THE UNIVERSITY OF CHICAGO

- **Our estimates of R_{eff} in regions 1-5 are slightly above 1 as of September 17, the latest date we can estimate R_{eff} with currently available CLI hospital admission data.** While uncertainty in these estimates means that we cannot rule out an R_{eff} at or below 1, they are consistent with recent increases in COVID hospital census in regions 1-5 and increases in cases in region 1. This uncertainty also means that we cannot rule out R_{eff} at or above 1 for other regions.

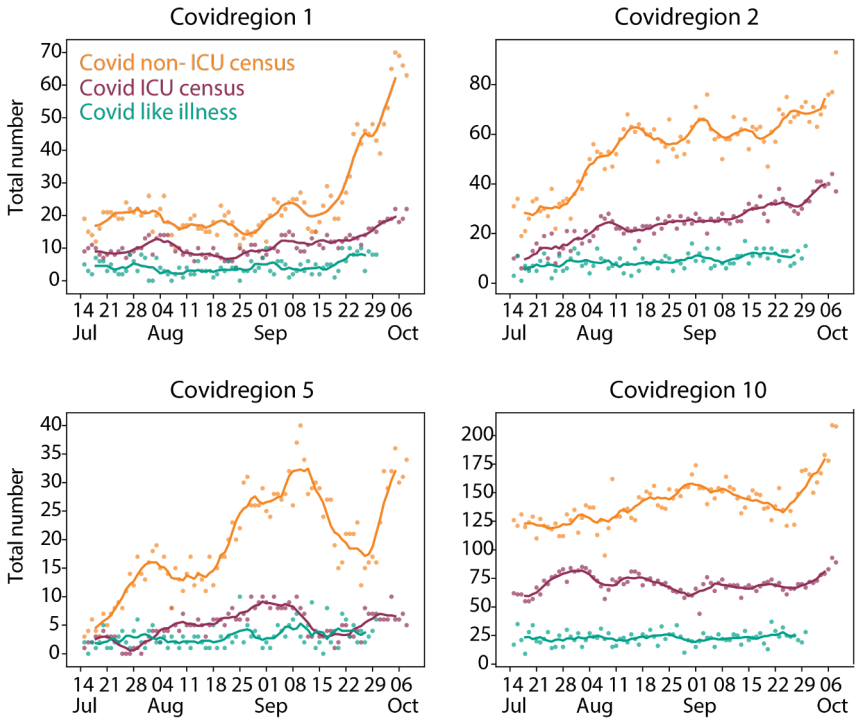
- **Additional data streams could provide more accurate information about transmission.** Because of uncertainty about delays between infection and case observation, hospital admissions are a more reliable metric of recent trends in transmission than case data. More up-to-date CLI data would allow us to produce more up-to-date estimates of R_{eff}. However, CLI is most informative about transmission in the oldest age groups, since they are the most likely to be hospitalized. Sentinel surveillance at outpatient sites would provide a clearer picture of how transmission in changing in all age groups across the state.

- **Representative serological surveys** to estimate the past infection in different populations (stratified by age, race/ethnicity, location, etc.) could improve forecasts, evaluate the success of testing and interventions in different groups, and help plan efficient and equitable vaccine allocation.

Northwestern University

Selected Covid Region highlights: what is data telling us?

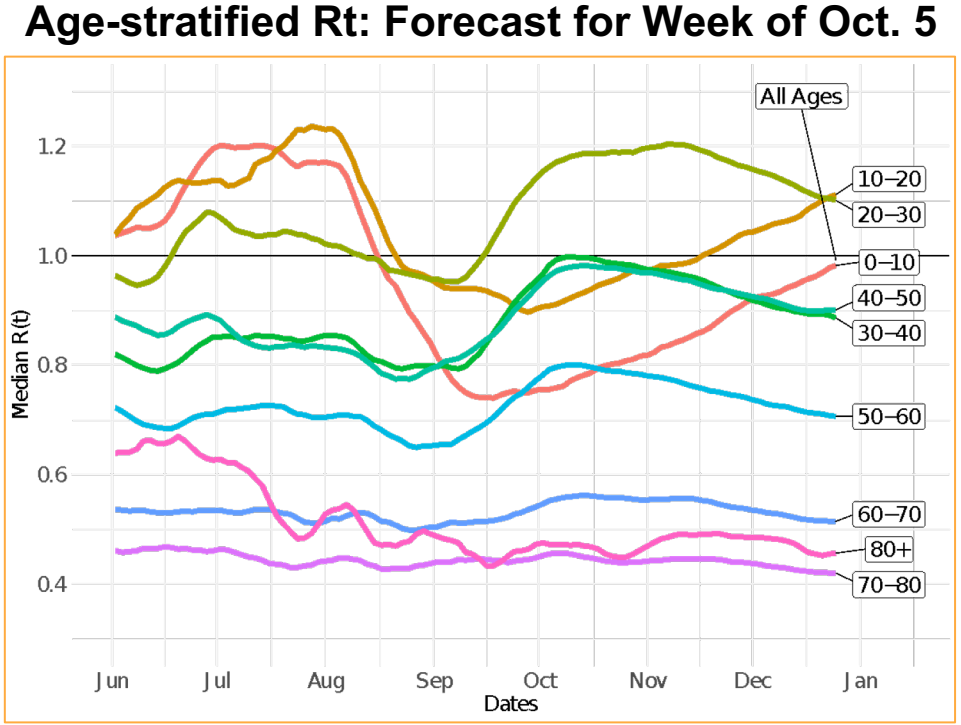
- Several Covid Regions show an increasing trend in hospital census over the last month(s), suggesting $R_t > 1$.
- Hospital census numbers can be difficult to interpret:
  - In Region 1, we see a fast increase in non-ICU census but a slow increase in ICU census.
  - In Region 2, the increase in census since July isn't reflected in CLI admissions.
  - In Regions 5 and 10, the recent increase in census isn't visible in CLI admissions.
- **Sentinel surveillance will help us disambiguate these trends.**
- At the Bloomington CBTS sentinel surveillance pilot site, there are ~7-10 COVID+ recent symptomatics found each day: nearly as many as the number of CLI admissions across all of Region 2. The greater number of recent symptomatics will give us **stronger signals in any increase or decrease in trends**.



Oct 9, 2020

FORECASTS OF INCREASING R(t) THIS WEEK

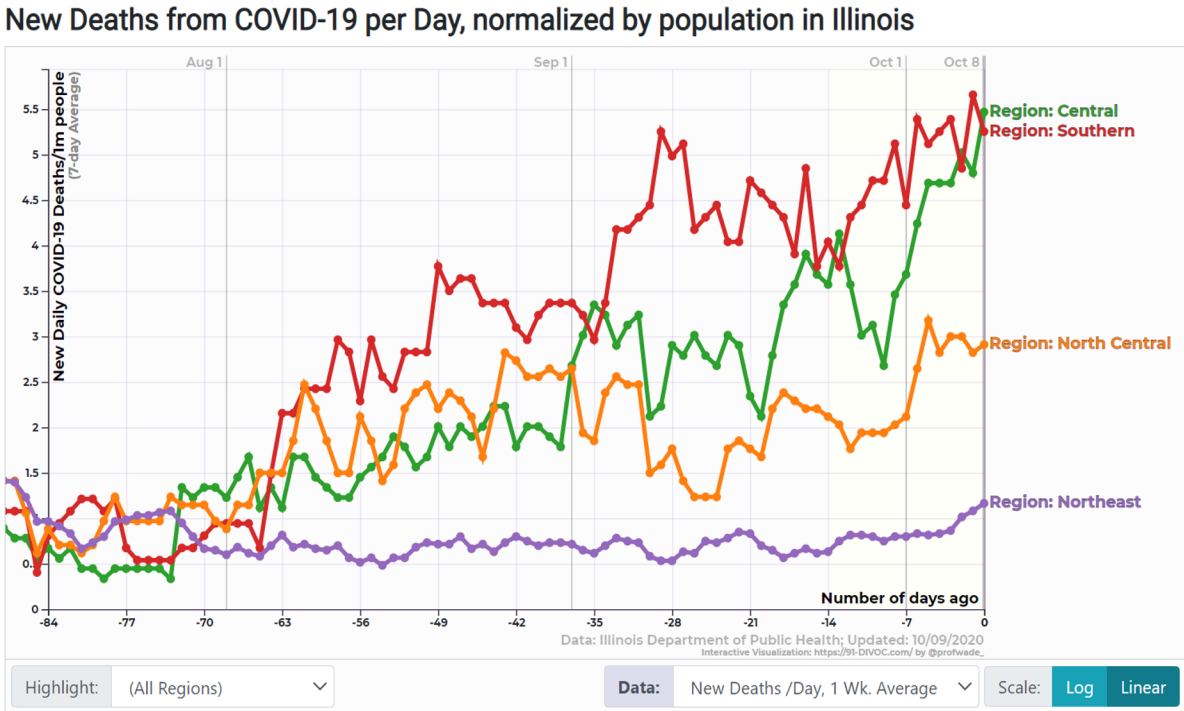
- Based on data from this week, CityCOVID model outputs for COVID Region 11 show an uptick in forecasts of new cases in the coming weeks
- These scenarios incorporate potential increases in out of household activities as a result of the Oct. 1 easing of restrictions in Chicago
- Overall R(t) values hover around 1, slightly higher than last week's forecasts
  - Chicagoans aged 20-30 more prominently factor in the rise in new infections, with other age groups under 50 also contributing
  - The 0-20 age group (school age) is included in the increased transmissions as well despite assumed adherence to good protective behaviors in schools



Oct 9, 2020

Death rate in Southern/Central regions surprisingly high

- The daily death rate in Southern and Central super-regions is high ~5 per million.
- For comparison UK ~ 1 per million, Israel ~ 4 per million.
- Test positivity is low: 6.4% in Southern and 6% in Central (excluding UIUC)
- Comparable to UK 6% but half that of Israel 11%.
- Hospital/ICU occupancy are not rising in Southern and Central IL



The daily death rate in 4 super-regions of Illinois

Oct 9, 2020