THE UNIVERSITY OF CHICAGO

- **The epidemic is growing across the state.** Estimates of R_{eff} as of October 1 are above one for most regions and for the state as a whole. More recent hospitalization data indicate R_{eff} has remained high or grown since, including in the Chicago area and other regions (4, 5) that had relatively low R_{eff} on October 1.

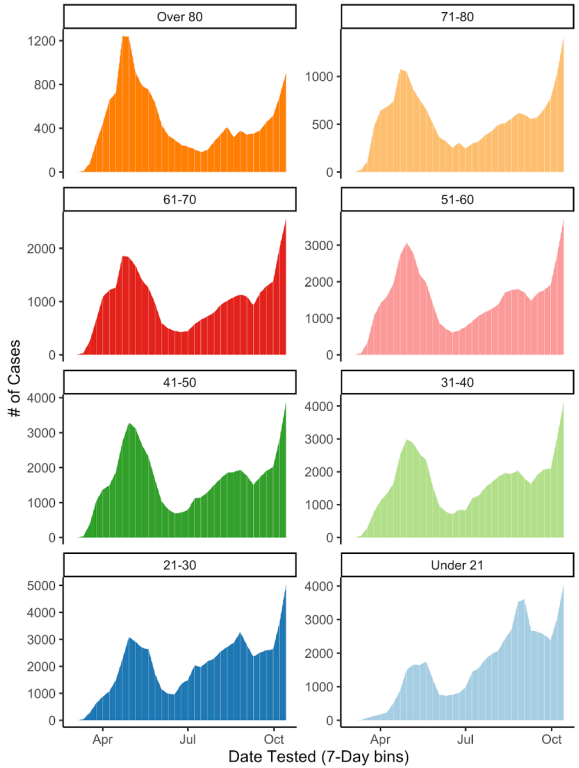
- **Social distancing, mask wearing, and reducing the sizes of gatherings** probably remain the most effective means of slowing transmission when prevalence is high and effective contact tracing is unavailable.

- We could **improve epidemiological forecasts, including of vaccination impact, and better understand where to focus efforts** via *representative* serological surveys to estimate the rate of past infection in different populations (stratified by age, race/ethnicity, location, etc.).

Northwestern University

Why are we seeing increased hospital census now? What do we expect to see in the coming weeks?

1. **The second wave has reached older adults** - likely due to **community spread from younger adults**. At this point, **transmission is not driven by indoor restaurants and bars** anymore.
    a. **Record high cases** among all adults within White population, including the elderly.
    b. **Record high cases** in younger Hispanic and Black populations now too.
    c. Data from June-September show much higher case hospitalization and fatality rates for all other groups compared to young White adults. Spread to older adults and minorities will translate to **even more hospitalizations and deaths**.
2. **Increase in cases is NOT due to increased testing.** Testing rates have been consistent since early September.
3. **More testing is needed to detect spread in vulnerable populations and minority communities. Priorities:**
    a. Testing rates have been and remain lowest in the Hispanic population
    b. Black people are especially under-tested in majority-Black ZIP codes
    c. The elderly are currently tested at lower rates than young adults



Oct 23, 2020

Perspectives on Recent Hospitalization Trends in Chicago

- We have observed increased hospitalizations in Chicago (COVID region 11). Our modeling work suggests a way to think about this is that reduced self-protective behaviors could be a factor. Relaxed behaviors, possibly driven by increased indoor activities, in the 18-40 year olds and to a lesser extent 40-60 year olds may be contributing to this trend.

- The schools in Chicago do not seem to have had a major impact so far, though this may change as we learn more about school outbreak numbers:
  - https://www.propublica.org/article/illinois-will-start-sharing-data-about-covid-19-outbreaks-in-schools

- Other potential factors may be an increase in small group social gatherings resulting in COVID cluster outbreaks, attributable possibly to COVID-fatigue, and the recent reduction in business restrictions starting 10/1.

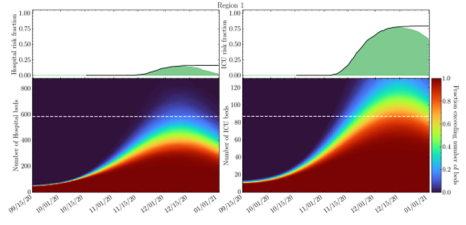
Oct 23, 2020

ILLINOIS

Hospital & ICU capacity is on track to be exceeded in Regions 1, 3 & 10 in mid-November

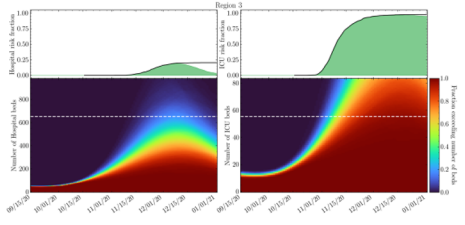
1. The second wave is getting stronger, especially in regions 1,3,5,10
   - R > 1 with high confidence
2. There is a high risk that hospital and ICU utilization will exceed the IDPH "warning threshold" after mid-November in regions 1,3,10
3. Surge facility planning should be initiated
4. Regional mitigations are not slowing the pandemic and need to be strengthened right away

Hospitals at Risk: Region 1



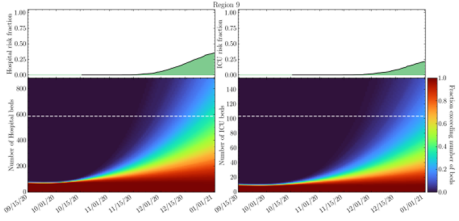
Significant risk of exceeding hospital or ICU COVID availability in the simulation time period

Hospitals at Risk: Region 3



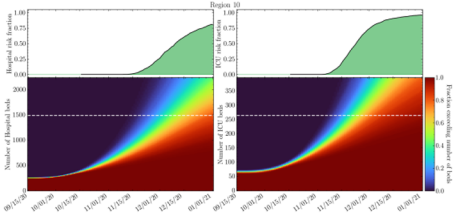
Significant risk of exceeding hospital or ICU COVID availability in the simulation time period

Hospitals at Risk: Region 9



Some risk of exceeding hospital or ICU COVID availability in the simulation time period

Hospitals at Risk: Region 10



Significant risk of exceeding hospital or ICU COVID availability in the simulation time period

Oct 23, 2020

Risk of exceeding hospital and ICU capacity