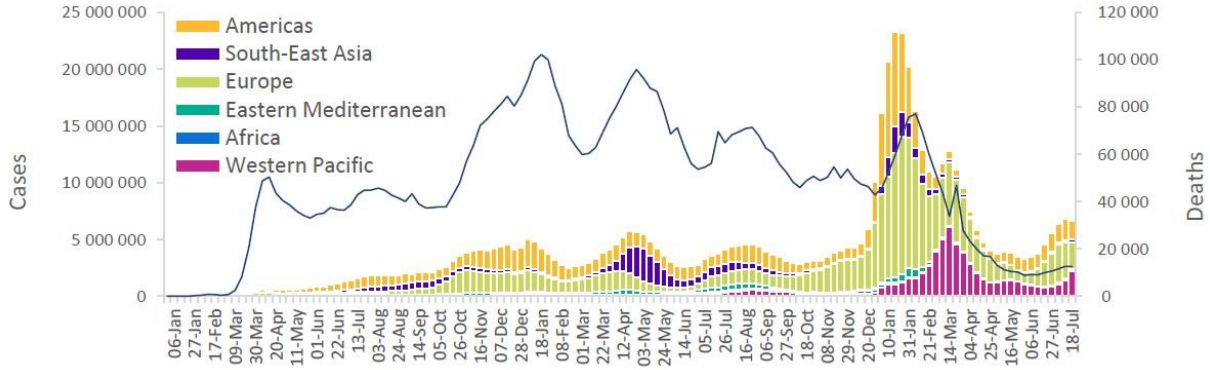
- An estimated 2.0 million people living in private households in the UK (3.0% of the population) were experiencing self-reported long COVID (symptoms continuing for more than four weeks after the first suspected coronavirus (COVID-19) infection that were not explained by something else) as of 4 June 2022. Of people with self-reported long COVID, 405,000 (21%) first had (or suspected they had) COVID-19 less than 12 weeks previously, 1.4 million people (74%) at least 12 weeks previously, 807,000 (41%) at least one year previously and 403,000 (21%) at least two years previously. Fatigue continued to be the most common symptom reported as part of individuals' experience of long COVID (56% of those with self-reported long COVID), followed by shortness of breath (31%), loss of smell (22%), and muscle ache (21%). The full report is available here
- ONS have recently published detailed data on long covid by age in Wales. The report suggests that people aged between 35 and 69 were most likely to have self-reported long covid in the four-week period ending 4 June 2022 (68,000 people). These data are available here

International overview – World Health Organisation update

- The WHO reports that globally, the number of weekly cases reported during the week of 18 to 24 July 2022 was similar to the number reported last week, with over 6.6 million new cases. Likewise, the number of new weekly deaths was similar to the number reported during the previous week, with over 12

600 fatalities. As of 24 July 2022, over 567 million confirmed cases and over 6.3 million deaths have been reported globally.

- At the regional level, the number of new weekly cases increased in the Western Pacific Region (+52%), the Eastern Mediterranean Region (+45%) and the South-East Asia Region (+13%), while it decreased in the African Region (-44%), the European Region (-24%) and the Region of the Americas (-12%). The number of new weekly deaths increased in the Eastern Mediterranean Region (+88%), the Western Pacific Region (+19%) and the South-East Asia Region (+8%), while it decreased in the African Region (-47%) and the European Region (-6%). The number of new weekly deaths in the Region of the Americas was similar to the figure reported during the previous week.



Source: Weekly Epidemiological Update on COVID-19

- The WHO reports that from 21 June to 21 July 2022, 193,561 sequences were collected and uploaded to GISAID. Among these, 175,679 sequences were the Omicron variant of concern (VOC), accounting for 90.1% of sequences reported globally in the past 30 days. During the same period, Delta VOC and recombinants were observed in 49 (<0.1%) sequences. The remaining 18,223 (9.9%) sequences are waiting to be assigned and presumed to be Omicron.

- A comparison of sequences submitted to GISAID in epidemiological week 28 (10 to 16 July 2022) and week 27 (3 to 9 July 2022) shows that BA.4 and BA.5 Omicron subvariants continued to be dominant globally with a weekly prevalence that remained stable, with BA.4 accounting for 11.1% in week 27 and 11.2% in week 28, and BA.5 accounting for 52.4% and 52%, respectively. Conversely, during the same period, BA.2 and BA.2.12.1 sequences showed a decline from 3.6% to 2.2% and from 6.4% to 2.7%, respectively.

3. Variant of Concern update

- UKHSA's most recent variant technical briefing (England data only) reports analysis of BA.4/5 vaccine effectiveness and severity is still pending wider detection and characterisation of these variants, which is taking slightly longer than previous waves due to reduced testing and sequencing. It is estimated that, in England, BA.5 is the variant with the highest growth rate representing

75% of cases, while BA.4 is around 20% of cases and BA.2 is 5%, of which the vast majority is BA.2.12.1.

Table 3. Modelled relative growth rates (as doubling times) and representation among sequenced cases for BA.2.12.1, BA.4 and BA.5

Date of estimate	Variant	Total samples	Percentage	Relative doubling time
13/07/2022	BA.2.12.1	1,974	1.46% (CI: 1.08 to 1.96)	-8.87 days (CI: -6.69 to -13.17)
13/07/2022	BA.4	5,661	14.51% (CI: 12.23 to 17.22)	-25.8 days (CI: -16.05 to -65.74)
13/07/2022	BA.5	16,286	82.92% (CI: 78.34 to 87.76)	45 days (CI: 75.11 to 32.12)

Source: SARS-CoV-2 variants technical briefing 44 (22 July 2022) (publishing.service.gov.uk)

- Estimated growth rates suggest that BA.5 has the largest relative fitness advantage, followed by BA.4 then BA.2.12.1. Modelling by UKHSA suggests that the relative growth of BA.2.12.1 and BA.4 are both in decline, while the relative growth of BA.5 is still increasing but has slowed considerably. This is likely due to BA.5 saturating as the dominant variant (as expected) and misclassification of BA.5 as 'other'.
- Updating on BA.2.75, as at 18 July 2022, 24 BA.2.75 cases have been detected in the UK: 20 in England (mainly London), 3 in Scotland and 1 in Wales which was collected on 29 June. However UKHSA states the small number of cases and limited observed growth makes estimation of growth advantage challenging.
- A recent preprint (not per-reviewed) study carried out in Sweden suggests that BA.2.75 does not show greater immune evasion than the currently-dominating BA.5. This may suggest that, at least in the short/medium-term, following the current BA.5 wave it is possible population immunity may have been increased to a level sufficient to prevent a subsequent BA.2.75 wave in the UK. However, this does not mean there will not be future waves caused by a more antigenically distant COVID-19 variant in the long-term.
- BA.2.75 has been shown to cause new waves in countries where BA.5 has not dominated, such as India where BA.2.75 appears to be outcompeting BA.5 in two regions, although there is still limited data on severity. It should also be noted that a number of additional BA2 sublineages are also circulating in India such as BA.2.38, BA.2.73, BA.2.76, so caution is advised in attributing the recent increase to BA.2.75 alone. Nevertheless, previous waves have shown clear variant travel links between the UK and India, suggesting that differences in population immunity are driving the observed trends, although caveats on limited testing apply.
- GISAID have reported observed cases of BA2.75 in a number of other countries including the US, Nepal, Japan, Canada and Australia, although absolute numbers are still very small. In terms of age demographics GISAID reports low numbers of sequenced cases are spread amongst all age groups, although numbers are slightly higher in those aged 20-29. However as there

are fewer than 1000 reported sequenced cases globally, this should be interpreted as very preliminary data.

UKHSA EMRG Consensus MTPs, 20 July – Available here

- The most recent projections have not been updated since last week's briefing. The most recent MTPs suggest admissions in Wales have peaked and will be decreasing from mid-July. Note that this is similar to the MTPs produced by SU (which also project that admissions will be decreasing throughout July and August).

4. Other health protection issues

Monkey Pox

- As at 28 July, 2,447 confirmed cases of monkey pox have been reported in the UK:
    - 30 confirmed cases are in Wales (1% of all UK cases). This is no change from the previous week; the number of active cases are being reviewed and will be updated as soon as possible.
    - 2,338 are in England (95.5%); of which 1,758 in London (71.8%)
    - 60 confirmed cases are in Scotland (2.5%)
    - 19 cases are in Northern Ireland (<1%)
- Of these the vast majority are male, with 19 female cases reported. There are reports that the current outbreak is disproportionately affecting vulnerable populations/individuals.
- The UK CMOs have agreed, in the short term, to the UK wide outbreak management approach proposed by UKHSA. This means that the majority of doses of the limited supply of Monkeypox vaccine stock held by UKHSA will be used primarily to respond to rising cases in the London area and other areas with outbreaks. The change to an outbreak management approach rather than pre-exposure vaccination will require a change of strategy for the NHS in Wales.
- This means further supply of vaccine will be available only to areas in Wales where there has been an outbreak. It was announced on 19 July that UKHSA had procured from the manufacturer, Bavarian Nordic, over 100,000 additional doses of the smallpox vaccine in response to the ongoing monkeypox outbreak. Additional doses are due to arrive in August, with the remainder expected by September.

Update to unexplained hepatitis cases in children

- Over the last few months a number of young children have developed acute severe hepatitis of unknown origin. The WHO has reported around 1,010

probable cases in 35 countries. In the UK, 263 case have been reported (as of 4 July) which includes a number who have been hospitalised and a small number (around 12) who have required a liver transplant.

- After a detailed analysis captured in two studies, one looking at data from Scotland and one looking at data from across the UK, scientists believe they have taken a considerable step to identifying the cause of the recent increase in serious hepatitis cases. Importantly, these analyses have ruled out any direct connection with the COVID-19 virus or the vaccination.
- The findings suggest that as a result of pandemic protective measures, infants missed out on building immunity to two common infections, adenovirus and adeno-associated virus 2, which led to some susceptible children developing unusual and serious liver complications. Because restrictions have now been lifted it is hoped that these cases will become fewer, although further investigation and analysis is required. The two studies, which have not been peer-reviewed, are available here and here.