

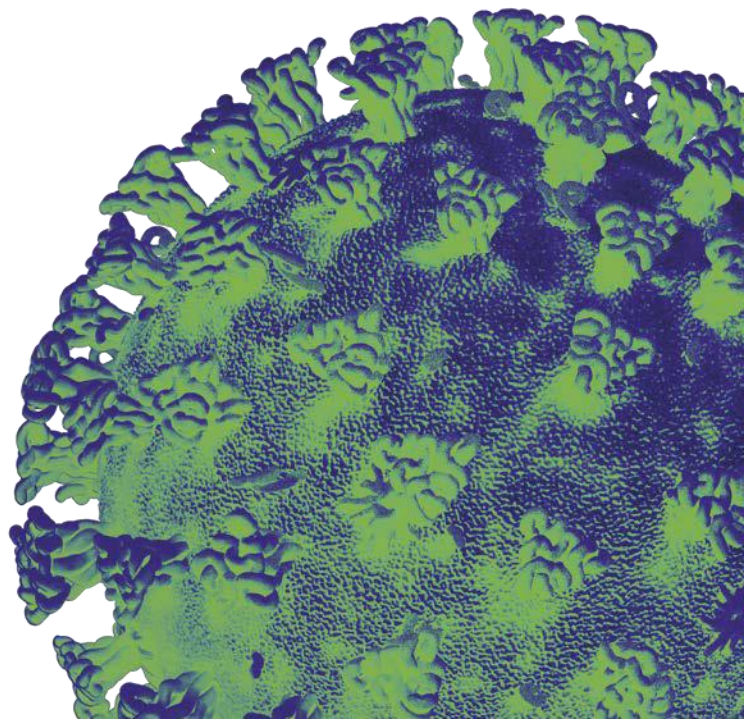
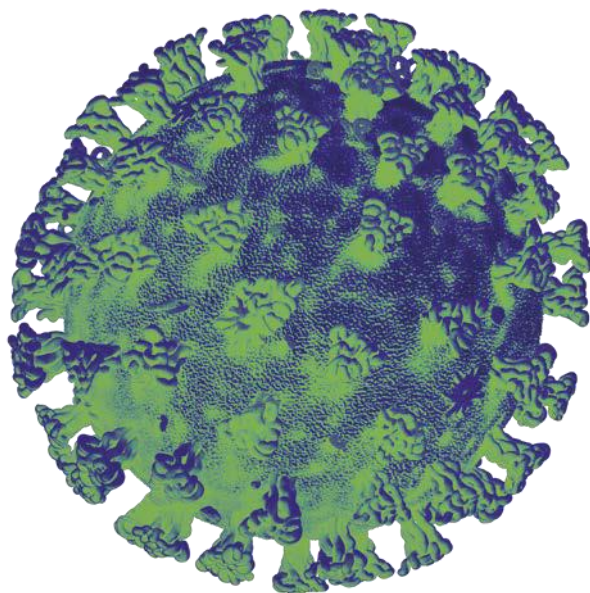
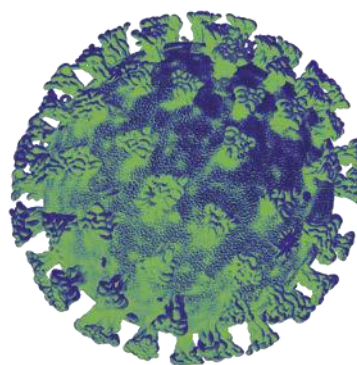


Llywodraeth Cymru
Welsh Government

Technical Advisory Cell

Summary of advice

4th December 2020



Technical Advisory Cell: Summary Brief

4th December 2020

Top-line summary

- As reported by SAGE (3rd December 2020), the R_t value in Wales is estimated to be between 0.8 and 1.1 (slightly increased since last week) and the epidemic is estimated to be either shrinking by -3% or growing by 1% per day. These consensus estimates show a range of values, however the changes observed in key indicators demonstrate that Wales is now in a period of growth.
- As of 3rd December, the number of new cases has increased in all age groups with the highest incidence seen in those aged 85 years and older. Test positivity for COVID-19 (the proportion of total tests that were returned positive) is above the red circuit breaker, at 15.1%.
- As of 4th December, the number of people with confirmed COVID-19 in hospital remains higher than the April peak and is above the red circuit breaker. Overall ICU occupancy (COVID-19 and non-COVID-19 patients) also remains above the red circuit breaker. Data indicates that a 1:1 staffing ratio for ICU patients is not possible across most health boards in Wales.
- For the week ending 27 November 2020, data from the Office for National Statistics (ONS) shows signs that the number of deaths involving COVID-19 reduced slightly. This pattern aligns with data from Public Health Wales. Deaths from all causes remains above the five-year average in Wales.
- Data from the ONS Covid-19 Infection Study for the week 22 to 28 November indicates that positivity rate in the community population in Wales was shown to have levelled off, after falling from a peak at the end of October.
- The latest mobility data mostly shows little change in Wales compared to the previous week. Mobility associated with retail and supermarkets is showing an upward trend. Note that it is not possible to determine if mobility is higher than this time last year due to the data starting in February.
- [Evidence](#) highlights that the following can reduce risk of transmission through direct physical contact, viral droplets and aerosols from in the air and contaminated surfaces; limiting or avoiding interactions with other people before meeting for 7-10 days; creating smaller, exclusive bubbles with fewer households; handwashing, surface cleaning, 2m social distancing and mask wearing where needed; improved ventilation and outdoor meeting options; and planning ahead to decide how to reduce risk.

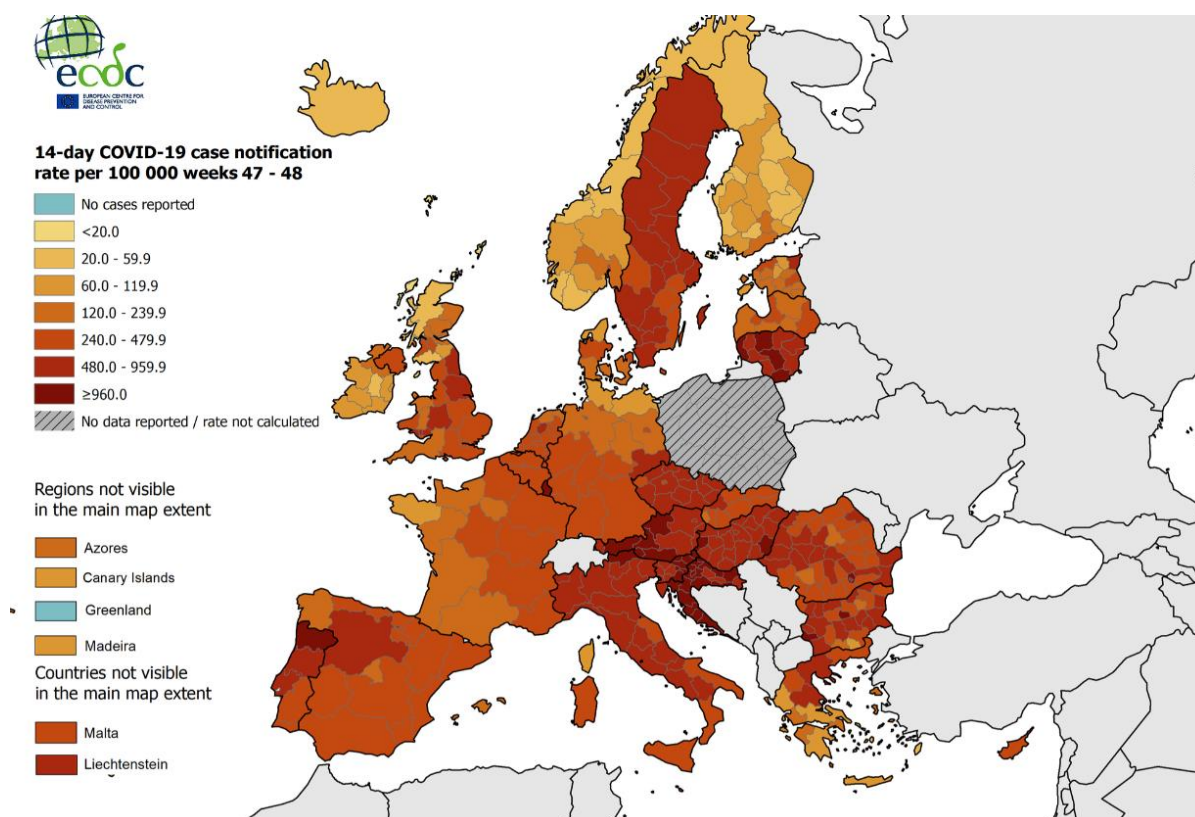
- The following papers have been published by the Technical Advisory Group:
 - A [paper](#) identifying the risks associated with swimming pools, hot tubs, saunas and steam rooms
 - A [summary](#) of evidence on costs and benefits and potential mitigations for measures to address COVID-19 in Wales
 - A [paper](#) on the effectiveness of non-pharmaceutical interventions in the Local Health Protection Zones and the Firebreak in Wales
 - A [statement](#) regarding non-pharmaceutical interventions in the pre-Christmas period
- 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 (3rd December) 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 (3rd December) is predicted to be between 0.8 and 1.1, which has slightly increased since 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.
- Care should still be taken when interpreting R_t and growth rate estimates for the UK, due to their inherently lagged nature, testing availability and, as these figures mask variation in the number of infections, how rates of transmission are changing in some parts of the country.
- A growth rate that is lower but still positive, or an R_t number above 1, indicates 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 in the EU for weeks 47-48.

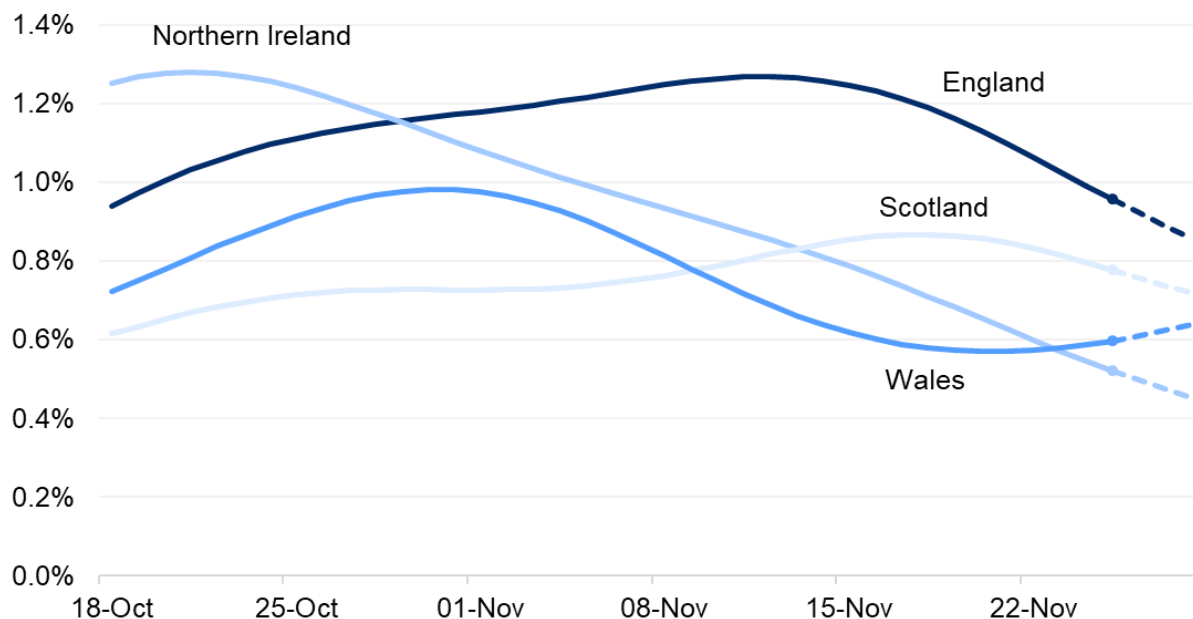


- By the end of week 48 (ending Sunday 29 November 2020), many countries had started to observe a stabilisation or reduction in case notification rates, test positivity and new hospital/ICU admissions. Absolute values of these indicators remain high, even where they are stable or decreasing, suggesting that transmission is still widespread.
- Case rates among older age groups and death rates are still increasing in 13 countries, while 11 countries are continuing to observe increases in hospital or ICU admissions and/or occupancy due to COVID-19.
- Data on the picture across Europe, including caveats around data lags and variable testing policies is available [here](#).

ONS infection study results

- The ONS infection survey data shows that test positivity appears to have levelled off in the most recent week (22 to 28 November 2020), after falling from a peak at the end of October.

- 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 18 October 2020 across the 4 UK Nations.



- For the week 22 to 28 November, an average of 0.60% of the community population in Wales had COVID-19 (95% credible interval: 0.40% to 0.84%).
- This equates to approximately 1 person in every 170 (95% credible interval: 1 in 250 to 1 in 120), or 18,100 people during this time (95% credible interval: 12,100 to 25,500).
- 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.
- Full results are published [here](#).

Case numbers

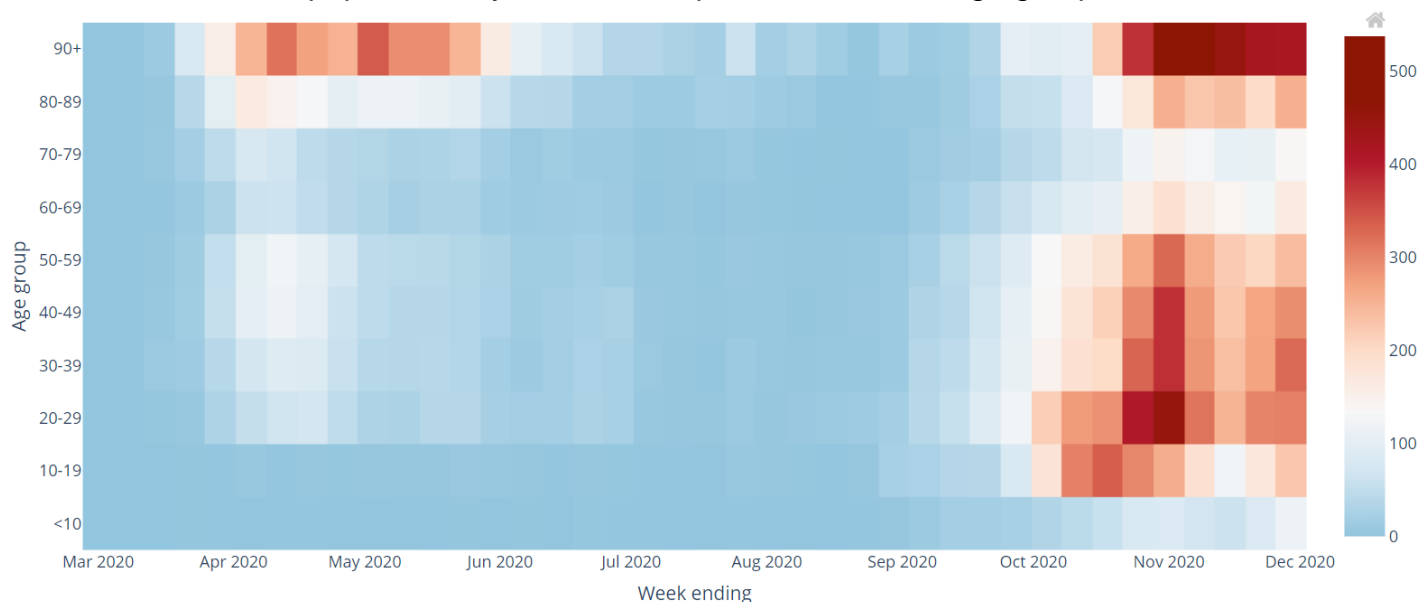
- The figure below shows that numbers of confirmed COVID-19 cases per day (7 day rolling sum, per 100,000 of the population) were reducing, however this has been followed by a subsequent increase in cases.



Source: Data from Public Health Wales as of 4th December 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.



Source: Welsh Government dashboard, data from Public Health Wales as at 01/12/2020

- According to Public Health Wales, as at 3rd December, incidence has increased in all age groups, with the highest incidence seen in those aged 85 years and older.

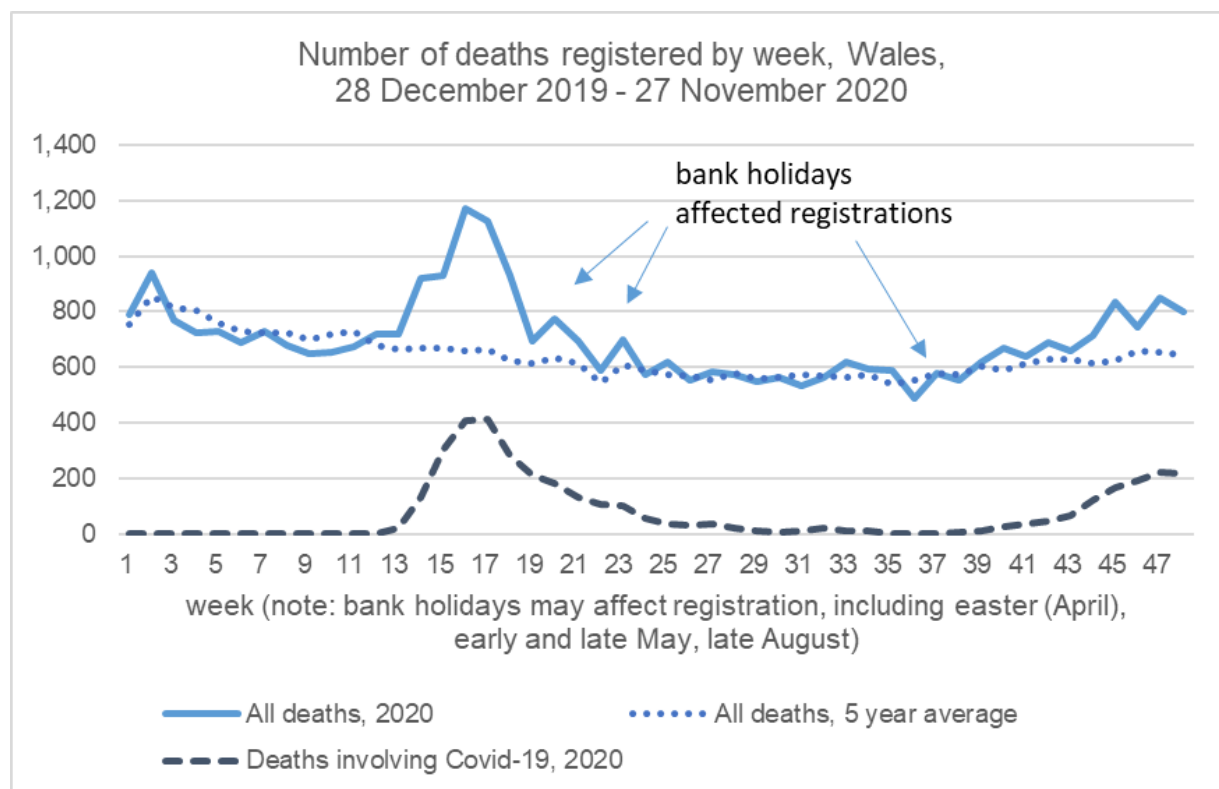
Deaths

- The Figure below shows the 7 day rolling sum of deaths reported by Public Health Wales as at 3rd December 2020, indicating that deaths have shown a decrease from around 190 deaths per week, and have since fluctuated around 150 - 160 deaths per week in recent weeks.



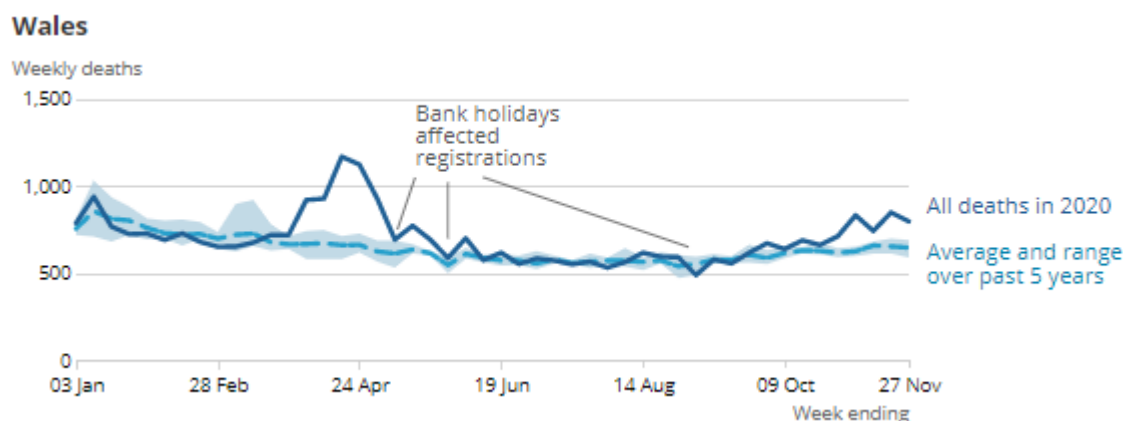
Source: Welsh Government dashboard, data from Public Health Wales as at 03/12/2020

- 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.
- 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 whilst subject to a time lag, is more complete.
- The Figure below shows the number of deaths registered by week up until 27th November 2020, and shows signs of a decrease.



Source data: Office for National Statistics

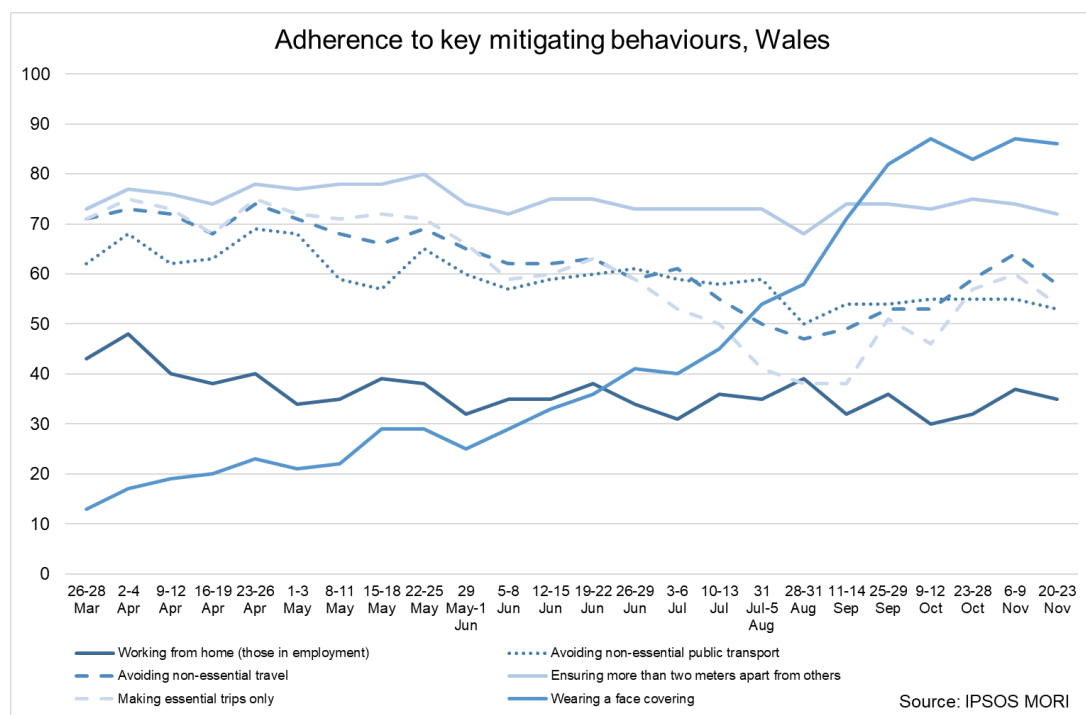
- In Wales, the number of deaths involving COVID-19 decreased from 223 deaths (Week 47) to 218 deaths (Week 48), while the total number of deaths in Week 48 was 151 deaths higher than the five-year average.
- The Figure below shows the number of all cause deaths registered by week in Wales from 28 December 2019 to 27 November 2020.



Source: [Office for National Statistics](#)

Adherence and understanding of current measures

- The following data is collected fortnightly and the newest data was reported last week. It is reported here for information; new data will be available to report next week.
- 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.

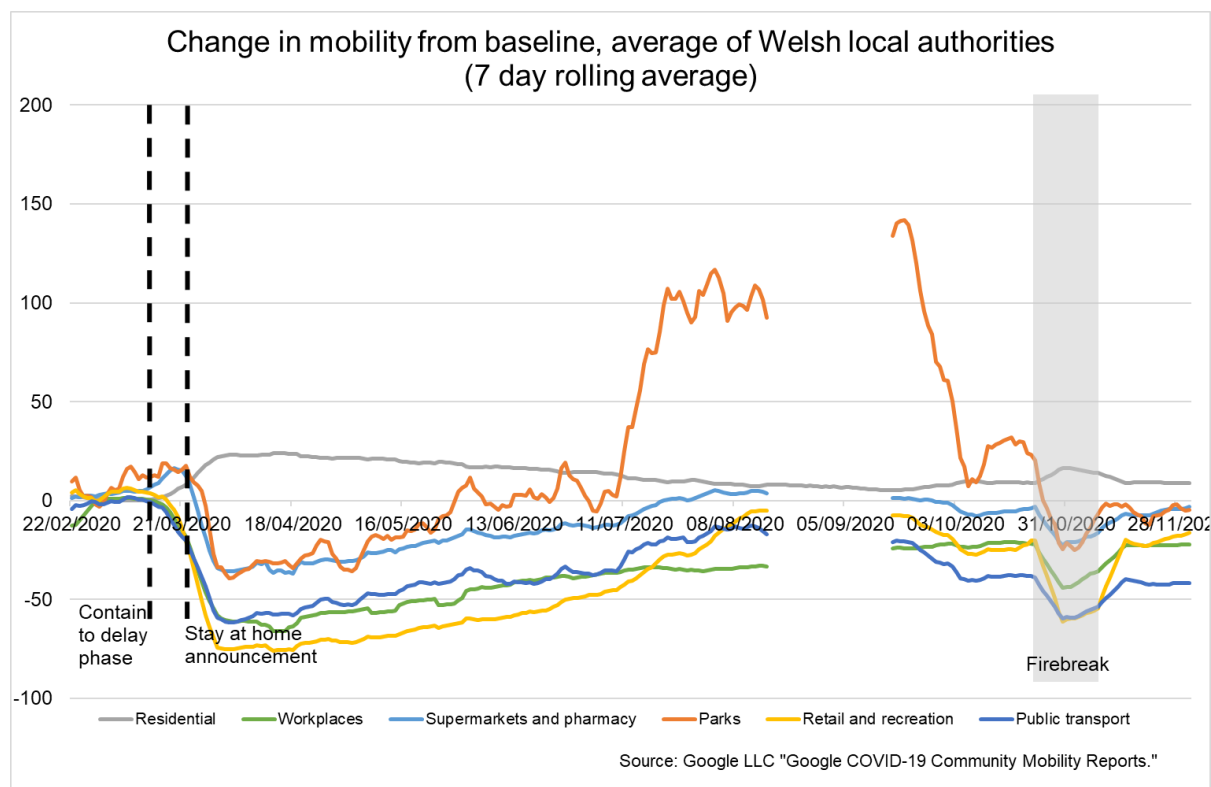


- The latest results from the [Public Engagement Survey on Health and Wellbeing during Coronavirus Measures](#) for the period 16-22 November show that 43% of people say they understand the current restrictions in Wales 'very well'. A further 43% reported understanding the restrictions 'fairly well'. 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](#). 31% reported having people outside their household/permitted extended household come into their house, whilst 27% reported going into others people's houses.

Mobility

- The latest mobility data mostly shows little change in Wales compared to the previous week. The data from Apple which covers a more recent time period than the other sources gives increases in mobility in England due to the lockdown ending.
- Mobility of [Facebook users](#) in Wales shows movement was 10% below the baseline for the week to the 1 December. This is up from 11% 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 5 December shows that requests for driving directions in Wales are down slightly from the previous week to 93% of the baseline (from 94%). Requests for driving directions are higher than before the firebreak (89%). Requests for walking directions are down and requests for public transport directions are similar 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 1 December 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 22% below the baseline), similar to before the firebreak (21% below). Retail & recreation (16% below the baseline, up from 19% the week before) and supermarkets & pharmacy (3% below the baseline, up from 5%) both show increases. Public transport and parks also show small increases 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 27 November shows a small increase in trips compared to the week before. Trips starting in Wales rose by 1 percentage point to 26% 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.

Research

- There are currently 7610 Welsh patients recruited to COVID-19 urgent public health studies, an increase of 79 in last 7 days.

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

As at 03 December 2020:

- The proportion of calls to NHS 111 and NHS direct related to possible COVID-19 symptoms are stable compared to the previous week.
- Overall GP consultations for any Acute Respiratory Infection (ARI), however GP consultations for suspected COVID has increased compared to the previous week.
- Ambulance calls possibly related to COVID-19 are currently stable.

- The number of laboratory confirmed COVID-19 episodes and testing positivity increased nationally compared to the previous week.
- During week 48, incidence increased in all age groups, with incidence being highest in those ages 85+.
- 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 increased compared to the previous week, however confirmed cases who are inpatients in hospital and admissions to critical care wards decreased compared to the previous week.
- Recent surveillance data suggest that COVID-19 infections in Wales remain geographically wide spread, with the majority of local authority (LA) areas experiencing increasing overall trends in confirmed case incidence in the most recent two weeks, following decreases in preceding two weeks.
- High numbers of incidents continue to be reported, mainly in residential care homes and school settings.
- A Wales-wide 'fire-break' restriction 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 again 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

- It is important to note that the total number of available ICU beds has fallen in recent weeks as Local Health Boards have made their reporting more consistent in terms of only reporting available ICU beds that can be staffed.

- 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 4th December).



- 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 4th December).

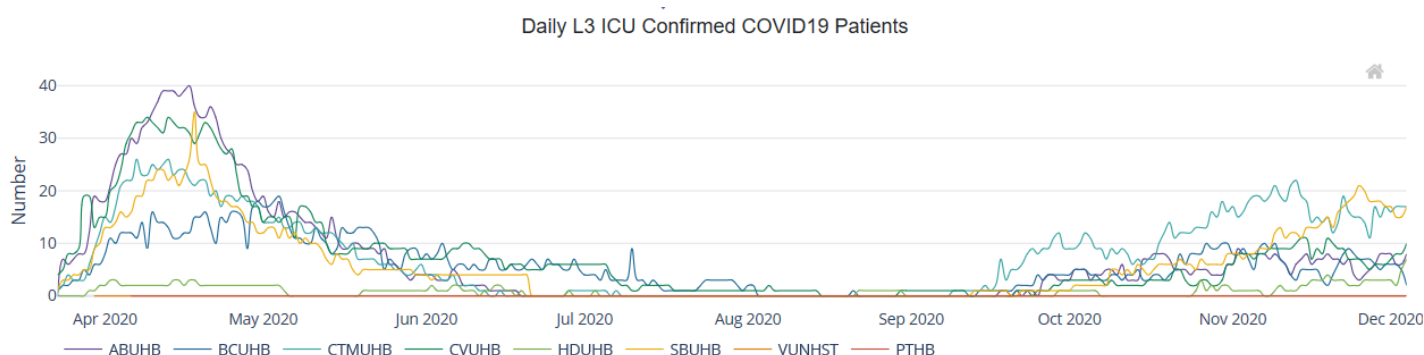


- As of 4th December, 1:1 care for all patients in ICU was not possible across most health boards (ICU was 103% occupied for 1:1 care, with a weekly average of 105% occupancy across Wales; see table below).
- The table below details the overall occupancy of ICU beds across health boards in Wales, including 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.

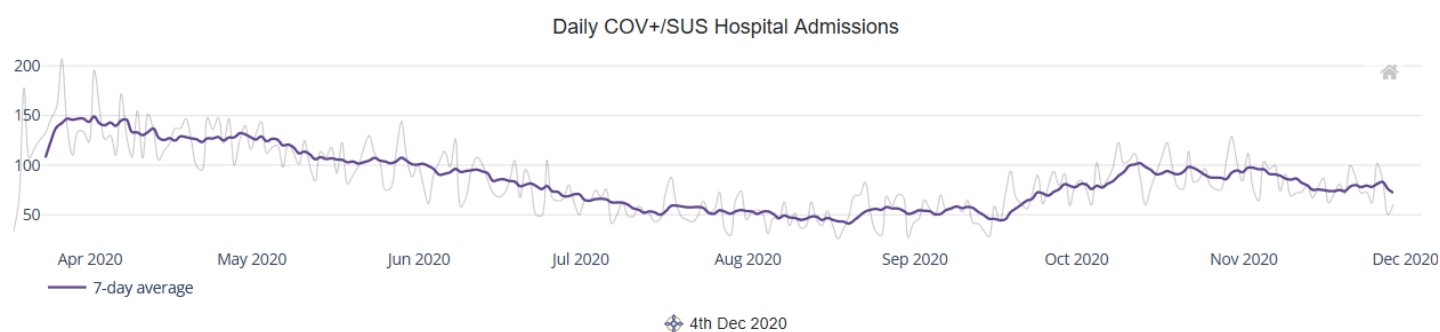
- Occupancy figures are based on ICU capacity reported to us by local health boards (190 beds in total at reporting date). However, once we get beyond around 150 ICU total beds occupied, it means they cannot be staffed at the 1:1 nursing ratio that is required for Level 3, and patient care will be affected. 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	82%	103%	3	61
ABUHB	79%	83%	0	8
BCUHB	66%	104%	1	2
CTMUHB	71%	100%	1	17
CVUHB	89%	111%	0	10
HDUHB	89%	109%	1	7
SBUHB	107%	107%	0	17

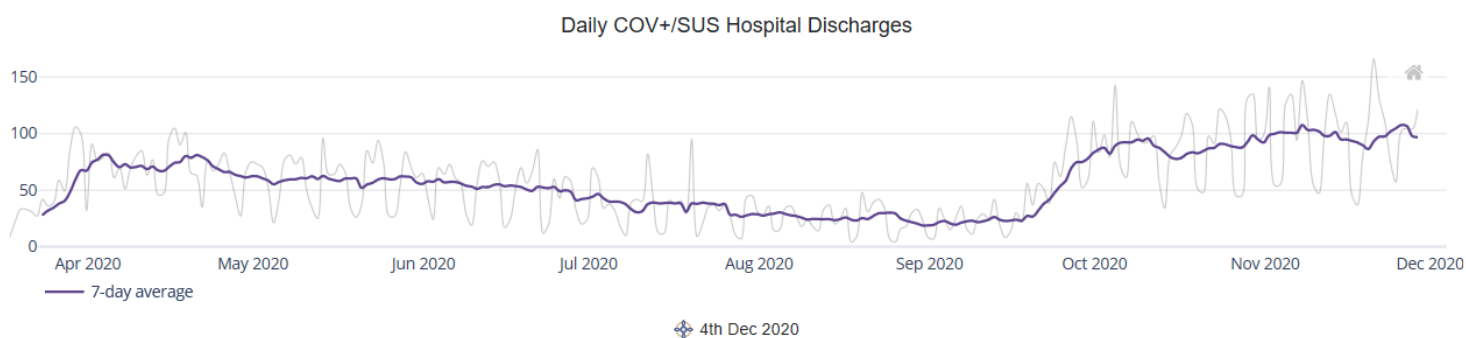
- The Figure below shows the total number of people who have tested Covid-19 positive and are in ICU in hospitals across the different health boards in Wales.



- 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.



- 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.



- 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.

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.

