THE UNIVERSITY OF CHICAGO

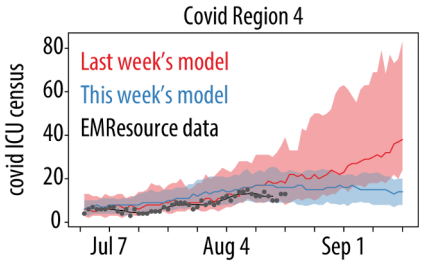
- **The epidemic is likely growing across the state and trends in the central and southern regions remain concerning.** R_{eff} was at or above 1 in all regions on August 15, the last date on which we can estimate R_{eff} well given reporting delays. Consistent with a growing epidemic, test positivity continues to rise despite increased testing in COVID regions 2, 3, 4, 5, and 7. Hospitalizations are rising in COVID regions 2, 3, and 6.

- **We observed an uptick in outbreaks within long-term care facilities (LTCFs) in the Southern restore region.** In the last 30 days, 10 facilities in the southern region (11.5% of all LTCFs in the southern region) reported their first COVID-19 outbreak, indicating that transmission within LTCFs remains a concern.

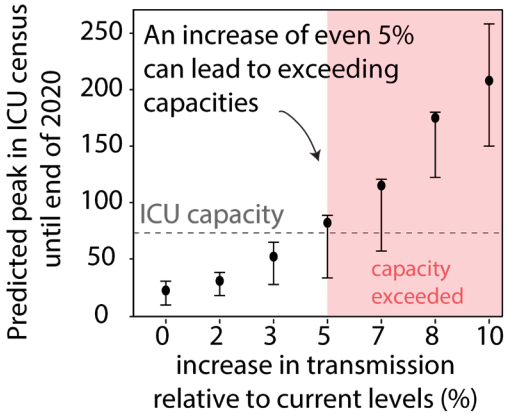
- **Sentinel outpatient surveillance would provide the clearest and earliest signal of changes in transmission rates (R_{eff}), especially when transmission is focused in younger age groups**. Daily reports of confirmed COVID-19 hospital admissions with dates of symptom onset could also be used to calculate R_{eff} with slightly more lag.

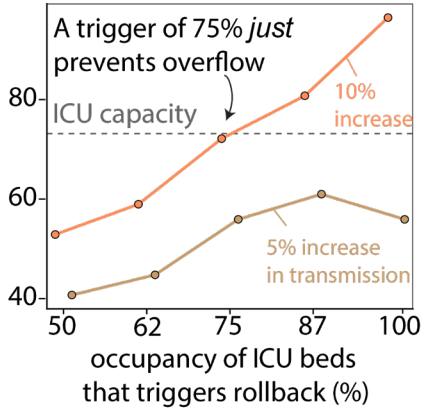
Northwestern University

- Although recent trends in hospital bed census suggest a slowdown or reversal of growth, R_{eff} **remains at or greater than 1** in all regions except regions 5 and 9.
- These new trends are **highly uncertain** because they depend on noisy hospital data.



- Additionally, **trends are highly subject to change**, given reopening of K-12 schools and universities.
- The effect of back-to-school on transmission will differ across the state: for example, **62.6%** of K-12 students Region 4 are attending schools with in-person or hybrid learning, compared with **39.6%** of students in Illinois overall.



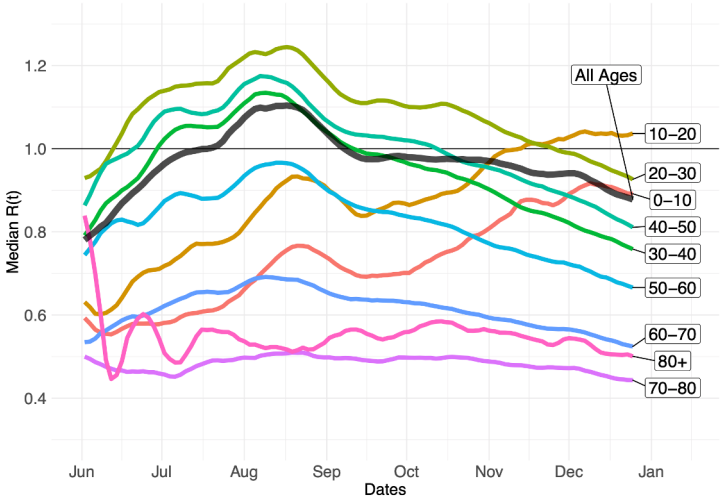


What's a good threshold on ICU bed availability to trigger additional mitigation interventions?

- We used this week's model to simulate scenarios with increased transmission. Example shown: Region 4.
- Increasing transmission more than 5% above current levels can result in overflowing ICU capacity (above left).
- Immediate action when occupancy of ICU beds reaches 75% can *just* contain a 10% bump in transmission such that ICU capacity is not exceeded (above right).
- Lower thresholds for action would be needed if transmission increases by more than 10%.

Aug 22, 2020

- Our simulation results this week indicate that Chicago is at the beginning of a period of reduction in transmission, which will see R(t) go below 1 around the first week of September.
- The 10-20 age group and, to a lesser extent, the 0-10 age group show a gradual upswing of R(t), coinciding with school reopenings in the beginning of September. This is despite the assumption that there is significant on-line learning (75% of in-school activities are assumed curtailed in these scenarios).
- These results indicate that improvements in testing times, contact tracing capabilities, and early-warning sentinel surveillance are still needed to detect and mitigate the clusters of infections.
- Finally, the simulation results are consistent with adult out-of-household activity levels returning to 80% of the pre-COVID19 activity levels. These results suggest that continued messaging about the importance of self-protective behaviors, such as mask wearing, social distancing, and hand washing, would be beneficial as community activities and interactions continue to increase.



Aug 22, 2020

ILLINOIS

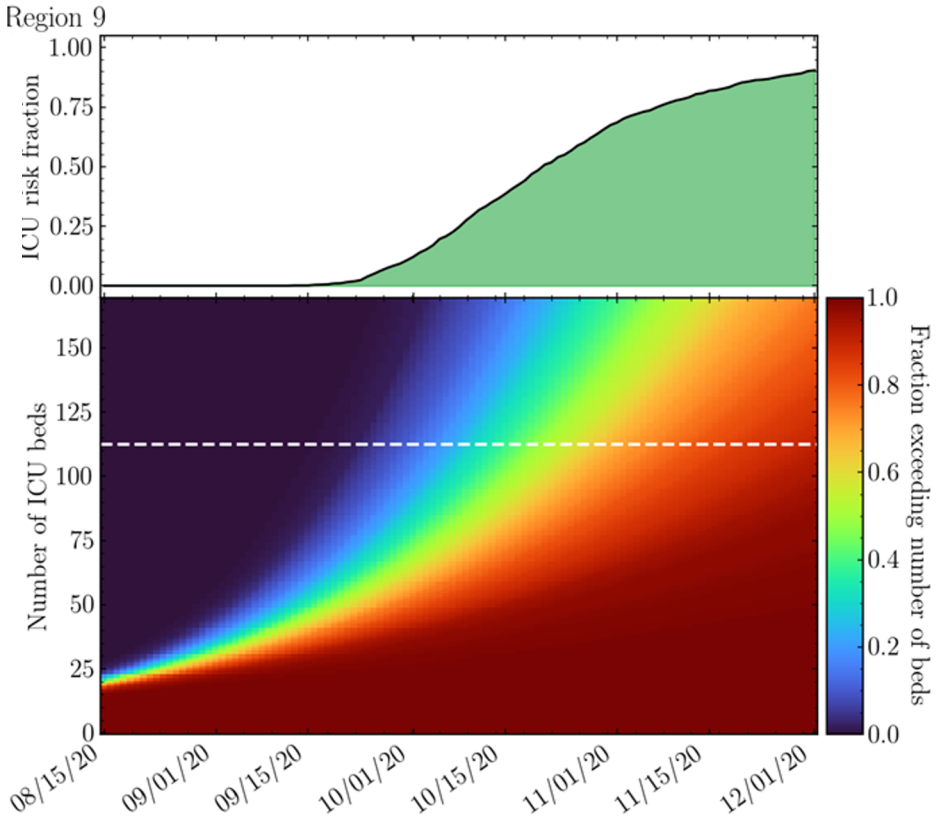
Second wave hospital capacity in regions 3,4,7,9 is concerning

SECOND WAVE

- Second wave in regions 2,3,4,5 continues to grow, with peak projected in late Nov. unless extra mitigation is taken.
- Milder second wave for all-state and regions 11, 7, 8, 9, 10, 1, 6

HOSPITALS AT RISK (HAR)

- Currently, we do **not** see a risk of exceeding IDPH threshold (75% of COVID availability) for hospital or ICU in the next 4 weeks, for any region.
- Region 9 has 50% to exceed ICU threshold in mid-October, regions 3, 4, 7 later



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