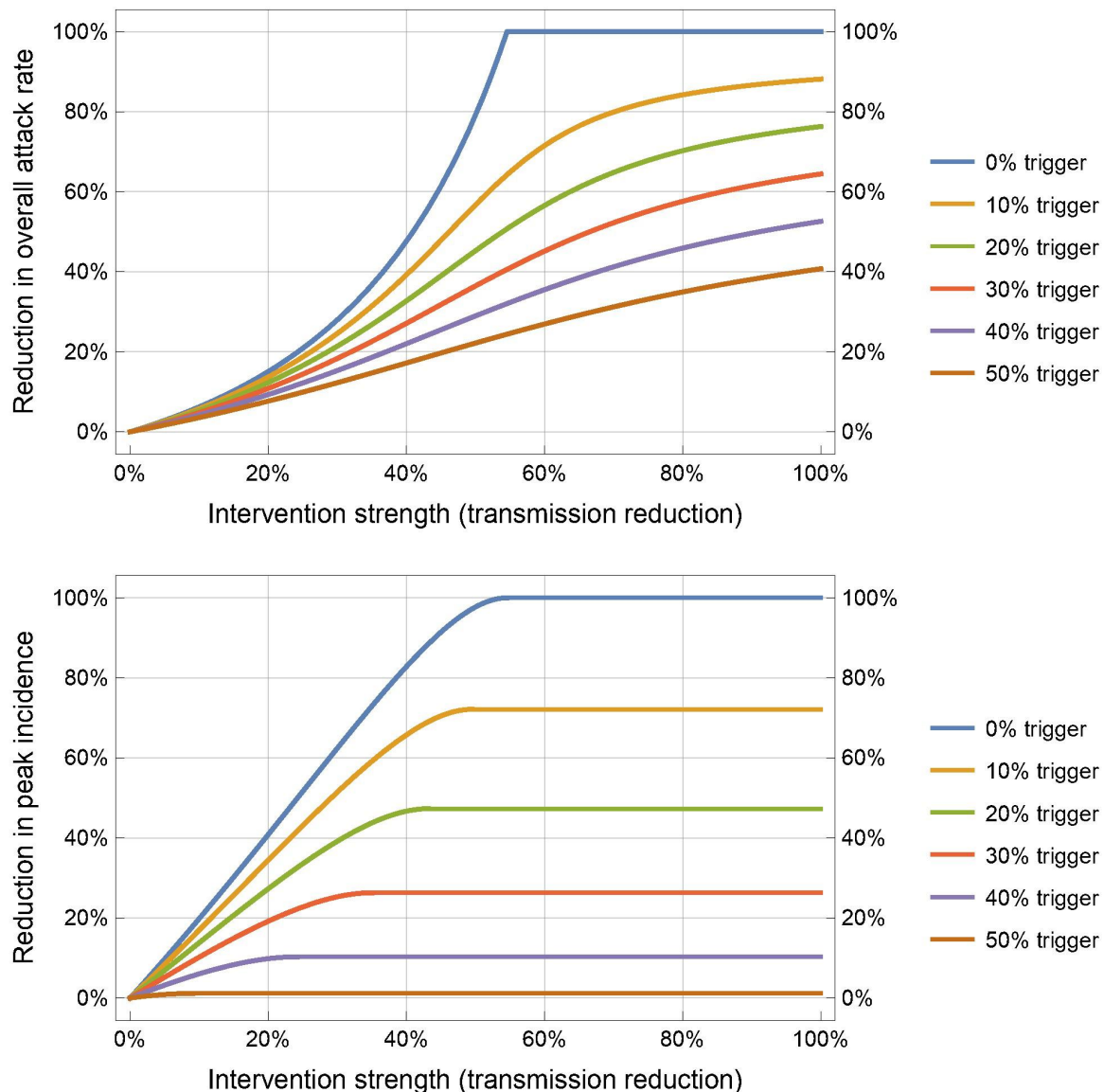


## Transmission-reducing interventions: prediction of reduction in overall attack rate and peak incidence from simple models

Transmission reduction by non-pharmaceutical interventions can be captured in the simplest epidemic models, giving a ballpark estimate for the size of the effect both in terms of reduction of overall attack rate and peak incidence, shown here for  $R_0 = 2.2$ .



These illustrate the size of effects and how they depend crucially on the transmission reduction factor and also when the intervention starts. The different curves are for a range of trigger thresholds for starting intervention: when the cumulative number of cases has passed a certain proportion of the population (so 0% is before anything happens and 50% is quite late, when half of the population were or are infected). The intervention is continued indefinitely (so a 'best case' and hence upper bound for the size of the effect). The mathematics behind these plots is derived from the classic SIR model (e.g. see Hollingsworth *et al.* 2011)

This simple approach should not replace models including more details, but if predictions from more complex models deviate substantially from those shown here, the factors behind that difference should be identified.