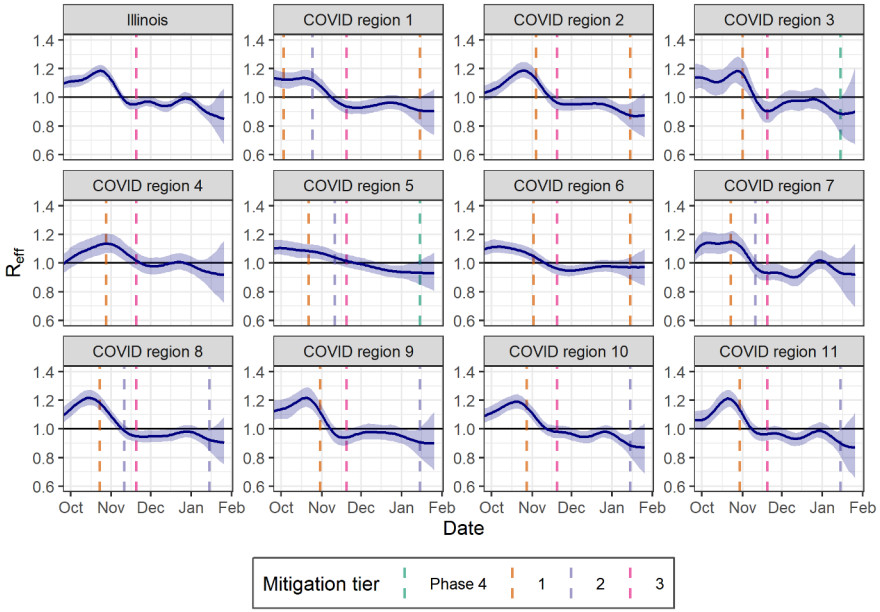
THE UNIVERSITY OF CHICAGO

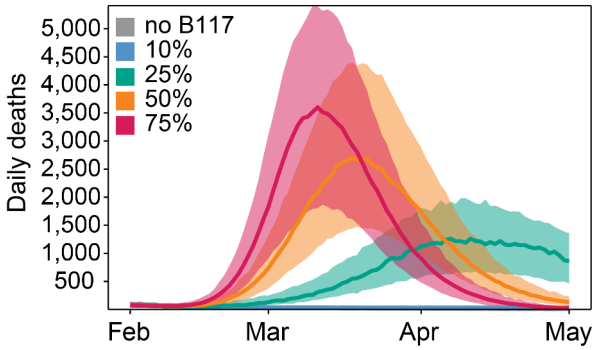
- In all regions, R_{eff} was at or below 1 as of January 27, indicating that **transmission was steady or declining**. However, the hospital census in regions 1, 4, and 5 suggest recent upticks in transmission.
- **Rapid distribution of first vaccine doses to older age groups is critical** to reduce mortality and mitigate future spread. Even with imperfect efficacy, primary doses reduce disease severity and probably reduce transmission.

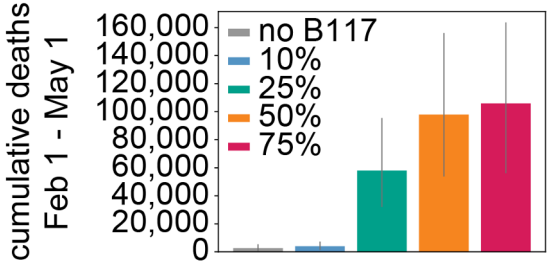


Feb 5, 2021

Northwestern University

- R_t is currently (as of Feb 3) still **< 1** in all Regions.
- We modeled hypothetical scenarios with different starting prevalence of B.1.1.7 under current transmission conditions and no new mitigations. We used current best estimates that the B.1.1.7 variant has **increased transmissibility (50%)** and **increased hospitalization and lethality (50%).**
- If even 25% of current COVID-19 infections are caused by the B.1.1.7 variant, there will be an **enormous number of deaths** between Feb 1 and May 1, 2021.
- Our scenarios do not yet include vaccination activities. Continued **vaccination data** and timeline are **urgently needed** for models to incorporate vaccine impacts into forecasts.
- Only 2.02% of the IL population is currently vaccinated. Urgent vaccination scale up is critical.
- If B.1.1.7 becomes more predominant locally before we reach herd immunity, **immediate move back to Tier 3 or Stay-at-Home will likely be necessary.**
- **Sentinel surveillance** can detect trends up to 10 days in advance of hospital admissions. **Quality surveillance is critical to quickly identify areas with increasing transmission.**



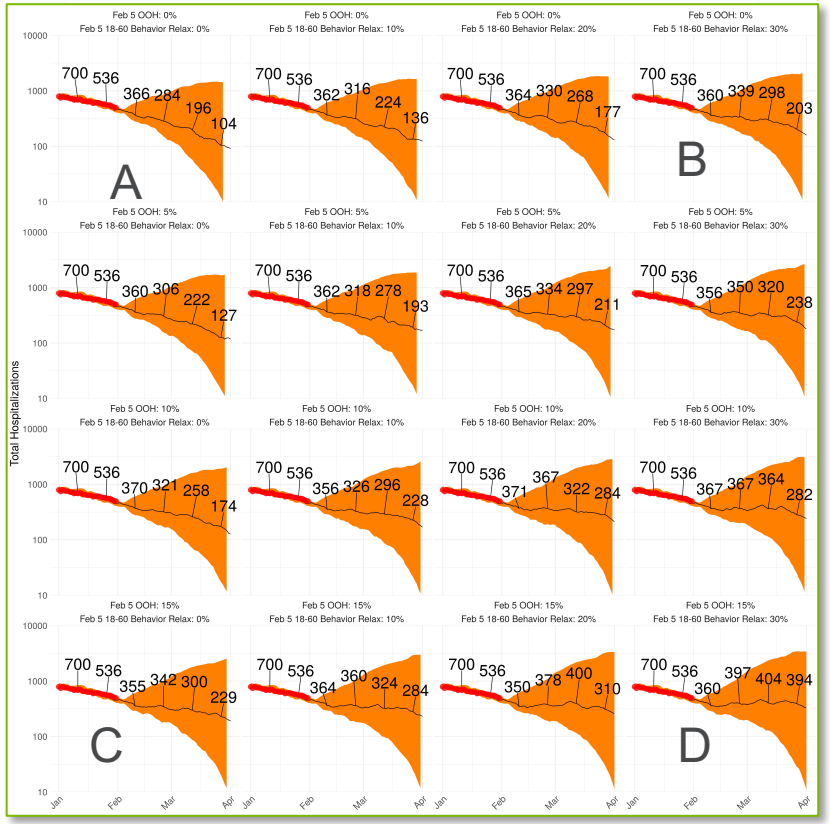


Feb 5, 2021

COMBINED EFFECTS OF EASING RESTRICTIONS AND RELAXING PROTECTIVE BEHAVIORS STARTING FEB 5

More Relaxed Protective Behaviors

Increasing Out-Of-Household Contacts



- We show here the CityCOVID median projection (black line) and uncertainty ranges (orange) for total COVID-related hospitalizations in Chicago, plotted against total hospitalization data up to 2/1/21 (red dots), with changes starting 2/5/21
  - A: No easing and no relaxed behavior case
  - D: Maximum easing and maximum relaxed behavior case
- We studied the combined effects of easing restrictions and relaxing protective behaviors
  - We observe an overall decline of median hospitalizations as we head towards March in all cases of easing, *when protective behaviors are not relaxed by more than 20%*
  - Median hospitalizations may increase due to easing, *when protective behaviors are relaxed by more than 30%*
- This output does not include any effects of vaccination, which, in the longer term would likely reduce hospitalizations
- This output does not include any effects of the B.1.1.7 variant