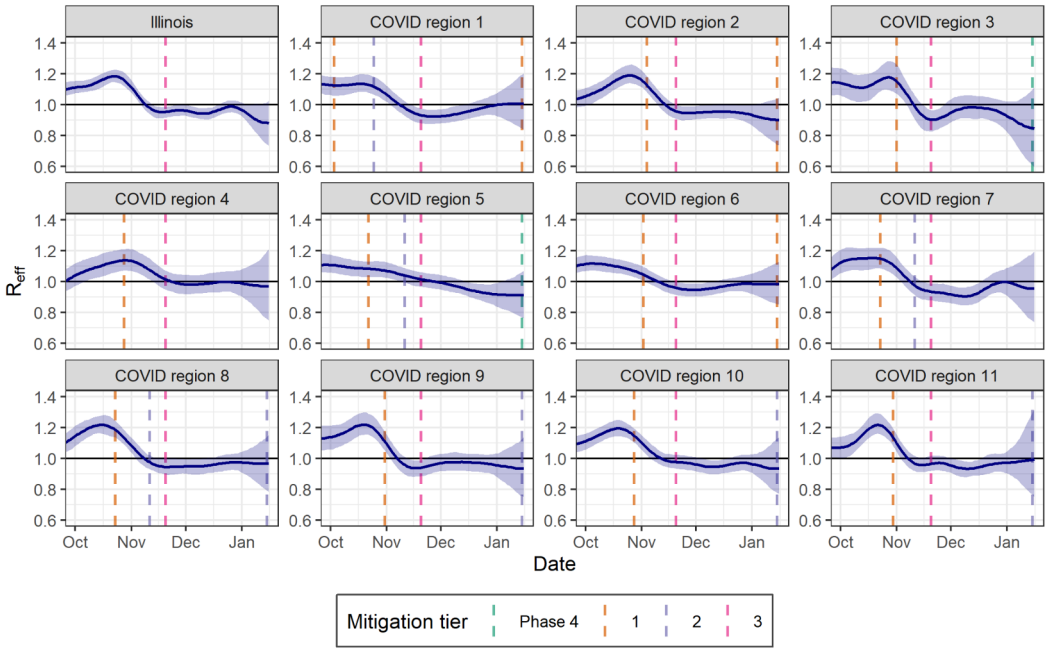
THE UNIVERSITY OF CHICAGO

- In all regions, R_{eff} was at or below 1 as of January 16, indicating that **transmission was steady or declining**. However, the hospital census in regions 4, 6, 7, 8, and 9 suggest recent upticks in transmission.
- If the prevalence of B.1.1.7 increases as projected, **we estimate an additional 1000–1900 deaths will occur by April 1** compared to our baseline scenario. This does not take into account vaccination or additional increases in transmission from relaxing mitigations.
- **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.



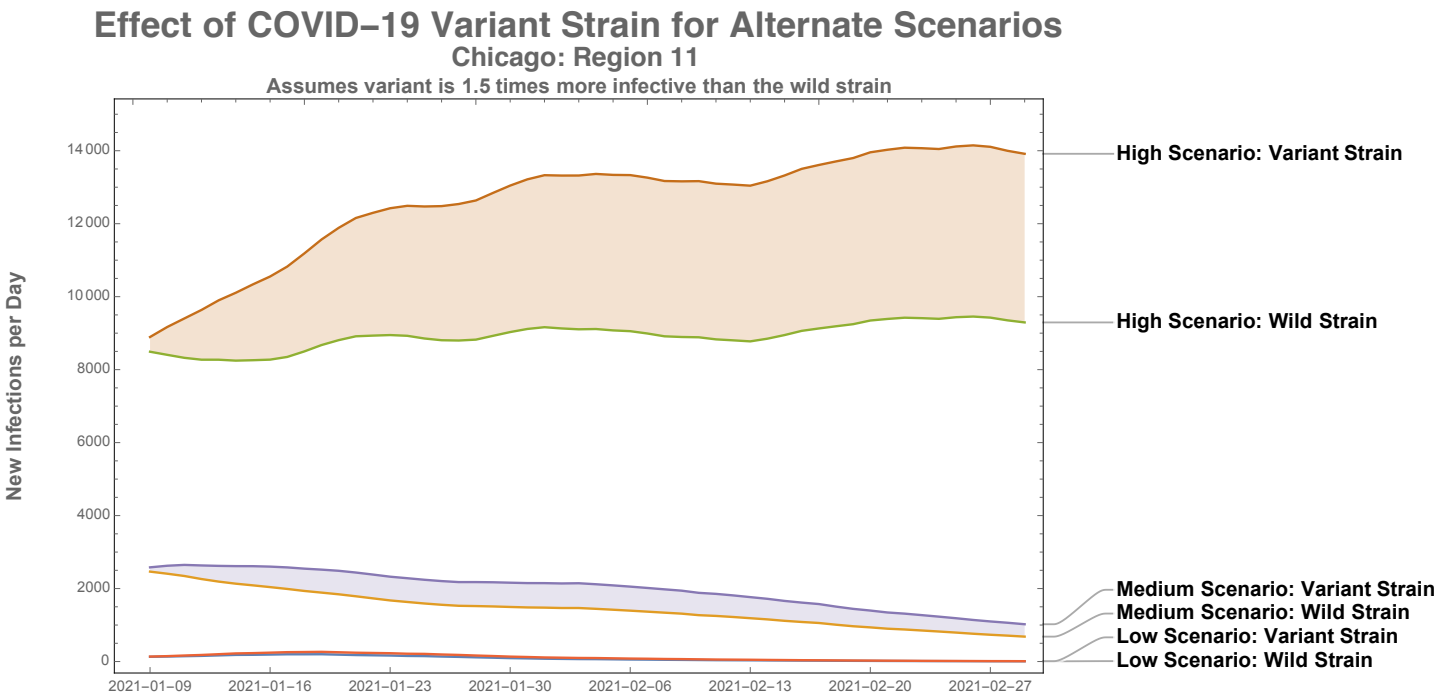
Jan 22, 2021

Northwestern University

- As of January 20, 2021, the epidemic is still contracting in Illinois. We estimate that **R_t is below 1 in all regions**.
- However, the **potential impact of the B.1.1.7 variant is very concerning**. B.1.1.7 has already been found in Illinois and is almost certainly circulating here.
- Even if B.1.1.7 is not more deadly, infecting 50% more people will still cause a **huge rise in deaths and hospitalizations** if unchecked.
- B.1.1.7's higher transmissibility (40-50% higher) means that **current mitigation efforts will not be successful** in containing an epidemic of B.1.1.7.
- To avoid a future lockdown due to insufficiently controlled spread of B.1.1.7, we should:
    - **Vaccinate as fast as possible**. We should aim high and think outside the box to get vaccine in as many arms as possible as quickly as we can. Example goal: have ZERO undistributed doses within a week of each new shipment.
    - Beef up **sentinel surveillance** to give advance warning of rising trends.
    - **Be prepared to go straight back to Tier 3** (or more) if $R_t > 1$ or other signs of concern appear. Improve people's ability to comply with Tier 3 mitigations.
- The actions we would take to manage B.1.1.7 effectively are the same ones we should take to *prevent* fast growth of B.1.1.7 in the first place. But **good prevention will mean we avoid a lot of pain later**.

Jan 22, 2021

What might be the effect of the COVID-19 variant?



Variant Strain Effects

- We are studying the possible effects of the variant under different scenarios
- Scenarios reflect inherent uncertainties in the spread (preliminary results are presented here).
- All scenarios assume:
  - current protective behavior levels and out-of-household activities are maintained, before lifting of restrictions
  - effects of vaccinations are not considered
  - variant spreads from near-zero cases in mid-January and grows exponentially to be dominant strain at 50% more infective than wild strain by March