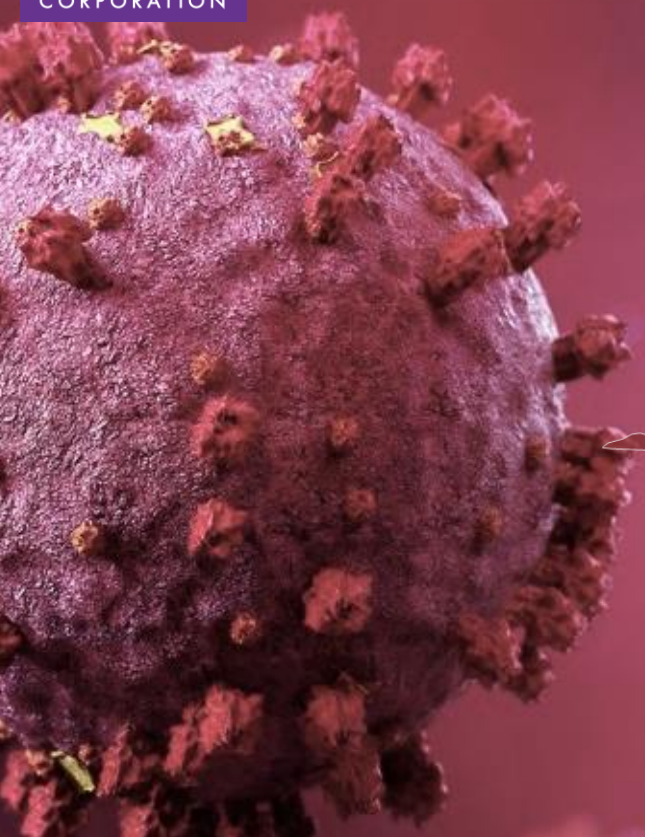
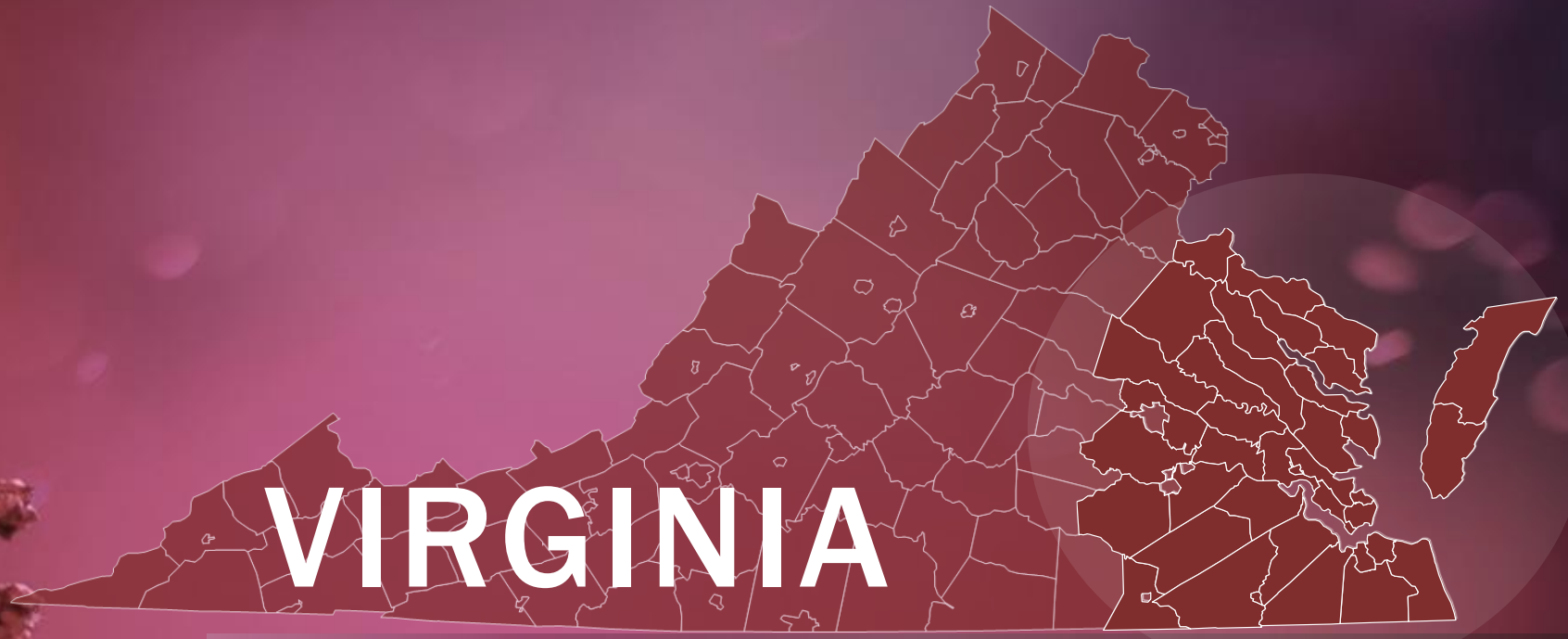




VIRGINIA

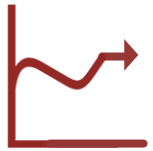
COVID-19 Update August 27th, 2020

Carter C. Price, Ph.D.

A team of RAND researchers was asked by the Commonwealth of Virginia to review available information on COVID-19 models of the commonwealth to determine the strengths and weaknesses of each model and their relevance to decisionmaking. The work of the research team will be documented in a forthcoming RAND research report. The information in this presentation is intended to keep policymakers abreast of the latest findings of the research team.

This research was sponsored by the Commonwealth of Virginia and conducted by the RAND Corporation. RAND is a research organization that develops solutions to public policy challenges to help make communities throughout the world safer and more secure, healthier and more prosperous. RAND is nonprofit, nonpartisan, and committed to the public interest. For more information, visit www.rand.org.

Bottom-Line Up Front



Virginia's total case level has been slowly declining

- However, case rates remain elevated along the border with North Carolina
- Hospitalizations have begun to slowly decline also

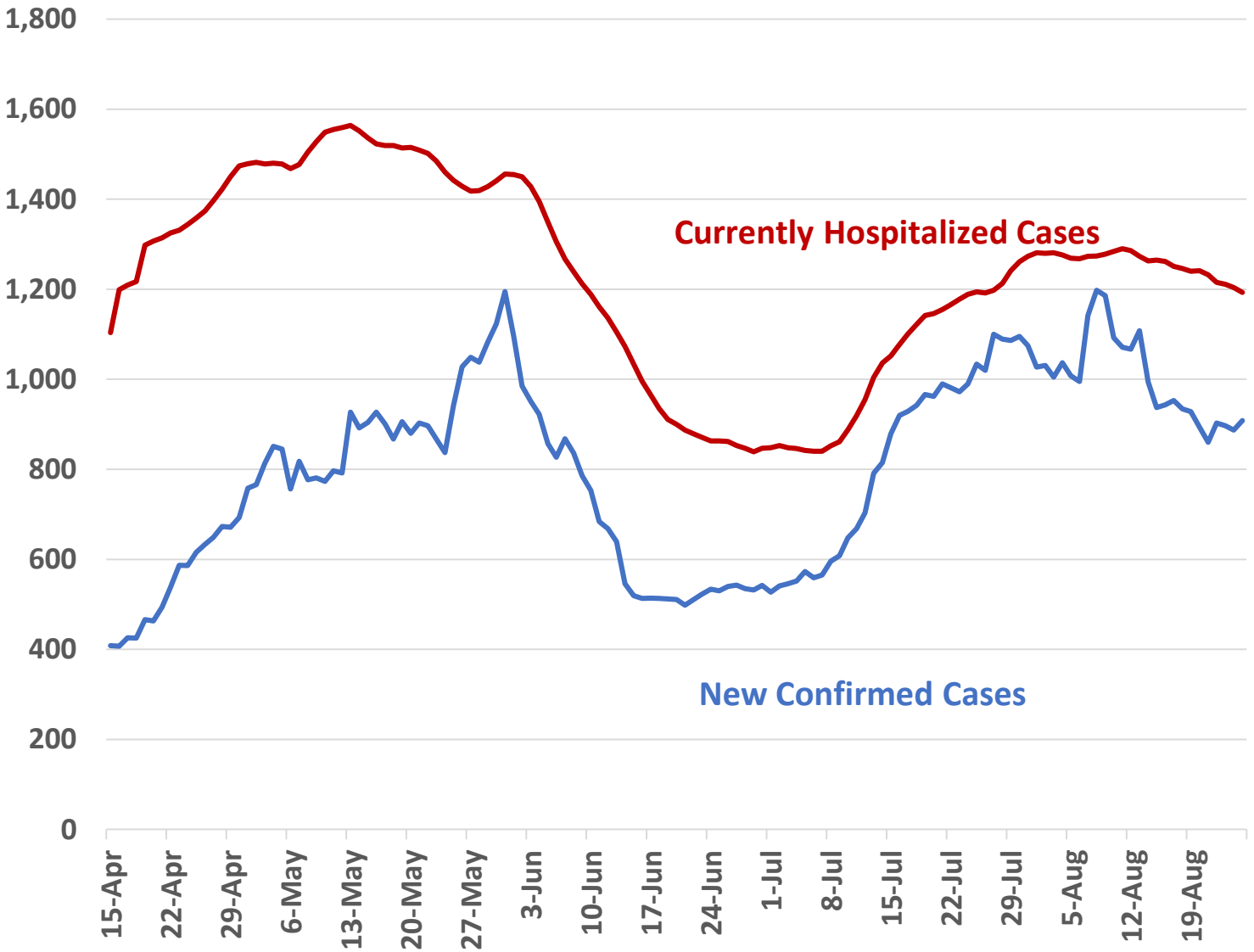
Additional triggers could lead to a rapid rise in the near term

- Seasonal changes
- Distancing fatigue
- In-person school beginning in some places
- Increased interstate travel
- Hurricane season

Modeling is less useful for forecasting because behavioral responses are driving current trends

- However, models will continue to be very useful for comparing policies and exploring scenarios
- In particular, models could be useful for understanding the effects of these triggers

The current trends indicate the latest wave is slowing



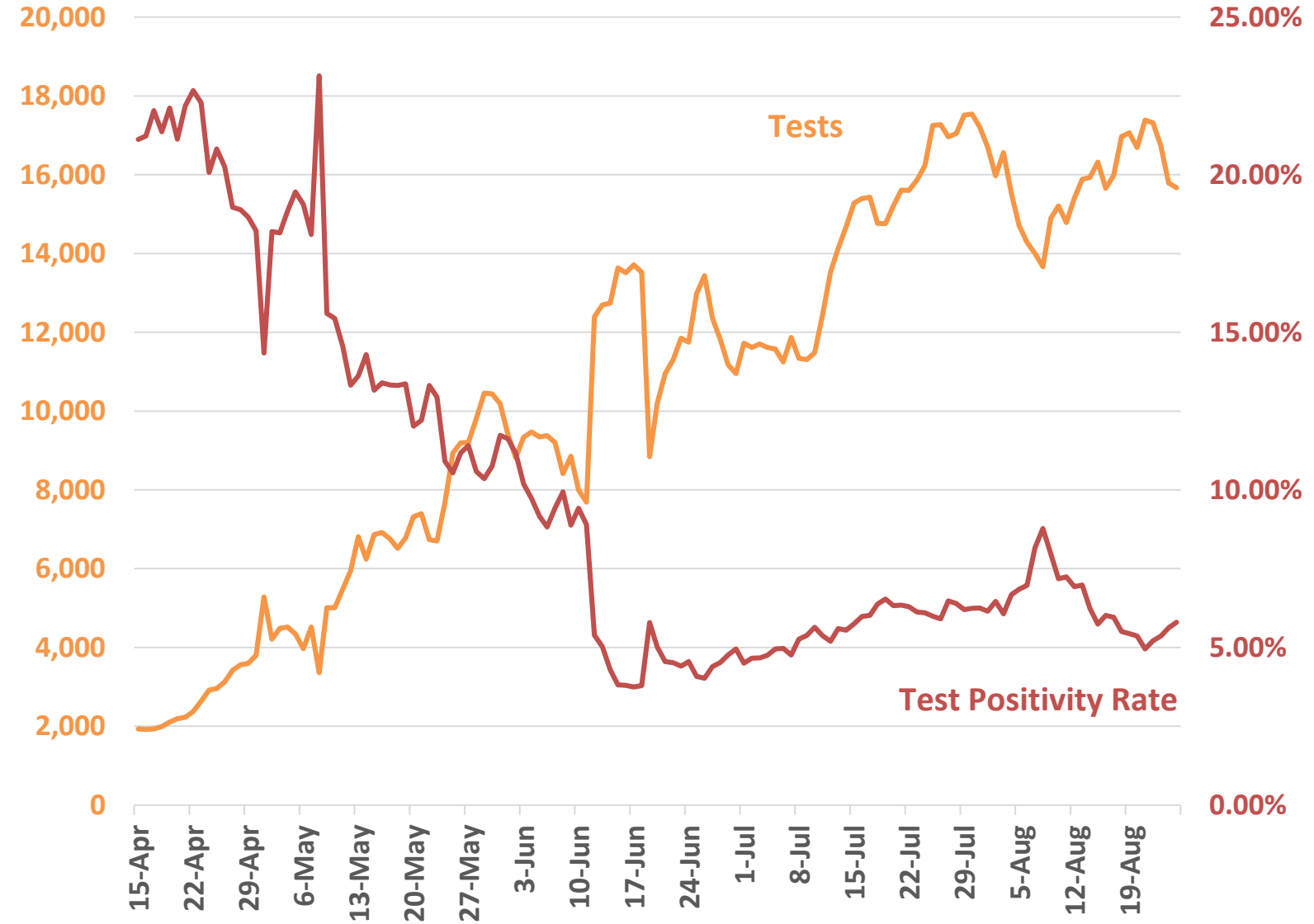
New confirmed cases have started to decline slowly

- New cases are declining at around five percent per week
- Any effects from reopening schools won't likely show up for another few weeks (many have been delayed or are remote for the time being)

Currently hospitalized cases have begun to slowly decline

- This is a lagging indicator and so will likely continue to slowly decline until a significant change in the case trends

Testing levels have remained in an appropriate range for a test-and-trace strategy



Tests per day have ranged around 14,000 to 18,000 for the last month

- Testing levels are appropriate for a test-and-trace strategy
- Further reopening is estimated to require five times more testing along with lower case rates (See Rockefeller Foundation)

The test positivity rate has been between five and six percent for the last two weeks

- Five percent is a suggested target
- This is not a “bright line” but it indicates that testing is slightly too low for the current case rate

Per capita new cases are highest in the southern counties

CASE COUNT

Source: VDH

Yellow indicates at least 20 cases per 100,000

Virginia's southern counties have continued to see high case levels

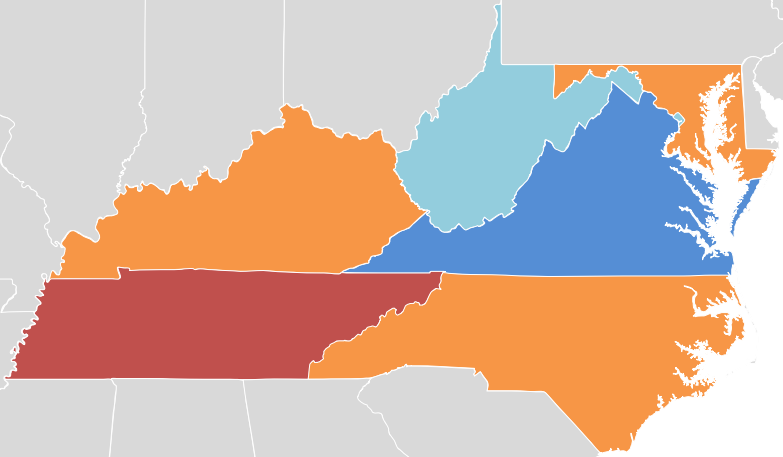
- Some of these counties have had declines

Case counts were flat in most counties compared to last week

These data were updated August 25th and represent a seven-day average of the previous week

Virginia's neighboring states may have passed their second peak

Over the last 7 days, Virginia had 10.4 (-6% from last week) new confirmed cases per day per 100,000



Very high case loads:

Tennessee (21.1 new cases per 100k, -10% from last week)

High case loads:

- North Carolina (14.8, +9%)
- Kentucky (13.5, -3%)
- Maryland (11.1, -10%)

Lower case loads:

- District of Columbia (7.4, -22%)
- West Virginia (6.7, -18%)

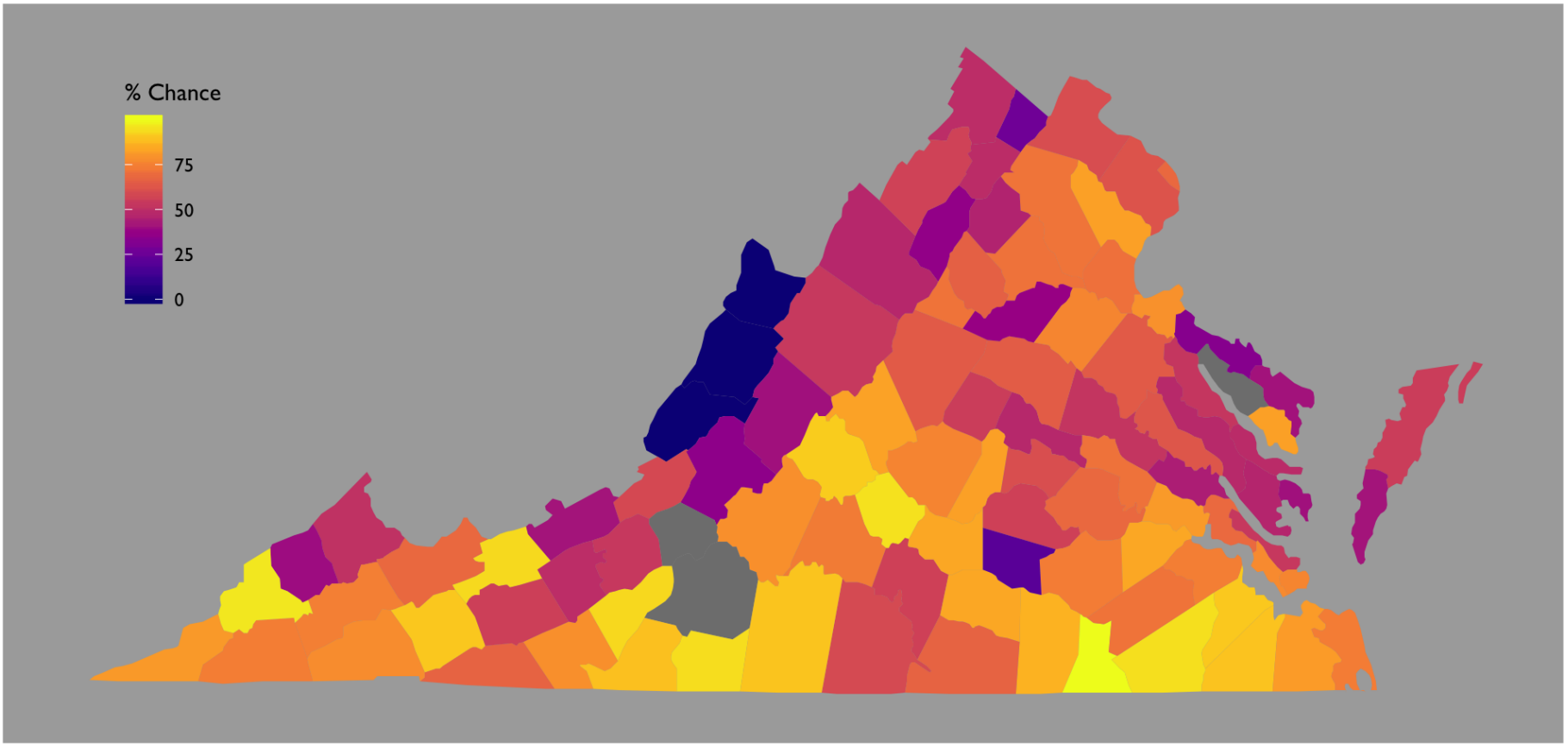
These data were updated August 25th and represent a seven-day average of the previous week

Assessment of the near-term

	Current Hospital Census	Near-term Forecasts
Values:	**Confirmed: 827** **Pending: 347**	**Near-term: Cases estimated to decline 5% next week and remain near that level until late September** **Longer-term: Cases are expected to begin rising again in late September**
Notes:	This has declined since last week	Second peak is estimated to have occurred in the past A third peak is expected to occur sometime after November 1st
Source:	Virginia Hospital and Healthcare Association https://www.vhha.com/communications/virginia-hospital-covid-19-data-dashboard/ Accessed 8/25/2020	Youyang Gu http://covid19-projections.com/us-va Accessed 8/25/2020

Most of Virginia has better than even odds of a COVID-19 case in a school of 500 in the first week of in-person classes

Probability of at least one case in a school of 500



101 of Virginia's counties have more than a 50 percent chance of a COVID-19 case arriving in the first week

- Half of the counties have more than a 68 percent chance

Southern counties have the highest risk

In-school transmission risk will depend on precautions

These estimates are based on an approach similar to that of Fox, et al., using data from VDH and UVA

We've been monitoring recent, relevant literature

Yonker et al., studied 192 suspected cases of COVID in patients aged 0 to 22

- They found viral loads in infected children were significantly higher than those of infected adults
- Despite having lower risk of symptoms, children may still play a major role in spreading COVID
- This is an important consideration as schools consider reopening

Yehia et al., looked at 11,210 COVID cases across 92 hospitals for an association between race and mortality

- They found a higher prevalence of COVID in the Black community
- On average, Black patients were younger, more likely to be women, and more likely to be on Medicaid than White patients
- Controlling for age, sex, insurance, comorbidities, neighborhood deprivation, and site of care, there was no statistically significant difference in mortality rates between Black and White patients

Brooks Holliday et al., examined the ability of vulnerable populations to receive social services in Los Angeles during the pandemic

- Most providers shifted to virtual services via video or telephone for cases
- Many of the clients lack reliable internet access or are not comfortable with technology
- There are increasing and disproportionate impacts that adversely affect equity concerns
- Investments and education are needed to close these gaps

Discussion and Questions