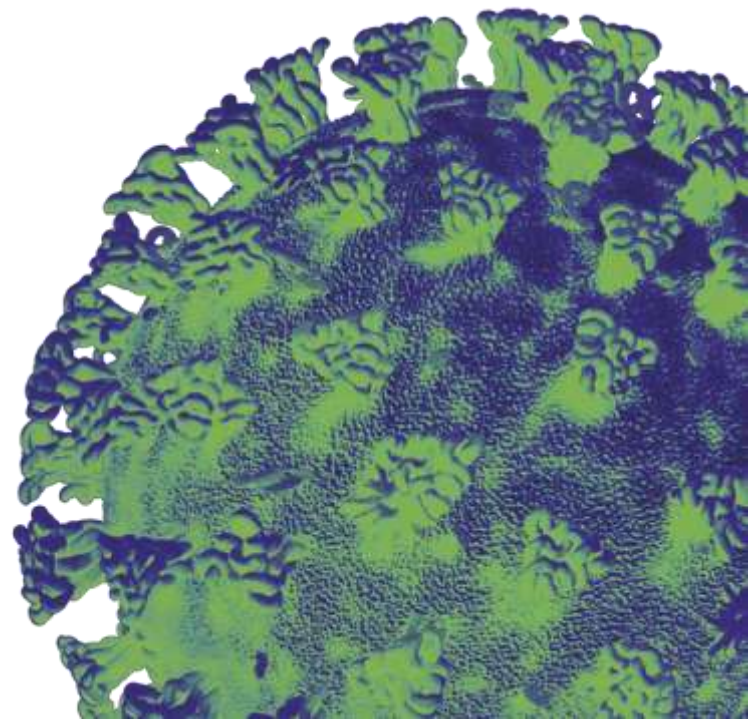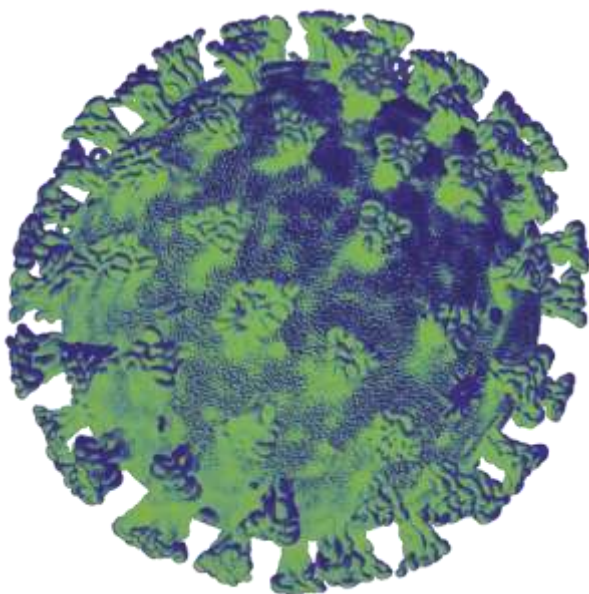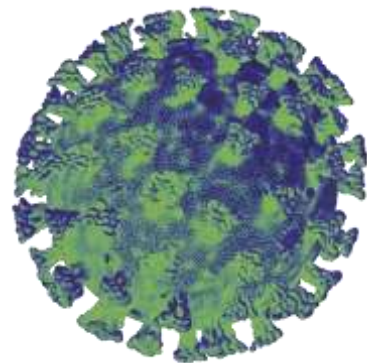Llywodraeth Cymru
Welsh Government

Technical Advisory Cell

Summary of advice

14 August 2020

Technical Advisory Cell: Summary Brief

14 August 2020

Top-line summary

- The growth rate estimates for Wales show that infections could be declining by up to 4% a day or increasing by up to 1% a day. However, there is great uncertainty in these estimates as they are based on low case numbers and/or dominated by clustered outbreaks.

- Results for Wales from the ONS Infection study show that an estimated 0.05% of the community population had COVID-19 over the last two weeks. There will be considerable uncertainty in this estimate until the sample size increases over further weeks.

Growth Rate

- There are currently nine 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 -0.04 and 0.01. There is significant uncertainty around the actual growth rate; infections could be declining by up to 4% a day or increasing by up to 1% a day.

- Care should be taken when interpreting the growth rate and reproduction number of Wales. This is because these estimates are based on low case numbers and 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


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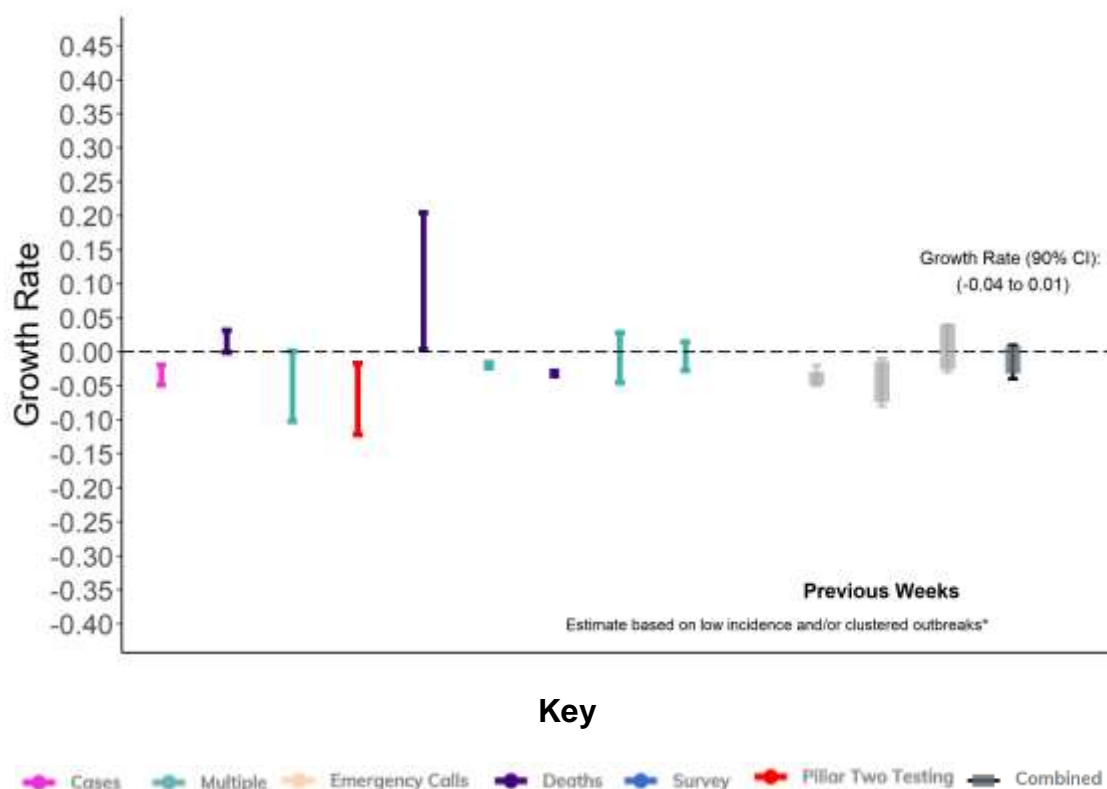
Reproduction number

- The most recent estimate of the Reproduction number R_t for Wales from SAGE is predicted to be between 0.80 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 R_t.

- 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 R_t separately for care homes and hospitals. R_t only considers onward transmission after the virus has been introduced into a particular population.

- SPI-M-O 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


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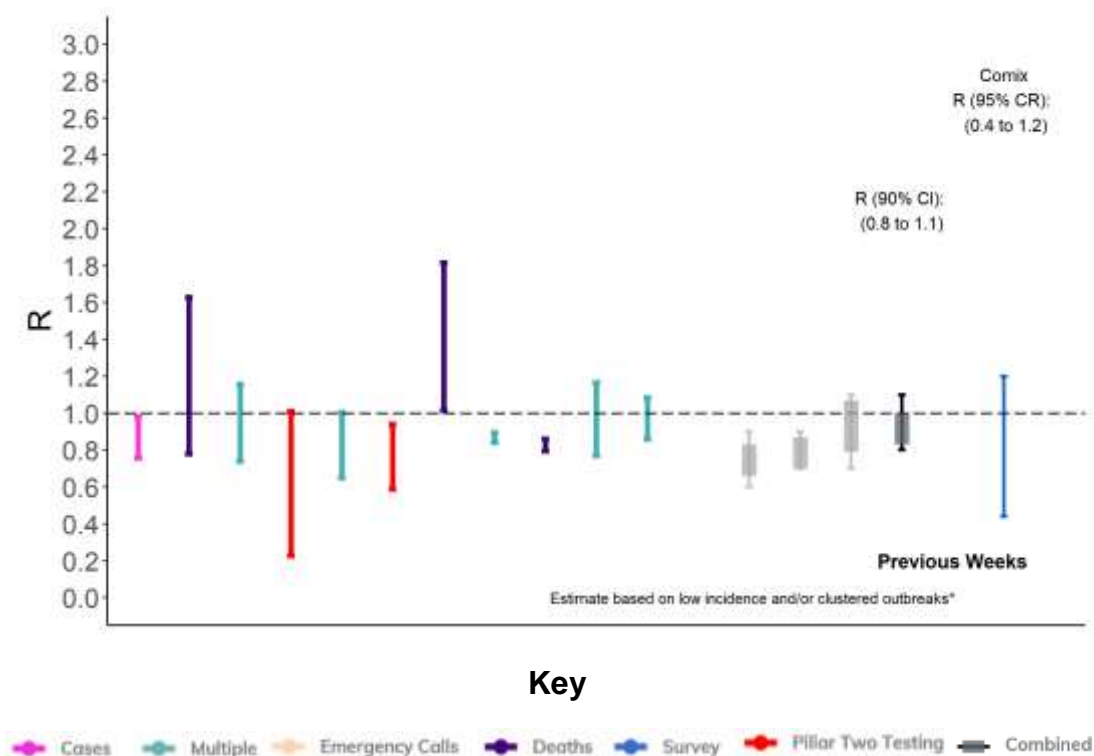
Halving time

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

Adherence to current measures and mobility

- The most recent IPSOS MORI data showed that many people in Wales continued to follow the social distancing guidelines. There were further reductions in those making essential trips in Wales whilst working from home, avoiding non-essential public transport and keeping 2 meters away from others remained 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
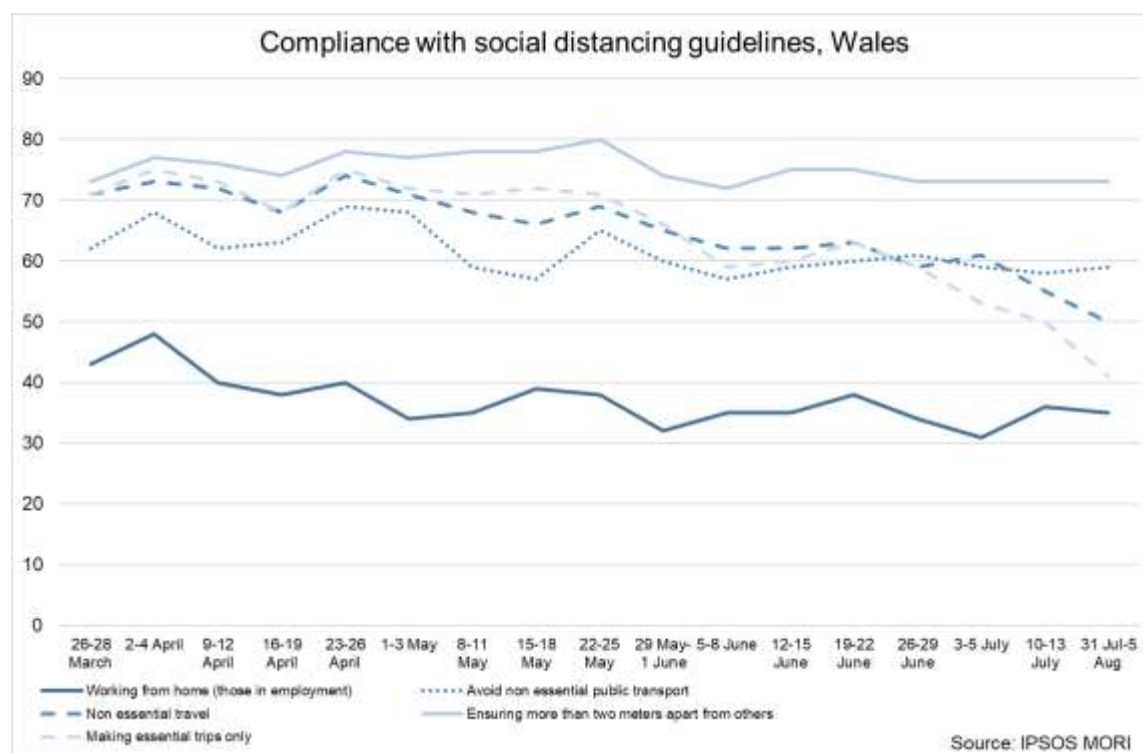
- Mobility in the last week shows a mixed picture, with some increases and some showing little change. There were slightly larger increases in mobility in Wales than the other nations.

- In mid-April mobility of Facebook users in Wales was 50% lower than the baseline, this is now around 4% lower and is similar to last week. 24% of

Facebook users in Wales are staying put, again similar to the previous 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 continued increases in retail & recreation. Other categories show slight increases in mobility.

- After lockdown patterns of mobility between England and Wales were broadly similar. Between mid-May and early-June England saw larger increases in mobility than Wales, with Scotland showing a similar pattern to Wales. During July mobility increased more in Wales than in England and that has continued into August.

- 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.
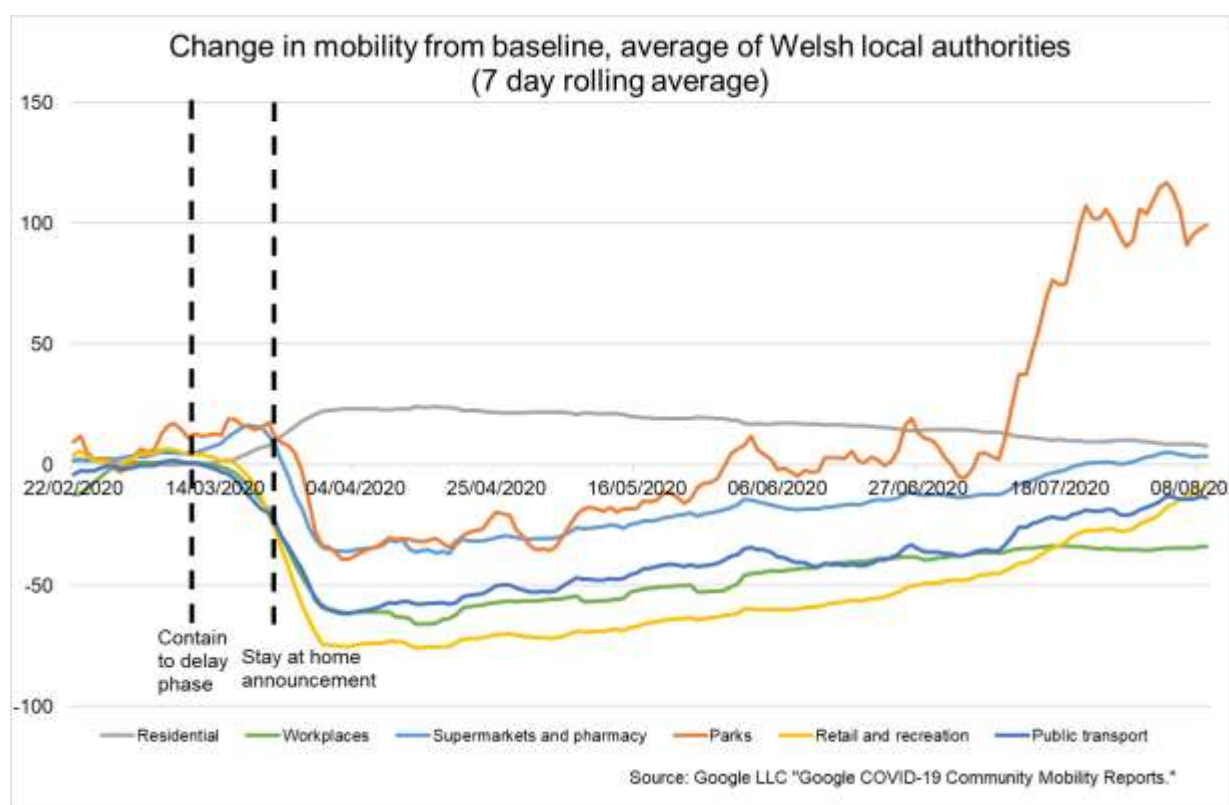
ONS Infection Study

- The results for Wales show that an estimated 0.05% of the community population had COVID-19 in the week to 09 August. This equates to approximately 1 person in every 2,100, or a total of 1,500 people during this time. Note that 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, though in both cases the figures are rounded to the nearest 0.01%. There is evidence that incidence rates in England increased recently but may now have levelled off.

Research

- There are currently 5095 Welsh patients recruited to COVID-19 urgent public health studies, an increase of 76 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 12th August.

- During week the past week the number of lab confirmed COVID-19 episodes decreased nationally compared to the previous week

- Hospital and ICU admissions are low and stable

- The main recent foci of activity remains in north Wales, where surveillance indicators were stable or decreasing in most areas, but some increases in areas in the east of Betsi Cadwaladr University Health Board (BCUHB) and in the north of Powys in recent weeks.

- There are still between 1 and 10 new incidents per week, mainly in residential care homes.
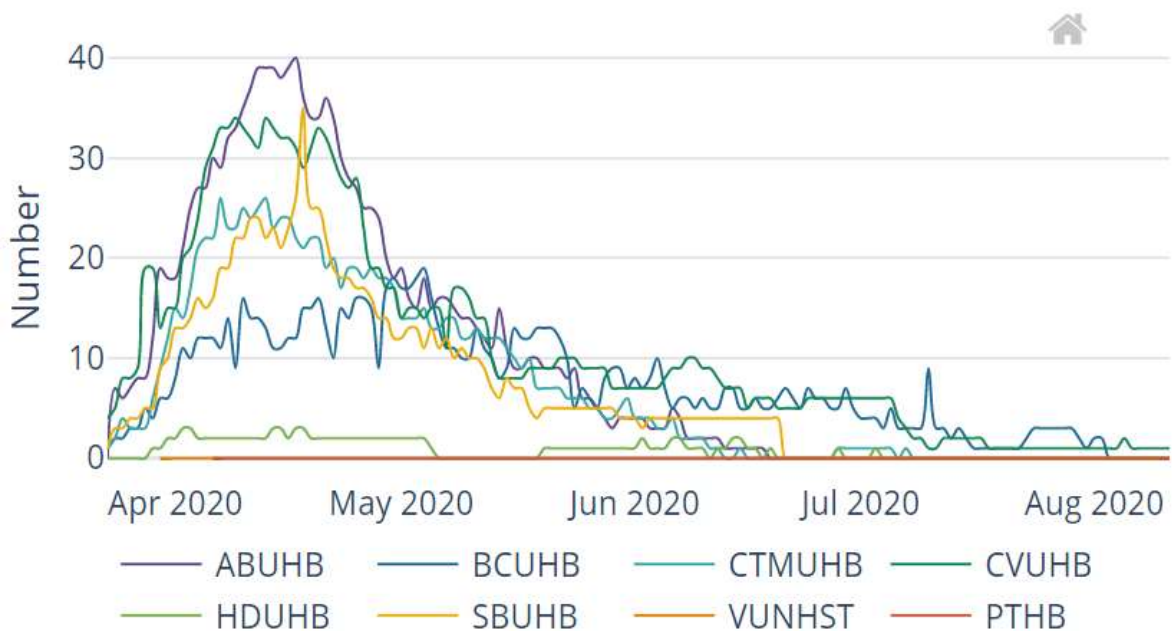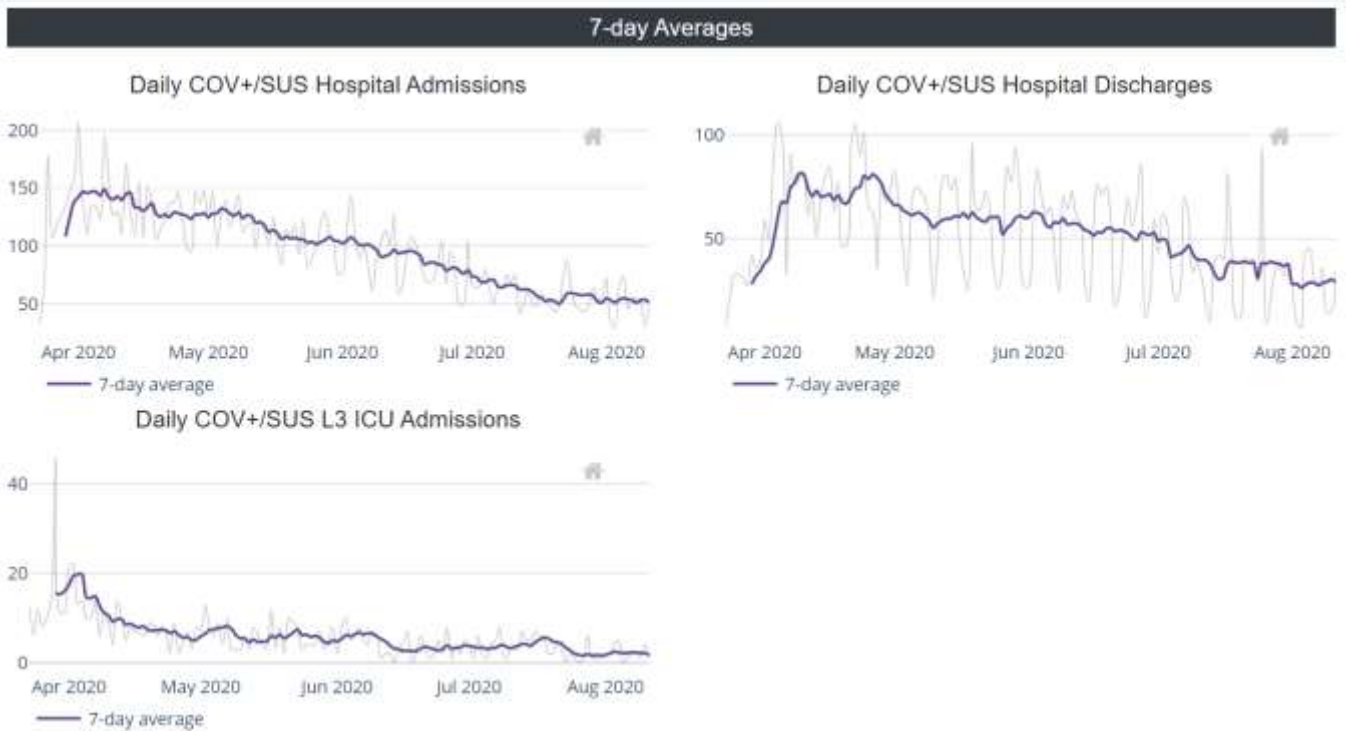
NHS Data Dashboard

- PHW data updated at 11/08/2020

- Hospital data updated at 11/08/2020

<u>L3 ICU</u>

- Of the total of 138 patients in L3 ICU in Wales (down from 144 in previous report):

  - 1 is confirmed COVID patients (in CVUHB);

  - 5 are suspected COVID patients (3 in ABUHB, 1 in CVUHB and 1 in SBUHB)

- Of the health boards with L3 ICU units:

  - ABUHB is at 75% occupancy (with 3 suspected COVID patients)

  - HDUHB is at 59% occupancy (all non-COVID patients)

  - SBUHB is at 72% occupancy (with 1 suspected COVID patient)

  - BCUHB, CTMUHB and CVUHB are at less than 50% occupancy.

Daily L3 ICU Confirmed COVID19 Patients

7-day Averages

Daily COV+/SUS Hospital Admissions

Daily COV+/SUS Hospital Discharges

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.