

WA COVID-19 situation report

Senate Health & Long Term Care Committee
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Presenter

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Institute for Disease Modeling | Global Health | Bill & Melinda Gates Foundation

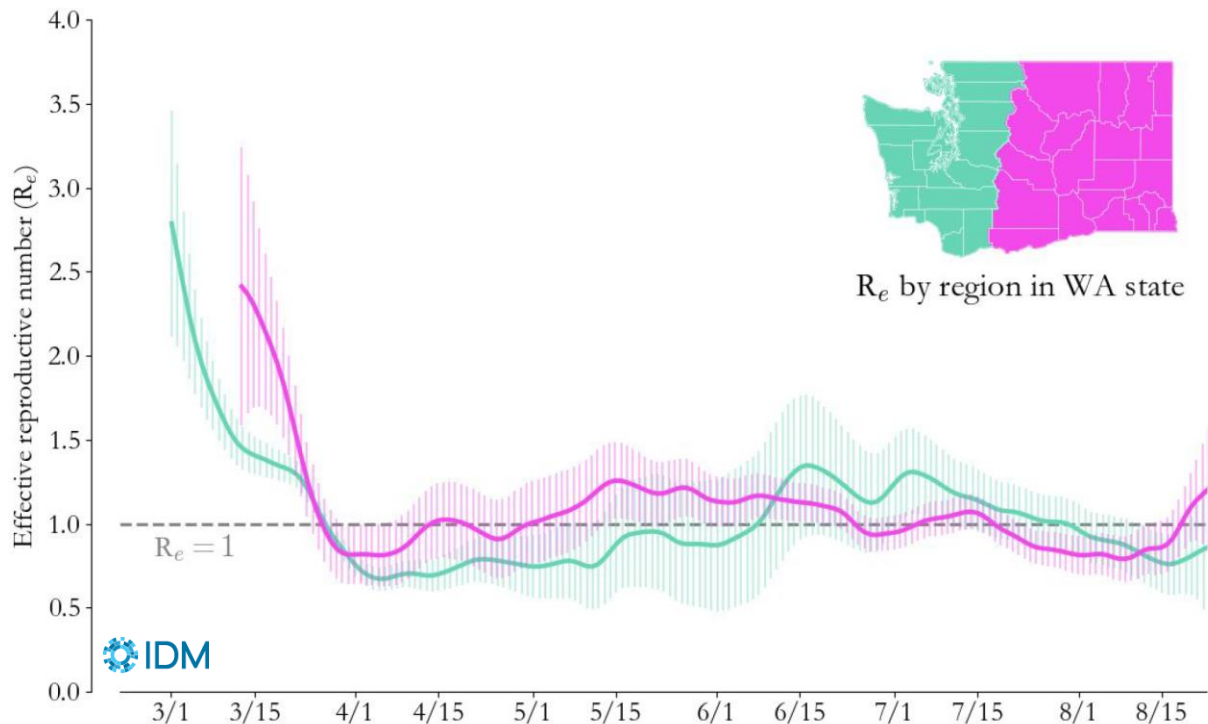
On behalf of

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One of the main things models can provide is **insight into transmission processes** we can't directly measure.



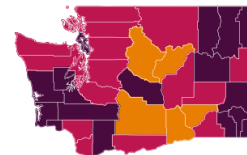
The **effective reproductive number** is one example.

- It's an estimate of, on average, how many people an infected person exposes.
- We base it on the number of tests and the test-positive fraction, accounting for day-to-day changes in the total number of tests.

Cases are mostly declining, but outbreaks are always possible.



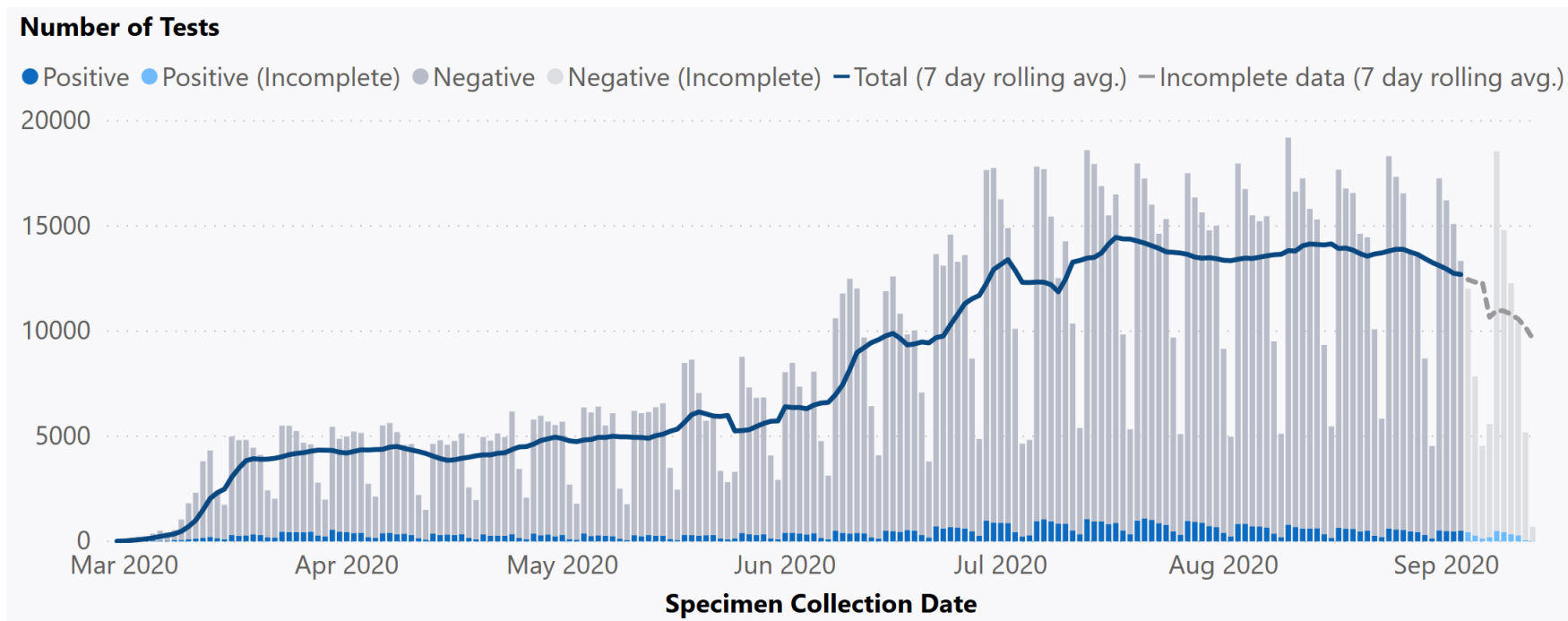
WSU outbreak in Whitman.



Current Safe Start phase
in Washington State

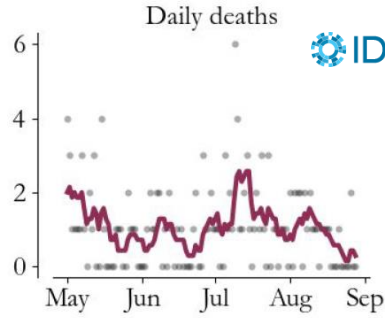
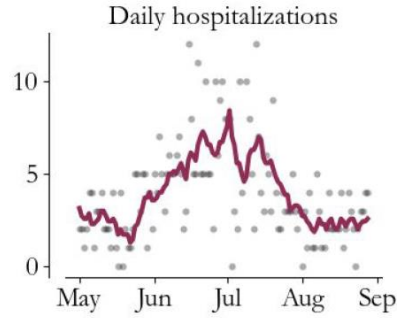
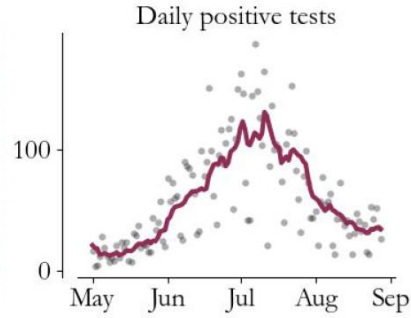
Remember that **testing volume may temporarily decline due to changing behavior** around Labor Day and due to the smoke.

Case trends stable over a few weeks are more informative than the report of the day.



COVID responds to our choices each day. Local variation is the norm.

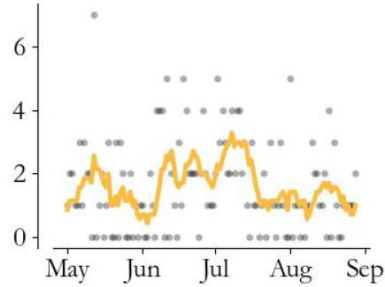
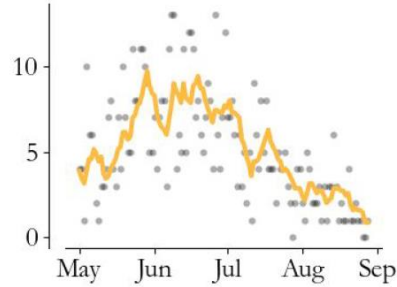
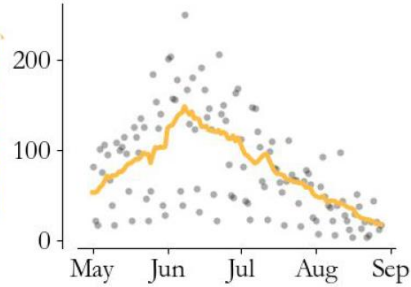
Benton and Franklin



Benton and Franklin

- Cases and hospitalizations pointing to plateau or possible recent increase

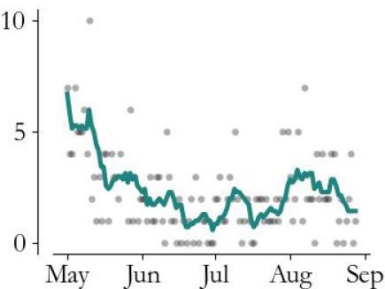
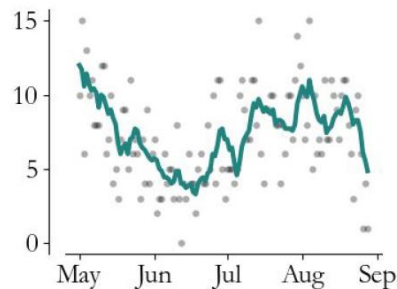
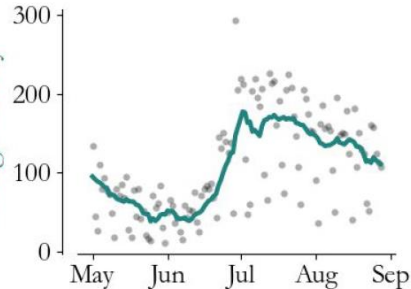
Yakima County



Yakima

- Continues steady decline

King County

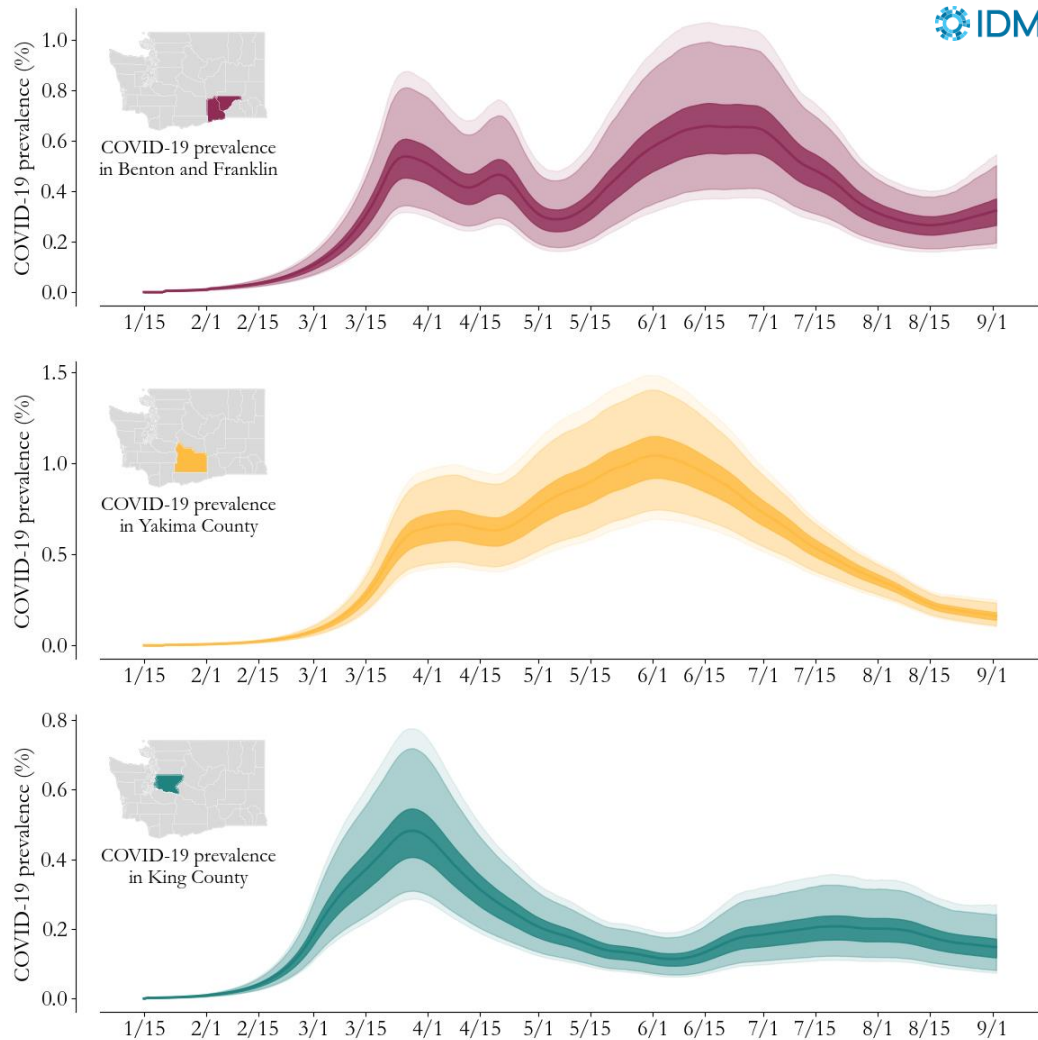


King

- Incidence slowly falling

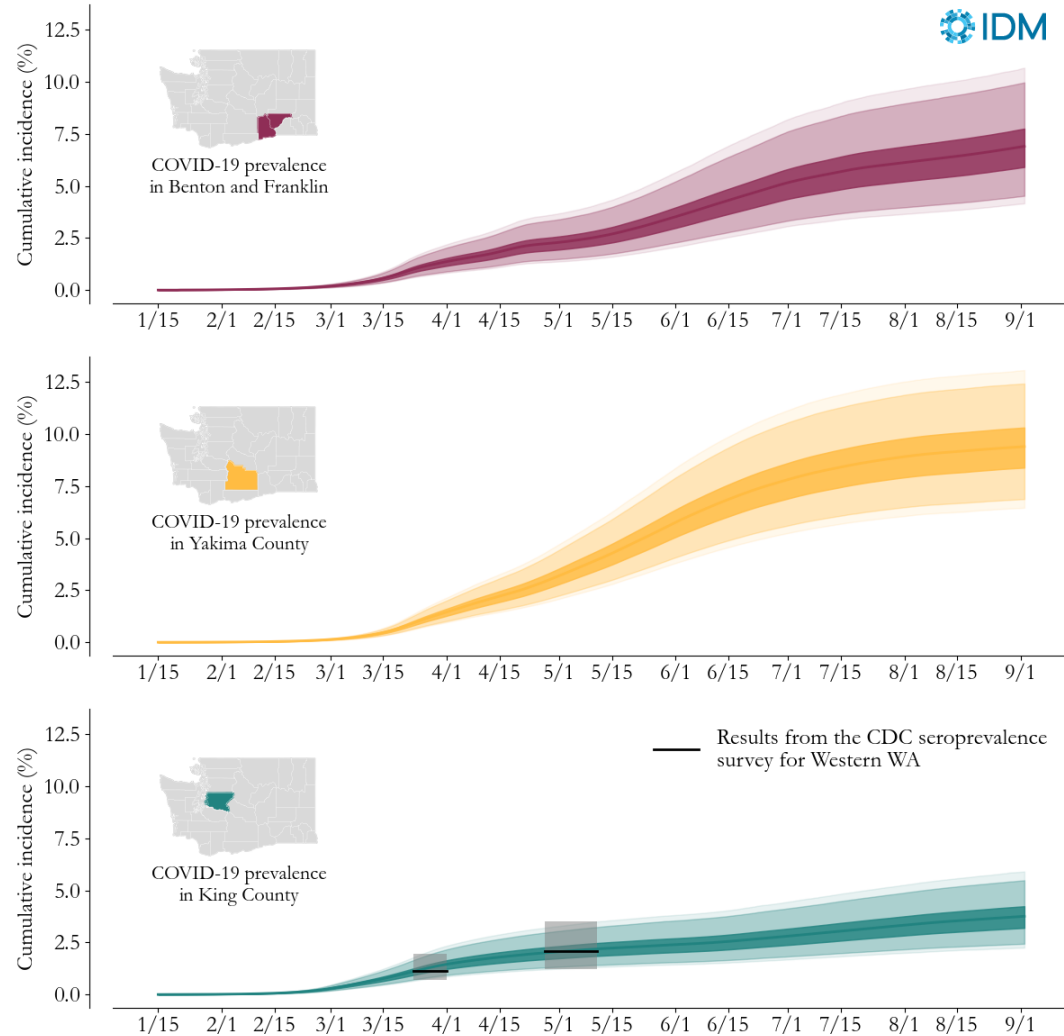
We can use the model to aggregate test, hospitalization, and mortality data into **a picture of all infections.**

- In Benton and Franklin, **we find that prevalence is likely increasing.**
- This is in stark contrast to Yakima, which has had sustained declines.
- Or King with a slow decline since the Phase 1.5 bump.

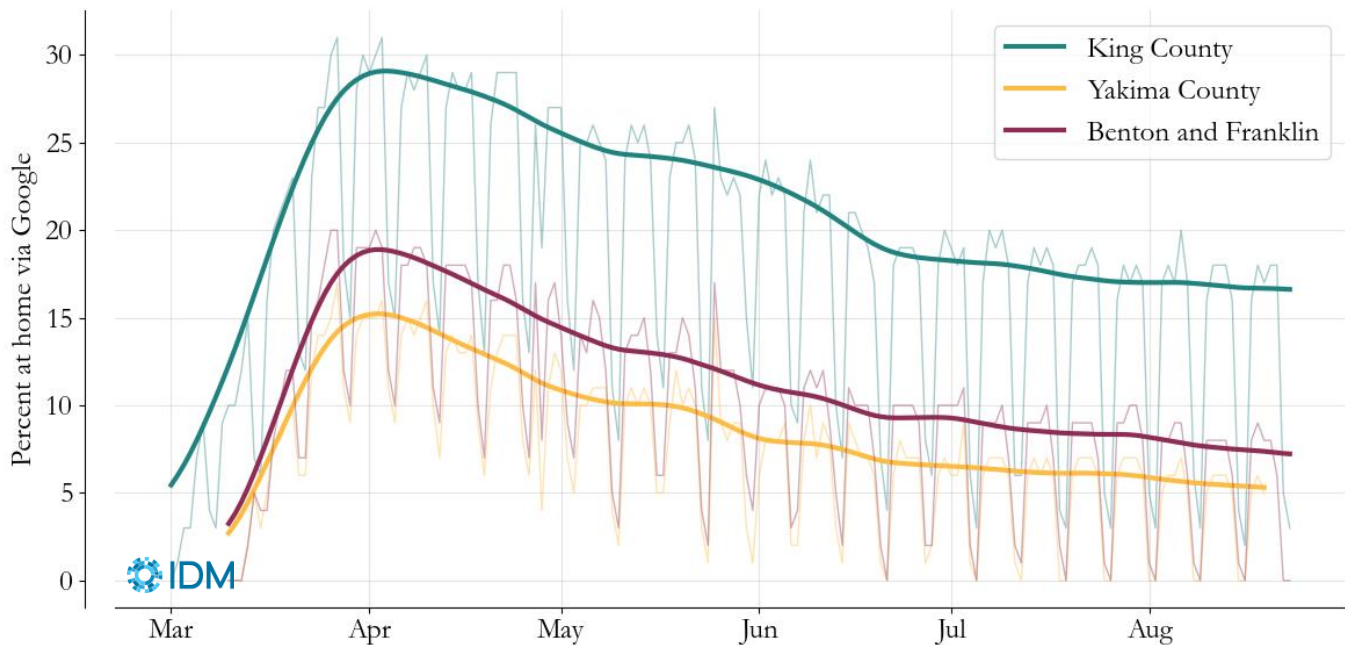


Modeled cumulative incidence estimates how many people have had COVID-19 and how many more remain at risk.

Other than possibly some smaller communities within counties, **nowhere in Washington is close to achieving herd immunity**, even under the most optimistic assumptions.

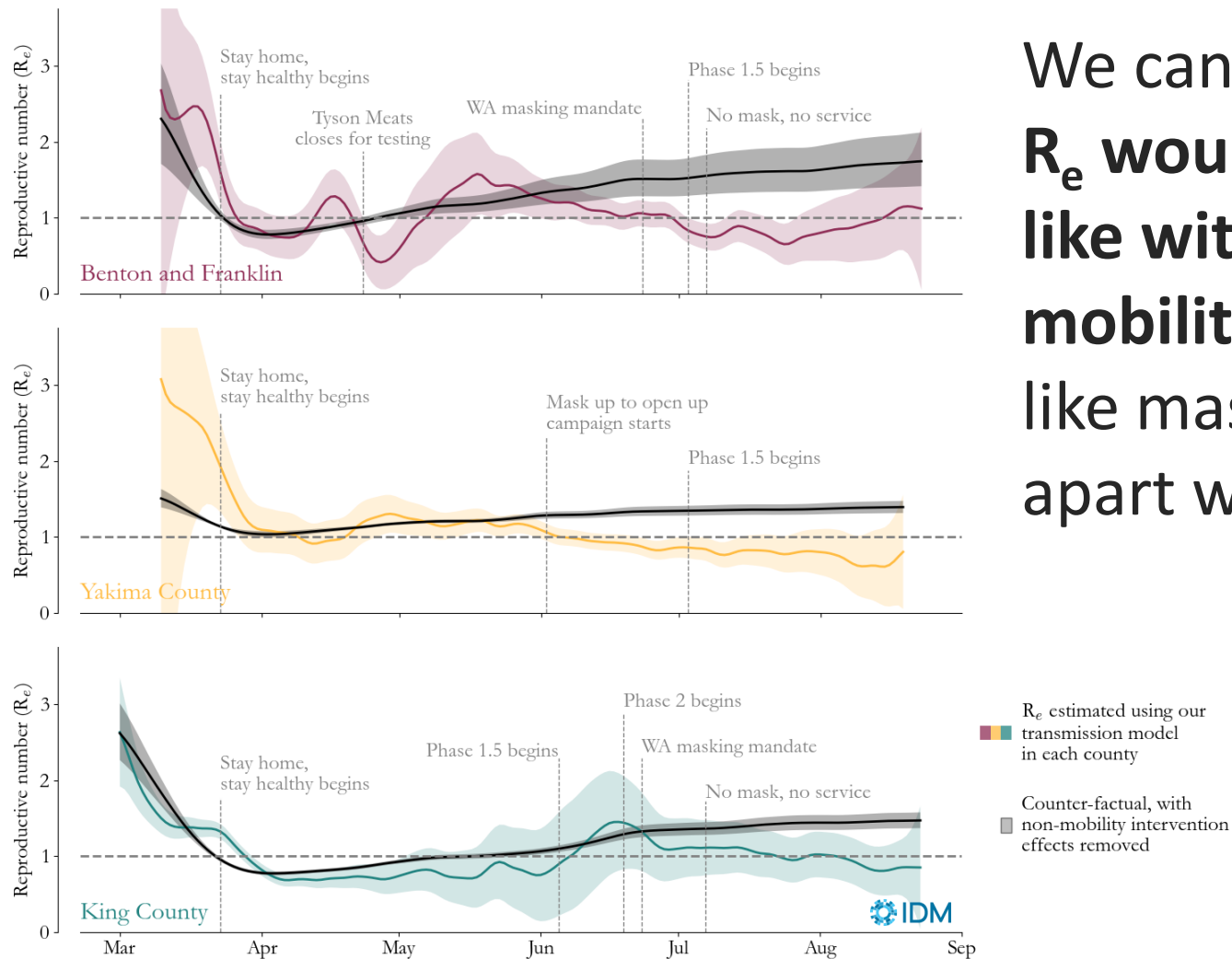


In this week's situation report, we use **mobility data from Google to contextualize our R_e estimates.**



Our goal is to better understand the components of transmission rate reductions, and **to get a richer understanding of how COVID control has changed since March.**

We can estimate **what R_e would have looked like without non-mobility interventions**, like masks and staying apart when out.



Masks, workplace and business risk mitigation, keeping our distance all add together into a large impact on transmission

In King County, if mobility were the whole story, *and ignoring behavioral feedback from disease*, daily mortality would have exceeded early April levels by September.

