

March 19th, 2021

KEY TAKEAWAYS

- Case rates nationally and in Virginia appear to have plateaued above peaks experienced last summer. Daily case rates in Virginia average 16 per 100k, compared to a peak of 13 per 100k during summer 2020.
- Virginia has surpassed its goal of 50,000 vaccine doses administered per day. Including currently vaccinated, almost 80% of Virginians are either already vaccinated, or will definitely or probably receive a vaccine when available.
- Barring severe disruptions to vaccine rollout or variants escaping vaccines, pandemic fatigue and reduced social distancing and mask usage remain the main threat to extending the pandemic.

68 per 100k

Highest Peak Average Daily Cases
 Week Ending Jan 24, 2021

16 per 100k

Average Daily Cases
 Week Ending March 14, 2021

57 per 100k

Potential Peak Average Daily Cases, Week Ending July 27, 2021 with B117 Variant & Pandemic Fatigue

13 per 100k

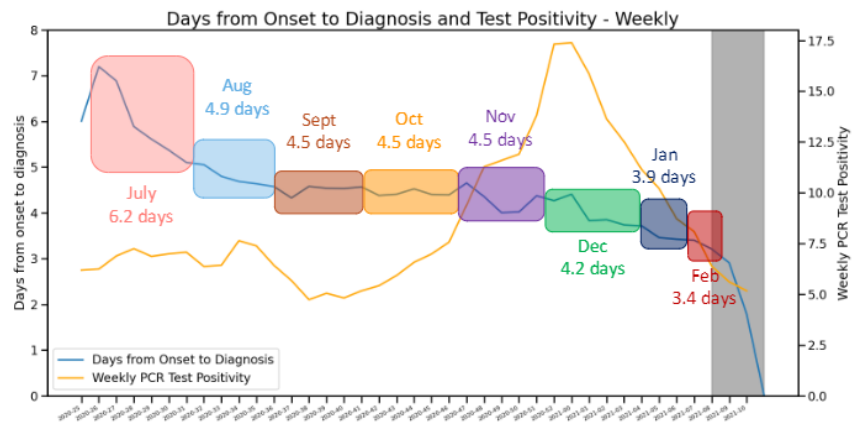
2020 Summer Peak
 Week Ending Aug 2, 2020

KEY FIGURES

Reproduction Rate (Based on Confirmation Date)

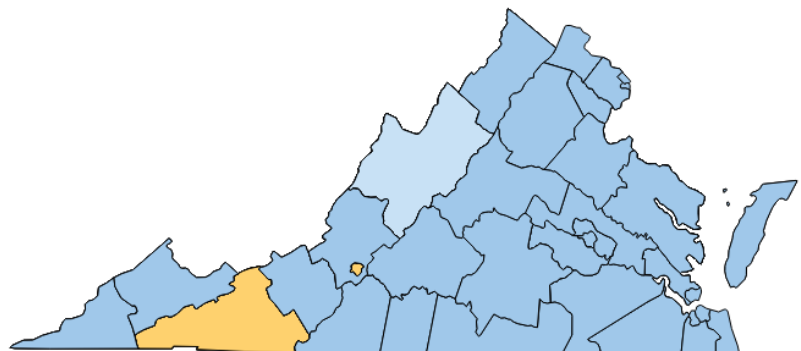
Region	R _e Mar 15	Weekly Change
State-wide	0.955	0.137
Central	0.924	0.091
Eastern	0.989	0.220
Far SW	1.184	0.257
Near SW	0.976	0.171
Northern	0.902	0.060
Northwest	0.983	0.158

Case Detection



Growth Trajectories: 0 Health Districts in Surge

Status	# Districts (prev week)
Declining	31 (29)
Plateau	2 (4)
Slow Growth	2 (2)
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.

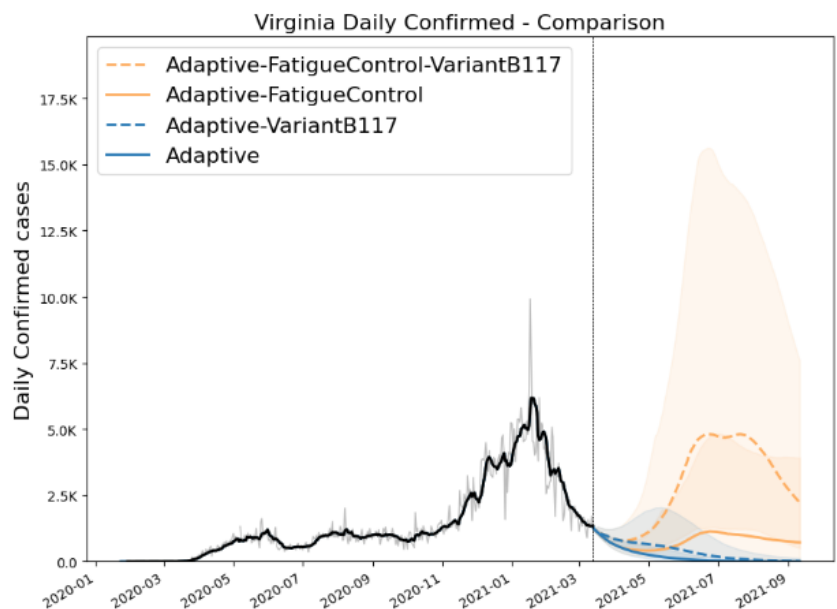
COVID-19 is a novel virus causing a global pandemic and response. The model improves as we learn more about it.

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 in late March.

MODEL RESULTS

The model shows a continued declining trajectory 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 just over 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, the summer could bring another longer peak almost as high as what we saw at the beginning of this year. To avoid another peak, we must give vaccines time to have an impact, especially as new variants become more prevalent across the nation. **Do your part to stop the spread. Continue to practice good prevention and get vaccinated when eligible.**



ECHOES OF MARCH 2020

A little over a year ago, on March 9, 2020 Italy was the first European country to impose a national lockdown in response to surging COVID-19 cases and hospitalizations. In the United States, many public health officials watched the lockdown closely. Would it work to "flatten the curve" or was COVID-19 so contagious that it would take stronger measures, like those seen in China, to tame the virus? Eventually, the lockdown did turn the tide. Across the Atlantic, we learned important lessons from Italy's experience, including the risks associated with unfettered spread of COVID-19 and the importance of prevention measures.

This week, Italy imposed new lockdown measures in many areas of the country. New daily cases in Italy have almost doubled since early March. Prime Minister Mario Draghi warned that Variants of Concern (VoCs) are driving the surge, while a rocky vaccine rollout has failed to stem the tide. The vaccine rollout has been smoother in the United States and Virginia. Nevertheless, case rates remain higher than peaks seen last summer and VoCs are present in Virginia and all US states. Italy provides a warning of the threat posed by new variants. It is up to us to determine whether history repeats itself, or merely rhymes.

Giving Vaccines Time to Work

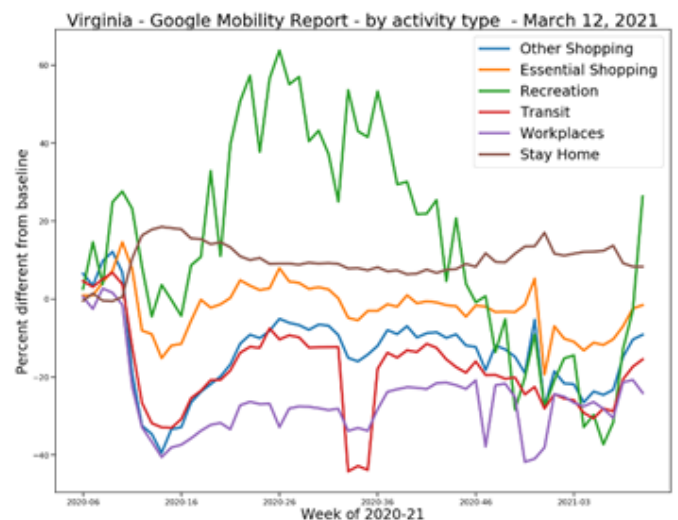
While the details of projections have changed, the results of the UVA COVID-19 model have been clear since February: prevention measures like social distancing, wearing masks, and hand washing give time for vaccines to work. This holds true even if VoCs like the B.1.1.7 variant, first identified in the United Kingdom, become dominant. If Virginians maintain their vigilance, the model projects case numbers will continue to decline even if the B.1.1.7 variant becomes dominant. By contrast, lax prevention causes cases to increase even without VoCs, with cases remaining near summer 2020 rates through August. With VoCs, cases may approach the peaks seen in January, and the pandemic may be extended well into the fall. As discussed last week vaccines do have an impact, but they need time to work.

How It's Going

Prevention remains as important as ever. However, signs are increasing that vigilance may be waning. Private cell phone data show that more people are returning to work, using transit, dining out, or engaging in non-essential shopping than over the winter months. Some states are also beginning to ease public health restrictions. Texas and Mississippi have ended all restrictions, including mask mandates in public facilities. Despite lifting restrictions, officials have emphasized the importance of individuals continuing to maintain prevention measures.

An Inflection Point?

In most states new daily cases have plateaued between 10 and 20 cases per 100,000 residents. In Virginia, cases have plateaued at about 16 per 100,000 residents. While these rates are much lower than highs approaching 70 cases per 100,000 residents this fall, they are still above the peaks seen during summer 2020. The situation in Italy provides a stark warning of what new variants can do if vaccines are not given time to work. Whether the current situation is a pause or an inflection point is up to us. Do your part to stop the spread. Continue to practice good prevention and get vaccinated when eligible.



Mobility data from Google and other private entities show increased activity over the past few weeks. Low activity over the late winter months coincided with unanticipated decreases in case rates. Renewed activity has coincided with plateaus in case rates.