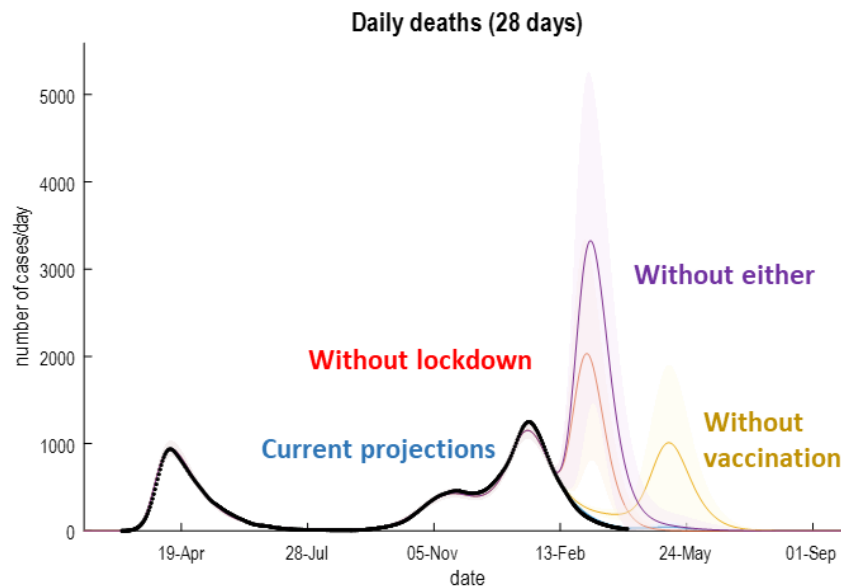


On the **April 13, 2021** the Prime Minister said: “Of course the vaccination programme has helped but the bulk of the work in reducing the disease has been done by the lockdown”. Was he right?



It is fairly straightforward to quantify the relative contribution of lockdown and vaccination by predicting what would have happened in the absence of lockdown, in the absence of vaccination rollout and in the absence of both. The above graphic reports estimates based upon the parameters of a [dynamic causal model](#) used for nowcasting and long-term forecasting. The lines correspond to expected deaths per day, while the shaded areas correspond to 90% confidence intervals. The [blue line](#) is the most likely estimate with both lockdown and vaccination in place, while the black dots correspond to (smoothed) data from the [ONS](#). The remaining three predictions correspond to what might have happened if lockdown had been lifted on 1 Feb 2021 ([red](#)), if the vaccination rollout had ceased on 1 Feb 2021 ([gold](#)) and if both had been suspended ([purple](#)).

It is evident from these projections that a premature lifting of lockdown restrictions would have released a resurgence of fatalities over the past few weeks (peaking at about 2000 deaths per day). Conversely, suspending the rollout of vaccination may have had a less immediate effect but resulted in a wave of fatalities in over the next weeks (roughly the size of the first wave). Removing both lockdown and vaccination produces a worst-case scenario with peak death rates of greater than 3300 per day. In short, lockdown could be claimed to have averted a third (or perhaps fourth) wave over the past few weeks, under the current vaccination rollout. Having said this, lockdown and vaccination clearly work hand-in-hand in precluding resurgences over the next few months.