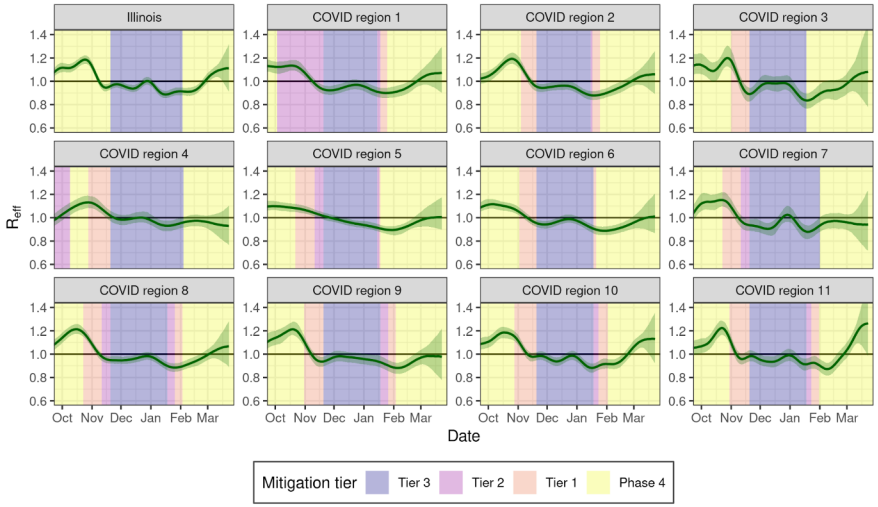
THE UNIVERSITY OF CHICAGO

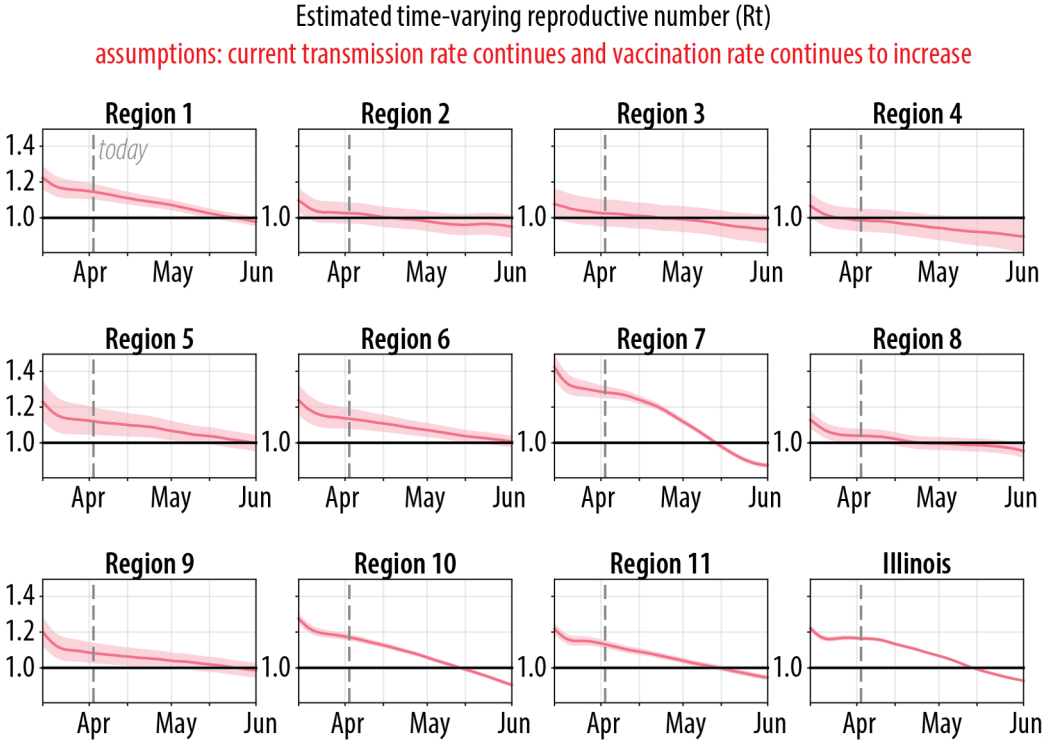
- As of March 23, R_{eff} **in regions 1-3, 5-6, 8, and 10-11 was at or above 1, indicating that the epidemic is growing.** This is consistent with more recent hospitalization data.
- The estimated R_{eff} **shows current mitigations and vaccination coverage are insufficient** to slow transmission. The R_{eff} in Chicago implies at least another 12% of the population would need to be vaccinated *immediately* to get R_{eff} below 1 (in roughly two weeks), assuming B.1.1.7 stays at current frequency.
- The B.1.1.7 clade is likely to continue spreading, further raising R_{eff}. Given the current pace of vaccination, the **next wave is unlikely to stop soon without more limits on indoor gathering**, improvements in ventilation, and other NPIs. **Prioritizing primary vaccine doses**, as shown to be effective in the UK and Canada, would leverage available vaccines to slow the pandemic.



April 2, 2021

Northwestern University

- **We are in another surge.** R_t is currently **above 1 in all Regions.**
- **If transmission does not increase further**, and vaccination rate (not just vaccinations but the pace of vaccinations) continues to increase, we expect R_t to **remain above 1 until around late May.** Under these assumptions, we expect another 2500 deaths by June.
- Continued expansion of more transmissible variants will further increase the transmission rate, so our estimate is likely too optimistic. However:
  - Will people change behavior in light of recent trends? In the past, this has decreased R_t even before mitigation measures were introduced.
  - How fast vaccination rate will continue to grow, and for how long? Accelerated vaccination would also help decrease transmission sooner.

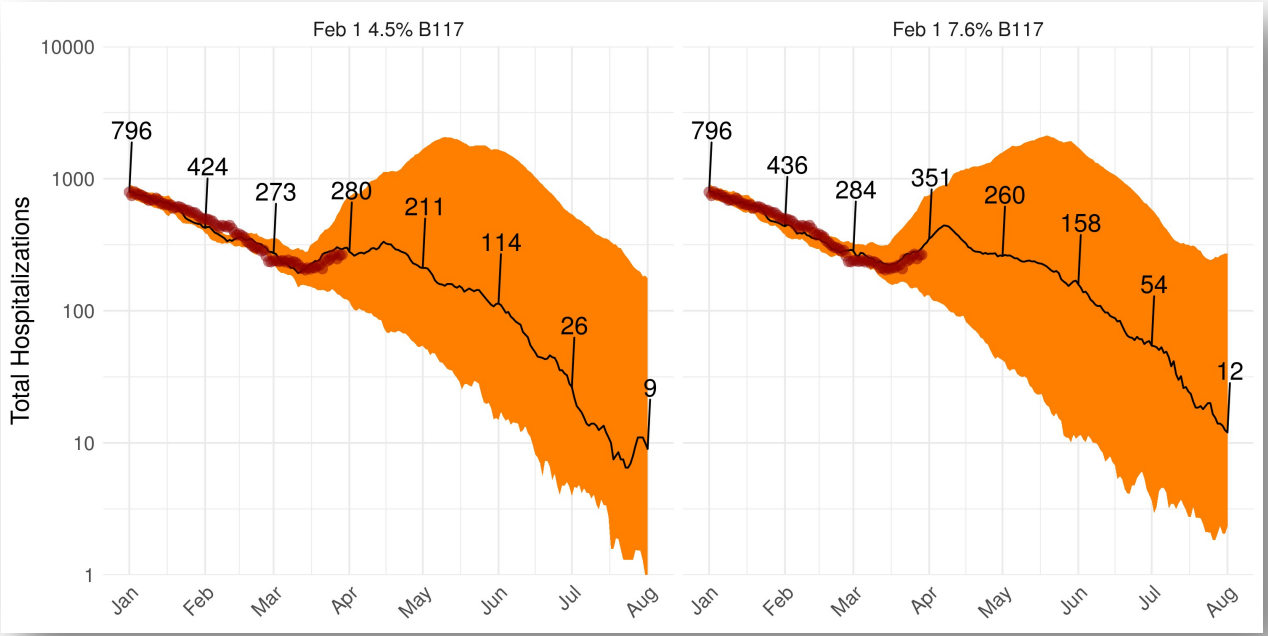


April 2, 2021

COVID-Related Hospitalizations (Chicago)

Feb 1 B117 Variant Prevalence	4.5%	7.6%
Mar 2 Out-of-Household Activity Level (pre-COVID)	90%	82.5%
Mar 2 18-40 Relaxation	60%	30%
Mar 2 40-60 Relaxation	30%	0%

- Different levels of assumed Feb 1 B117 variant prevalence interact with assumptions about out of household activities and age differentiated behavior relaxation to yield observed hospitalization trends
- In either scenario, under current conditions, hospitalizations decline beginning in May



April 2, 2021