



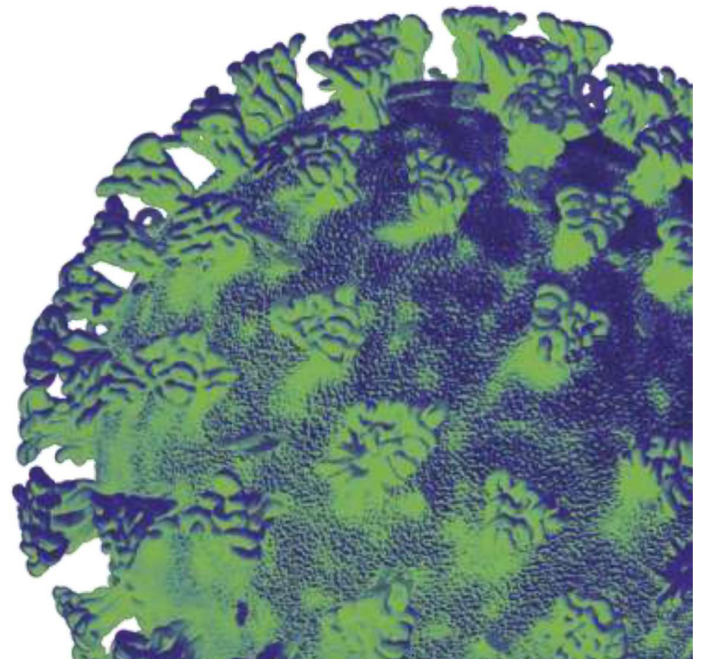
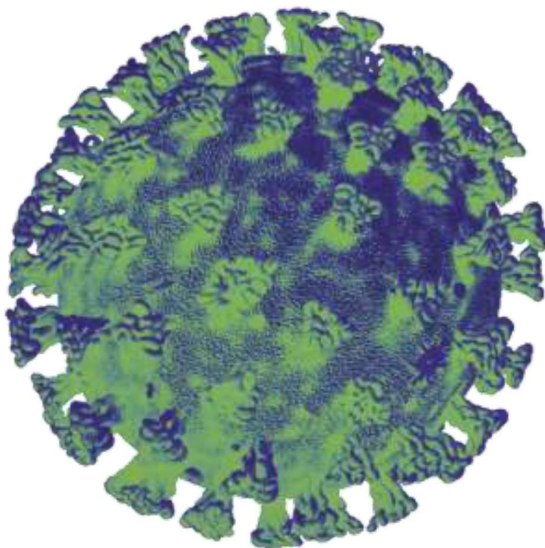
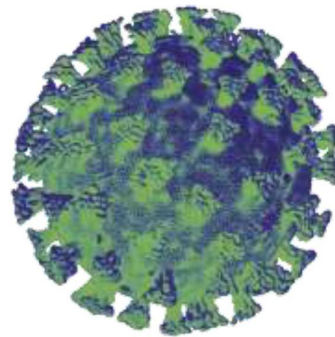
Llywodraeth Cymru
Welsh Government

Technical Advisory Cell

Circuit breakers/ Early

warning indicators

10 July 2020



Circuit breakers/early warning indicators

As lockdown restrictions are relaxed, cautiously and incrementally in Wales, the Welsh Government's Technical Advisory Group has developed a list of indicators which are designed to provide early warning of rising infection rates which in turn may mean that reverses in the lockdown measures need to be considered.

As transmission levels drop, the R number becomes less useful as the main guide to decision making. These indicators will provide a more sophisticated approach to assessing the risks of COVID-19, supplementing the R number and giving a broader and deeper picture of the prevalence of the virus on an ongoing basis.

The headline indicators, known as "**circuit breakers**", cover key areas of transmission, incidence and prevalence of the virus and NHS capacity. A further set of "**early warning**" indicators cover a wider range of measures for monitoring, including the R-value, numbers of people in hospital with the virus, mortality data, pressures on personal protective equipment (PPE) availability, and analyses of lineages of the virus in Wales.

The list of early warning indicators and circuit breakers has been developed with stakeholders and will be reviewed regularly.

Decisions on how and whether to reverse the easing of restrictions are for the First Minister, who will evaluate the evidence presented as part of the process.

Circuit breakers coverage

Five indicators that include coverage of these data:

Transmission/Incidence

- SPI M O consensus nowcast estimate of R_t (the reproduction number or "R-number")
- Doubling/ halving times (excluding nosocomial) admissions
- COVID-19 Related hospital occupancy
- COVID-19 Related ICU occupancy
- Overall ICU Occupancy

NHS Capacity

- Hospital admissions of COVID-19 positive patients
- Hospital bed occupancy of COVID-19 positive patients
- ICU admissions of COVID-19 positive patients

- ICU bed occupancy of COVID-19 positive patients

Early warning indicators

These are currently under consultation and development with colleagues across the Welsh Public Service.

Transmission/Incidence

- SAGE estimates of Rt (the reproduction number or “R-number”) from individual academic groups
- Number of confirmed COVID-19 cases
- ZOE prevalence data (% of population with covid-19)
- NHS Direct / 111 calls related to COVID19
- NHS online activity related to COVID19
- NHS Primary Care Consults related to COVID19 (phone and face to face)
- NHS Community nursing visits related to COVID19

NHS Capacity

- Hospital bed occupancy of suspected and confirmed COVID positive patients
- ICU admissions of COVID-19 positive patients
- ICU bed occupancy of COVID-19 positive patients
- Number of COVID-19 patients on mechanical ventilators
- Number of COVID-19 patients on CPAP

Genomics

- Number of active UK Lineages of COVID-19 in Wales.
- Growth rate/number of new cases in pre-existing UK Lineages of COVID-19 found in Wales in the last 1-3 weeks.
- Number of new UK lineages seen in Wales in the last 1-3 Weeks.
- Geographic distribution of new cases in UK lineages in Wales (across health boards) in data from the previous 1-3 weeks.

Mortality

- Total number of COVID-19 deaths

PPE

- Level of PPE supplies: total
- PPE stocks: Disposable Gloves
- PPE stocks: Disposable Plastic Apron
- PPE stocks: Disposable fluid-repellent coverall/gown
- PPE stocks: Surgical mask
- PPE stocks: Fluid-resistant (Type IIR) surgical mask
- PPE stocks: Filtering face piece (FFP3) respirator

Further indicators are currently in development in collaboration with partners across Wales.