



Figure 3. Hospital bed occupancy of suspected and confirmed COVID-19 positive patients (7 day rolling average) (NWIS 16/10/20)<sup>9</sup>

We are currently tracking to our Reasonable Worst Case (RWC) that projects around 18,000 hospitalisations and 6,000 deaths due to Covid-19 over the winter period<sup>10</sup>. By comparison, since the beginning of the pandemic there have been around 5,300 hospital cases, around 1,800 of which may have been hospital acquired, and around 2,600 deaths from Covid-19.

### 3. Circuit breaker indicators<sup>11</sup> (TAC)

Circuit breakers are monitored closely in order to provide an indication if sensitive markers of community transmission or hospital activity have been breached. Two indicators for community transmission and one for hospital activity have been breached

#### Transmission

- Circuit breaker one: The upper limit of the range of R values for Wales reaches or exceed 1.5, current estimated value from PHW **1.20** (95 % confidence interval 1.17 – 1.23). SPI-M consensus 1.1-1.4. PHW estimate breached last week, SMI-M consensus not breached but has been previously.
- Circuit breaker two: > 40 Cases per 100k, current estimated value **129.6** per 100,00, breached since 17 September 2020.
- Circuit breaker three: Positivity rate > 5%, current estimated value **11.7%**, breached since 27 September 2020.
- **Two circuit breaker indicators related to transmission have been breached for more than 7 days – suggesting that the number of cases is likely to be uncontrolled and the number of cases is likely to continue growing exponentially.**

#### Hospital occupancy

- Circuit breaker four: Total hospital bed occupancy for confirmed COVID-19 patients reaches or exceeds 500, currently **559** and increasing rapidly, not breached
- Circuit breaker five: If the critical care occupancy for confirmed COVID-19 patients reaches or exceeds 70, currently **23** but increasing, not breached.

<sup>9</sup> <https://wales-gov-dashboard.armakuni.co.uk/>

<sup>10</sup> <https://gov.wales/sites/default/files/publications/2020-09/technical-advisory-group-new-worst-case-scenario-for-winter.pdf>

<sup>11</sup> 12 October 2020

- Circuit breaker six: The total critical care bed occupancy (for COVID and non COVID patients) is above 150, currently **152** but decreasing slightly, breached since 30 September.
- Supporting indicators on number of patients on mechanical ventilators and Continuous Positive Airway Pressure (CPAP) have increased to 117 and 37 respectively.
- *These indicators suggest that whilst the number of COVID cases in hospital are not exceeding indicators, when combined with elevated levels of non-COVID critical care occupancy there is an insufficient number of critical care beds and/or staff to sustain a large COVID outbreak, in addition to existing non-COVID treatments.*

#### **4. Effect of current restrictions (TAC)**

There is a high confidence that the local restrictions currently in place across many local authorities in Wales has led to a significant slowdown in the current wave of the pandemic. The case incidence and positivity have been suppressed in some, though not all, Local Authority areas throughout most of September.

The behavioural analysis from the WHO on pandemic fatigue, as well as behavioural surveys from ONS and mobility data show that compliance with the restrictions in place is waning. In particular, since the R number has not been reduced below 1 by the current package of interventions, growth of infections is still ultimately following an exponential course. This obvious continued growth causes anxiety and mistrust in the current NPIs, and reduces the effectiveness of local area restrictions, leading to a vicious circle of reduction.

Wastewater sampling, case incidence analysis and insights from genomic sequencing of the virus show that there is now high confidence that there is a relatively heterogeneous seeding of the virus across the country. Seeding from areas of high incidence in the North West of England has penetrated as far as the Llyn Peninsula.

Exponential growth of the epidemic means that very large numbers of infections are accrued over a short period of time (weeks) once the population is heterogeneously seeded with infection. Even with the R number below 1.5, this still means that case rates are accelerating every week.

#### **5. Balance of harms (TAC)**

Both intervening and not intervening will cause harm: long and short-term harms, direct and indirect harms, economic harms, social and psychological harms and health harms. There could be a disproportionate impact on many different groups of people and it will be vital to mitigate against as many of the harms as possible.

From a health protection perspective of managing COVID-19 in Wales there is compelling evidence for reducing transmission of the virus as far as possible by preventing household, workplace and social contacts that drive continued infection.

From an economic perspective, preventing transmission is less important than maintaining an effective workforce and infrastructure. Limiting the size of a pandemic related recession