Technical Advisory Cell

Summary of advice

23rd October 2020
Technical Advisory Cell: Summary Brief
23rd October 2020

Top-line summary

- For the period covering 13th – 19th October, all Welsh Local Authorities (LAs) were above 50 cases per 100,000 of the population, with the exception of Ceredigion. All LAs were above 5% positivity.

- Increasing cases are seen across all age groups, with incidence highest in those aged 18-25. Increases in the proportion of cases in people over 60 have been seen, however there are early indications this may be reducing. The total number of patients in intensive care has reduced slightly, however numbers still remain above the circuit breaker for occupancy and the number of COVID-19 patients has increased. There has been an increase in the number of deaths in confirmed COVID-19 cases in hospitals.

- The current daily growth rate in Wales estimated by SAGE indicates that infections could be increasing by between 1% and 5% per day. The most recent estimate of the Reproduction number (Rt) for Wales from SAGE is predicted to be between 1.0 and 1.4. A growth rate that is lower but still positive, or an Rt number above 1, indicates that the epidemic is growing exponentially.

- According to estimates from the Office for National Statistics COVID-19 Infection study, approximately 1 person in every 180 of the community population in Wales had COVID-19 in the week 10 – 16 October. New data included this week shows that in September, 4.2% of participants aged 16+ tested positive for COVID-19 antibodies. It is important to acknowledge the uncertainties around these estimates.

- A report published by TAC recommends that the most deprived populations in Wales require protection from the direct effects of COVID-19, and from the indirect effects of COVID-19 on the economy which will increase health inequalities in the longer term.

- Guidance from the Technical Advisory Group on assessing the potential for new technologies to improve SARS-CoV-2 diagnostic testing is available, and a consensus statement on use-cases for near patient and point-of-care tests for detecting SARS-CoV-2 viral RNA or antigens have been published.

- Papers from SAGE considered by the Technical Advisory Cell and Group are published here.
Growth rate and Reproduction number

- The current daily growth rate is estimated by SAGE (21\textsuperscript{st} October) to be between 0.01 and 0.05 in Wales, indicating that infections could be increasing by between 1\% and 5\% per day.

- The most recent estimate of the Reproduction number ($R_t$) for Wales from SAGE (21\textsuperscript{st} October) is predicted to be between 1.0 and 1.4. The estimate of $R_t$ is shown as a range without a central estimate.

- Care should still be taken when interpreting $R_t$ and growth rate estimates for the UK, due to their inherently lagged nature, and as these figures mask variation in the number of infections and how rates of transmission are changing in some parts of the country. Availability of testing may also be a constraint.

- A growth rate that is lower but still positive, or an $R_t$ number above 1, continues to indicate that the epidemic is growing exponentially.

Doubling time

- SAGE estimates doubling times for new infections across the UK to be between 14 and 18 days. There are continued difficulties in interpreting testing data and so estimates of doubling times remain uncertain. There is significant heterogeneity across geographies and the potential for faster doubling times in certain areas.

Firebreak scenario modelling

- Swansea University have modelled the impact of the firebreak to generate estimates of the impacts on health and NHS provision for a two and three week fire break.

- It is a not a forecast, nor a prediction of what is most likely to happen, but provides important information to help the government prepare and respond in a range of different scenarios.

- The table and chart below shows the effect on deaths with $R_t$ at 1.4 (SAGE estimates are 1.0-1.4), followed by a fire break of two or three weeks ($R_t$ 0.9) followed by an $R_t$ of 1.4. Figures are shown in the table for two time periods; one up until December 2020 and one up until the end of March 2021. Modelled data starts on 14\textsuperscript{th} October, indicated by the vertical dashed line on the chart.
Figure: Modelled impact on mortality due to COVID19 for Wales, from January 2020 - June 2021

<table>
<thead>
<tr>
<th></th>
<th>Total number of deaths by scenario</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No fire break</td>
</tr>
<tr>
<td>12 October - 31 December 2020</td>
<td>2,500</td>
</tr>
<tr>
<td>12 October - 31 March 2021</td>
<td>4,890</td>
</tr>
</tbody>
</table>

- The results highlight that the height of the peak number of deaths is reduced and the timing of the peak number of deaths moves later. The same pattern is also observed for hospital admissions and cases. The magnitude of the impact on all of these measures and Rt during a firebreak will depend on the package of interventions chosen. Inclusion of more interventions will in theory, and if adhered to, have a greater reduction of Rt.

- A fuller paper on the impacts of a firebreak was published on Monday 19th October on the [Welsh Government website](https://gov.wales).

- Please also note that the Reasonable Worst Case modelling for Wales will be updated to reflect the modelled impact of the firebreak in order to support planning within Wales.

**Age profile of cases**

- The Figure below shows the number of confirmed COVID-19 episode incidence per 100,000 population in individuals aged 60 and over. The number of cases in this age group has been rising towards the level seen in the previous wave...
of infections. Data is shown up to week ending 9th October. Vertical lines highlight a notable increase in total number of tests administered.

- The chart below shows data from up until the week ending 18th October. This shows that the increasing proportion of cases (shown in darker red) in older age groups may be showing early indications of reducing.

- Please note that the most recent data, for week ending 18 October, is likely to be impacted by delays in the provision of COVID-19 test result data. This means that it is likely to be revised upwards in the next publication, as more test result data are available.
Deaths

- According to provisional death certificate data provided by ONS, there were 37 COVID-19 deaths in Welsh residents registered with COVID-19 mentioned on the death certificate during week 41 (ending 9 October). This has increased by 13 from the previous week.

- The Figure below shows the weekly number of COVID-19 deaths registered by place of occurrence in Wales for the week ending 13 March 2020 (Week 11) to week ending 9 October 2020 (Week 41)

![Weekly COVID-19 Deaths by Place of Occurrence](image)

International update

- Virus resurgence continues in Europe as record daily case rises reported in Germany, Czech Republic, and Italy. Argentina passes 900,000 cases as the virus spreads to populated centres in the interior of the country. After a summer of relative normality, Latvia is now experiencing a second wave of the virus that is bigger than the first.

- Hospital and/or ICU occupancy and/or new admissions due to COVID-19 were high (at least 25% of the peak level during the pandemic) or had increased
compared to the previous week in 20 countries (Austria, Belgium, Bulgaria, Croatia, Czechia, Denmark, Estonia, France, Greece, Hungary, Ireland, Italy, Latvia, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia and the UK). No other increases have been observed, although data availability varies.

- Weekly test positivity was high (at least 3%) or had increased against the previous week in 19 countries (Belgium, Bulgaria, Croatia, Czechia, France, Greece, Hungary, Ireland, Italy, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain and the UK).

- The 14-day COVID-19 death rate for the EU/EEA and the UK, based on data collected by ECDC from official national sources from 31 countries, was 12.7 (country range: 0.0–36.2) per million population. The rate has been increasing for 30 days.

- High levels (at least 10 per million) or sustained increases (for at least seven days) in the 14-day COVID-19 death rates compared to those reported seven days ago are currently being observed in 17 countries (Austria, Belgium, Bulgaria, Croatia, Czechia, Estonia, France, Hungary, Italy, Lithuania, Malta, the Netherlands, Poland, Portugal, Romania, Spain and the UK).

- France, Italy, Poland and Germany all recorded their largest daily rise in new cases on Thursday (Oct 15) since mass testing began.

- The map below shows the 14-day average incidence rate per 100,000 people for weeks 40-41. As last week, it is clear that in many regions, the incidence has risen to over 120 cases per 100,000 people and to over 240 cases per 100k people in a rising number of areas.

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

- The most recent [IPSOS MORI data](#) (updated last week) for Wales shows similar results to 2 weeks ago for a number of key mitigating behaviours. The percentage who reported using a face covering increased further to 87% (from 83%), whilst those who said they had worked from home fell from 36% to 30%. 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.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.
The latest results from the Public Engagement Survey on Health and Wellbeing during Coronavirus Measures (updated last week) show that 48% of people say they understand the restrictions in their local area ‘very well’ and a further 37% ‘quite well’. The results also show that 47% of people said they were following coronavirus restrictions ‘completely’ and a further 43% reported majority compliance. This is very similar to the results from the covid social study.

Mobility data for Wales shows a mixed picture in the last week, with some showing small increases and some showing small decreases.

In mid-April mobility of Facebook users in Wales was 50% lower than the baseline, for the week to the 21st of October it was 13% lower than the baseline (and is up slightly from last week). 26% of Facebook users in Wales are staying put, similar to last week. In early April around 45% were staying put – this was around 18% in early March.

Apple data for the week to the 21st of October shows that requests for driving directions in Wales are down slightly compared to the previous week. Requests for walking directions and requests for public transport directions have both fallen.

The Google mobility data to the week of the 18th of October shows small increases in residential in the last week (i.e people spending more time at home than last week). Other categories mostly show small increases.

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. During July mobility increased more in Wales than in
England and that continued throughout August. After the first local lockdowns were introduced in September there were large reductions in mobility in Wales, however the last week has seen increases in some of the data sources.

- Anonymised and aggregated mobile phone data from O2 to the 16th of October has shown that following the introduction of the local lockdowns there were notable falls in trips in all areas the first 2 days after the lockdown started. However trips in those areas are (on average) gradually returning to pre-local lockdown levels. Trips in Wales show an increase in the last week, whilst the UK shows a small increase. Over much of the summer changes in trips were similar in Wales and the UK, but are lower in Wales since the local lockdowns started – around 28% lower than they were in the first week March compared to 20% in the UK.

- 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.

![Change in mobility from baseline, average of Welsh local authorities (7 day rolling average)](image)

Source: Google LLC "Google COVID-19 Community Mobility Reports."

**COVID-19 Infection Survey results (Office for National Statistics)**

- The results for Wales show that an estimated 0.55% of the community population had COVID-19 in the week 10 – 16 October. This equates to approximately 1 person in every 180, or a total of 16,700 people during this time.
Data suggest the positivity rate has increased in recent weeks. It is important to stress the uncertainty around these estimates. Since the survey is still only picking up relatively few positive tests overall, the results are very sensitive to small changes in the number of these positive tests.

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.

For the first time, this week’s results include estimates of the proportion of people testing positive for antibodies through blood samples. The data show that in September, 4.2% of participants aged 16+ tested positive for COVID-19 antibodies, though again confidence intervals around this estimate are wide.

Research

There are currently 5984 Welsh patients recruited to COVID-19 urgent public health studies, an increase of 164 in last 7 days.

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

(As at 22nd October 2020)

The proportion of calls to NHS 111 and NHS direct related to possible COVID-19 symptoms remained stable compared to the previous week.

GP consultations for Acute Respiratory Infection (ARI) decreased in week 42 compared to previous weeks, however GP consultations for suspected COVID-19 have increased.

Ambulance calls possibly related to COVID-19 are currently stable.

The number of lab confirmed COVID-19 episodes increased nationally compared to the previous week and testing positivity was over 12%.

During week 42, incidence increased across all age groups, incidence was highest in those age 18-25.

Confirmed case incidence and testing episode positivity continue to rise in many health board regions of Wales.

Confirmed cases in patients who are tested on admission to hospital and patients in ICU have increased in week 42 compared to the previous week. There has been an increasing trend in inpatients testing positive, particularly in Cwm Taf Morgannwg health board.
- Recently increasing trends in confirmed case incidence have been noted in the majority of LA areas of Wales.

- The distribution of cases at suggests increasing geographical spread, with an increasing median and range of case numbers per area also.

- There are increasing numbers of incidents reported, mainly in residential care homes, school settings and university students.

- Incidents have been noted in young adults of university student age with reports of transmission occurring in shared accommodation.

- In the previous 21 days (as at 19th Oct) there were between 1 and 47 total cases (staff and students) in most local authorities, with the exception of Cardiff, Swansea, Rhondda Cynon Taf and Wrexham with 120, 74, 61 and 58 cases respectively.

- Highest activity seen in Cardiff, Merthyr Tydfil and Rhondda Cynon at. As at 22nd October, local restrictions currently in place in 15 local authority areas, one town (Llanelli) and one city (Bangor).

- A Wales-wide lockdown will be introduced 6pm Friday 23 October until 12:01am Monday 9 November 2020.

- All-cause deaths are at seasonally expected levels. Increases in deaths in confirmed COVID-19 cases in hospital have been seen.

**NHS Data Dashboard**

- Hospital data updated as at 23/10/2020.

- The table below details the occupancy of Intensive Care Units (ICU) across health boards in Wales. Overall ICU occupancy has dropped slightly since last week’s brief from 62.1% to 60.7%. However, numbers still remain above the circuit breaker for occupancy and the number of COVID-19 patients has increased.

<table>
<thead>
<tr>
<th>Health Board</th>
<th>L3 ICU Occupancy %</th>
<th>COVID-19 Suspected Patients</th>
<th>COVID-19 Positive Patients</th>
</tr>
</thead>
<tbody>
<tr>
<td>ABUHB</td>
<td>59.4%</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>BCUHB</td>
<td>68.3%</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>CTMUHB</td>
<td>66.6%</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>CVUHB</td>
<td>59.5%</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>HDUHB</td>
<td>50.0%</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>SBUHB</td>
<td>58.6%</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Wales</td>
<td>60.7%</td>
<td>7</td>
<td>31</td>
</tr>
</tbody>
</table>
- The Figure below shows the total number of people who have tested Covid-19 positive and are in Intensive Care Units in hospitals across the different health boards in Wales.

![Daily L3 ICU Confirmed COVID19 Patients](image)

- 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.

![Daily COV+/SUS Hospital Admissions](image)

- 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.