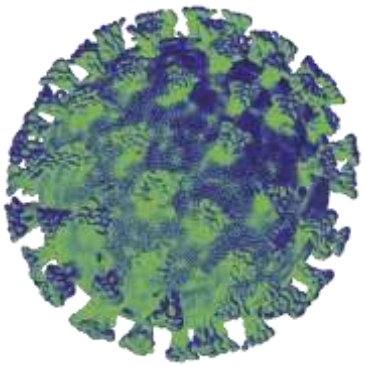
ul

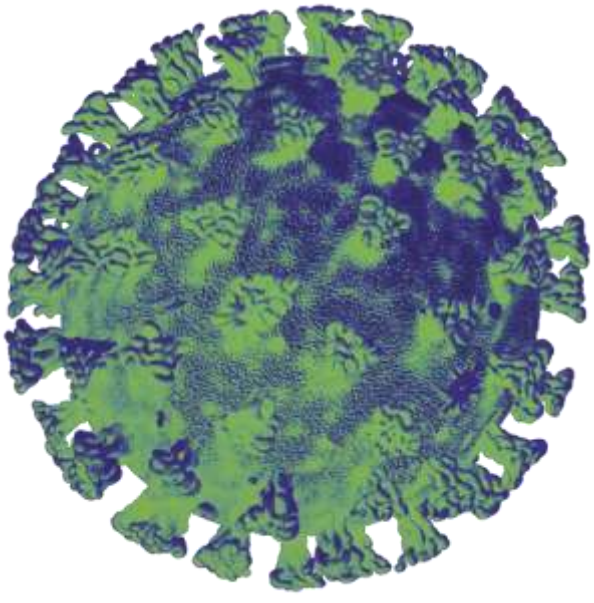
Llywodraeth Cymru
Welsh Government

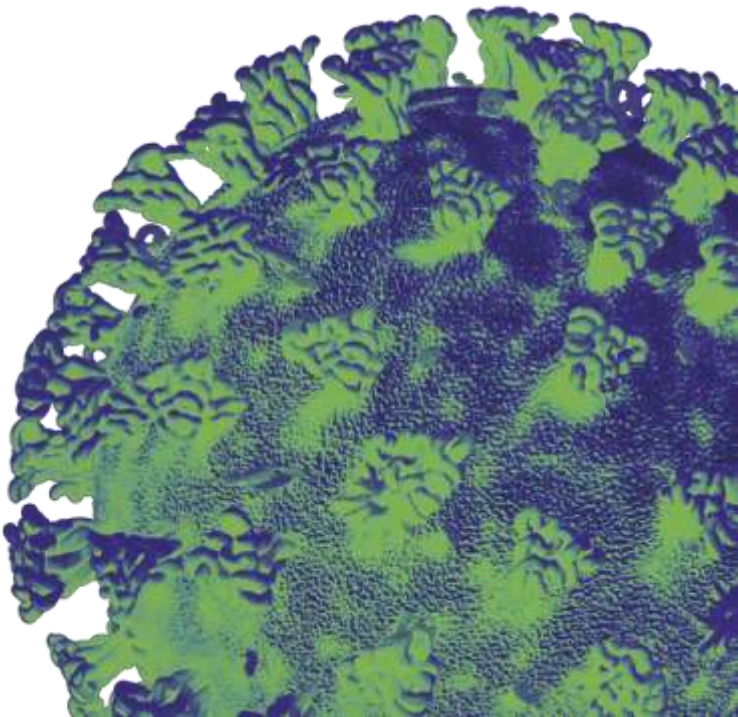
Technical Advisory Cell

Summary of advice

07 August 2020







Technical Advisory Cell: Summary of advice

7 August 2020

Top-line summary

- The incidence growth rate estimates for Wales show that infections could be declining by up to 3% a day or increasing by up to 4% a day. However, there is great uncertainty in these estimates as they are based on low case numbers and / or dominated by clustered outbreaks

- The first results for Wales from the ONS Infection Study estimate 0.05% of the community population (1,400 people) had COVID-19 in week commencing 27 July 2020. There will be considerable uncertainty in this estimate until the sample size increases over further weeks. This estimate is based on fewer than three positive swab tests.

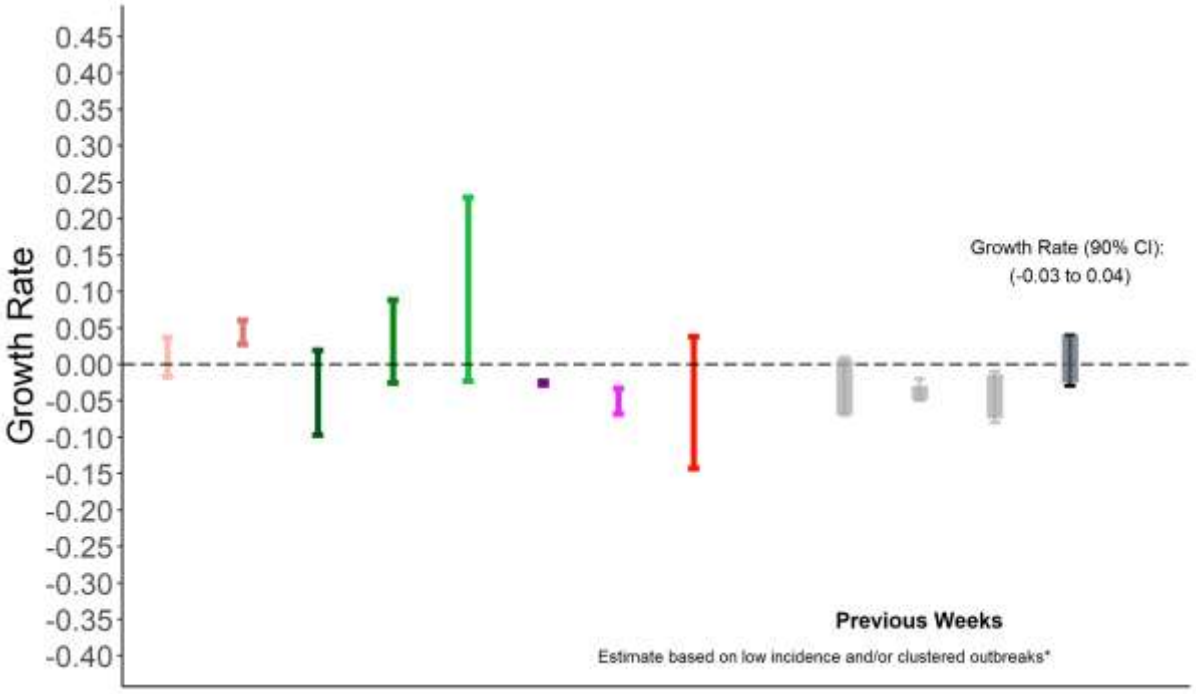
Growth Rate

- There are currently eight models that estimate growth rates for Wales. The results from these models are also combined using equal weights to provide an overall estimate of growth rate. Figure 1 shows the latest growth rate estimates for Wales, including the combined model.

- The current growth rate is estimated to be between -0.03 and 0.04. There is significant uncertainty around the actual growth rate; infections could be declining by up to 3% a day or increasing by up to 4% a day.

- Care should be taken when interpreting the growth rate and reproduction number for Wales. This is because these estimates are based on low case numbers and / or dominated by clustered outbreaks and are not sufficiently robust to inform policy decisions.

Figure 1: Current estimates for growth rate in Wales – with 90% confidence intervals, along with the combined model based on equal weights



Key

Each model has a different colour to distinguish the different contributors. No break down by data input method is available this week.

Reproduction ratio

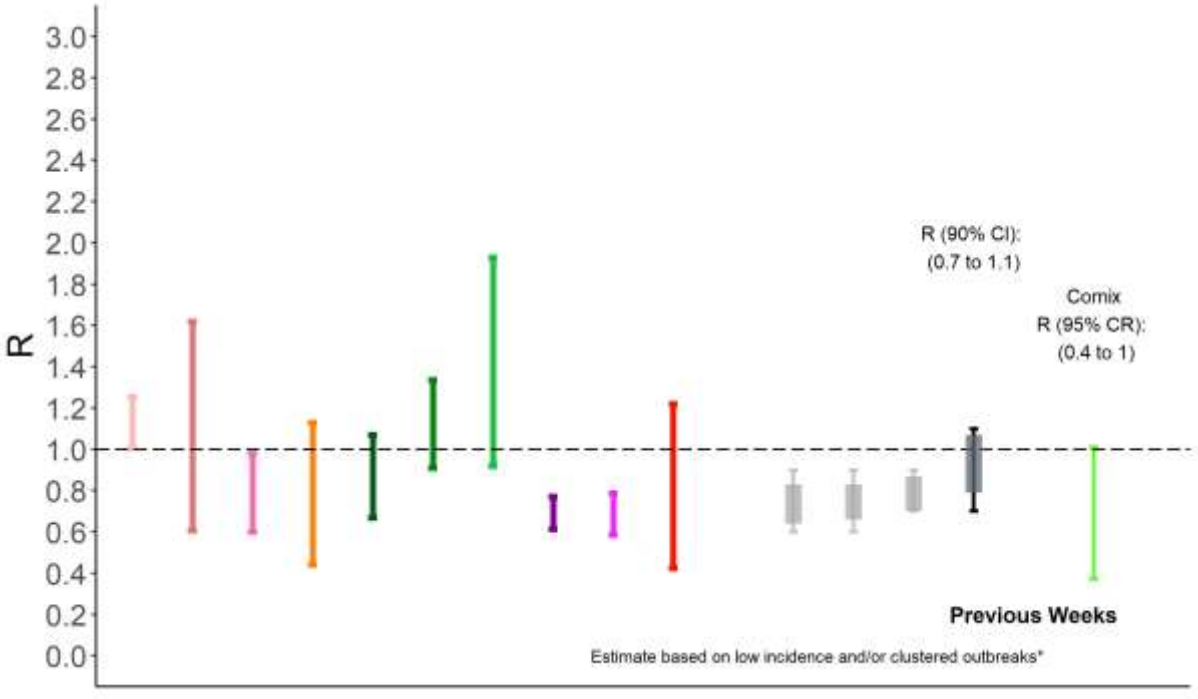
- The most recent estimate of the Reproduction number R_t for Wales from SAGE is predicted to be between 0.7 and 1.1. Due to the low number of cases, the estimate of R_t is now shown as a range without a central estimate. The large confidence interval suggests a high degree of uncertainty of the exact value of R_t.
- A consistent R_t value below 1 will lead to a reduction in cases and hospitalisations, however a consistent R_t value above 1 will lead to an increase in cases and hospitalisations. As the number of cases falls, the impact of over-dispersion events may increase where instances of the virus being spread to several people in a short space of time may lead to fluctuations in the number of cases.

Current Estimate of R_t

- There is evidence of small variations in R_t between the different nations of the UK. There is, however, greater uncertainty in the estimates for Scotland, Wales, and Northern Ireland partly due to the smaller numbers of cases and deaths compared to England.
- Any changes in transmission that may have occurred in the past two to three weeks will not yet be reflected in clinical data, nor therefore in current estimates of Rt.

- There are three settings which are particularly relevant to the current situation: the community, care homes, and hospitals. These are not independent; infection can be spread between hospitals and care homes, from these settings back into the community, and vice versa. These cannot be captured though estimating Rt separately for care homes and hospitals. Rt only considers onward transmission after the virus has been introduced into a particular population.
- SAGE recommends that the situation in particular settings is not monitored using R_t, but rather in terms of how the number of cases and deaths in them is changing and, where possible, epidemiological investigation of how the three epidemics interact.
- In order to take into account all evidence and approaches results from all models are combined using equal weights to provide an overall estimate of R_t for Wales. This is shown in black to the right of Figure 2 below.
- Results are anonymised to avoid giving precedence to one particular model over another. Confidence intervals (90%) are also shown. The methodology for the Comix model is very different, so cannot be compared with the other models. It is therefore plotted separately from the others, and shown in blue on the right of Figure 2.
-

Figure 2. Current estimates of R_t in Wales –with 90% confidence intervals, along with the combined model based on equal weights



Key

Each model has a different colour to distinguish the different contributors. No break down by data input method is available this week.

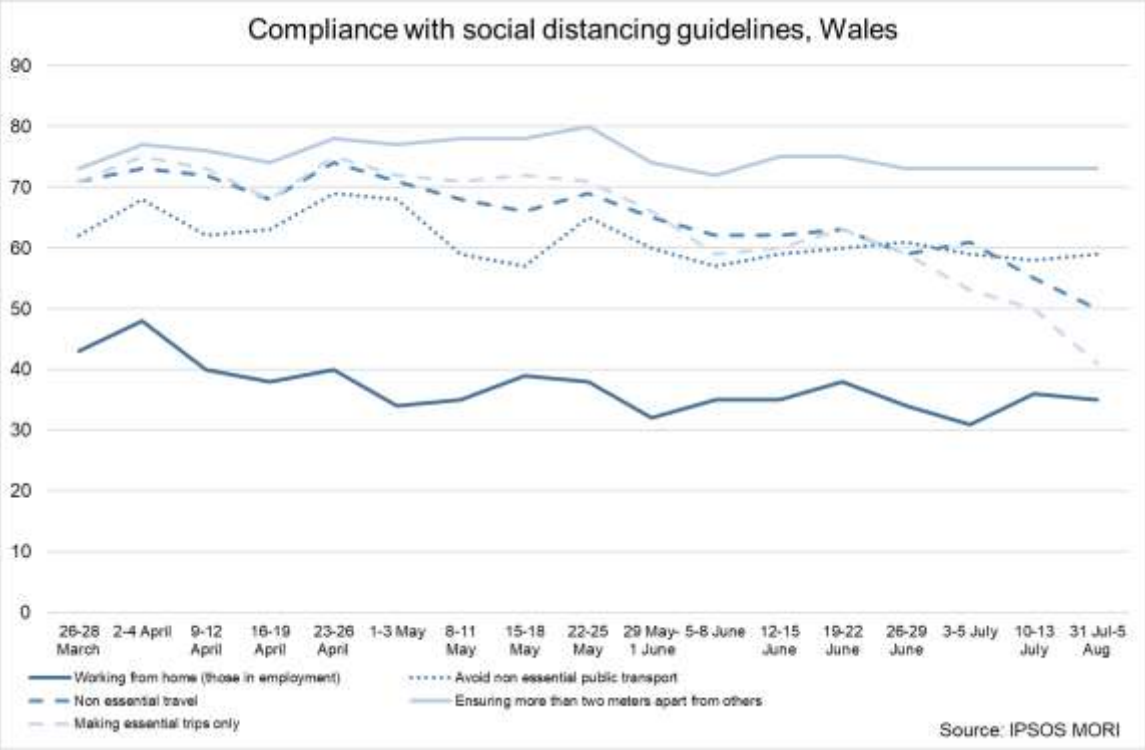
Halving time

- Reliable estimates of halving times cannot currently be estimated due to low and stable numbers of admissions.

Adherence to current measures and mobility

- The latest IPSOS MORI data shows that many people in Wales continue to follow the social distancing guidelines. There have been a further reductions in those making only essential trips in Wales. Working from home, avoiding non-essential public transport and keeping 2 meters away from others remain stable.
- Figure 3 below represents data collected online by IPSOS MORI as part of a multi-country survey. Each of the waves has included approximately 600 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.

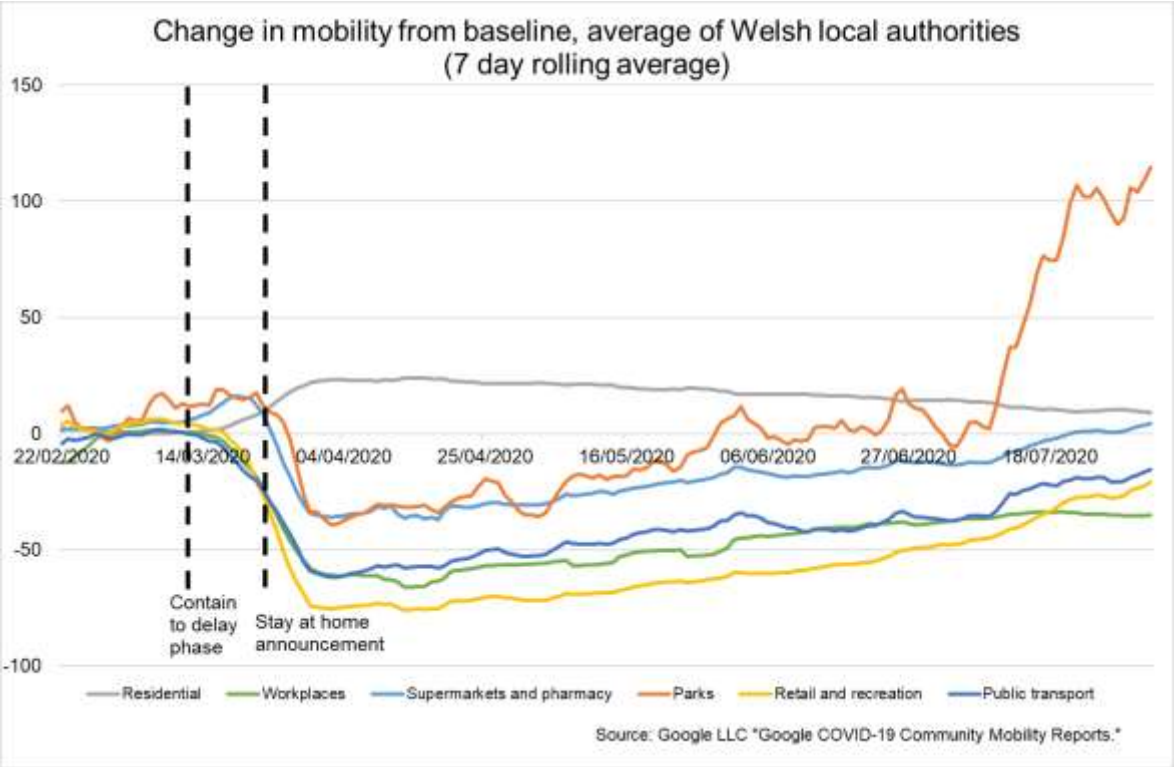
Figure 3: Compliance with social distancing in Wales



- The Covid Social Study shows that compliance has remained relatively constant over the last two weeks. “Majority” compliance remains around 90% overall, but is lowest (70-80%) amongst adults under 30. During strict lockdown (before easing measures came in), 9 in 10 people reported understanding the rules about what they should be doing to prevent the spread of the virus. Comprehension of the rules in strict lockdown was highest amongst adults aged over 30, with just over 3 in 5 adults understanding the rules completely, compared to only around 1 in 2 adults under 30.

- Travel in the last week has increased after little change in the previous week. The increases are generally larger than the other nations.
- In mid-April travel of Facebook users in Wales was 50% lower than the baseline, this is now around 5% lower and has increased in the last week. 25% of Facebook users in Wales are staying put, down a little from last week. In early April around 45% were staying put – this was around 18% in early March.
- Apple data showing requests for driving directions in Wales have increased significantly since early July and are now the highest they have been since the data started in January and are higher than the other nations. The Google mobility data shows increases in retail & recreation, supermarkets & pharmacy and also public transport. Workplaces and residential show little change.
- After lockdown patterns of mobility between England and Wales were broadly similar. Between mid-May and early-June England saw larger increases in travel than Wales, with Scotland showing a similar pattern to Wales. During July travel increased more in Wales than in England and that has continued into early August.
- Figure 4 below shows the change in travel 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.

Figure 4: Change in travel in Wales



Data Collection for Test and Trace Programmes

- SAGE have identified a set of information that is will be crucial to get collected by the test and trace systems on the cases and contacts identified through community testing and contact tracing. These include:
    - Recording of symptom onset time of index cases
    - All traced contacts should be tested within an appropriate interval after exposure to an index case
    - Routine multiple follow ups with contacts of index cases, after initial contact to gather information such as:
        a. whether they subsequently test positive,
        b. when their symptom onset is,
        c. whether they enter isolation/quarantine,
        d. behaviour during isolation/quarantine etc. – are they adhering to quarantine; if not, what is preventing that and what support is needed?
    - Information on barriers to adherence will allow government to build up a picture, in case there are particularly common barriers, or if specific groups of people, e.g. homeless or traveller communities, are having difficulties adhering – changes to the system can then be considered.
    - Location setting where suspected to have contacted virus (e.g. household, school, workplace incl. type of workplace, social setting e.g. pub/restaurant, or a transient event e.g. a wedding)
    - Commuting patterns, including mode of transport
    - Types of relationship between contact and index case e.g. household or support bubble member, in the same shop / leisure facility, etc.
    - Timings of interactions with the test and trace system and any tests (antigen and serology)
    - Proportion of cases associated with a known cluster / proportion of cases not associated with known case or transmission chain – if this proportion is low, then scale up testing of individuals and use backwards contact tracing accordingly
    - Positive serology test result – this allow for the prevention of asking individuals to quarantine multiple times

- This data, helping to describe the likely source of infection for every known case, is required to enable risk-based assessments for transmission under current or future interventions, and to increase the accuracy of models that simulate the spread of the epidemic.

ONS Infection Study

- The first results for Wales show that an estimated 0.05% of the community population had COVID-19 in the week to 02 August *(95% credible interval: 0.01% to 0.11%)*. This equates to approximately 1 person in every 2,200 *(95% credible interval: 1 in 7,800 to 1 in 900)*, or a total of 1,400 people during this time (95% credible interval: 400 to 3,400). There is considerable uncertainty around the estimates and credible intervals are provided to indicate the range within which we may be confident the true figure lies.
- The estimated proportion of the community population with COVID-19 in England was 0.05%, the same as the estimate for Wales. There is evidence that incidence rates in England increased recently but may now have levelled off.

Research

- There are currently 5,019 Welsh patients recruited to COVID-19 urgent public health studies, an increase of 302 in last seven days.

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

- NHS 111 and NHS direct calls for COVID-related symptoms are low and stable
- Ambulance calls possibly related to COVID peaked in April but have fallen and are now stable
- Testing positivity has declined from nearly 50% in April to 1% for the 7 days ending 29th July.
- During the past week the number of lab confirmed COVID-19 episodes decreased nationally compared to the previous week
- Both hospital and ICU admissions are still falling overall
- The main recent foci of activity is in north Wales, where surveillance indicators were stable or decreasing in most areas but with recent increases in areas in the east of Betsi Cadwaladr University Health Board (BC UHB) and in the north of Powys.
- There are still between 1 and 10 new incidents per week, mainly in residential care homes

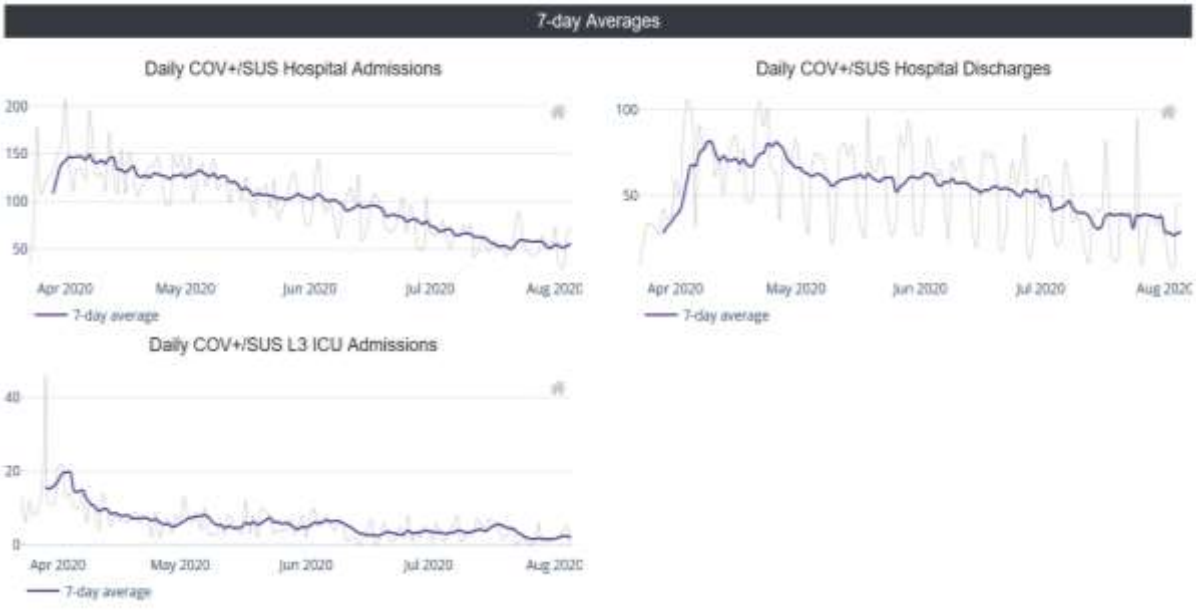
NHS Data Dashboard

- PHW data updated at 04/08/2020
- Hospital data updated at 05/08/2020

L3 ICU

- Of the total of 144 patients in L3 ICU in Wales (up from 135 in previous report):
    - 2 are confirmed COVID patients (both in CVUHB);
    - 3 are suspected COVID patients (1 in ABUHB, 1 in BCUHB and 1 in HDUHB)

- Of the health boards with L3 ICU units:
    - SBUHB is at 83% occupancy (all non-COVID)
    - HDUHB is at 69% occupancy (with 1 suspected COVID patient)
    - ABUHB is at 53% occupancy (with 1 suspected COVID patient)
    - BCUHB is at 53% occupancy (with 1 suspected COVID patient)
    - CVUHB and CTMUHB are at less than 50% occupancy.



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.