

Risk of resurgence in COVID-19 if Connecticut reopens too soon

May 25 2020, by Michael Greenwood



Credit: Yale University

As Connecticut tentatively reopens this week after a two-month shutdown, a new report by the Yale School of Public Health warns that if people resume normal activities and contacts too quickly there will be a "sharp resurgence" in hospitalizations and deaths in the coming months.

Associate Professor Forrest Crawford and postdocs Olga Morozova and Zehang (Richard) Li created a [mathematical model](#) to predict COVID-19 transmission, hospitalization and deaths in the state under "slow" and "fast" reopening scenarios.

If the state reopens too quickly, a second wave may be unleashed, the effects of which could be worse than what has already happened. It could result in an estimated total of over 8,100 deaths by September 1 in Connecticut. More than 3,500 state residents have already died from [coronavirus](#).

"If contact rates return quickly to levels seen in early March, the number of new cases could rise dramatically over the summer" said Crawford, the report's lead author. "Connecticut decision-makers need to closely monitor data on new cases and hospitalizations, as well as transmission model projections, in order to reopen the state safely."

Under a slow reopening scenario (defined as relaxing restrictions so that contact increases at a rate of 10 percent each month) the incidence of the disease will still increase slightly in the coming weeks but will taper off and stay at lower levels. Hospitalizations for the disease will continue to decline, rising slightly in August and the number of coronavirus-related deaths will rise slowly, with an estimated total of 4,600 to 7,100 by September 1.

Under the fast scenario (defined as increasing contact at a rate of 10 percent every two weeks), Crawford and colleagues found that the number of new infections is likely to spike throughout the summer, potentially exceeding hospitalization capacity and resulting in anywhere from 5,400 to 13,400 total deaths by September 1.

"These projections are based on the latest available data and knowledge from the scientific community," said Li. "As we gather new evidence

about transmissibility of the disease and effectiveness of interventions, our model projections will improve."

The researchers attributed the recent decline in hospitalizations to the reduction in contacts following distancing measures implemented by the state officials. "It is too early to return to normal. As some businesses reopen, it is even more important for people to continue practicing social distancing and avoid traveling to highly affected areas, most importantly New York City," said Morozova.

Yale School of Public Health Professor Albert Ko co-chaired Gov. Ned Lamont's ReOpen Connecticut Advisory Group, which strongly advised a cautious and conservative schedule as the state starts to return to normal.

"These model projections of the future risk of COVID-19 resurgence directly informed the recommendations made to mitigate this risk," Ko said. The advisory group, which recently completed its work, was not involved in the preparation of the report.

Other key points from the report include:

- Real-time metrics (such as hospitalizations, case counts and deaths) may not provide adequate warning to avoid a resurgence.
- Closure of schools and the state's stay-at-home order greatly reduced transmission of the virus.
- There are substantial gaps in knowledge about critical aspects of the disease, including the proportion of infected individuals who are asymptomatic, infectiousness of children, the effects of testing and contact tracing on isolation of infected individuals and how contact patterns may change following reopening.

Provided by Yale University

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