

THE LANCET

Global Health

Supplementary appendix

This appendix formed part of the original submission. We post it as supplied by the authors.

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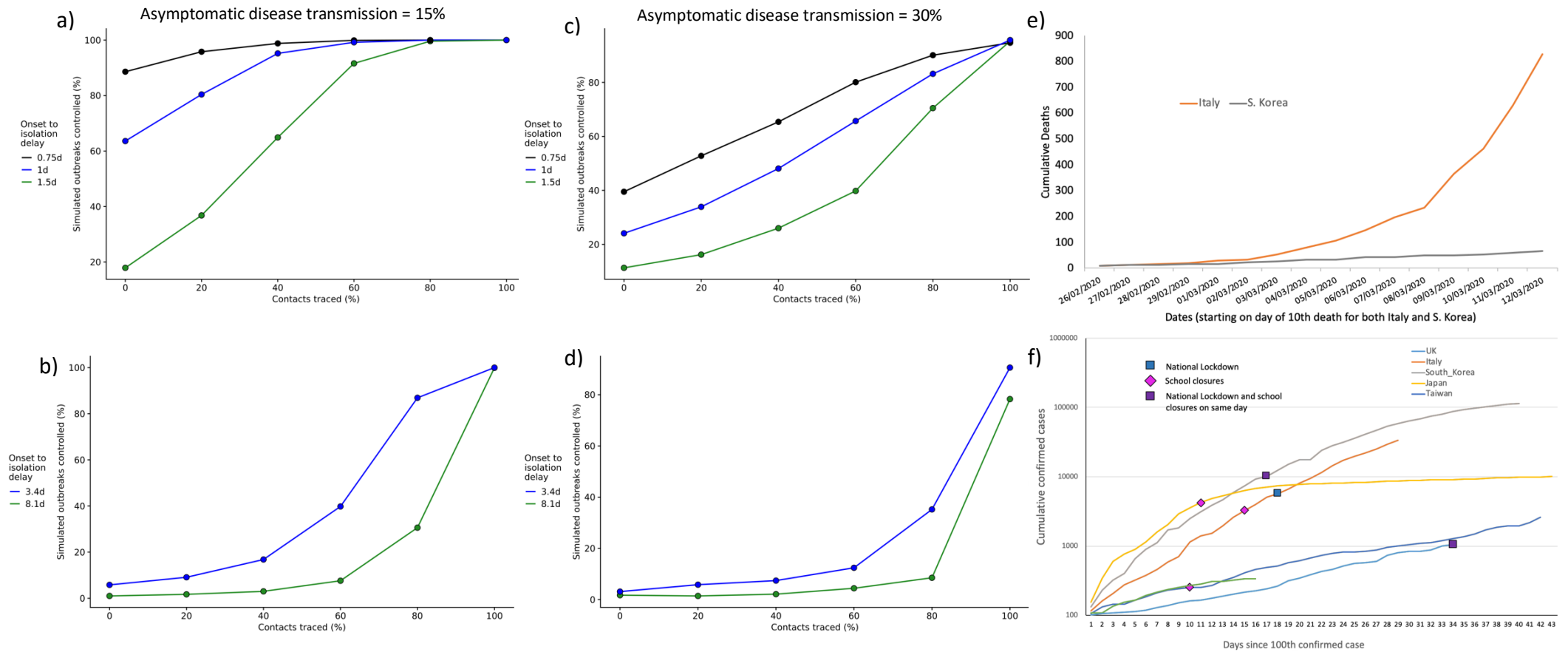


Figure 1. The impact of case detection, contact tracing and isolation on SARS-CoV-2: modelling evidence and empirical data. Figures 1a-d depict results from simulations modelling the impact of case detection, contact tracing and isolation on epidemic control at 12 wks. These models were developed by Hellewell et al.² Figure 1a. shows the baseline scenario modelled by Hellewell et al.² (simulations rerun, and shown in 1b. for comparison) with one alteration to the model: the delay time (time from symptom onset to isolation) is modelled with medians of 0.75, 1, and 1.5 days as opposed to delays of 3.4 and 8.1 days, which were the two scenarios modelled in Hellewell et al.²(Figure 1b.). The baseline scenario considered 20 initial cases, 15% transmission from asymptomatic cases and an R_0 of 2.5. Figure 1a. and 1b. show that rapid isolation (within 1-2 days) can result in a high probability of achieving control (defined as the proportion of simulations in which the outbreak was controlled within 12 wks) even with modest rates of contact tracing. Figures 1c. and 1d. show the corresponding results (c. - rapid isolation, d- delay parameters used in the original Hellewell² model), but with an asymptomatic disease transmission of 30% rather than 15%, as in the baseline model. Figure 1c shows that even with a 30% asymptomatic proportion, control can be achieved with <60% contacts traced if case detection and isolation is within a median of 1 day from symptom onset. Figure 1e shows the difference in trajectories of cumulative deaths between South Korea and Italy since the 10th death in both countries (which occurred on the same day -26.2.2020), as observed on the 12th March 2020, when the UK government announced its decision to cease all community testing and contact tracing as a policy. Figure 1f. shows the trajectory of cumulative confirmed deaths from SARS-CoV2 in selected countries since the 100th confirmed case in each country, with the timeline of interventions of school closures of lockdown implemented. Where no interventions are shown, lockdown or school closures have as of 3rd April 2020 not been implemented yet.