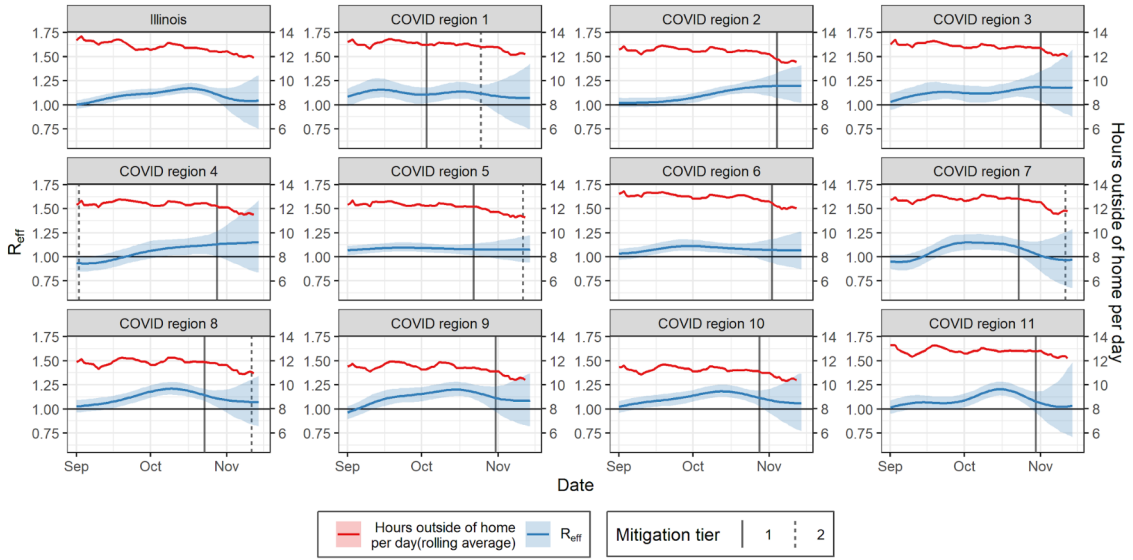
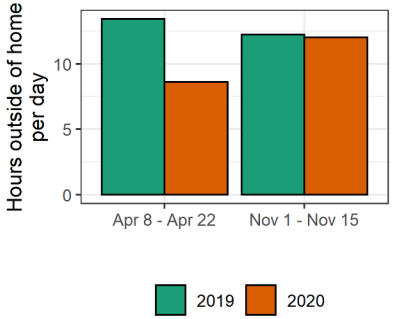
THE UNIVERSITY OF CHICAGO

- In most regions, $R_{eff}$ remains above 1 and the epidemic continues to grow exponentially.
- **Tier 1 mitigations in late October did not have a significant effect on lowering $R_{eff}$.** In most regions, transmission either remained constant after mitigation (regions 2-6) or was already declining prior to mitigation (regions 8-11). It is too early to evaluate the effects of Tier 2 mitigations put into place on November 11.
- **Mobility is high relative to the peak of shelter-in-place.** While there have been modest decreases in the time spent outside of the home since November 1, the average time spent outside the home is comparable to the same time period one year ago.

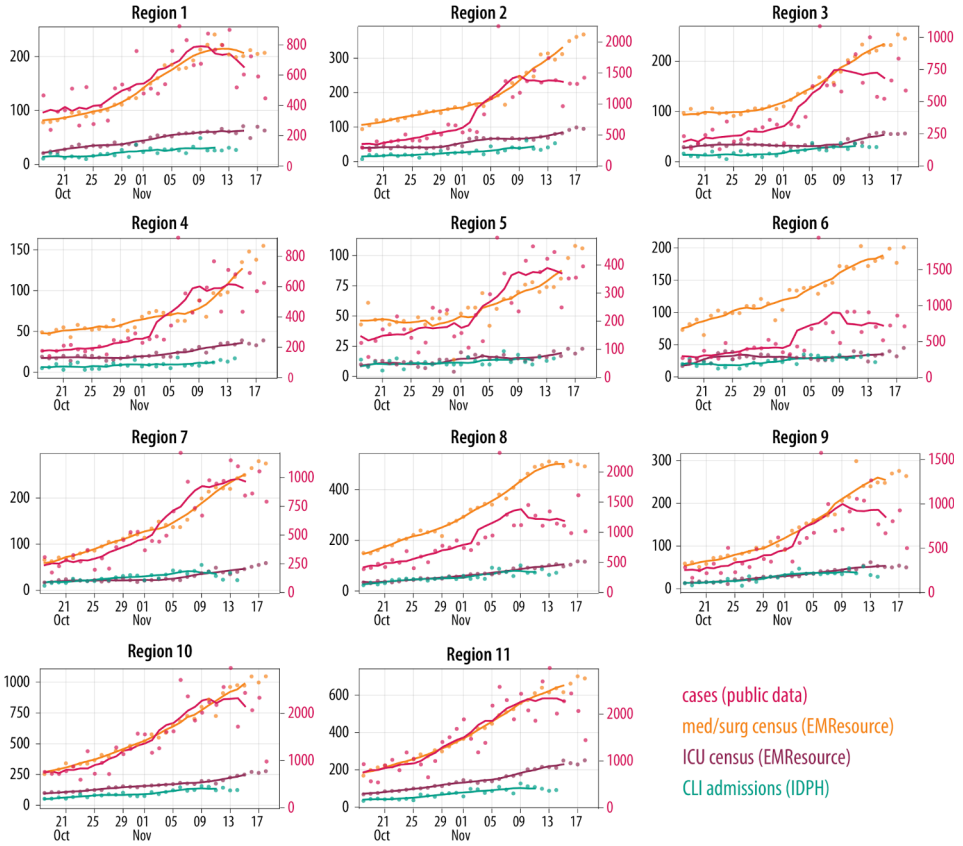



Nov 20, 2020

Northwestern University

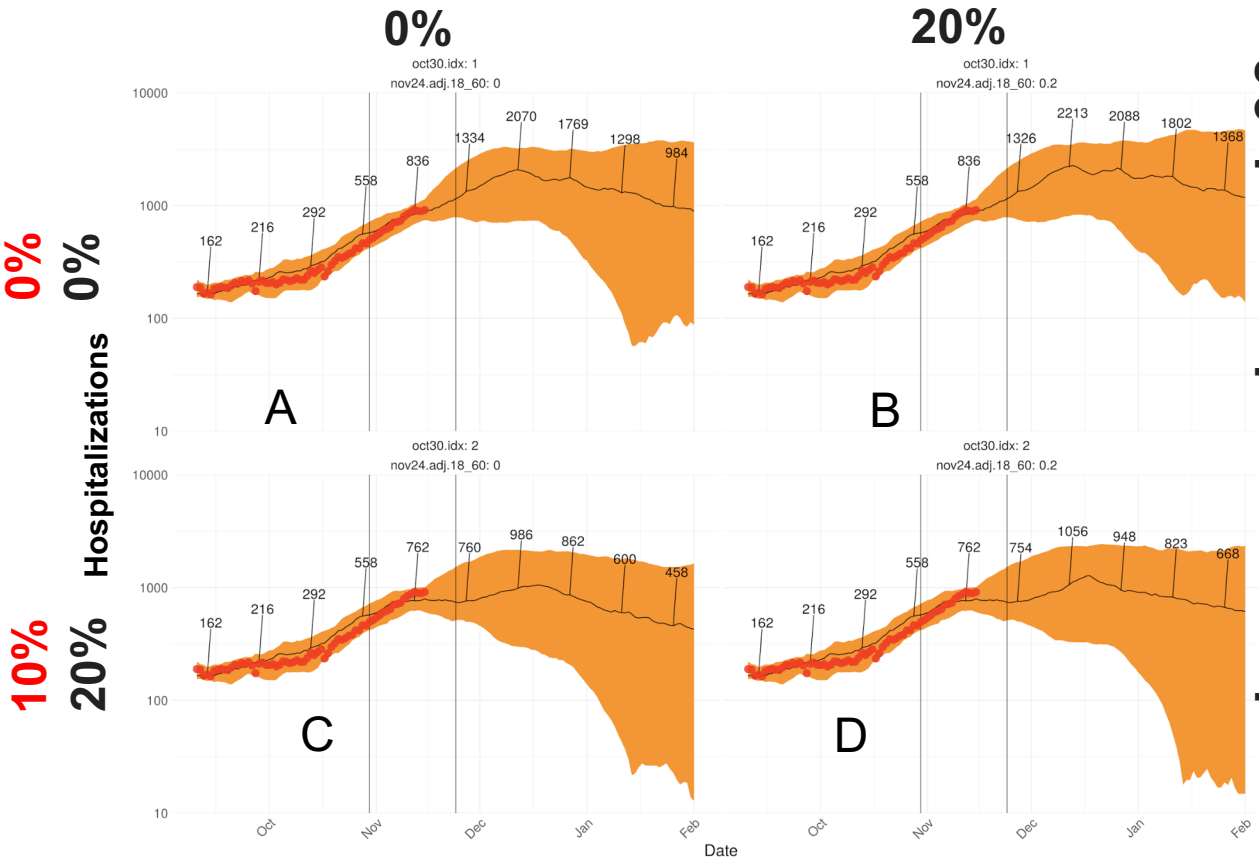
- We estimate that **$R_t$ > 1 in all Covid Regions** but may be starting to decrease in some regions.
- Data trends are *cautiously* optimistic in some regions:
  - Cases are flattening or or decreasing in all regions, especially in Regions 1, 3, 10 and 11
  - Covid-like admissions might be decreasing in Regions 7, 9, 10, and 11, but data are very noisy
  - Med/surg census is flattening in Regions 1, 8, and 9, while still growing in other regions. Rate of growth *may* be less steep now in Regions 3, 6, 10, and 11.
  - **ICU census continues increasing trends in all regions**
- The mitigation measures put in place **may be showing first effects** in turning the curve, or these decreases could be due to warm weather. However, we **are not yet out of the danger zone**, and mitigations must be maintained further to reduce transmission.




Nov 20, 2020

# Nov. 24: Relaxation in Protective Behaviors

**Oct. 30:**
**Out of Household (OOH) Activity Levels Decreasing**
**Improvement in Protective Behaviors**




## Current Trends and Holiday Gatherings

- All scenarios show median hospitalizations peaking in December between about 1,000 (C) and 2,213 (B) and a decline afterwards through February 1.
- The effects of the October 30 mitigations in Chicago would have to result in a combined 10% reduction in out-of-household activity levels and 20% improvement in protective behaviors to keep hospitalization levels under 1,000 (C).
- Relaxed behaviors (B, D) over gatherings during the Thanksgiving holidays show slightly worse outcomes in already concerning trends.

Vertical lines are dates **10/30** and **11/24**
Results are for Chicago, Region 11

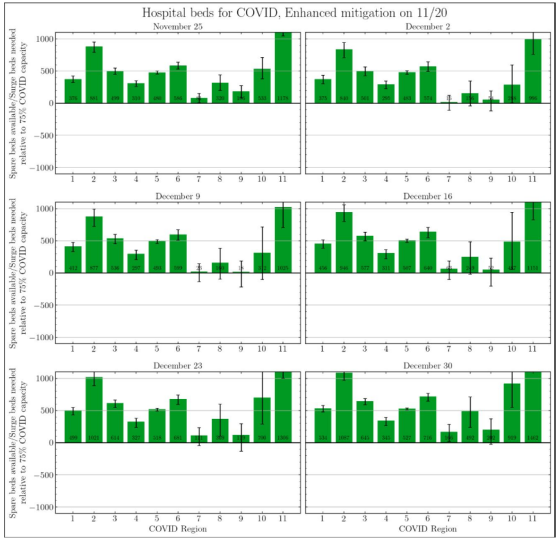
ILLINOIS

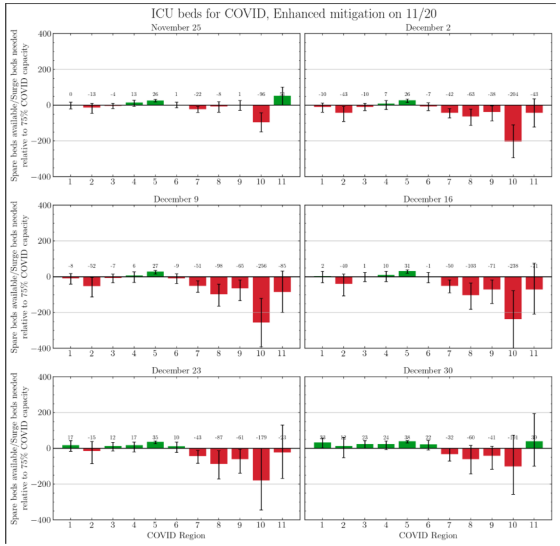
1. If Tier 3 has no effect on transmission, we predict strong risk of severe ICU overflow

2. If Tier 3 reduces disease transmission ($R_t$) by 15%
   - (i) ICU overflow will be much smaller but still significant
   - (ii) Hospital beds will not overflow

1. The 15% reduction in transmission is probably sufficient to prevent the worst case scenario. Reduction of transmission beyond 15% would be even better but not by a wide margin.

# 15% drop in transmission during Tier 3 reduces but does not eliminate 75% ICU overflow




Occupancy of hospital beds will not exceed the 75% threshold

Occupancy of ICU beds will exceed the 75% threshold

Estimated median hospital shortfalls for all regions over the next 6 weeks, assuming Tier 3 achieves 15% reduction in transmission