

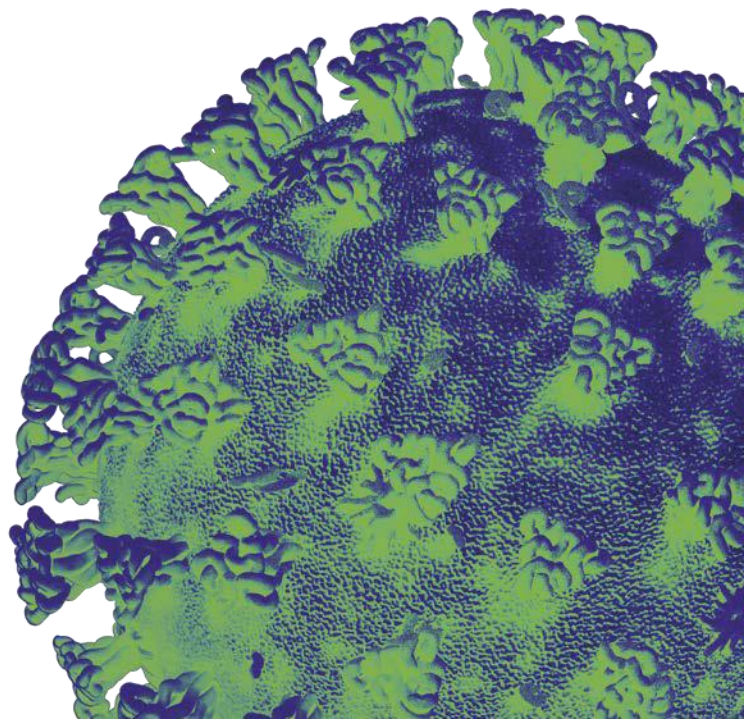
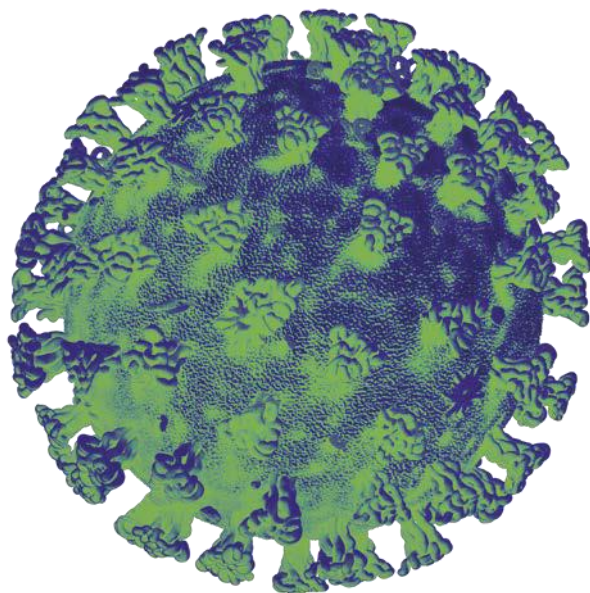
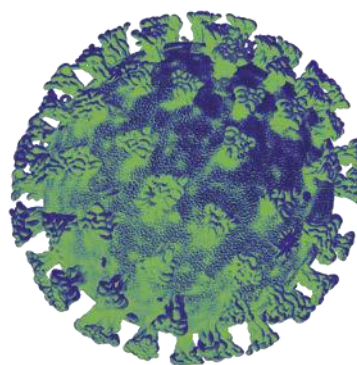


Llywodraeth Cymru  
Welsh Government

# Technical Advisory Cell

## Summary of advice

7 February 2021



## Technical Advisory Cell: Summary Brief

7 February 2021

### Top-line summary

- It is likely that the current restrictions in Wales and the good adherence to them is reducing the size of the Covid-19 epidemic in Wales (high confidence).
- These reductions are from exceptionally high peaks of infections and hospitalisations, and the NHS still remains under significant pressure. Continued vigilance is required to ensure we remain on an improving trajectory and avoid a return to exponential growth.
- As of 4 February the number of people with confirmed COVID-19 in hospital has decreased over recent weeks, but remains high and above the April peak.
- SPI-M have modelled the likely progress of the epidemic if restrictions are lifted too early or too quickly and found that there is high likelihood of returning to current levels of infections and hospitalisations in those scenarios (high confidence).
- The best way to reduce the likelihood of new variants emerging is keep the number of infections low (high confidence).
- In contrast with testing data, data from the [ONS infection study](#) indicates that the positivity rate in Wales has levelled off in the most recent week.
- The weekly number of deaths reported through rapid mortality surveillance by Public Health Wales has decreased in the most recent week, but remains high at just under 200 per week.
- As at 7 February, a total of 603,976 first doses of COVID-19 vaccine have been given in Wales. 2,792 people have received two doses. The actual number of doses will be higher due to ongoing data entry.
- Papers from SAGE considered by the Technical Advisory Cell are published [here](#). Recent papers published by the Technical Advisory Group are available [here](#):
  - [Considerations for changing the operation of schools to allow more face-to-face learning](#)
  - [Consensus statement on testing in the context of vaccinations associated with care homes](#)

## Growth rate and Reproduction number

- The Reproduction ( $R_t$ ) number is the average number of secondary infections produced by a single infected individual.  $R_t$  is an average value over time, geographies, and communities. This should be considered when interpreting the  $R$  estimate for the UK given the differences in policies across the four nations.
- The most recent estimate of the Reproduction number ( $R_t$ ) for Wales from SAGE (as approved on 4 February) is predicted to be between 0.7 and 0.9 (90% confidence interval). The estimate of  $R_t$  is shown as a range without a central estimate and is a lagging indicator, based on the latest data available up to 1 February.
- The current daily growth rate estimated by SAGE (as approved on 4 February) is between -0.06 and -0.03 (90% confidence interval) in Wales, indicating that infections could be shrinking by between -6% and -3% per day.
- Public Health Wales also estimate  $R_t$  for Wales using data on the number of positive cases. These estimates should be interpreted with caution may be effected by changes in testing patterns. As at 29 January,  $R_t$  in Wales is estimated to be between 0.63 and 0.66 (95 % confidence interval).
- 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.

## Halving time

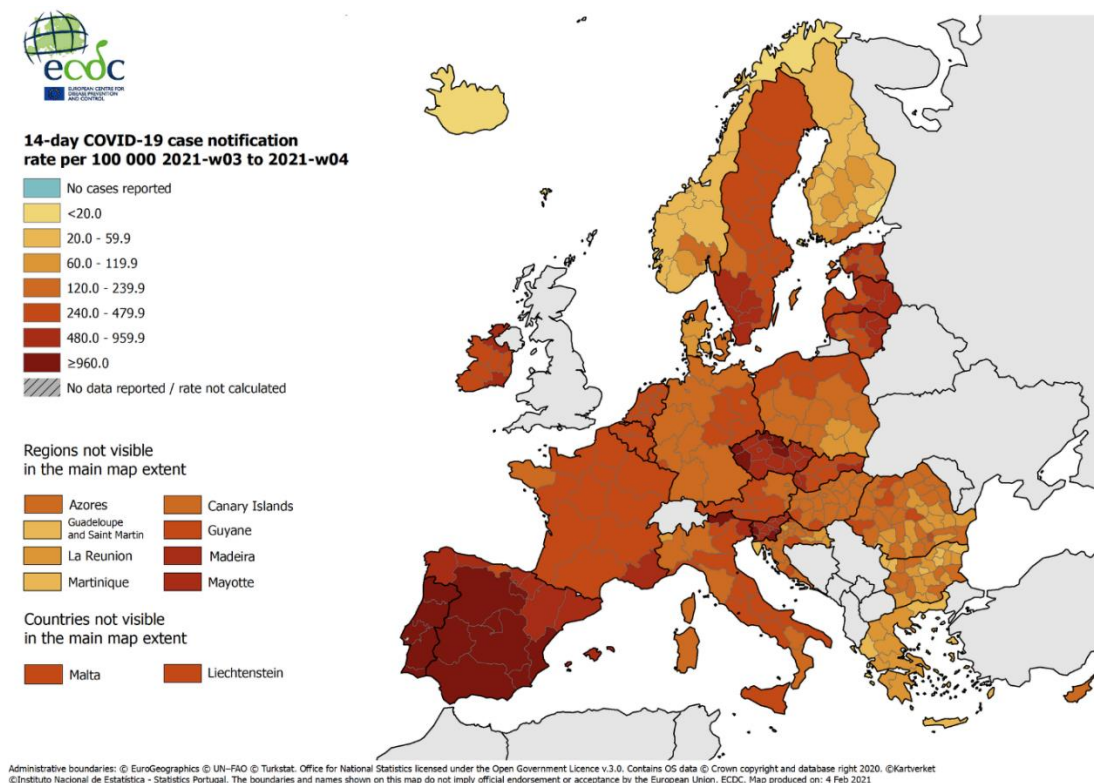
- As at 2 February, Public Health Wales estimated the halving time (the time it takes for the number of cases to half) to be 13.2 days (95% confidence interval 7.6 to 49.1 using data from 16/01/2021 to 29/01/2021).
- Halving time (and  $R_t$  and growth rates), gives an indication of the rate of change and therefore it should be treated with caution for the reasons outlined above.

## International update

- The general situation in Europe continues to improve, even in Spain and Portugal which appear to have arrested their sharp recent rises and are showing steady declines. The only country which is rising (although not sharply) is Finland and this is from a relatively low baseline figure. However, this improving picture has been achieved only by countries maintaining tight controls and tight impositions of non-pharmaceutical interventions (NPIs) so there is no room for complacency

and little room for relaxation, especially in light of the widespread detection of new variants of concern.

- The map below shows the 14-day average notification rate per 100,000 people in Europe. The UK is not included due to Brexit.



- Elsewhere, there is a mixed picture in South America where some countries have arrested or reduced their infection rates (e.g. Argentina, Brazil, Chile, Uruguay, Paraguay) but other countries have increasing rates (e.g. Bolivia, Peru, and Venezuela). A similar picture is found in Southern Africa where South Africa, Namibia and Zimbabwe have reducing rates but Mozambique has a rising rate. Again, these countries have arrested or reduced their infection rates by tight NPI controls. These falls in cases are despite the new variants being more infectious but it is too early to say whether the new variants will reverse these reductions. There are also reports of rapid rises in localised areas in Africa and South America which could run out of control.
- Regarding the new variants, the first map below shows the number and location of countries which have detected VOC 202012/01 (UK variant, Kent). Other variants are not as widespread but nevertheless are thought to be spreading rapidly in some countries which do not have good genomic testing capabilities.
- The maps further below illustrate the spread of the South Africa (501Y.V2) and Brazil (P.1 or B.1.1.248) variants.

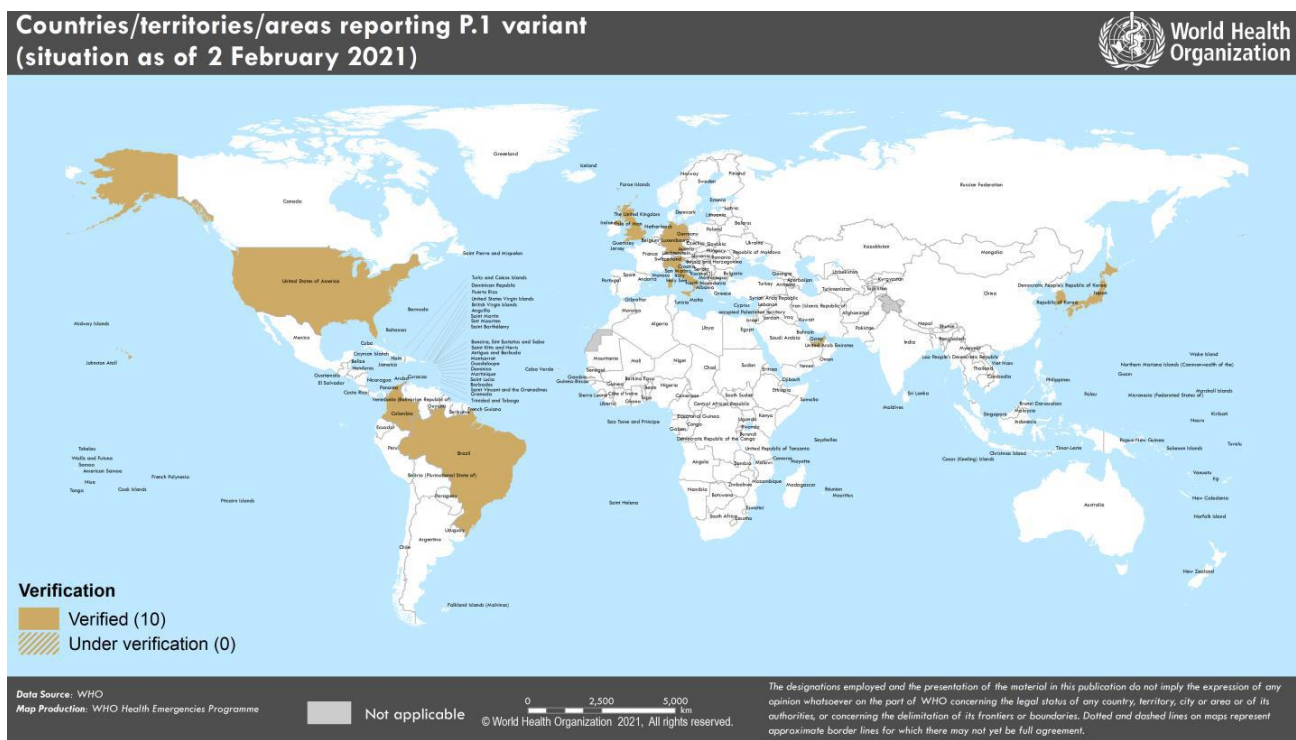


### Countries/territories/areas reporting VOC 20212/01 variant (situation as of 02 February 2021)



### Countries/territories/areas reporting 501Y.V2 variant (situation as of 02 February 2021)

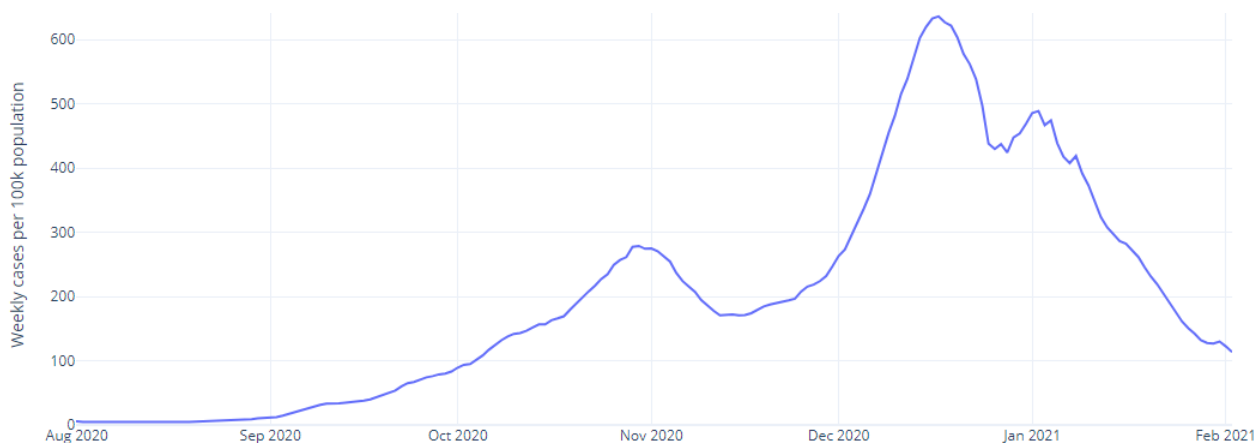




- Data on the picture across Europe, including caveats around data lags and variable testing policies is available [here](#).

## Case numbers

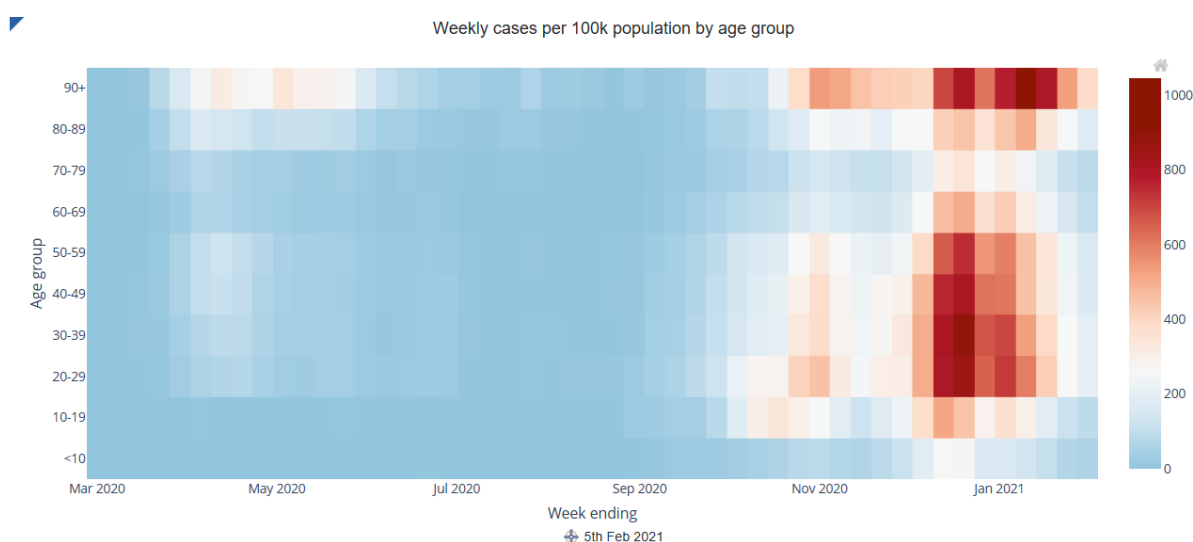
- The figure below shows that numbers of confirmed COVID-19 cases per day (7 day rolling sum, per 100,000 of the population). Cases continue to show a downward trend.



**Source:** Data from Public Health Wales as of 2 February

## 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. The darker red indicates an increased number of weekly cases.
- According to Public Health Wales, during week 04, incidence decreased in all age groups, incidence was highest in those aged 85+

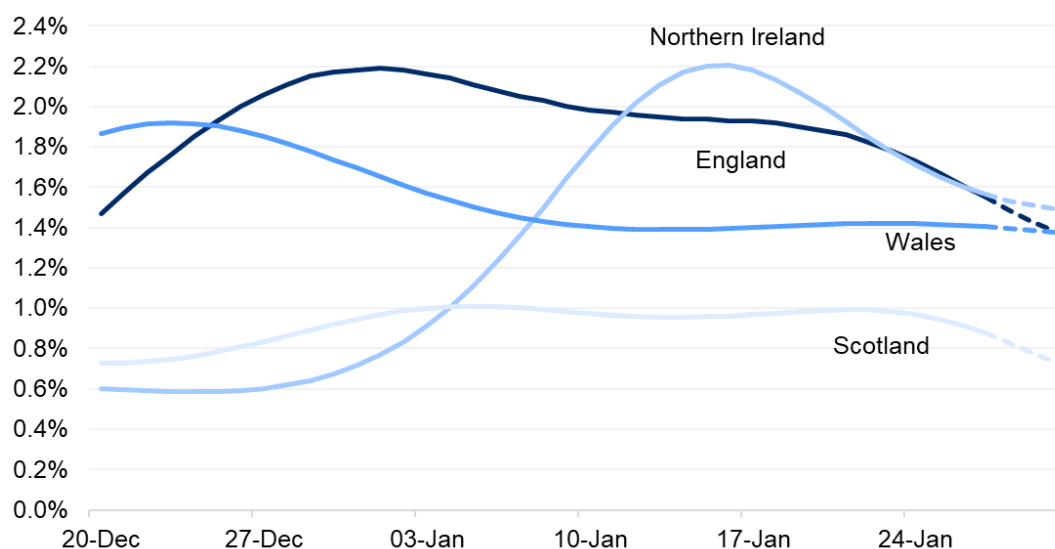


**Source:** Welsh Government dashboard, data from Public Health Wales as at 5 February.

## Covid-19 Infection Study results (Office for National Statistics)

- 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.
- However there is a greater lag in data from the infection survey than from other sources such as [Public Health Wales](#). It is also important to stress the uncertainty around these estimates. 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. The sequencing data from Public Health Wales for positive cases may be more robust and less subject to a time lag, even though it generally only includes people who have chosen to be tested.

- The ONS infection survey data for the most recent week (24 to 30 January 2021) indicates that the positivity rate in Wales has levelled off, after falling from the peak seen just before Christmas.
- For the week 24 to 30 January 2021, an average of 1.40% of the community population had COVID-19 (95% credible interval: 1.19% to 1.63%). This equates to approximately 1 person in every 70 (95% credible interval: 1 in 85 to 1 in 60), or 42,700 people during this time (95% credible interval: 36,100 to 51,600).
- The Figure below shows the latest estimates for positivity rates (%) since 20 December 2020 across the 4 UK Nations.
- There is some uncertainty around the individual point estimates for the nations. Estimates for the last few days of the series, shown as dashed lines in the chart below, have more uncertainty.



**Source:** Coronavirus (COVID-19) Infection Survey, ONS, 03/02/21

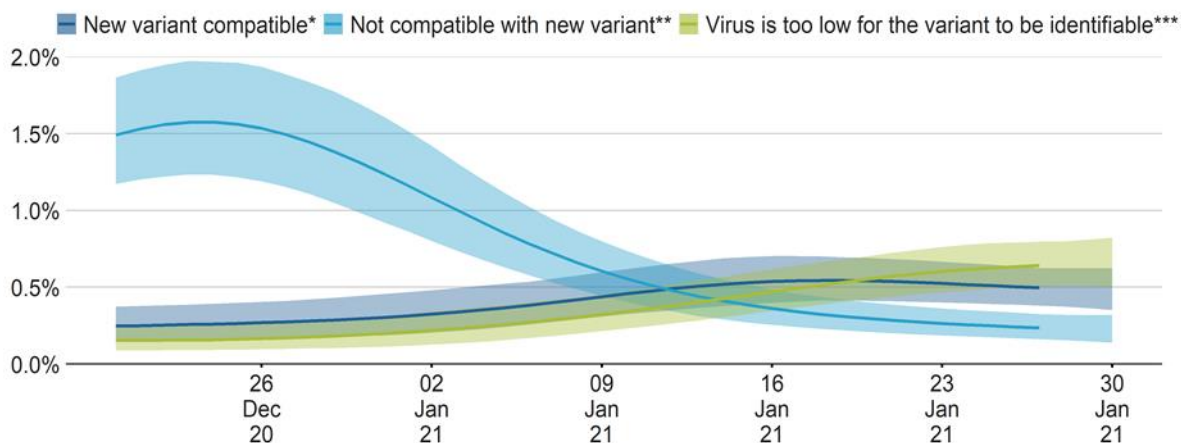
- Following a recent increase, positive cases that are compatible with the new variant VOC202012/01 have decreased in the most recent week. Cases that are clearly not compatible with the new variant have also decreased. Cases where quantities of the virus were too low for the variant to be identifiable has increased; these may represent cases where the Ct (cycle threshold<sup>1</sup>) value is high and individuals have had the virus for a longer period of time. See chart below.

<sup>1</sup> A high Ct value indicates a low concentration of genetic material and a low Ct value indicates a high concentration of viral genetic material



### Percentage of people testing positive for COVID-19 in Wales

Modelled daily estimates



The area to the right of the where the central estimate ends has a lower level of certainty due to lab results still being processed for this period

\*New variant compatible = gene pattern ORF1ab + N

\*\*Not compatible with new variant = gene pattern S + ORF1ab + N

\*\*\*Virus is too low for the variant to be identifiable = all other gene patterns

Data from 20 December 2020 to 30 January 2021

**Source:** Coronavirus Infection Survey, ONS, 03/02/21

- Full results are published [here for Wales](#) and [here from the ONS](#).

### Vaccination in Wales

- As at 4 February, a total of 523, 042 first doses of COVID-19 vaccine have been given in Wales. 1,635 people have received two doses. The actual number of doses will be higher due to ongoing data entry.
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- Vaccinations data is available from the [PHW tableau](#).

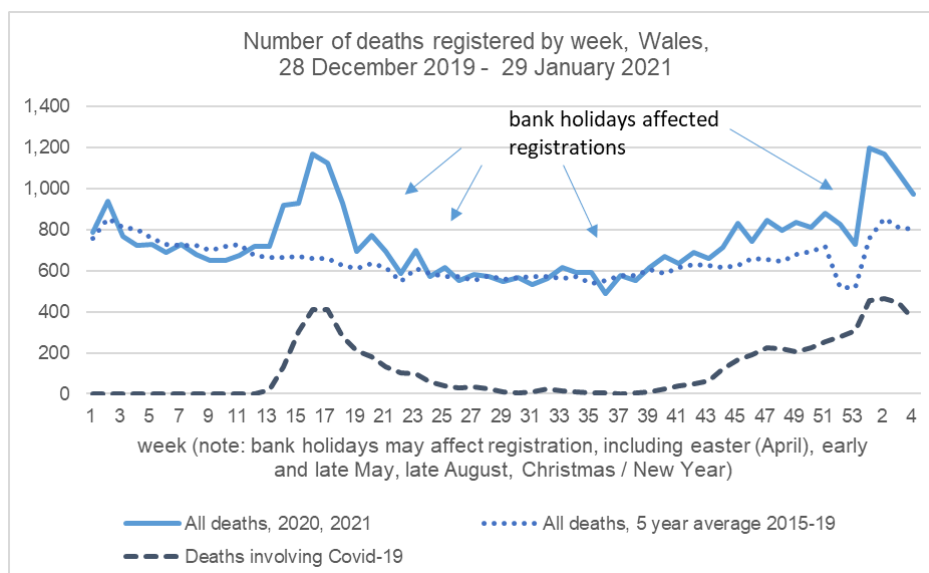
### Deaths

- The Figure below shows the 7 day rolling sum of COVID-19 deaths reported by Public Health Wales rapid mortality surveillance as at 2 February. The weekly number of deaths reported has decreased in the most recent week, but remains high at around 180 per week. Care should be taken in interpreting the most recent trends.



**Source:** Welsh Government dashboard, data from Public Health Wales as at 2 February

- 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 (ONS) 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.
- In Wales, the number of registered deaths involving COVID-19 decreased from 447 (Week 3) to 361 (Week 4), the sixth-highest recorded at any point during the pandemic. The number of registered deaths involving Covid has declined for two successive weeks.
- The Figure below shows ONS data of the number of deaths involving COVID-19 registered by week in Wales and the number of all cause deaths registered by week from 28 December 2019 to 29 January 2021.



Source data: [Office for National Statistics](#)

### Deaths in care homes

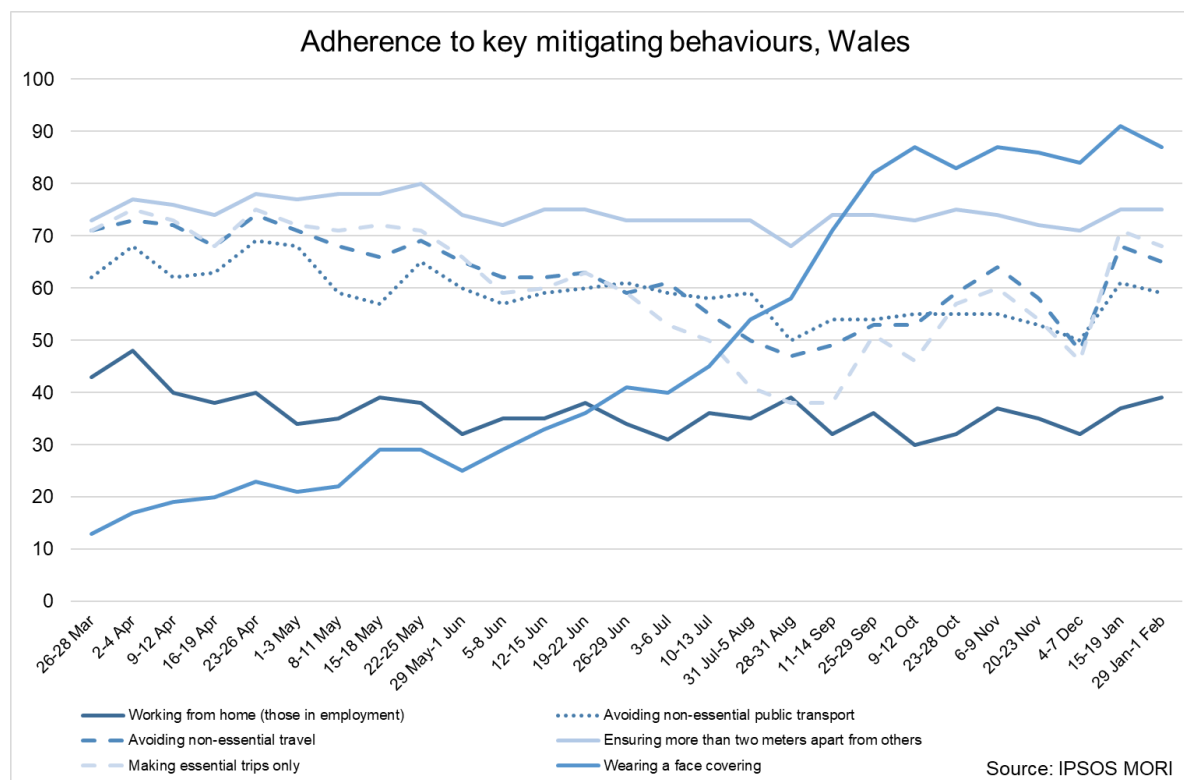
- As notified to Care Inspectorate Wales (CIW), between 1 March 2020 and 29 January 2021, care home resident deaths with suspected or confirmed COVID-19 has made up 23% of all reported deaths.
- In the most recent week, there are early signs that deaths of care home residents from confirmed or suspected COVID-19 are decreasing, however there is fluctuation in the numbers of deaths on a weekly basis. These numbers still remain high and close to levels seen in April.
- At the start of the November 2020 there was an increase in the number of COVID-19 related deaths notified to CIW. Following a decrease in December 2020, there has been a further increase in January 2021. The average number of COVID-19 deaths is now generally between 15 and 20 each day, which is higher than the increase observed in November 2020.
- The Chart below shows notifications of deaths of adult care home residents with confirmed or suspected COVID-19 by location of death and day of notification (7 day rolling sum, between 7 March 2020 and 29 January 2021).



- Further information on care home deaths from Care Inspectorate Wales is available [here](#). Please note these are provisional figures to help monitor the impact of COVID-19. They are not comparable with data from Public Health Wales.
- Deaths data from the Office for National Statistics is subject to a time lag, but will be more complete and report higher numbers of deaths. Deaths involving COVID-19 in care homes accounted for nearly half of all deaths in care homes in Week 4 (49.0%), an increase from Week 3 (46.6%).

### Adherence and understanding of current measures

- There is new data from IPSOS MORI this week. The results from Public Health Wales are the same as last week.
- The [most recent IPSOS MORI data](#) for the period 29 January – 1 February for Wales shows a similar picture to the last survey wave which was 2 weeks prior (15-19 January). 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.

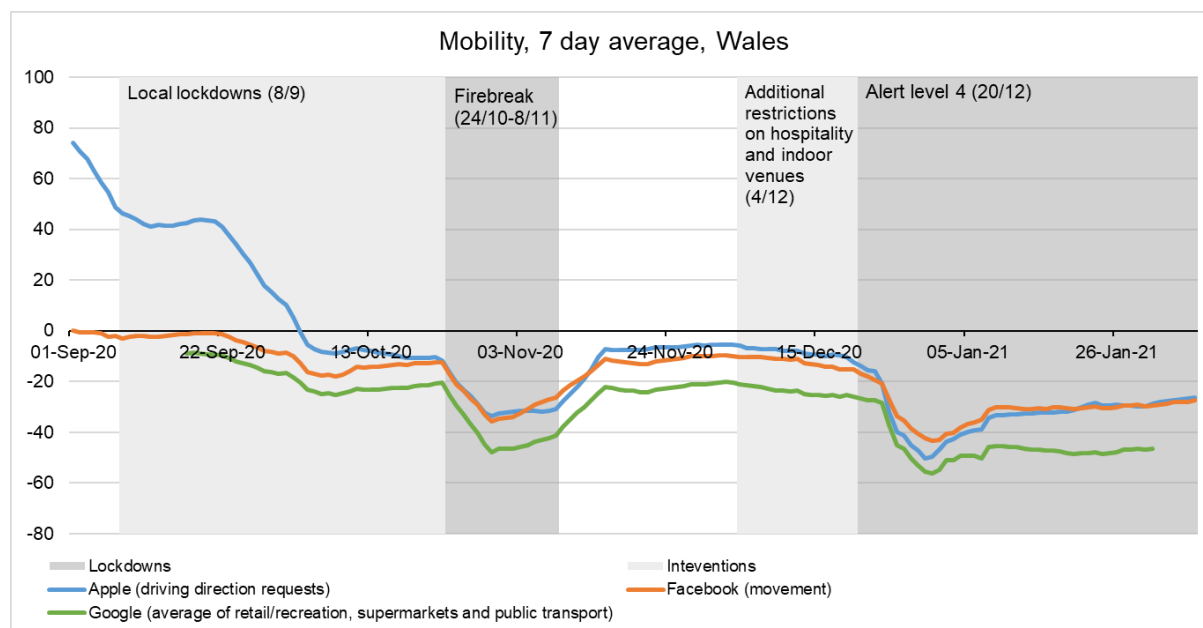


- The latest results from the [Public Engagement Survey on Health and Wellbeing during Coronavirus Measures](#) for the period 18 January – 24 January show that 53% of people say they understand the current restrictions in Wales ‘very well’. A further 40% reported understanding the restrictions ‘fairly well’. These results are similar to two weeks ago which were higher than those in mid-December before alert level 4 started. The survey also shows that 55% of people said they were following coronavirus restrictions ‘completely’ and a further 37% reported majority compliance, again similar to two weeks ago and higher than in mid-December. 19% reported having people outside their household/permitted extended household come into their house, whilst 13% reported going into others people’s houses, both of these are lower than in mid-December and similar to two weeks ago.

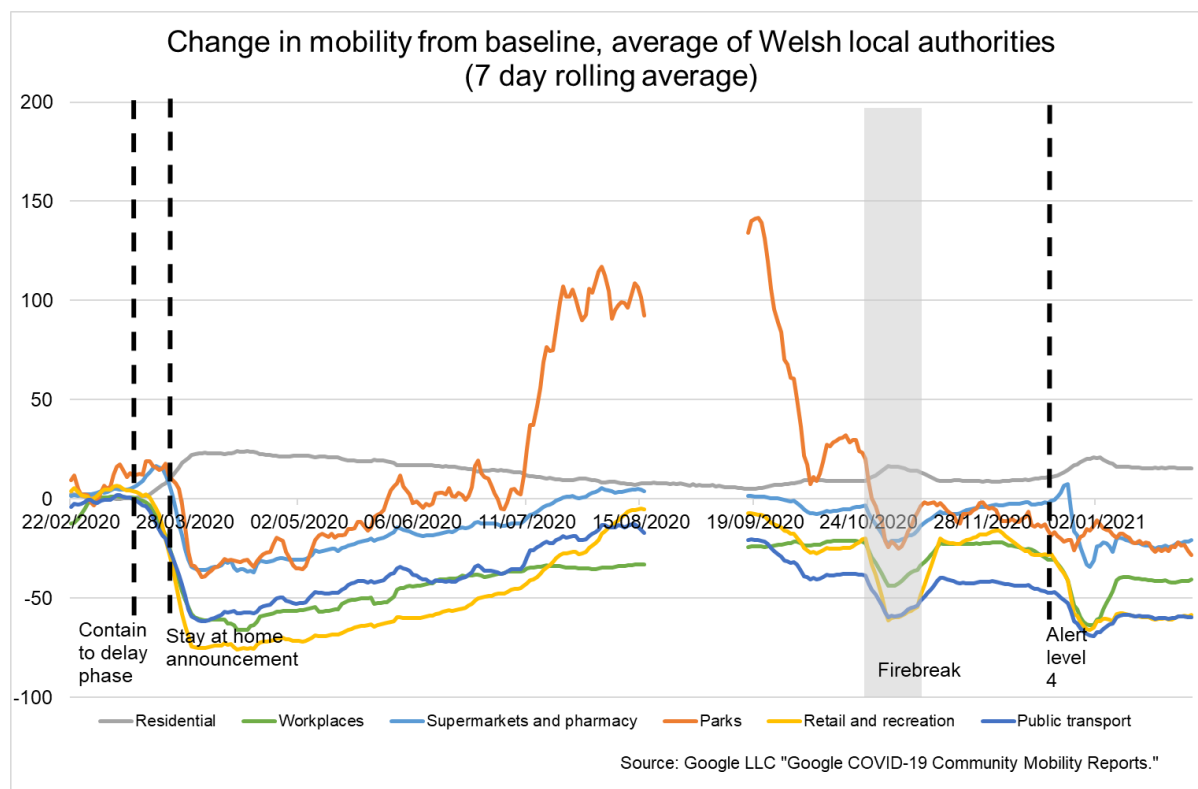
## Mobility

- Mobility data for the first week in February from Facebook and Apple show small increases compared to the previous week. Data from Google and O2 for the last week in January also show small increases relative to the previous week. Levels of mobility are mostly around the second week of the firebreak.





- Mobility of [Facebook users](#) in Wales shows movement was 28% below the baseline for the week to the 6 February. This is higher than the week before (30%). The percentage of users staying put (near to home) was 34%, down slightly from the week before (35%). 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 6 February shows that requests for driving directions in Wales were up from the previous week at 74% of the baseline (was 70%). Requests for walking directions and requests for public transport directions were higher than the previous week relative to the baseline. The baseline is the 13<sup>th</sup> of January 2020.
- The [Google mobility data](#) to the week of the 31 January for residential (i.e people spending time at home) are similar to the week before at 15% above the baseline. Workplaces were up slightly (at 41% below the baseline, up from 42%). Retail & recreation mobility was up from last week (58% below the baseline, up from 61%) whilst supermarkets & pharmacy show an increase (21% below the baseline, up from 24%). Public transport shows no change compared to the previous week whilst parks is down slightly.
- 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 17<sup>th</sup> – September 10<sup>th</sup> due to the data not meeting quality thresholds.



- Anonymised and aggregated mobile phone data from O2 for the week to the 29 January shows a small increase in trips compared to the week before. Trips starting in Wales rose by 1 percentage point to 52% of the baseline. The baseline for the O2 data is the same day of the week in the first week of March.

## Research

- There are currently 11,045 Welsh patients recruited to COVID-19 urgent public health studies, an increase of 278 since last report.

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

As at 4 February

- The proportion of calls to NHS 111 and NHS Direct related to possible COVID-19 symptoms decreased compared to the previous week.
- Overall GP consultations for any Acute Respiratory Infection (ARI) and suspected COVID have decreased this week compared to the previous week.

- The number of ambulance calls possibly related to COVID-19 remained stable in the most recent week compared to the previous week.
- The all-Wales number of lab confirmed COVID-19 episodes has continued to decrease in the most recent week. Sample positivity for testing episodes decreased to below 10% in week 04.
- During week 04, incidence decreased in all age groups, incidence was highest in those aged 85+
- Confirmed case incidence and testing episode positivity has decreased in all regions of Wales in recent weeks.
- At a national level, confirmed case admissions to hospitals and confirmed cases who are inpatients in hospital decreased compared to the previous week. In the most recent week, admissions to critical care wards decreased compared to the previous weeks.
- Recent surveillance data suggest that COVID-19 infections in Wales is decreasing in all regions of Wales. Cases remain geographically widespread, however the majority of local authority (LA) areas are seeing decreasing overall trends in confirmed case incidence in the most recent week.
- The number of incidents reported in recent weeks has decreased but remains high in residential care homes.
- Most school pupils are currently being taught online, with some face-to-face learning for vulnerable children and children of critical workers. Schools surveillance information is available on the [Public Health Wales dashboard](#).
- All-cause deaths are higher compared to the 5 year average, but decreased in the most recent week.
- Deaths in confirmed cases in hospital, reported through PHW mortality surveillance decreased in the most recent week, but remain high.
- 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 34%, 28% and 22% of deaths respectively).
- Influenza is not currently circulating in Wales.

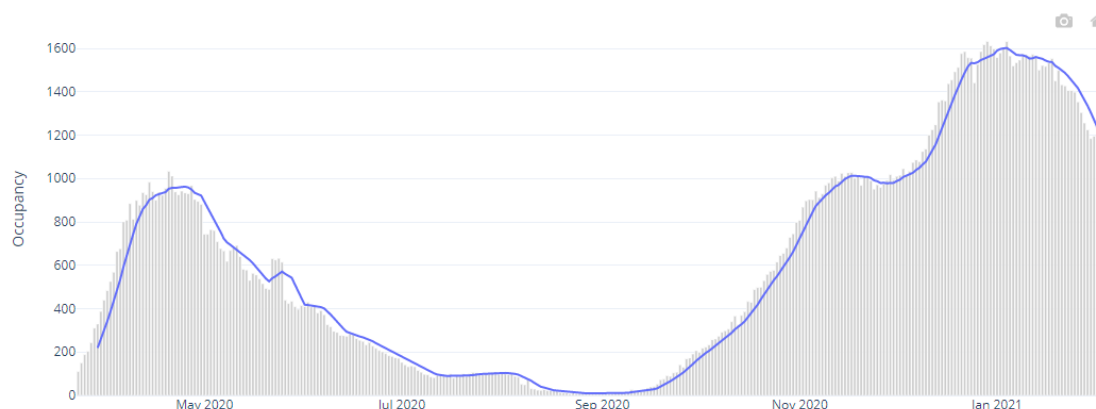
## Local authority analysis from Public Health Wales

(Period covering 24 to 30 January 2021)

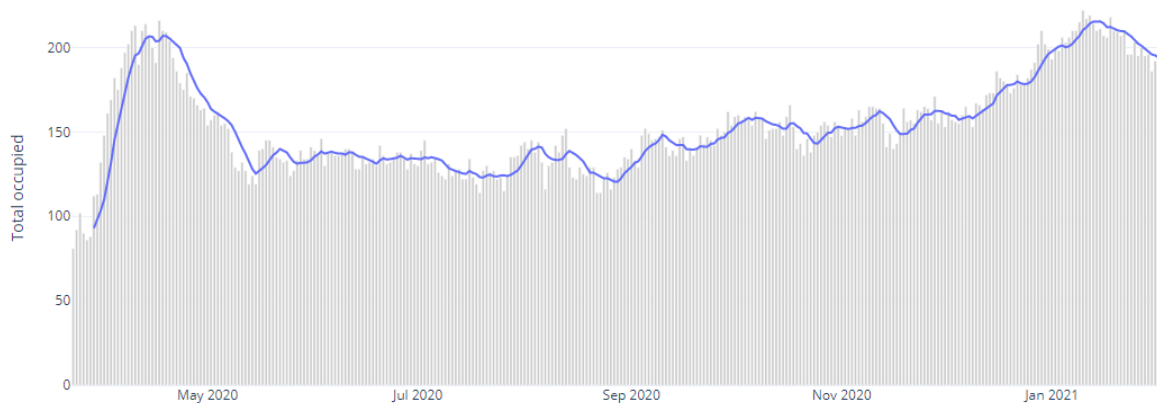
- All local authorities are in the highest threshold for 7-day incidence ( $> 50$  per 100,000) and test positivity ( $>5\%$ ), apart from Gwynedd which is in the lower bracket of 25 to  $<50$  per 100,000 incidence.
- Please use caution in interpreting trends for the most recent period as testing data is not always complete and figures will be subject to future revision if late data feed through.
- Further information is available on the [Public Health Wales dashboard](#).

## 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 4 February).



- 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 4 February).

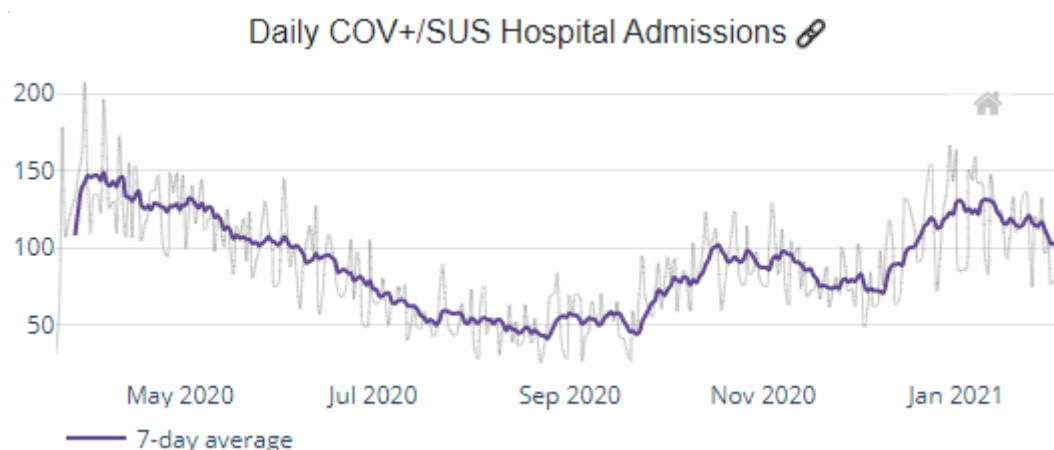


- As of 4 February the number of people with confirmed COVID-19 in hospital has decreased over recent weeks, but remains high and above the April peak. Both overall ICU occupancy (COVID-19 and non-COVID-19 patients) and occupancy for COVID-19 patients only have started to show a steady decline over the last 2-3 weeks but remains high. The number of people recovering from COVID-19 is high, still at around 1,000, in the most recent week.
- When considering data on capacity (230 beds) and occupancy (173 beds) reported to us by local health boards, Level 3 ICU across Wales is approximately 75% occupied with both COVID and non-COVID patients (as of 4 February). However, there are normally approximately 152 critical care beds (Level 3 ICU equivalent) and so hospitals are creating additional critical care bed capacity due to increased demand. Therefore, critical care units in Wales are at or over 100% occupied for their normal critical care capacity and 1:1 nursing staffing ratio for all critical patients may not be possible for many patients, even with non-critical care staff helping to care for patients.
- 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. Data as of 4 February.

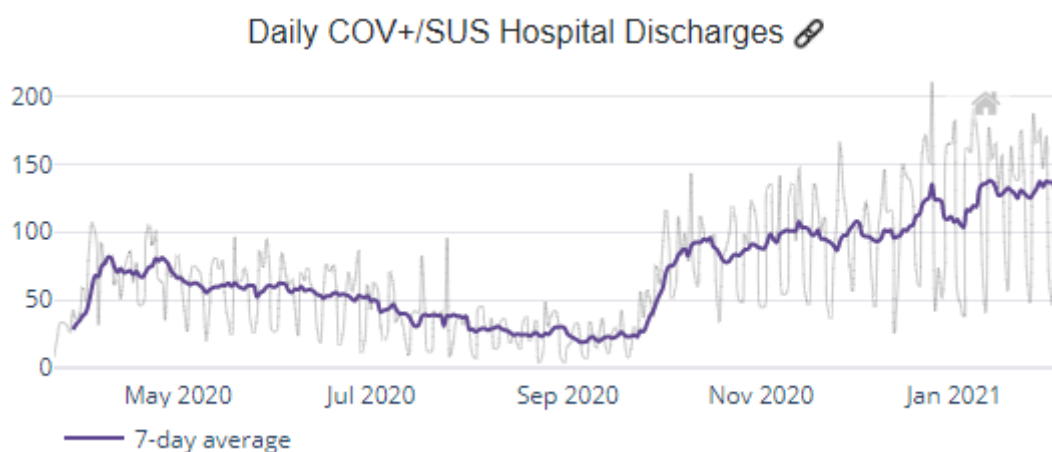


- The Figure below shows the number of people admitted to hospital and are either suspected (SUS) or confirmed as having Covid-19 (COV+). The purple line represents the total number over a rolling 7 day average, whilst the fainter grey lines show the actual figures at that time. Data as of 4 February.

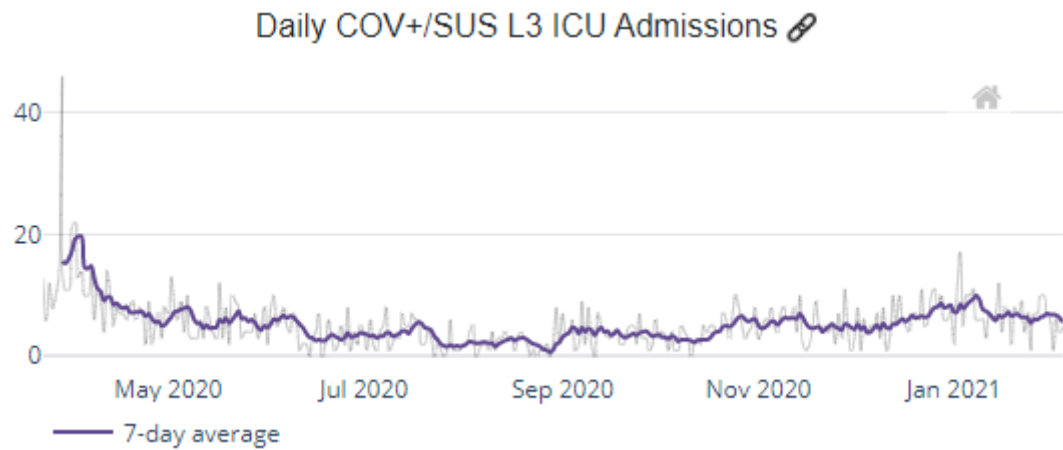




- The Figure below shows the number of hospital discharges of people who are either suspected (SUS) or confirmed as having Covid-19 (COV+). The purple line represents the total number over a rolling 7 day average, whilst the fainter grey lines show the actual figures at that time. Data as of 4 February.



- The Figure below shows patients admitted to the intensive care units and are either suspected (SUS) or confirmed as having Covid-19 (COV+). 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. Data as of 4 February.



**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.

