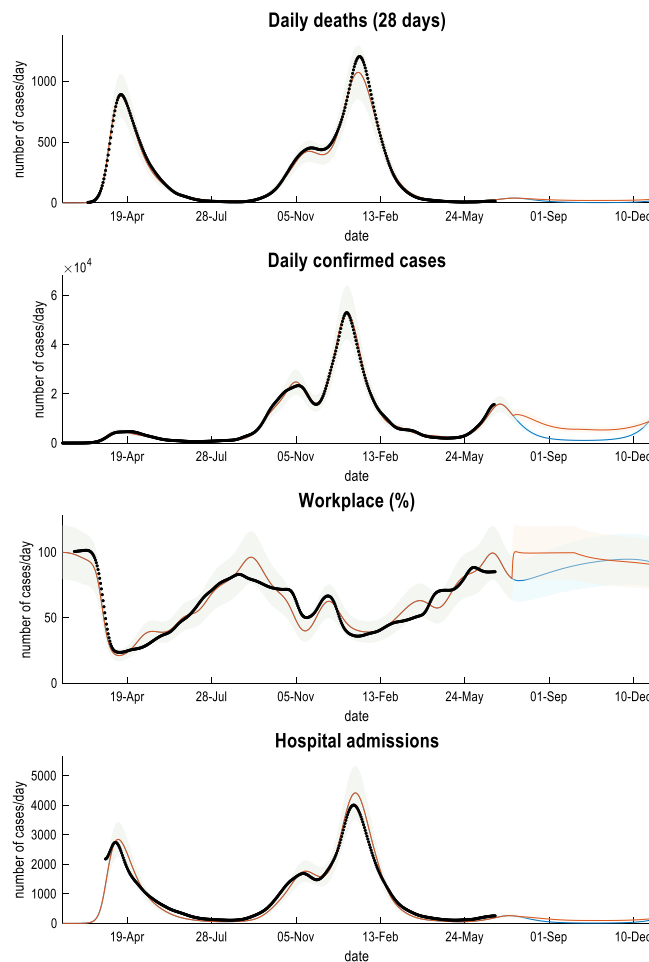


## Scenario modelling for advisory board to the Cabinet office (5 July 2021)

**Context:** The final phase of the roadmap on 19<sup>th</sup> of July is approaching. Current dynamic causal modelling suggests a slight resurgence of hospital admissions and fatality rates over the next week or two and a gradual (partial), prevalence-dependent increase in contact rates (please see the long-term forecast [dashboard](#) for current estimates – and the national [dashboard](#) for data fits upon which these estimates are based). Predictions of contact rates are based on population behaviour in response to previous fluctuations in prevalence. **What would happen if restrictions were lifted completely on 19<sup>th</sup> July 2021?**

This question can be answered—using scenario modelling—by increasing the rate at which people return to a normal (pre-pandemic) contact rate on that date.



This figure reports the results of scenario modelling using the parameters of a [dynamic causal model](#) based on data covering the entire pandemic until 4 July 2021. The lines correspond to expected deaths per day, daily confirmed cases, workplace activity (based upon Google mobility

data) and hospital admissions. The shaded areas correspond to 90% confidence intervals. The blue lines are the most likely estimates, while the black dots correspond to (smoothed) data from the [ONS](#) and [Google mobility data](#). The red lines show what might happen if restrictions are lifted on 19<sup>th</sup> July (modelled by increasing the rate at which people return to a normal contact rate). Quantitatively, the estimated excesses due to complete versus predicted (partial) relaxation of restrictions are as follows<sup>1</sup>:

**Daily deaths (28 days):** 129,151 (CI 102,675 to 155,627) versus 126,886 (CI 100,874 to 152,898), with an expected difference of 2,265 excess deaths

**Daily confirmed cases:** 6,240,041 (CI 4,960,832 to 7,519,249) versus 5,590,480 (CI 4,444,432 to 6,736,529), with an expected difference of 649,561 excess cases

**Hospital admissions:** 497,919 (CI 395,846 to 599,992) versus 485,582 (CI 386,038 to 585,126), with an expected difference of 12,337 excess admissions

These figures are cumulative estimates until 1 January 2022.

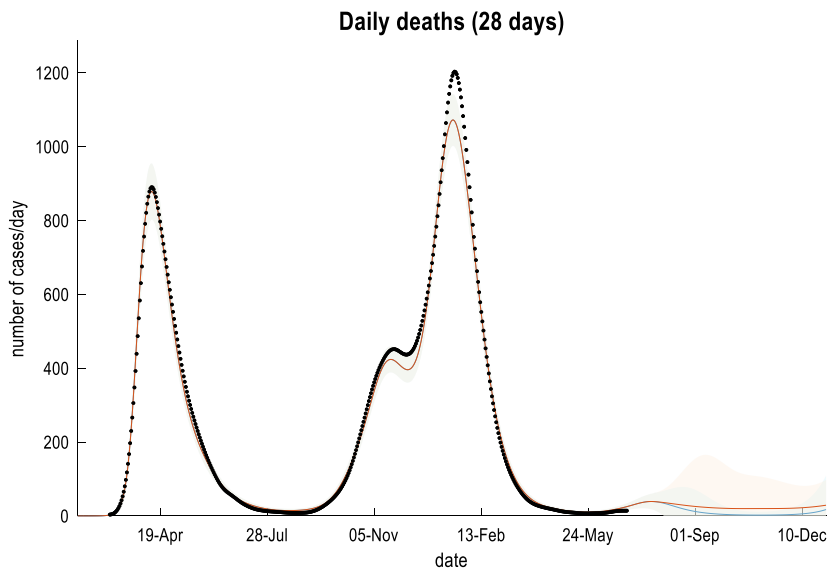
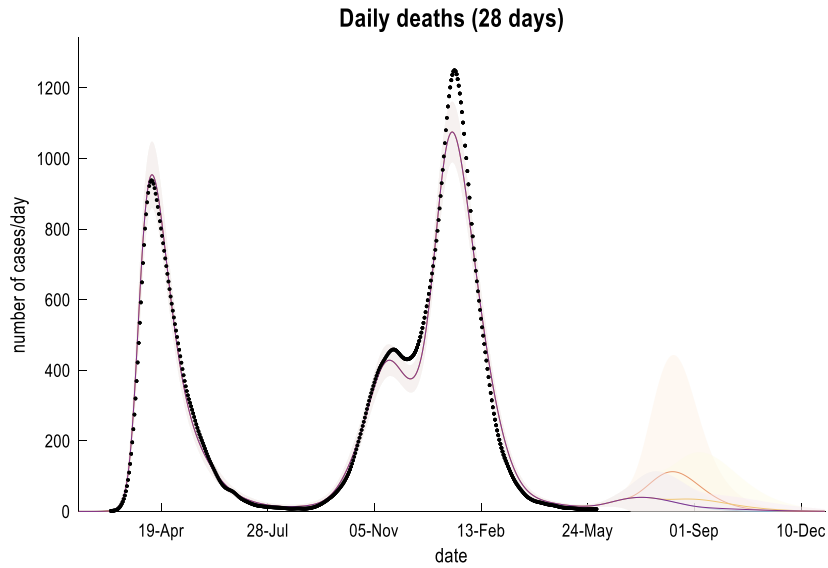
**Conclusion:** Although a relaxation of restrictions on 19 July will produce a substantial number of excess cases, there will be, quantitatively, relatively little impact on excess deaths or hospital admissions. This suggests a shift in focus from mortality to morbidity; i.e., a shift away from national lockdowns and restrictions towards personal mitigating behaviours, local public health measures and vaccinating groups (i.e., children) who may develop complications of COVID-19 that do not require hospitalisation.

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<sup>1</sup> the confidence intervals represent uncertainty about what could have happened over the entire epidemic – as opposed to uncertainty about what will happen, until the 1 January 2022.

## Appendix

A previous report (on 11 June 2021) predicted trajectories of daily deaths that are consistent with the current predictions and, more importantly, what actually happened:



The upper figure reproduces the first panel of the last report for the advisory board to the Cabinet Office on **11 June**. The lower figure reproduces the first panel above (on **5 July**), scaled for direct comparison. The fatality rates (black dots) appear to be following the predicted trajectory (purple line in the first panel).