

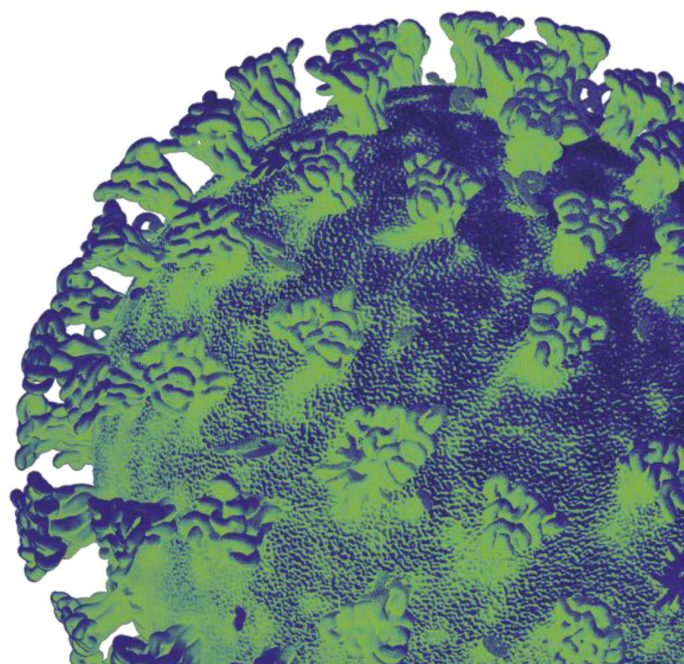
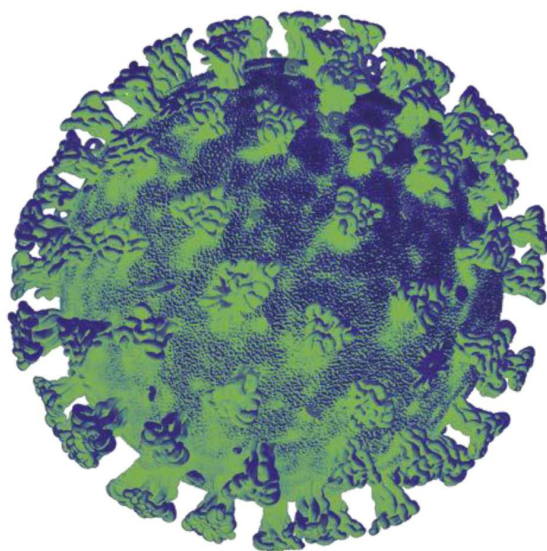
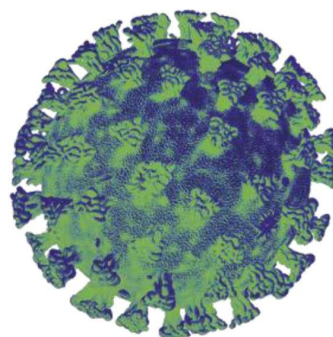


Llywodraeth Cymru
Welsh Government

Technical Advisory Cell

Summary of advice

27th November 2020



Technical Advisory Cell: Summary Brief

27th November 2020

Top-line summary

- As reported by SAGE, the R value in Wales is estimated to be between 0.8 and 1.0 (the same as last week), and the epidemic is estimated to be shrinking/growing by -3% and 1% per day; other estimates using early indicators are higher.
- As at 27th November, overall cases of COVID-19 in Wales have continued to show an increase. Incidence has shown a decrease in those aged 45 and over, whilst incidence increased in all other age groups; highest incidence was seen in those aged 18-25 and those aged 85 years and older.
- Data from the [ONS Covid-19 Infection Study](#) show a decrease in test positivity across Wales (week 15 to 21 November 2020). Positivity rates in Wales have remained lower than England and Northern Ireland recently.
- As of 27th November, confirmed COVID-19 hospital occupancy is showing signs of reducing, but still remains higher than the April peak. However overall ICU occupancy remains above the red circuit breaker and data indicates that a 1:1 staffing ratio for ICU patients is not possible across Wales.
- Deaths from all causes remain above the five-year average in Wales and according to data from the Office for National Statistics, the number of deaths involving COVID-19 increased up to week ending 13 November 2020. However, the number of 'all-cause' deaths has shown a decrease and recent data from Public Health Wales (which includes deaths from confirmed COVID-19 only) indicates COVID-19 deaths have reduced in recent weeks.
- Mobility increased slightly this week compared to last week. Whilst some areas such as retail and recreation and requests for driving directions are slightly higher than before the firebreak, mobility for workplaces is slightly lower.
- [SAGE highlights](#) that most transmission occurs due to prolonged, close interaction with familiar people. Principles to reduce risk include; considering whether in-person contact is essential, making use of outdoor and community spaces, protecting vulnerable people, ensuring emotionally vulnerable have social support, limiting duration of contact (especially indoors), limit interactions to same small group of people, managing the home environment and negotiating a safe meeting plan.
- Avoiding social contacts for a period of at least 7-10 days before meeting people (especially the older or vulnerable) at Christmas or for other celebrations will help to reduce the risk of transmission.

- [Recent data](#) show epidemics shrinking across the majority of areas under Tier 3 restrictions in England and following restrictions in all areas of Northern Ireland. The picture is more mixed across Wales, but overall the firebreak was followed by a reduction in new cases for 2-3 weeks. The picture is also more mixed for Central Scotland during the central belt restrictions; although the general trend is for a reduced growth rate following restrictions. Care should be taken when assigning causality with NPIs and reduction in epidemic growth, however on balance the current evidence suggests that the stronger interventions adopted in England (i.e. Tier 3) and Northern Ireland (i.e. National restrictions) resulted in reduced growth rates. Whilst the picture is more mixed in Scotland, most epidemics grew more slowly or shrank after the central belt restrictions than before. These stronger interventions included restrictions on meeting others (apart from support bubbles), the closure/limited opening of pubs, bars and restaurants, and limited travel.
- The UK Government Cabinet Office have published a [paper](#) explaining how the different types of evidence available support the view that hospitality venues are a significant risk for transmission.
- Overall, evidence indicates that the firebreak has worked to reduce cases and infections in the community. Hospital and ICU occupancy and deaths have shown early signs of improvement. However cases are increasing again and therefore there remains a need for increased vigilance and appropriate action to reduce the negative impact of the virus on individuals and services in Wales, both prior to and during the festive period. Estimates of R using early indicators such as [CoMix](#) data, combined with mobility data, suggests that people's behaviours may have returned to pre-firebreak levels.
- Papers from SAGE considered by the Technical Advisory Cell are published [here](#).

Growth rate and Reproduction number

- The current daily growth rate is estimated by SAGE (26th November) to be between -0.03 and 0.01 in Wales, indicating that infections could be shrinking/growing by between -3% and 1% per day.
- The most recent estimate of the Reproduction number (R_t) for Wales from SAGE (26th November) is predicted to be between 0.8 and 1.0, which is the same as last week. The estimate of R_t is shown as a range without a central estimate.
- The consensus R_t value from SAGE is based on a weighted average of models that use cases, hospital admissions, deaths, and contact survey data. Many of these indicators have a 1-3 week time lag from when they would pick up a change in infections.
- There are other estimates of R, some of which estimate a higher value. It is important to note that all estimates have strengths and weaknesses. For

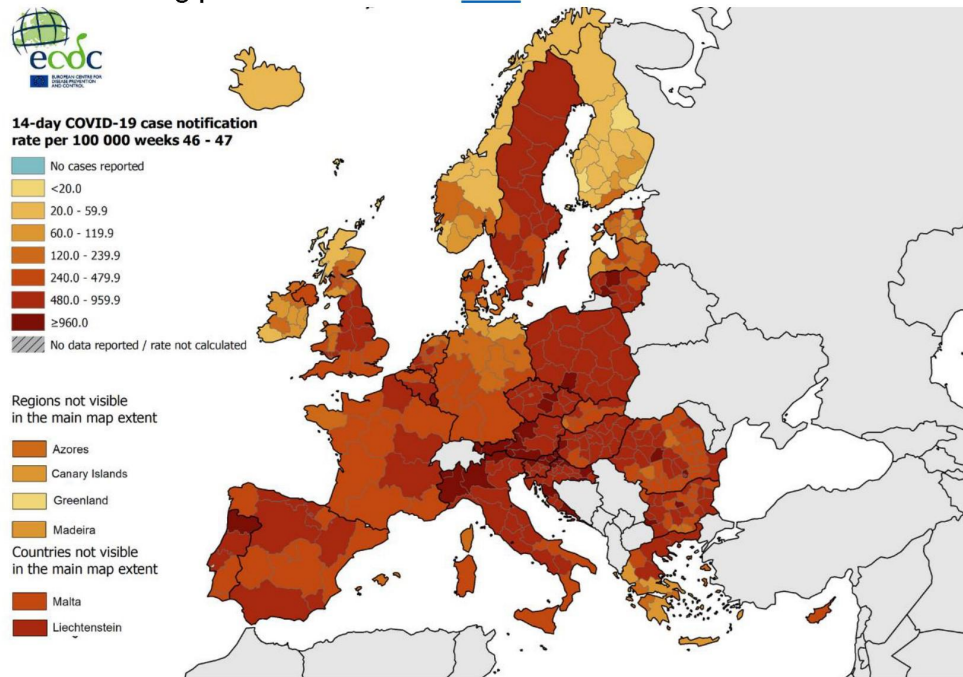
example, estimates using [CoMIX data](#) may offer an early indication of changes in transmission, however they are based on contact survey data only, from a relatively small sample size and self-report data.

- Care should still be taken when interpreting R_t and growth rate estimates for the UK, due to their inherently lagged nature, and as these figures mask variation in the number of infections, how rates of transmission are changing in some parts of the country and testing availability.
- A growth rate that is lower but still positive, or an R_t number above 1, continues to indicate that the epidemic is growing exponentially.
- Estimates should be interpreted with caution and the confidence intervals taken into account.

International update

- The map below shows the 14-day average incidence rate per 100,000 people for weeks 46-47.
- Among 30 countries with high case notification rates (at least 60 per 100 000), sustained increases (for at least seven days) were observed in five countries (Estonia, Latvia, Lithuania, Portugal and Sweden). One country (Finland) had increases of less than seven days' duration. Stable or decreasing trends in case rates of 1–22 days' duration were observed in 24 countries (Austria, Belgium, Bulgaria, Croatia, Cyprus, Czechia, Denmark, France, Germany, Greece, Hungary, Ireland, Italy, Liechtenstein, Luxembourg, Malta, the Netherlands, Norway, Poland, Romania, Slovakia, Slovenia, Spain and the UK).
- Among 23 countries in which weekly test positivity was high (at least 3%), two countries (Estonia and Portugal) had positivity that had increased compared to the previous week. Test positivity remained stable or had decreased in 21 countries (Austria, Belgium, Bulgaria, Croatia, Czechia, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, the Netherlands, Norway, Poland, Romania, Spain, Sweden and the UK).

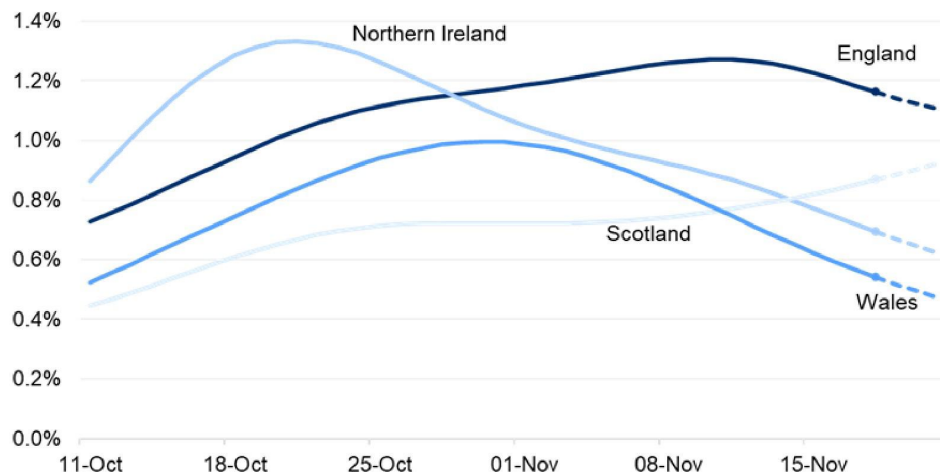
- Data on the picture across Europe, including caveats around data lags and variable testing policies is available [here](#).



ONS infection study results

- Recent data from the ONS infection study show a decrease in test positivity across Wales. Positivity rates in Wales have remained lower than England and Northern Ireland recently.
- These data are helpful because they are the only estimates of infection covering asymptomatic as well as symptomatic cases, and they are not affected by other factors such as testing capacity or the number of people coming forward for testing. The results are for private households only – the ‘community population’ – and do not apply to those in hospitals, care homes or other institutional settings.
- The Figure below shows the latest estimates for positivity rates (%) since 11 October 2020 across the 4 UK Nations.
- For the week 15 to 21 November, an average of 0.54% of the community population in Wales had COVID-19 (95% credible interval: 0.34% to 0.78%).
- This equates to approximately 1 person in every 185 (95% credible interval: 1 in 290 to 1 in 125), or 16,400 people during this time (95% credible interval: 10,500 to 23,900).
- It is important to stress the uncertainty around these figures. Since the survey picks up relatively few positive tests overall, the results can be sensitive to small changes in the number of these positive tests.

Positivity rates (%) across UK countries since 11 October 2020

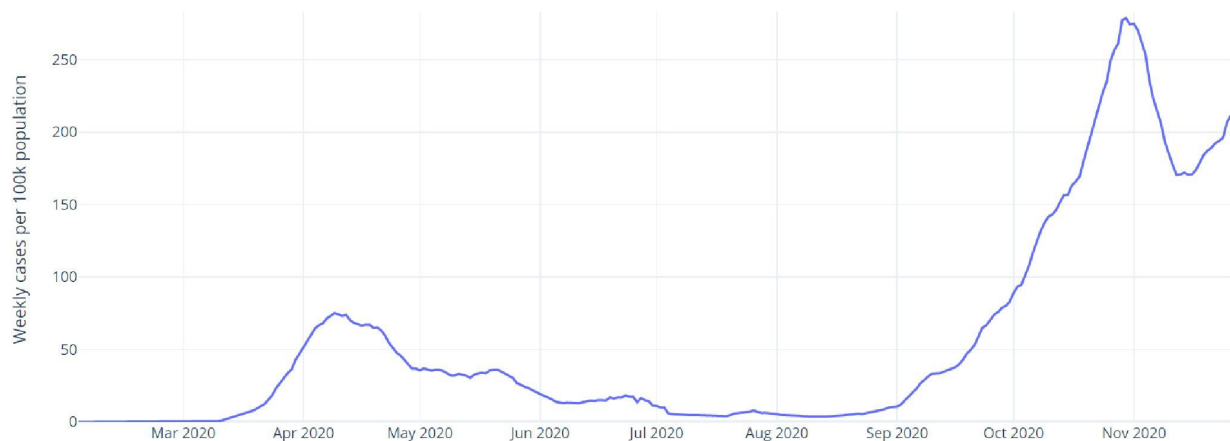


Source: Covid-19 Infection Survey 25/11/20

- Full results are published [here](#).

Effects of the firebreak on case numbers

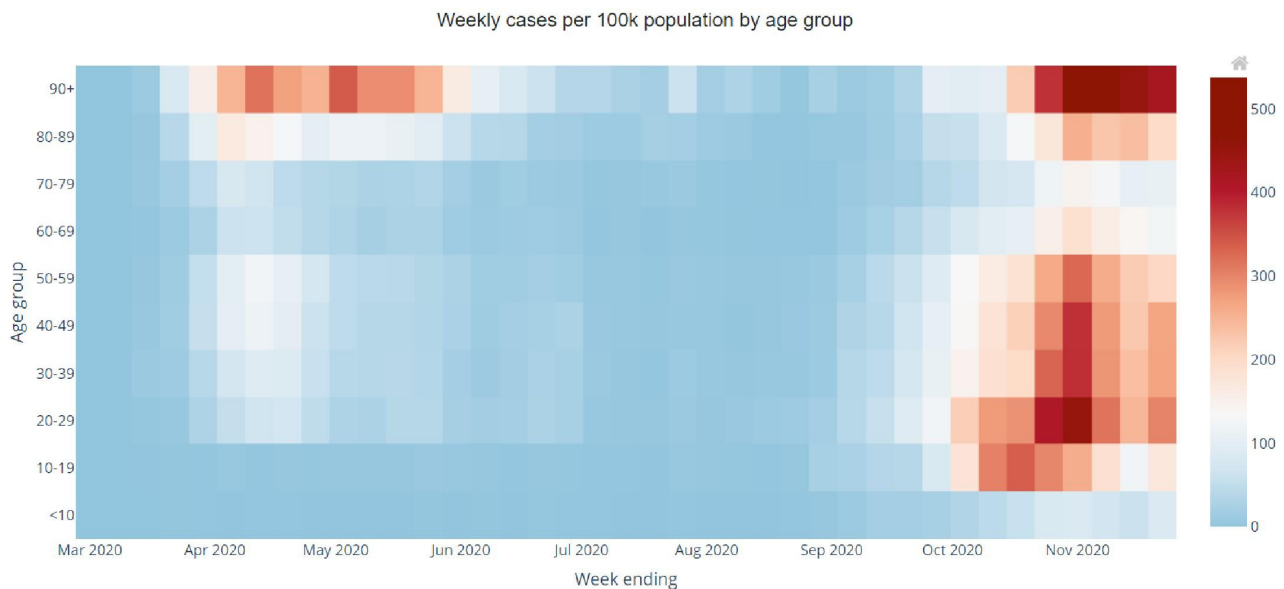
- The figure below shows that numbers of confirmed COVID-19 cases per day (7 day rolling sum, per 100,000 of the population) were reducing, however this has been followed by a subsequent increase in cases.



Source: Data from Public Health Wales as of 26th November 2020

Age profile

- The Figure below shows the number of confirmed COVID-19 episodes per 100,000 population, by week of sample collection and age group.
- According to Public Health Wales, as at 27th November, incidence has shown a decrease in those aged 45 and over, whilst incidence increased in all other age groups; highest incidence was seen in those aged 18-25 and those aged 85 years and older.

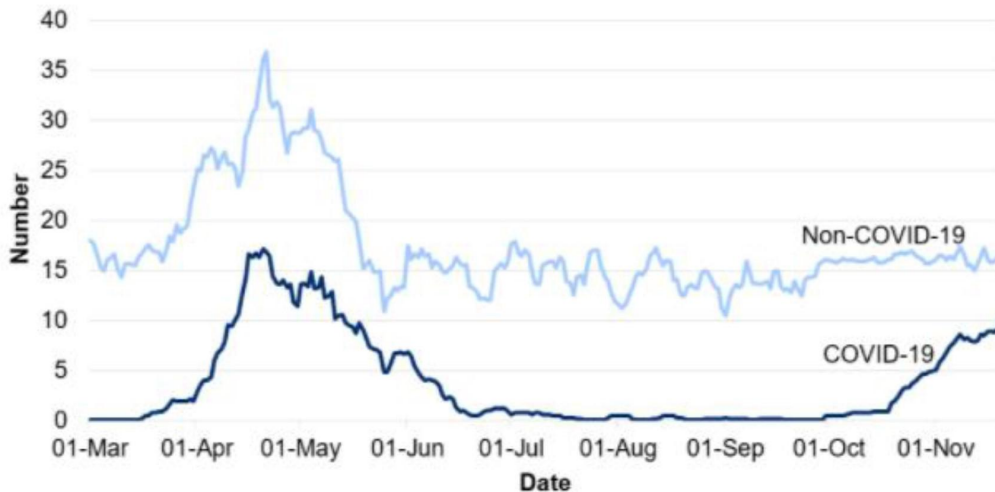


Source: Welsh Government dashboard, data from Public Health Wales as at 27/11/2020

Care homes

Between 1 March to 20 November 2020:

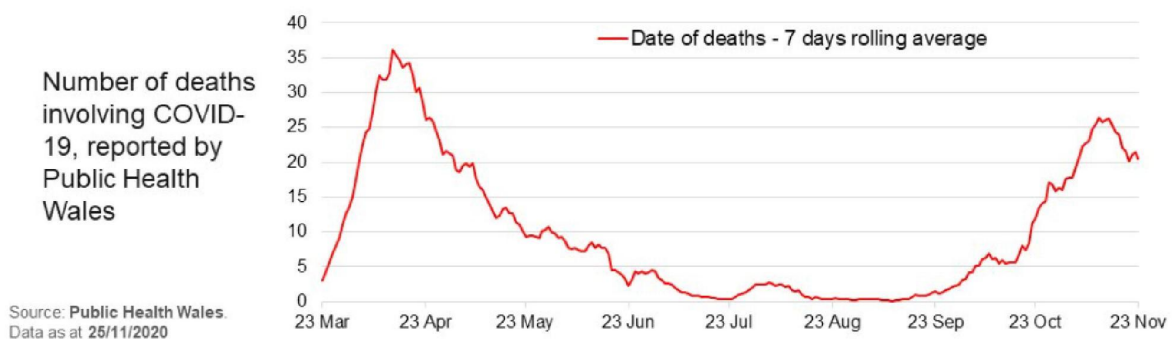
- Care Inspectorate Wales (CIW) has been notified of 934 care home resident deaths with suspected or confirmed COVID-19. This makes up 17% of all reported deaths.
- 509 of these were reported as confirmed COVID-19 and 425 suspected COVID-19.
- The first suspected COVID-19 death notified to CIW was on the 16 March, which occurred in a hospital setting.
- As shown in the Figure below, the number of COVID-19 related deaths notified to CIW has been increasing since October.



Source: Notifications of Service User Deaths received by Care Inspectorate Wales, analysis available [here](#).

Deaths

- The Figure below shows data from Public Health Wales indicating that deaths have shown a decrease in recent weeks (data as at 25 November 2020).
- It is important to note that this data includes reports of a death of a hospitalised patients in Welsh hospitals or care homes where COVID-19 has been confirmed with a positive laboratory test and the clinician suspects COVID-19 was a factor that caused death. It does not include patients who may have died from COVID-19 but who were not confirmed by laboratory testing, those who died in other settings, or Welsh residents who died outside of Wales. The true number of deaths will be higher.

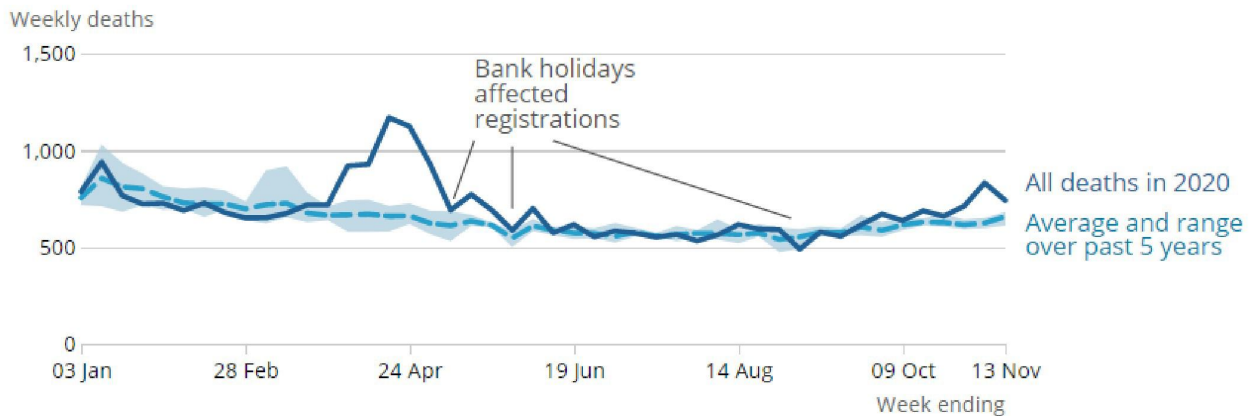


Source: Public Health Wales.
Data as at 25/11/2020

- The Office for National Statistics reports on both suspected and confirmed COVID-19 deaths using data available on completion of the death registration process and is therefore subject to a time lag.

- According to the Office for National Statistics, the number of deaths in Wales involving COVID-19 increased from 166 deaths (Week 45) to 190 deaths (Week 46; week ending 13 November).
- Deaths from all causes remain above the five-year average in Wales, however the number of all cause deaths has shown a decrease from 832 in Week 45 to 742 in Week 46 (week ending 13 November).
- The Figure below shows the number of all cause deaths registered by week in Wales from 28 December 2019 to 13 November 2020.

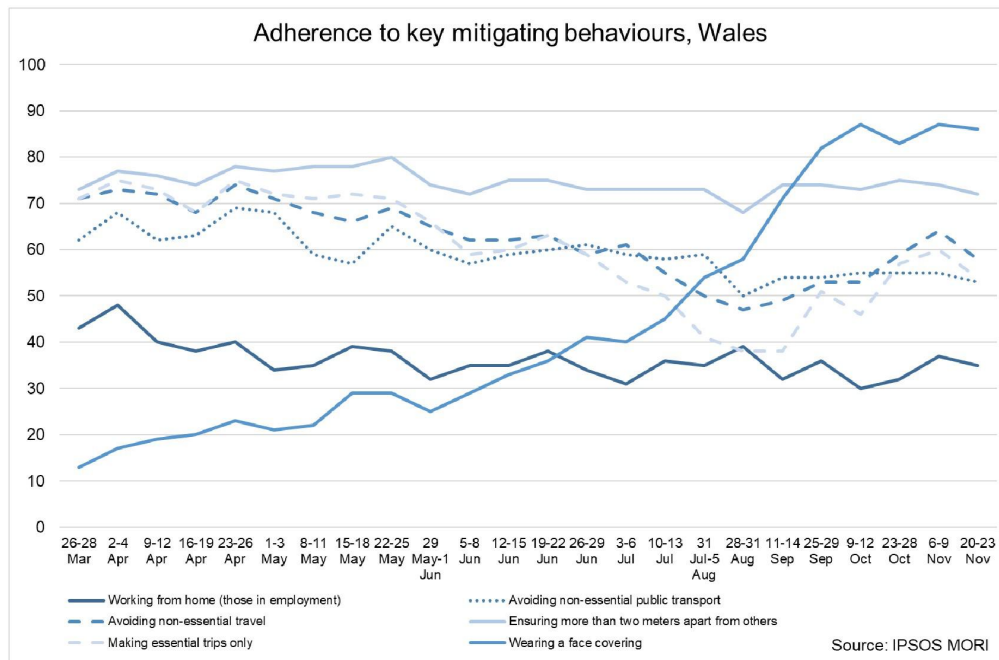
Wales



Source: [Office for National Statistics](#)

Adherence and understanding of current measures

- The most recent [IPSOS MORI data](#) for the period 20-23 November for Wales shows reductions in some categories following the end of the firebreak. There were reductions in people making essential trips only and avoiding non-essential travel compared to two weeks ago (during the firebreak). Other categories (such as avoiding public transport and working from home) were similar to two weeks ago. It should be noted that this is self-reported adherence and will be affected by individuals understanding of the rules and the circumstances that apply to them.
- The figure below represents data collected online by IPSOS MORI as part of a multi-country survey on the Global Advisor platform. Each of the waves has included c.500 respondents in Wales. The sample is broadly representative of the adult population aged 16-74. Data is weighted to reflect the age and gender profile of the Welsh population aged 16-74. All samples have a margin of error around them. For a sample of around 500, this is +/- 4.8 percentage points.



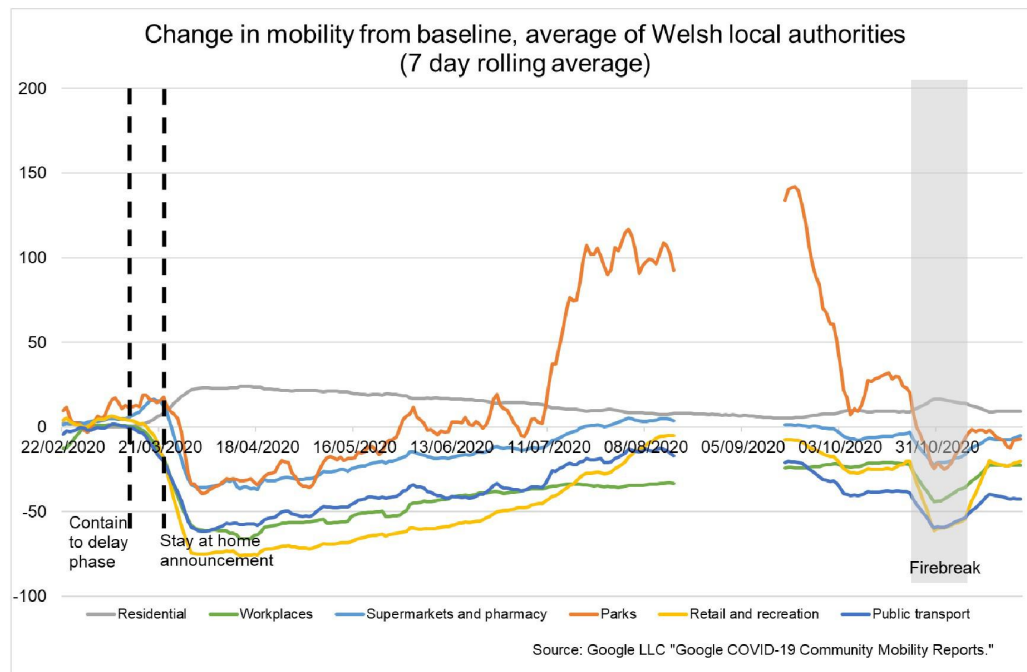
- The latest results from the [Public Engagement Survey on Health and Wellbeing during Coronavirus Measures](#) for the period 16-22 November show that 43% of people say they understand the current restrictions in Wales 'very well'. A further 43% reported understanding the restrictions 'fairly well'.
- The results also show that 47% of people said they were following coronavirus restrictions 'completely' and a further 41% reported majority compliance. This is similar to last three survey waves and is in-line with results from the [covid social study](#).

Mobility

- The latest mobility data shows mostly small increases in Wales compared to the previous week. Whilst some data is around levels seen before the firebreak, some are higher (such as Facebook users movement and Google mobility retail & recreation). Workplaces and public transport are lower than before the firebreak. In the last 7 days mobility has increased in all nations, apart from Scotland which has seen reductions.
- Mobility of [Facebook users](#) in Wales shows movement was 11% below the baseline for the week to the 26 November. This is up from 13% the week before. The percentage of users staying put (near to home) was 25%, slightly lower than the week before (26%). The 'staying put' figures are similar to before the firebreak, but movement is a little higher (was around 13% in the week before the firebreak). The baseline is the average value, for the corresponding day of the week, during the 4-week period 2 February – 29 February 2020.
- [Apple data](#) for the week to the 28 November shows that requests for driving directions in Wales are up slightly from the previous week to 94% of the baseline

(up from 93%). Requests for driving directions are higher than before the firebreak (89%). Requests for walking directions are up but requests for public transport directions have fallen relative to the baseline compared to last week. The baseline is the 13th of January 2020.

- The [Google mobility data](#) to the week of the 24 November shows no change in residential (i.e people spending time at home) compared to the week before at 9% above the baseline. This is similar to before the firebreak. Workplaces also show no change (at 23% below the baseline), slightly lower than before the firebreak (21% below). Retail & recreation (20% below the baseline) and supermarkets & pharmacy (5% below the baseline) both show increases in the last week. However public transport and parks show reductions compared to the previous week.
- The figure below shows the change in mobility in Wales using Google mobility data. The figures are based on the average of the local authorities that have data. The baseline is the median value, for the corresponding day of the week, during the 5-week period Jan 3–Feb 6, 2020. The data for several categories is not available for August 17th – September 10th due to the data not meeting quality thresholds.



- Anonymised and aggregated mobile phone data from O2 to the 20 November show increases in trips compared to the week before (which included a few days of the firebreak). Trips starting in Wales rose by 4 percentage points to 28% below the baseline and are similar to levels seen prior to the firebreak. The baseline for the O2 data is the same day of the week in the first week of March.

COVID-19 weekly surveillance and epidemiological summary from Public Health Wales

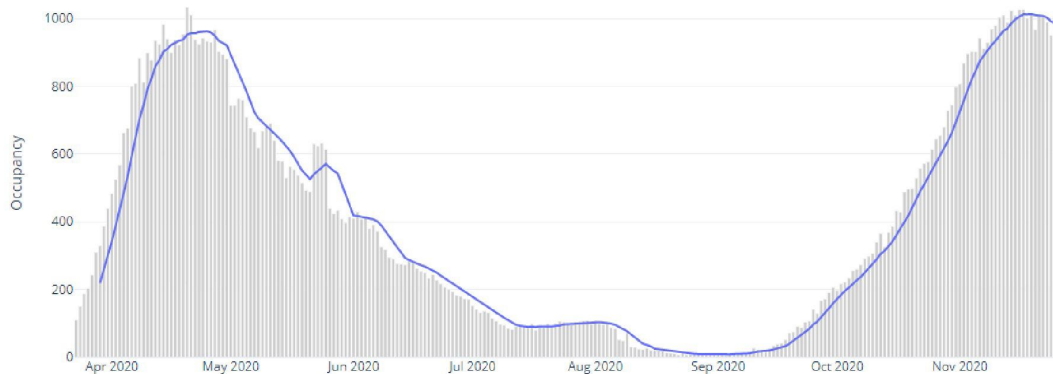
As at 26th November 2020:

- The proportion of calls to NHS 111 and NHS direct related to possible COVID-19 symptoms are stable compared to the previous week.
- GP consultations for Acute Respiratory Infection (ARI) and suspected COVID-19 remained stable in week 47 compared to the previous week.
- Ambulance calls possibly related to COVID-19 are currently stable.
- The number of laboratory confirmed COVID-19 episodes increased nationally compared to the previous week, however testing positivity decreased.
- During week 47, incidence decreased in those aged 45 and over, however incidence increased in those aged less than 45.
- Confirmed case incidence and testing episode positivity has increased in many health board regions of Wales, with the exception of Betsi Cadwaladr UHB and Powys THB.
- At a national level, confirmed case admissions to hospitals and confirmed cases who are inpatients in hospital decreased compared to the previous week.
- Recent surveillance data suggest that COVID-19 infections in Wales are geographically wide spread, with the majority of local authority (LA) areas experiencing increasing overall trends in confirmed case incidence after seeing decreases in previous weeks.
- High numbers of incidents continue to be reported, mainly in residential care homes and school settings.
- A Wales-wide 'fire-break' restriction on non-essential travel outside the home was in place between 23rd October and 9th November.
- A decrease in confirmed case incidence had been observed within recent weeks, however incidence has increased this week compared to the previous week.
- All-cause deaths have increased compared to the 5 year average. Increases in the number of deaths in confirmed cases in hospital have been seen.
- In deaths where information is available from PHW rapid mortality surveillance, chronic heart disease, diabetes and chronic respiratory disease are the most commonly reported risk factors (in 35%, 28% and 23% of deaths respectively).

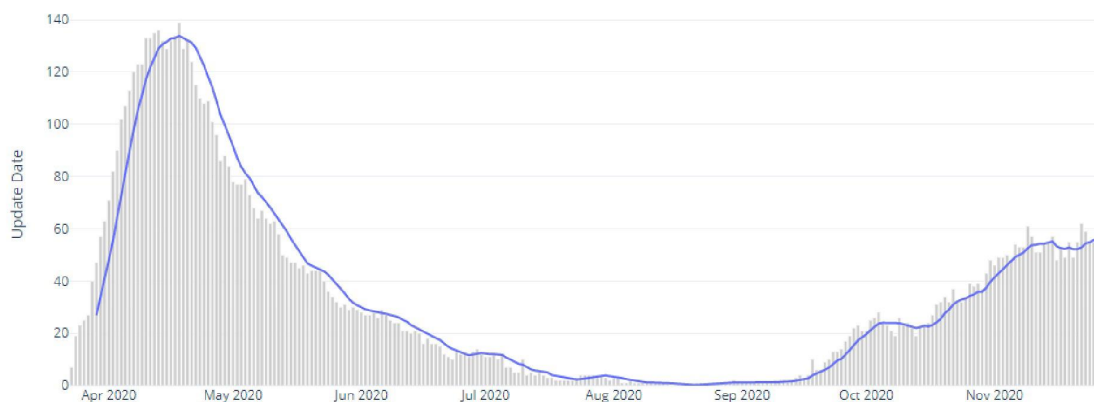
The Public Health Wales dashboard is available [here](#) and includes local authority analysis.

Hospital occupancy

- The figure below shows the confirmed COVID-19 hospital occupancy over the first and second wave of the pandemic (7 day rolling average, as at 27th November).



- The Figure below shows the confirmed COVID-19 intensive care unit (ICU) occupancy over the first and second wave of the pandemic (7 day rolling average, as at 27th November).

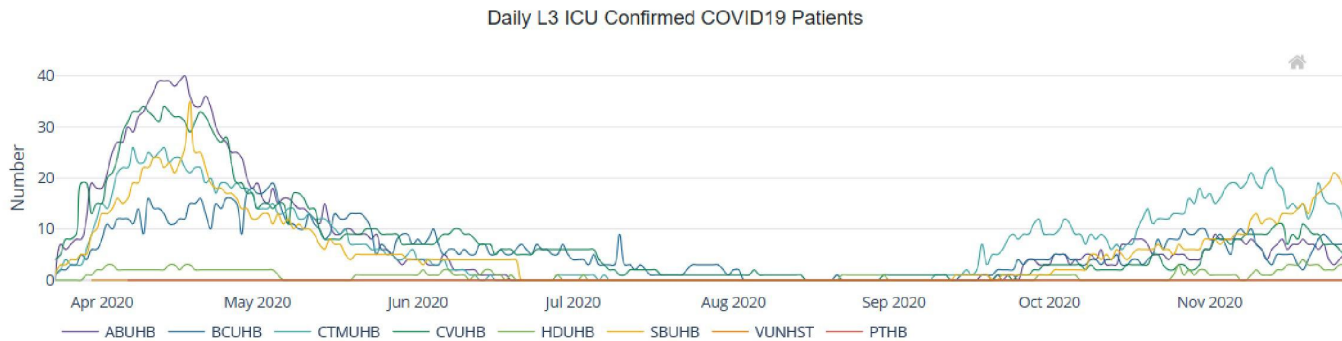


- As of 27th November, while ICU occupancy of COVID-19 and non-COVID-19 patients have shown reductions over the last week, 1:1 care for all patients in ICU was not possible in some health boards (ICU was 103% occupied for 1:1 care, with a weekly average of 105% occupancy across Wales; see table below).
- The table below details the overall occupancy of ICU beds across health boards in Wales, including overall ICU occupancy as a percentage of the number of beds that it is possible to staff at 1:1 ratio (based on there being 152 available across Wales). The number of confirmed or suspected COVID-19 patients in ICU has increased since last week.
- The first column in the table indicates overall ICU occupancy (COVID-19 and non-COVID-19 patients) when additional possible capacity is considered.

- Occupancy figures are based on ICU capacity reported to us by local health boards (257 beds in total at reporting date). However, once we get beyond around 150 ICU total beds occupied, it means they cannot be staffed at the 1:1 nursing ratio that is required for Level 3, and patient care will be affected. Also this does not factor in regional variation; some ICUs are close to capacity and conveying critically ill COVID-19 patients by ambulance is not desirable unless absolutely necessary.

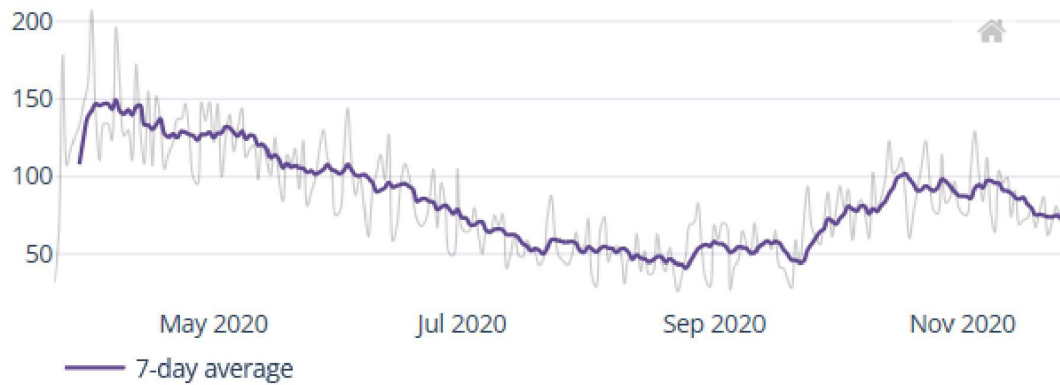
Health Board	Level 3 ICU Occupancy %	Level 3 ICU occupancy (% of 1:1 ratio beds occupied)	COVID-19 Suspected Patients	COVID-19 Positive Patients
Wales	61%	103%	8	49
ABUHB	57%	87%	5	5
BCUHB	71%	115%	2	7
CTMUHB	56%	96%	0	11
CVUHB	42%	114%	1	5
HDUHB	75%	109%	0	3
SBUHB	93%	96%	0	18

- The Figure below shows the total number of people who have tested Covid-19 positive and are in ICU in hospitals across the different health boards in Wales.



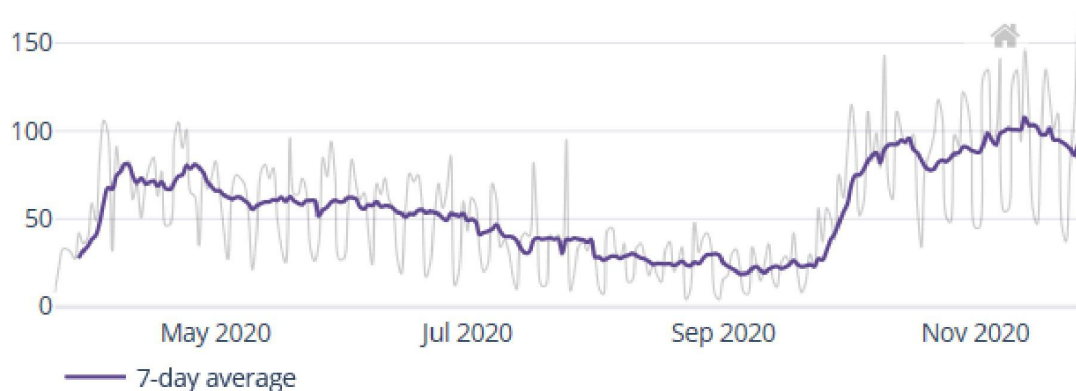
- The Figure below shows the number of people admitted to hospital and are either suspected or confirmed as having Covid-19. The purple line represents the total number over a rolling 7 day average, whilst the fainter grey lines show the actual figures at that time.

Daily COV+/SUS Hospital Admissions



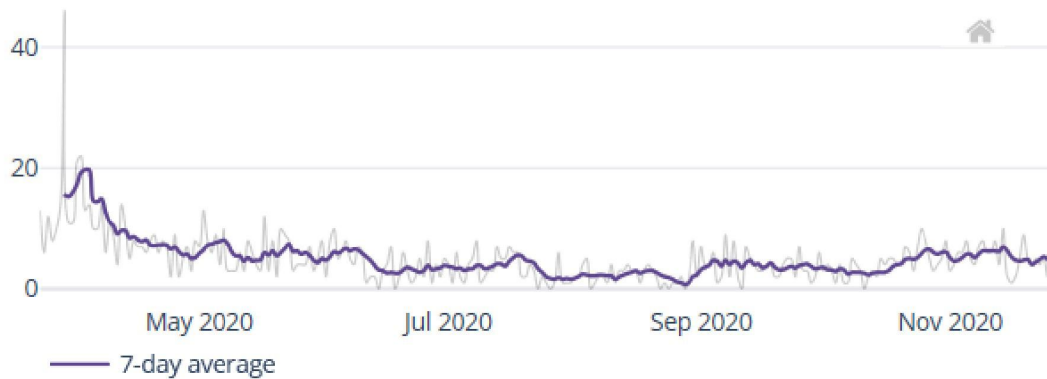
- The Figure below shows the number of hospital discharges of people who are either suspected or confirmed as having Covid-19. The purple line represents the total number over a rolling 7 day average, whilst the fainter grey lines show the actual figures at that time.

Daily COV+/SUS Hospital Discharges



- The Figure below shows patients admitted to the intensive care units and are either suspected or confirmed as having Covid-19. The purple line represents the total number over a rolling 7 day average, whilst the fainter grey lines show the actual figures at that time.

Daily COV+/SUS L3 ICU Admissions



Professional Head of Intelligence Assessment (PHIA) probability yardstick

- Where appropriate, TAC advice will express Likelihood or confidence in the advice provided using the PHIA probability yardstick to ensure consistency across the different elements of advice.

