

April 2nd, 2021

KEY TAKEAWAYS

- Case counts in Virginia have plateaued and are now slowly increasing. More counties (13) are having slow growth.
- Vaccination progress continues with 66,882 average daily doses administered this past week.
- The B.1.1.7 variant is becoming the predominant strain in Virginia as predicted and the model projects another peak in late spring or early summer. The timing and size of the peak depend on how well Virginians maintain prevention measures.

17 per 100k
 Average Daily Cases
 Week Ending March 28, 2021

115 per 100k
 Potential Peak Average Daily Cases, Week Ending June 27, 2021 with B117 Variant & Pandemic Fatigue

13 per 100k
 2020 Summer Peak
 Week Ending Aug 2, 2020

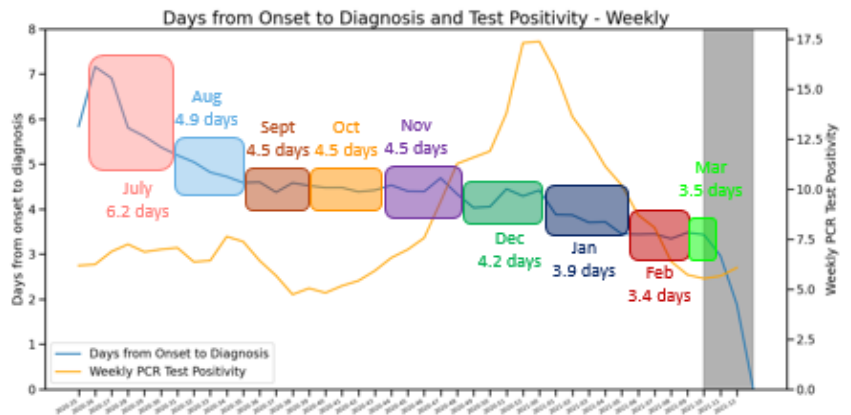
68 per 100k
 Highest Peak Average Daily Cases
 Week Ending Jan 24, 2021

KEY FIGURES

Reproduction Rate (Based on Confirmation Date)

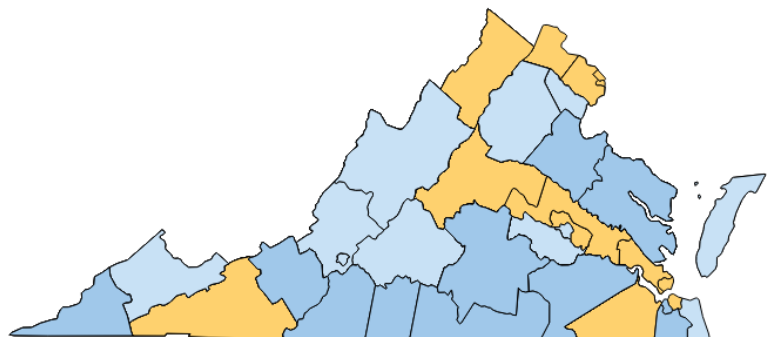
Region	R _e Mar 29	Weekly Change
State-wide	0.994	-0.013
Central	1.037	0.014
Eastern	1.014	-0.030
Far SW	1.122	0.273
Near SW	0.884	-0.021
Northern	1.011	-0.034
Northwest	0.925	-0.115

Case Detection



Growth Trajectories: 0 Health Districts in Surge

Status	# Districts (prev week)
Declining	11 (23)
Plateau	11 (6)
Slow Growth	13 (6)
In Surge	0 (0)



THE MODEL

The UVA COVID-19 Model and the weekly results are provided by the UVA Biocomplexity Institute, which has over 20 years of experience crafting and analyzing infectious disease models. It is a (S)usceptible, (E)xposed, (I)nfectious, (R)ecovered epidemiologic model designed to evaluate policy options and provide projections of future cases based on the current course of the pandemic.

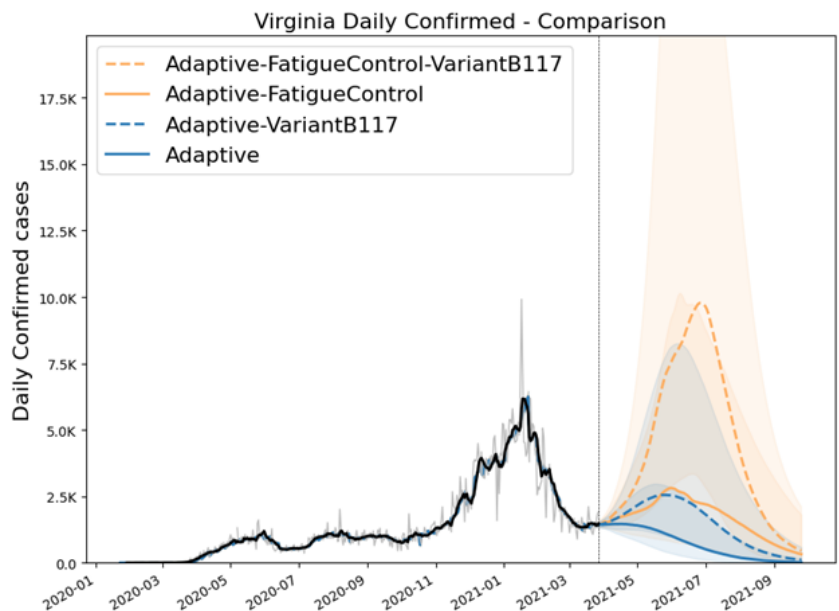
COVID-19 is a novel virus causing a global pandemic and response. The model improves as we learn more about it.

THE PROJECTIONS

The UVA team continues to improve the model weekly. The UVA model uses an "adaptive fitting" methodology, where the model traces past and current trends and uses that information to predict future cases at the local level. The model incorporates projections on the impact of vaccines which will improve over time. Several scenarios are modeled, including counterfactual "no vaccine" scenarios. The model also includes "what-if" or planning scenarios. The "Fatigued Control" scenario identifies the highest transmission rates seen between June and September 2020 and projects those forward. The "VariantB117" scenario projects the potential impact of new variants, including a 50% increase in transmission, with the B.1.1.7 variant becoming dominant by the end of March.

MODEL RESULTS

The model shows a plateau along the current course, but warns of a surge in cases that could occur as variants predominate and cautious behavior relaxes. Under the current course, model scenarios show that cases peaked at **68 average daily cases** per 100,000 residents during the week ending **January 24th**. However, under the Fatigued Control - Variant B.1.1.7 scenario, if Virginians relax their behavior as new variants take hold, cases will reach a new peak with **115 average daily cases** per 100,000 the week ending **June 27th**. To lessen the projected peak, we must give vaccines time to have an impact, especially as the B.1.1.7 variant becomes the predominant strain in Virginia. **Do your part to stop the spread. Continue to practice good prevention and get vaccinated when eligible.**



COVID-19 vaccinations in Virginia are proceeding at an aggressive pace. Unfortunately, case counts are not continuing to decline as vaccination coverage continues to improve. This does not mean that vaccinations are not working, but rather that other factors are in play, including less social distancing and the B.1.1.7 variant.

Vaccination Progress

With 30% of Virginians having received at least one dose of vaccine, including 70% of those 70-79 years of age, more and more people are developing immunity every day. The average number of doses administered over the last 7 days has reached 66,882, a number that did not seem possible just a few months ago. High and increasing coverage levels in the older population have contributed to fewer recent COVID-19 deaths.

Variants are Here

As anticipated, the B.1.1.7 variant has become or is very close to becoming the predominant strain in Virginia and the U.S. Because this variant has a higher growth rate and causes more severe disease, it is blunting the positive impacts of steadily increasing vaccination coverage. As the figure on page 2 shows, the model projects another peak in cases in late spring or early summer – a smaller one if current prevention measures are maintained or a larger one with less social distancing and mask use.

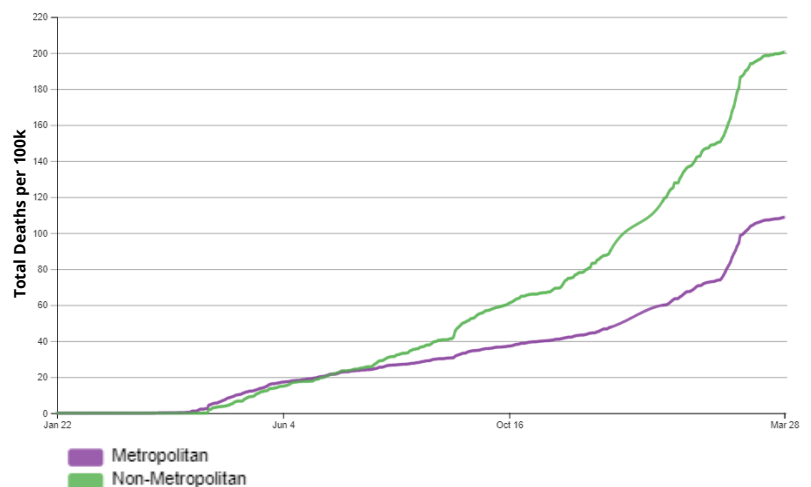
Another variant, B.1.351, which first emerged in South Africa in October 2020, is the second most common variant of concern in Virginia and the U.S. While this variant does not appear to cause more severe disease like B.1.1.7, evidence indicates that one of its spike protein mutations may affect neutralization by some antibodies. Virginia is one of five southeastern states, including Maryland, North Carolina, South Carolina and Georgia, that each have more than 20 cases and together account for 59% of the U.S. cases of this emerging variant that may be able to escape from some current vaccines and therapies.

Additional Disparities Persist

The burden of COVID-19 has not been spread evenly throughout Virginia and the U.S. While much of the focus has appropriately been on racial/ethnic disparities, disparities also exist that are unfavorable to more rural areas and to areas with more people living in poverty. Based on recent CDC data, persons in non-metro counties in Virginia have been 1.8 times more likely to die of COVID-19 than residents of metro area counties. Persons in counties with higher poverty rates have been 1.6 times more likely to die of COVID-19 than those from counties with lower poverty rates.

Despite all the vaccination progress in Virginia, case counts have plateaued and in 13 counties are in slow growth. Both the B.1.1.7 variant and relaxed behavior are likely responsible for this. Social distancing and mask use need to continue until a much greater percentage of Virginians are vaccinated.

COVID-19 Cumulative Death Rate per 100,000 Population in Virginia, by Metro vs. Non-Metro



This figure shows higher COVID-19 death rates among non-metro Virginia counties.