



CENTER FOR
INFERENCE &
DYNAMICS
OF INFECTIOUS DISEASES



Northeastern

COVID-19 (april 26)

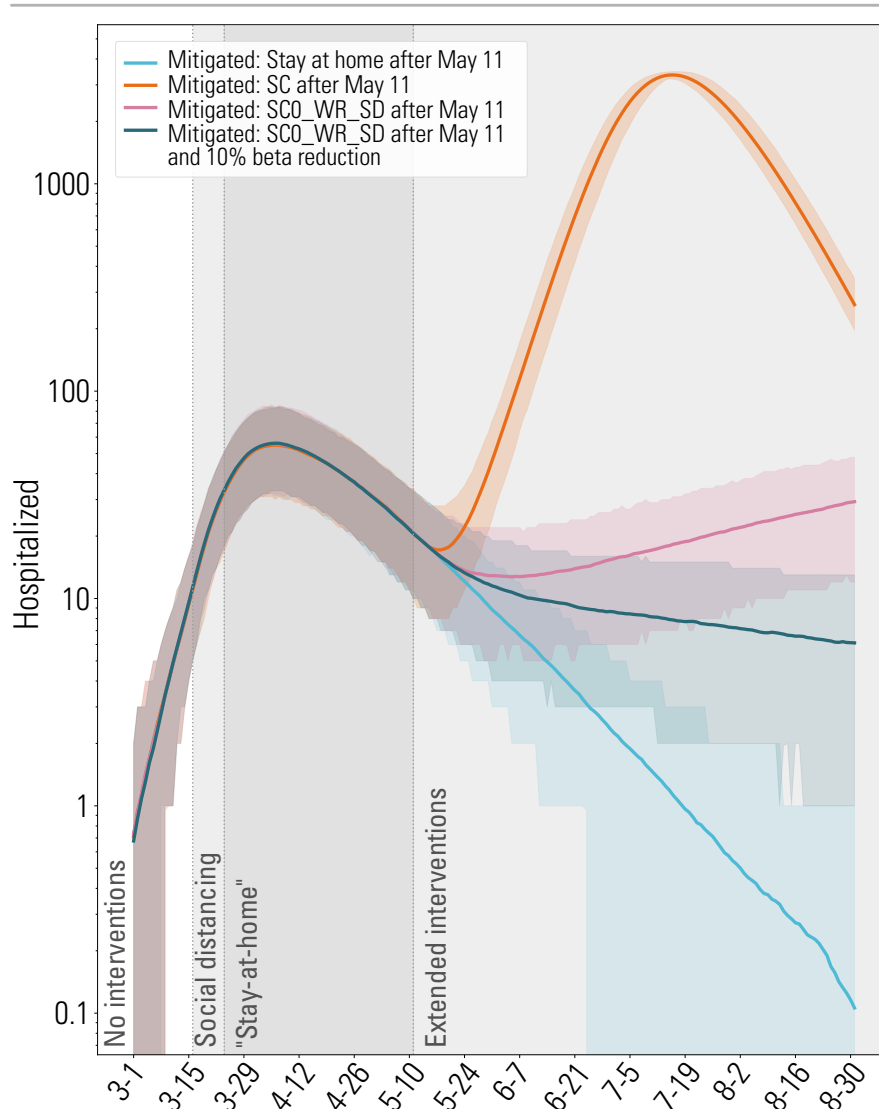


Laboratory for the
Modeling of Biological +
Socio-technical Systems

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Re-opening scenarios implemented May 15th

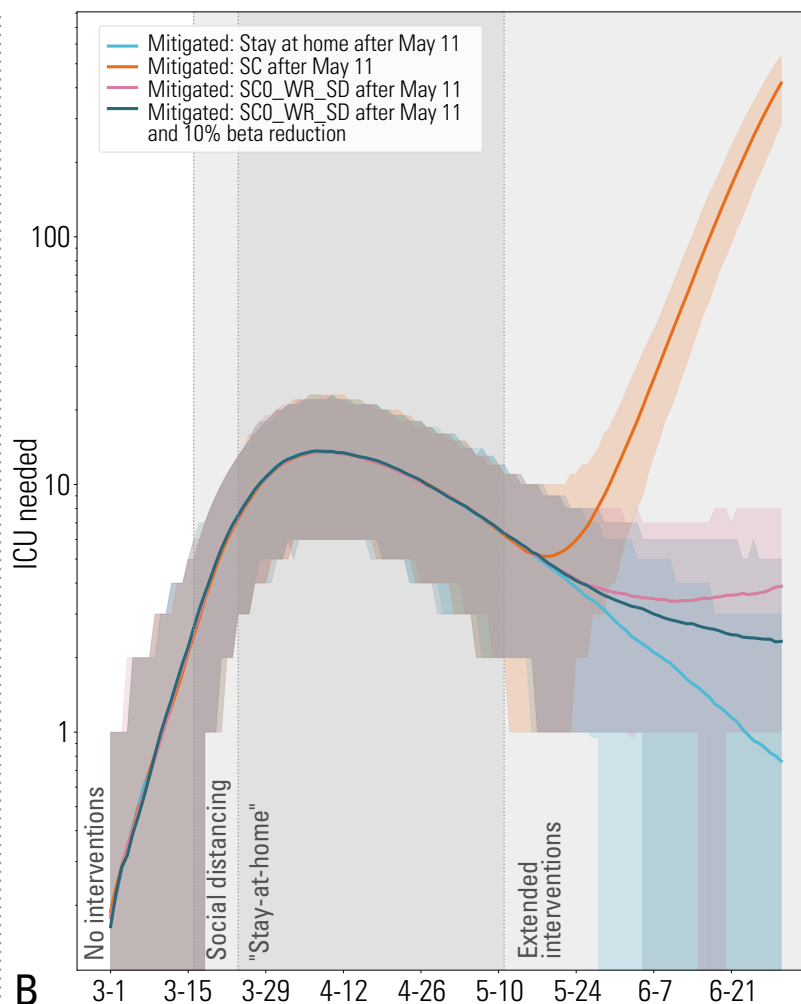
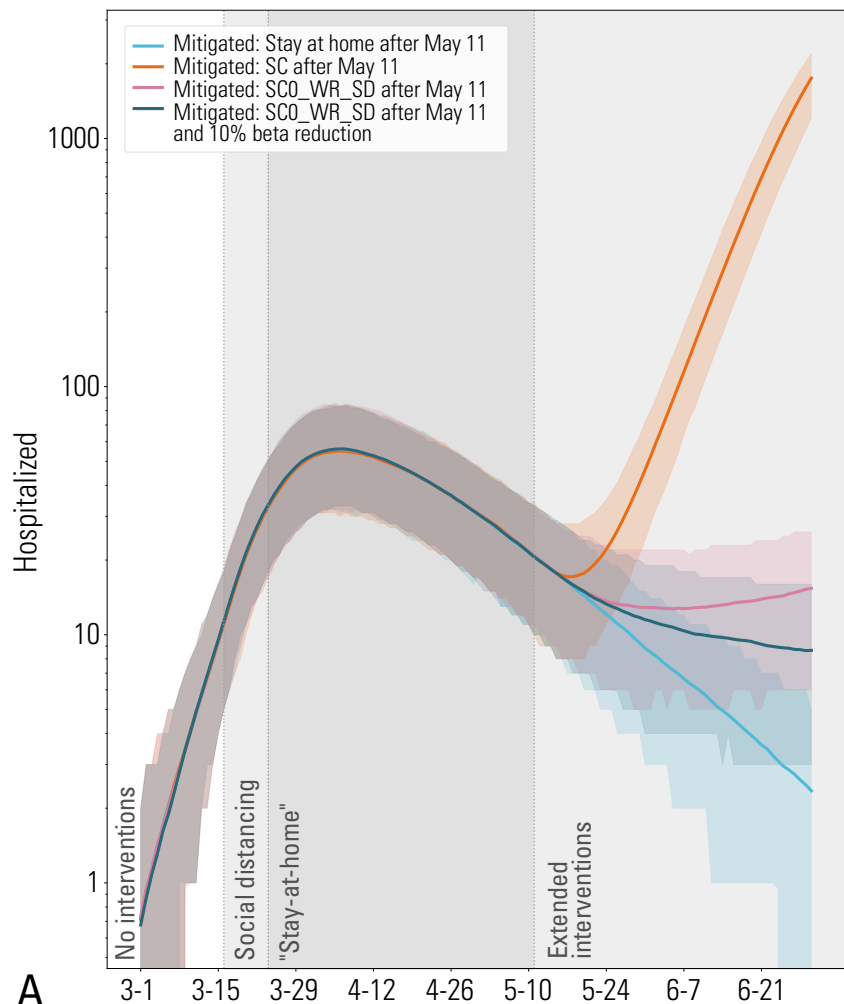
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- (azur line) “stay at home” continued. Transmissibility reduction 70%.
- (Blue line) Resume non-essential work for about 50% of the work force +additional transmissibility reduction (masks, behavioral changes etc.). Total transmissibility reduction 55%.
- (Purple line) Resume non-essential work for about 50% of the work force. Transmissibility reduction 50%.
- (red line) Back to normal except school closure.

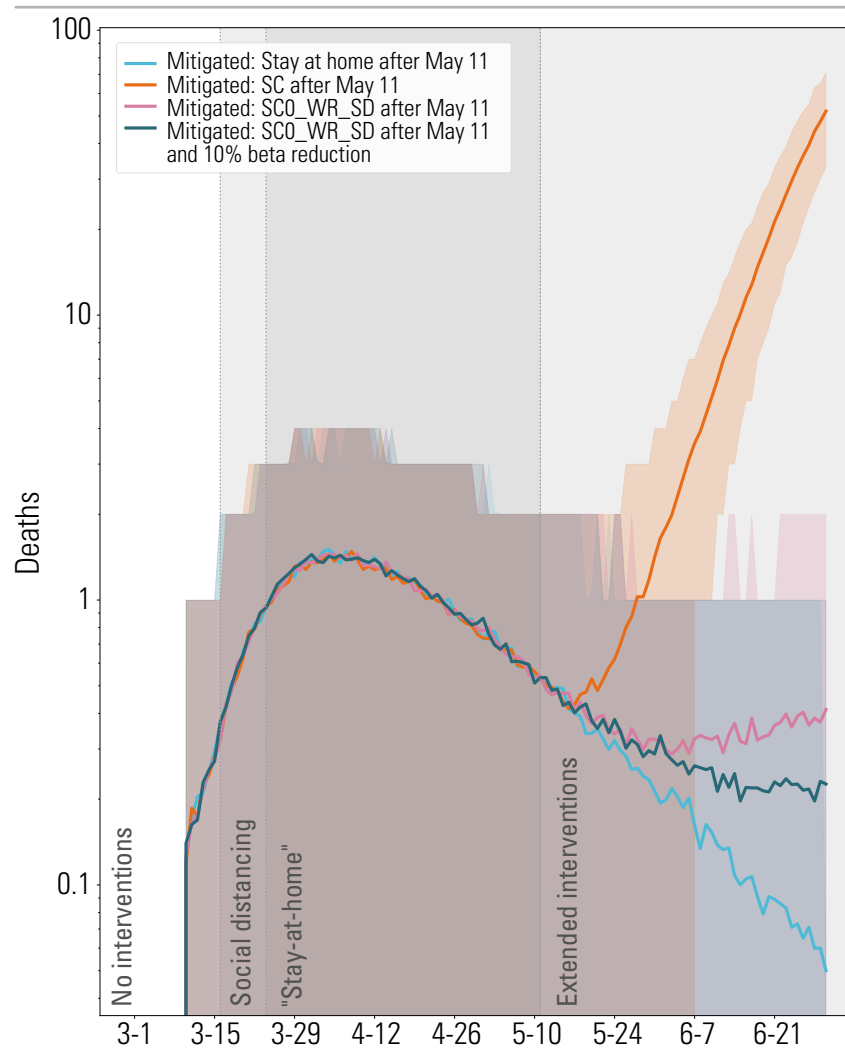
Re-opening projections

Vermont



Re-opening projections

Vermont



Discussion and caveats

- We do not consider in the scenarios specific strategies for enhancing contact tracing, testing and early isolation of cases.
- We are also not considering potential changes to the virus transmissibility due to environmental factors, in particular seasonal drivers such as temperature and humidity.
- The model is stochastic and age structured, considering the interaction of individuals in single years from 0 to 85+. The contact patterns account for the interaction of individuals in different settings: households, schools, workplaces, and the general community. This compartmentalization of settings allows the estimation of the different interventions. ***The model may change as new data become available, revising specific characteristic rates and times estimates.***
- There are very large uncertainties around the transmission of COVID-19, the effectiveness of different policies and the extent to which the population is compliant to social distancing policies. The presented material is based on modeling scenario assumptions informed by current knowledge of the disease, and subject to change as more data will be available. ***Future decisions on when and for how long to relax policies must be informed by ongoing surveillance.*** Additional modeling and data studies are required to assess the level and effectiveness of additional non-pharmaceuticals interventions required to lift current social distancing interventions.