

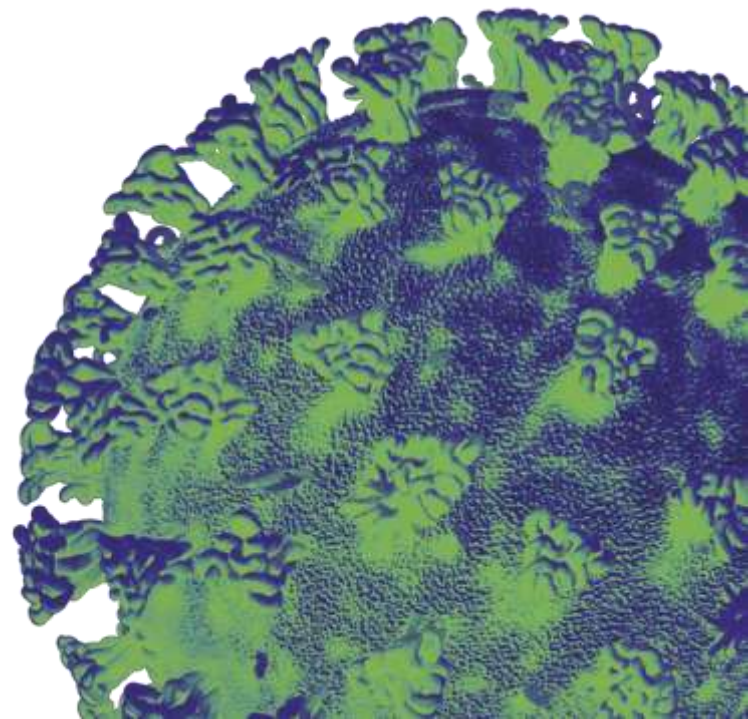
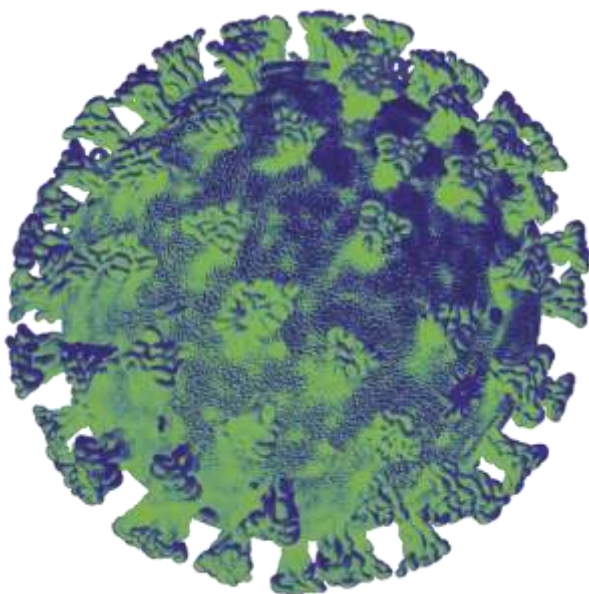
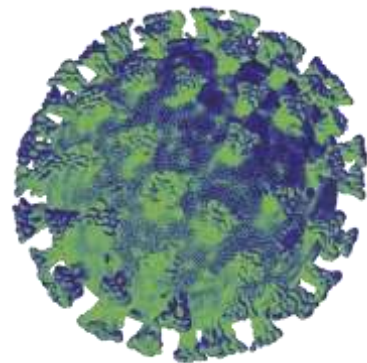


Llywodraeth Cymru
Welsh Government

Technical Advisory Cell

Summary of advice

12 June 2020



Technical Advisory Cell: Summary Brief

12 June 2020

Top-line Summary

- TAG estimates that there has been an 8 to 10-fold drop in the prevalence and incidence of the virus in Wales since the peak of this first wave of the pandemic.
- As the number of new cases drops to low levels, R_t becomes very sensitive to daily changes in cases found through testing and tracing, causing R_t to fluctuate weekly and tend towards $R_t = 1$.
- If the incidence of infections continues to decline, other measures such as number of new cases and GP reports will become more important than using R_t as the primary indicator.
- People with different social networks should try to avoid meeting (especially close, prolonged, indoor contact) or sharing the same spaces.
- Evidence suggests that:
 - Individuals are infectious in the pre-symptomatic phase
 - Individuals who develop symptoms are most infectious just before the onset of symptoms.

Reproduction Number

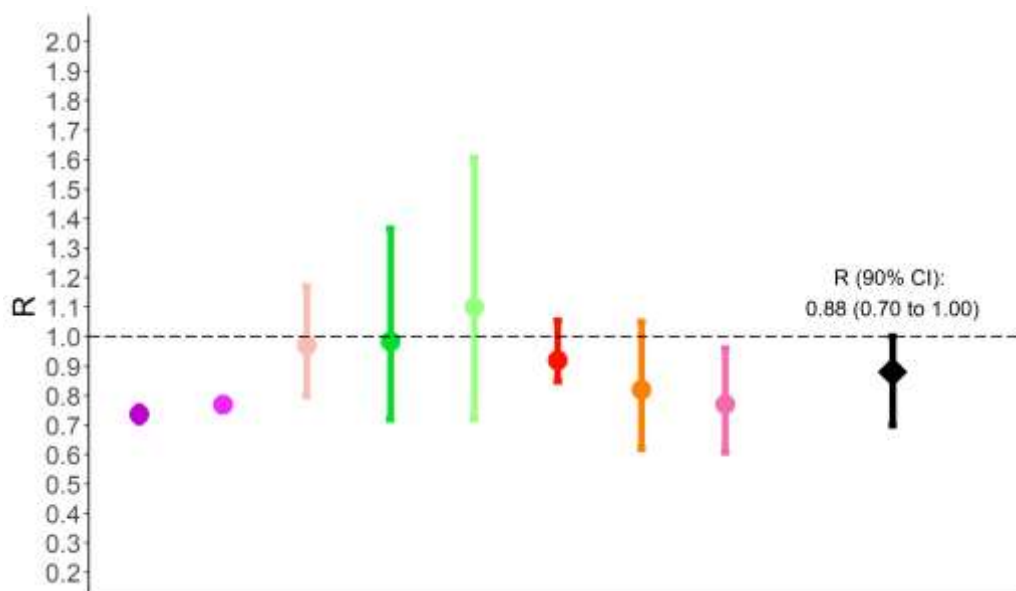
- The most recent estimate of the Reproduction number R_t for Wales from SPI-M is between 0.7 and 1.0 with a central estimate of 0.9.
- This estimate and the estimate published in the TAC Summary on 03/06/20 are based on different sets of models, so the two cannot be directly compared.
- R_t has been below 1 for at least five weeks which has led to a reduction in cases and hospitalisations. If R_t remains below 1 then cases will continue to fall.
- There is no evidence of R_t being significantly different in 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.

Current Estimate of R_t

- 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 .

- We use R_t to estimate the rate of reproduction in the community. There are other settings that are particularly relevant to the current situation that we consider to be separate epidemics, such as hospitals and care homes. These are not independent; infection can be spread between hospitals and care homes, from these settings back into the community, and vice versa. These trends or transmissions cannot be captured though estimating R_t separately for care homes and hospitals.
- It is recommended that the situation in smaller settings is monitored using number of cases and deaths, where possible, epidemiological investigation of how the multiple settings interact.
- The latest estimates from the different models we use for R_t in Wales are shown in the Figures below. Results are anonymised to avoid giving precedence to one particular model over another. Results using the combined model using equal weights are also shown in black along with 90% confidence intervals.

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



- Figure 2. Shows the reproduction number in Wales over time with confidence intervals. The horizontal dotted line indicates the target value of 1 for the effective reproduction number required for control. The vertical dashed line indicates the date of report generation.

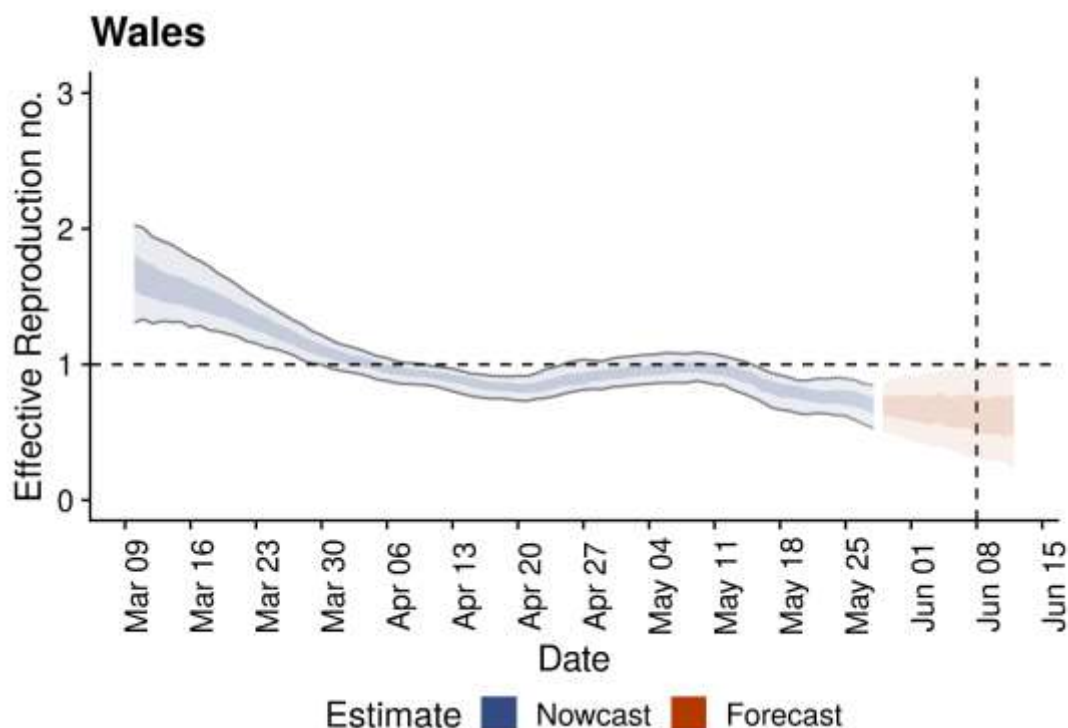


Figure 2: Reproduction numbers over time in Wales

Adherence to current measures

- Many people in Wales continue to follow the social distancing guidelines, however there continues to be a gradual decline in compliance. Data at a GB level (from ONS) shows increases in those leaving their home for 'non-essential' reasons.
- At the last review compliance was estimated to be around 70%, the latest data suggest it may have fallen to somewhere between 60%-65%. Recent research shows that despite general continued compliance, more people report breaking the rules by having friends or family visit them at home. Other research shows compliance is lower for younger age groups (18-29) and complete compliance is lower for higher income households.
- Figure 3 represents data collected online as part of a multi-country survey on the Global Advisor platform. Each of the waves has included c.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.
- For further information on public views on COVID-19, please see: <https://gov.wales/surveypublic-views-coronavirus-covid-19>.

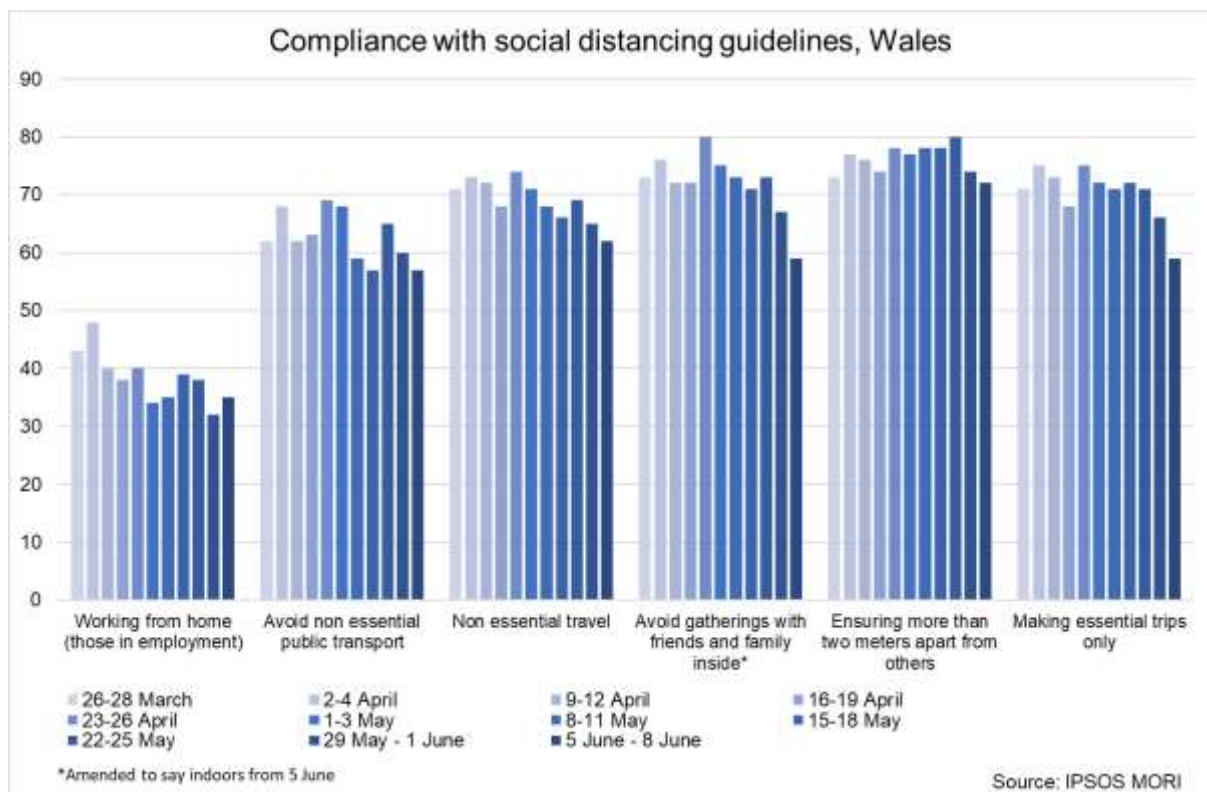


Figure 3: Compliance with social distancing guidelines

- Since mid-April travel has been increasing steadily, however the last week has seen no increase/a slight reduction on the week before. In mid-April travel of Facebook users in Wales was 50% lower than the baseline, this had risen to 29% by 2nd of June and has remained around 30% since. Similarly Apple data shows requests for driving directions in Wales have fallen slightly in the last week following a period of increase since mid-April. The Google mobility data also shows stability over the last week in most categories.
- After lockdown patterns of travel in England and Wales were broadly similar. However between mid-May and early June England saw larger increases in travel. Whilst the pattern in Wales has been broadly flat in the last week, England has seen small reductions in travel.
- The figure below shows the change in travel in Wales. 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. This pattern is mostly similar to that of the UK as a whole.

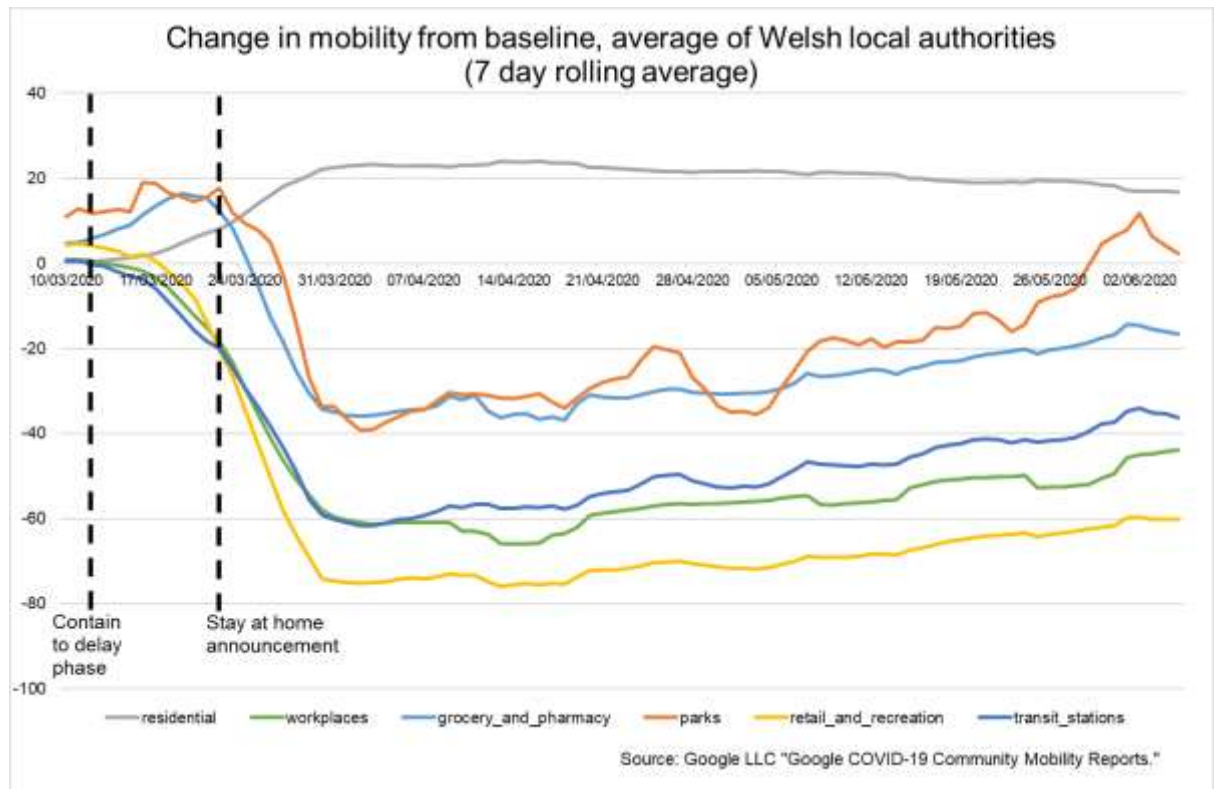


Figure 4: Change in mobility from baseline across Wales

Dynamics of SARS-CoV-2 Infectiousness

A report from the SAGE NERVTAG group has provided findings that:

- The virus incubation period estimate remains unchanged at a median of five days, with the great majority (>95%) of patients having illness onset within 14 days of exposure.
- Viable virus has been recovered from pre-symptomatic patients, supporting the hypothesis that patients are infectious in the pre-symptomatic phase.
- Investigations confirm that individuals have the greatest viral load just before, or at the same time as, the start of symptoms, followed by a gradual decline.
- In some individuals, the virus can be detected 43 days after the onset of symptoms. However, in most (but not all) cases, infected people shed virus at very low amounts 14 days after symptoms begin, suggesting they are no longer infectious.
- In hospitalised patients there is evidence of infectiousness until day 20, although there is only a small probability of this.
- Individuals who only have mild symptoms may be infectious for a shorter period of time. In individuals who have had mild symptoms and are recovering, there is a low probability of infectiousness 7-9 days after illness onset. (medium confidence)

Economic Harms

- The Welsh Government Chief Economist has provided a briefing to TAG that begins to outline the longer term economic harms resulting from COVID-19.
- Evidence for potential long run socio-economic harm associated with the recession induced by the Covid-19 pandemic suggests that there are multiple causal channels by which the crisis impacts on the economy, including:
 - disruption to supply chains (including those involving overseas suppliers);
 - worker sickness and absence;
 - the measures put in place to reduce transmission of the virus;
 - changes in consumer and business behaviour in response both to the risk of infection and to expectations of future economic weakness
- It will be difficult, probably impossible, to distinguish effects caused by the measures put in place to contain the virus from the other factors, particularly “voluntary” changes in the behaviour of individuals and businesses. Some of these other changes may well persist once the measures have been relaxed or removed, prolonging the economic disruption. There may also be permanent changes to which the economy will have to adapt.
- Long-term socio-economic harm results from so-called “scarring effects” caused by economic crises such as recessions. Such scarring effects represent damage caused to individuals and businesses that have persisting, adverse effects on socio-economic outcomes.
- For the business sector, scarring effects include reductions in investment, which cause longer-term decreases in the rate of growth of productivity and pay, and the loss of otherwise viable businesses, which results in socially wasteful set-up costs for their eventual replacements.
- However, such negative effects on the business sector tend not to persist into the very long term – the business sector recovers over a period not usually exceeding around five years (although it can be longer where business investment has been severely affected).
- In the current crisis, schooling has also been severely affected. This would be expected to have long lasting effects on the socio-economic outcomes of children, with more adverse effects likely for disadvantaged children, who are least likely to have had access to alternative educational opportunities.
- Assessing and striking any trade-offs between long run socio-economic harms and more immediate effects is therefore inevitably a matter of political judgement that has to be made in the context of incomplete and uncertain evidence.

SAGE Environmental Group paper on raising awareness of the problem of high social connectivity

- There is emerging evidence that some occupations and situations pose higher risk of infection due to greater levels of social connection. This higher risk is linked to

increased mortality in some occupations and sectors of the population, including lower income and BAME communities.

- People in occupations involving numerous social contacts of longer duration and close proximity may be at increased risk of both contracting and spreading Covid-19. Examples of potentially higher risk occupations may include: bus and taxi drivers, social care and healthcare workers and people working in some retail, catering, security, and manufacturing settings.
- Other situations involving numerous social contacts of longer duration and close proximity also carry a higher risk of spreading Covid-19. Examples include: using public transport; large family gatherings; religious and cultural events; pubs, restaurants and cafes.
- As risk levels reduce in the general population, it is vital that all members of the public, employers, employees and self-employed people are aware of situations that continue to pose higher risk and of what actions need to be taken by everyone to reduce the risk of disease transmission.
- People who have large numbers of contacts with different people should avoid close, prolonged, indoor contact with anyone as far as possible (at work, when travelling, and in social contexts outside work)
- Avoiding meeting and sharing spaces is the most effective way to reduce risk. When meeting or sharing spaces cannot be avoided, people in these roles and everyone they meet with need to take extra care to protect each other by reducing the risk of catching and spreading infection.
- It is vital that this responsibility is shared between the people at risk, their employers and all the people they meet. Taking extra care may involve actions including handwashing at appropriate times, avoiding touching face or surfaces, cleaning all shared surfaces, changing/washing clothes, using and disposing of tissues, ventilating shared spaces, social distancing, and wearing a face covering when close to others if social distancing is not possible.

Research

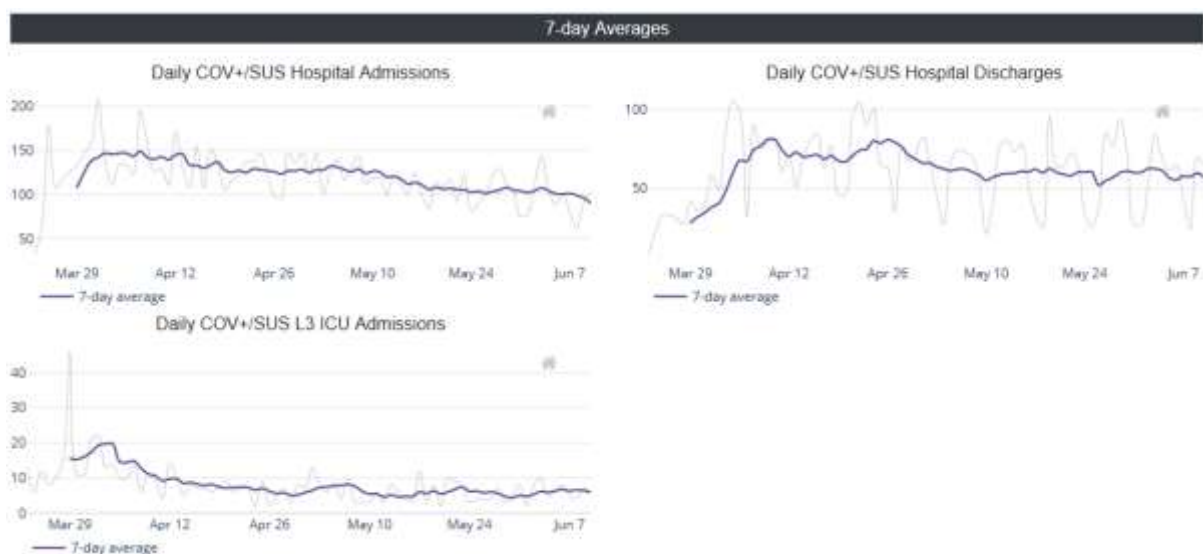
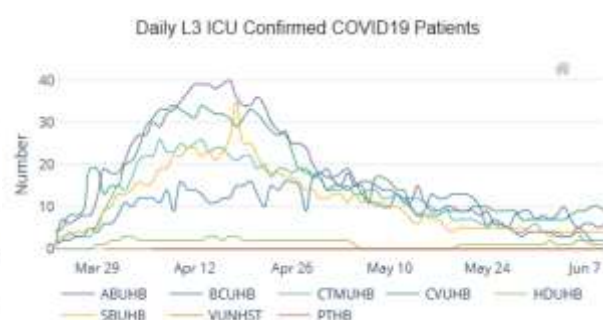
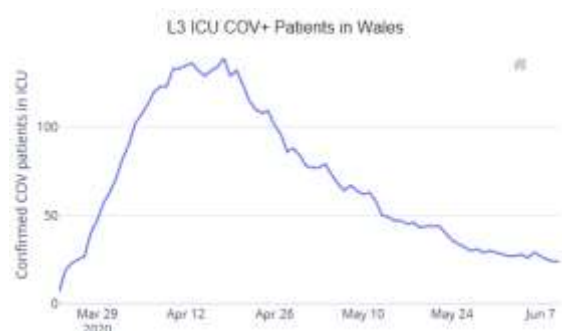
- There are currently 2,494 Welsh patients recruited to COVID-19 urgent public health studies, an increase of 174 in last seven days.
- The SAIL Databank in Wales is leading the way in the number of linked data research projects supporting COVID-19 response that are active in the UK, highlighting the benefits of Welsh Government investment in health and social care research infrastructure.
- The latest data from collaborative research work drawing on the KCL ZOE study app (based on approx. 70,000 users in Wales) is tremendously helpful in showing how the COVID19 pandemic could be affecting Welsh communities.

NHS Data Dashboard

- PHW data updated at 10/06/2020
- Hospital data updated at 10/06/2020

L3 ICU

- Overall occupancy is at 41.8%
- Of the total of 140 patients in L3 ICU in Wales:
 - 17% are confirmed COVID patients (down from 20% of previous report);
 - 4% are suspected COVID patients (down from 11%); and
 - 77% are non-COVID patients (up from 68%).
- Of the health boards with L3 ICU units:
 - CVUHB and HDUHB are at less than 55% capacity;
 - BCUHB, CTMUHB and SBUHB are at less than 50% capacity; and
 - ABUHB is below 25%.



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.

