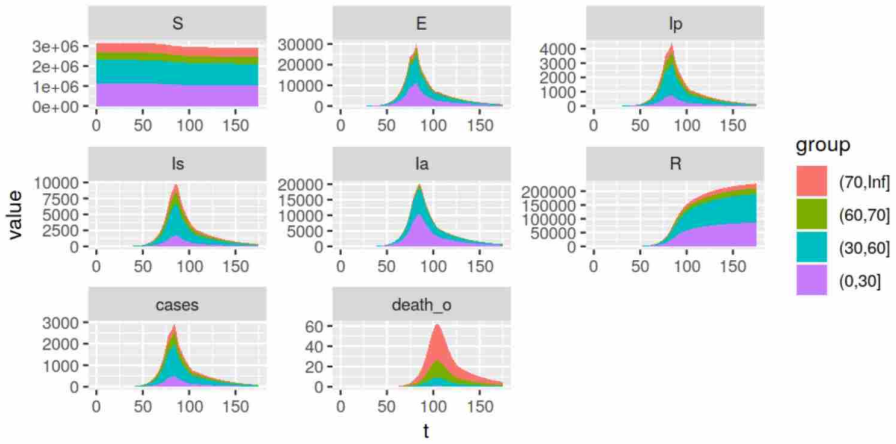

Figure 8. Age-specific trajectories of 100 best fitting model simulations in the 6 model compartments plus symptomatic cases and deaths.

Modelling the effect of lockdown timing

Figure 9 shows the effect of different timings of lockdown parameters on the potential course of the epidemic in Wales. We consider the shift of full lockdown combined with pre-lockdown behaviours in time, using parameters sampled from the fitted model. Under the scenario of no mitigation measures at all, the epidemic would be expected to have reached a very high peak in mid May. If only pre-lockdown reduction levels of contact were maintained (no full lockdown) a peak of over 250 deaths per day may have been expected near the beginning of June. Under scenarios of full lockdown, we investigated the sensitivity of total deaths to the timing of lockdown. If lockdown had been delayed by only 5 days, the scenarios here suggest an additional 28% of deaths would have occurred. If lockdown had been introduced only 5 days earlier than March 23rd an expected 24% of deaths may have been prevented. This sensitivity reflects the high growth rate of cases at this point in the epidemic.

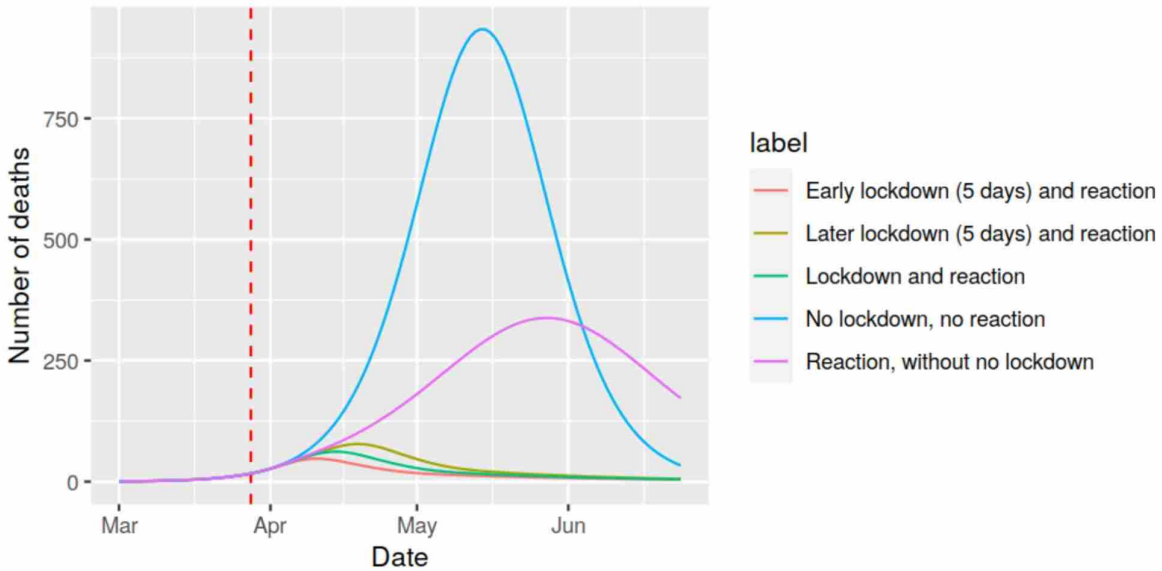

Figure 9. Estimated impact of lockdown timings on the epidemic in Wales. No epidemic mitigation at all (blue), No lockdown but initial sustained *pre-lockdown* social distancing (magenta), delayed lockdown (5 days) (olive green), calibrated to observed Wales outbreak (green), 5 days earlier lockdown (red).