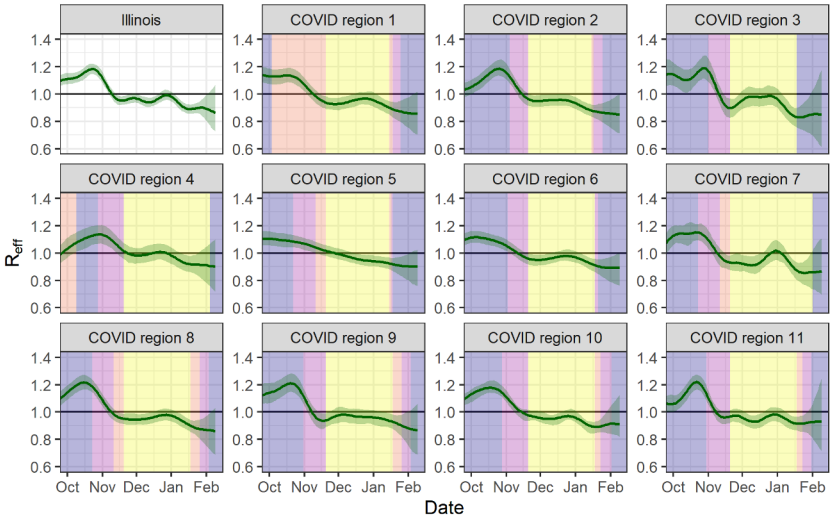
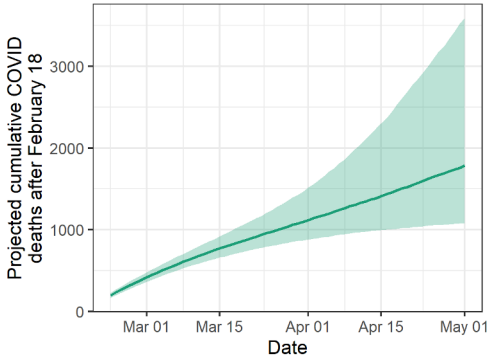
THE UNIVERSITY OF CHICAGO

- In all regions, R_{eff} was at or below 1 as of February 9, indicating that **transmission was steady or declining**. However, more recent hospitalization trends in **region 7** suggest that transmission is increasing.
- We think an **increase in R_{eff} is very possible** due to the transition to Phase 4 and emergence of more transmissible variants. It is unclear how these factors will interact with seasonality.
- We project that 1000–3500 deaths will occur by May 1 if vaccination continues at its current pace, more transmissible variants spread, and any benefits of seasonality are offset by the shift to Phase 4. **Increasing the number of primary doses in the elderly can help blunt the impact of new variants.**

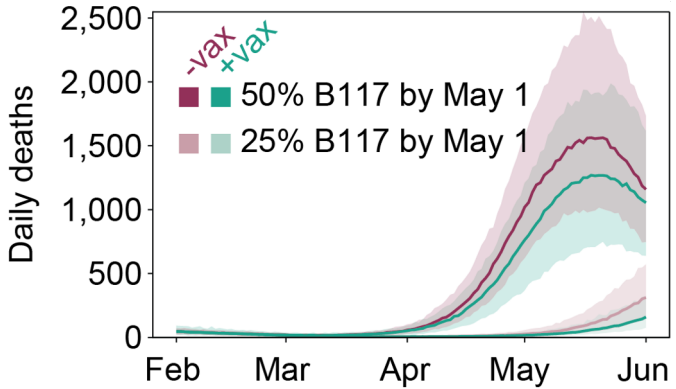


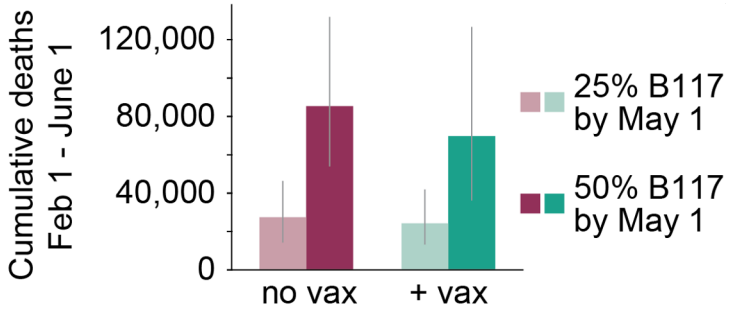


Feb 19, 2021

Northwestern University

- R_t is hovering **just below 1** across IL.
- We modeled hypothetical scenarios with a gradual increase of B.1.1.7, reaching 25% or 50% prevalence on May 1. We used current best estimates that the B.1.1.7 variant has **increased transmissibility (50%)** and **increased hospitalization and lethality (50%).**
- We used current transmission conditions as baseline and no new mitigations were imposed.
- For vaccination, we extrapolated current vaccination rates. The modeled vaccination trajectory had 13% of all Illinoisans with 2 doses by June 1. In this exercise, we did not target vaccination by age group.
- At the modeled vaccination levels, we still predict **enormous numbers of deaths between now and June 1**. Mitigations will be needed to control transmission and avert deaths. **Accelerating vaccine distribution is critical**.
- **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.**



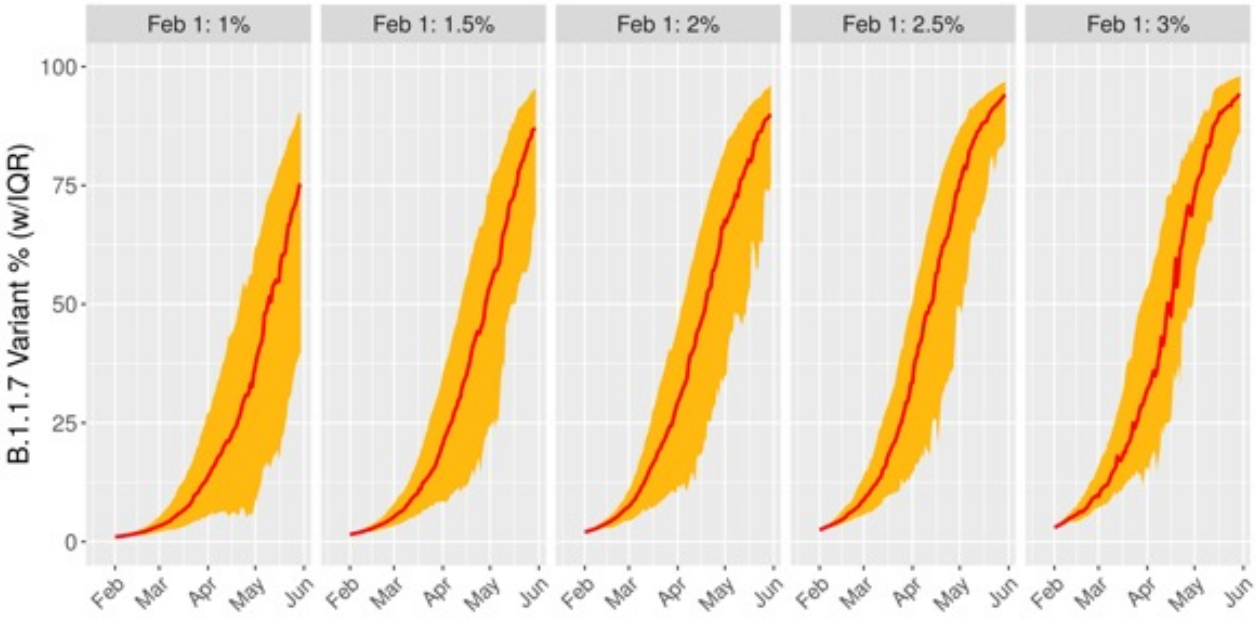


Feb 19, 2021

Prevalence of the Variant in New Infections

Different new infection variant prevalence on Feb 1

Increasing % of new infections due to variant



- With limited estimates about the current new variant prevalence in Chicago, we selected scenarios where this value on Feb 1 ranged from 1% to 3%
- Trends in new infection prevalence are sensitive to this assumption
- Variant is dominant strain (50%) mid-April to mid-May