

February 26, 2021

KEY TAKEAWAYS

- While still high, cases, hospitalizations, and deaths in Virginia continue to decline from the recent peak.
- Despite this, recent spikes among some college and university students raise red flags. The B.1.1.7 variant was identified on UVA campus during the surge there.
- Continued vigilance and declining case rates are necessary to ensure new variants do not cause a summer surge in cases.

68 per 100k

Peak Average Daily Cases
 Week Ending Jan 24, 2021

29 per 100k

Average Daily Cases
 Week Ending Feb 21, 2021

97 per 100k

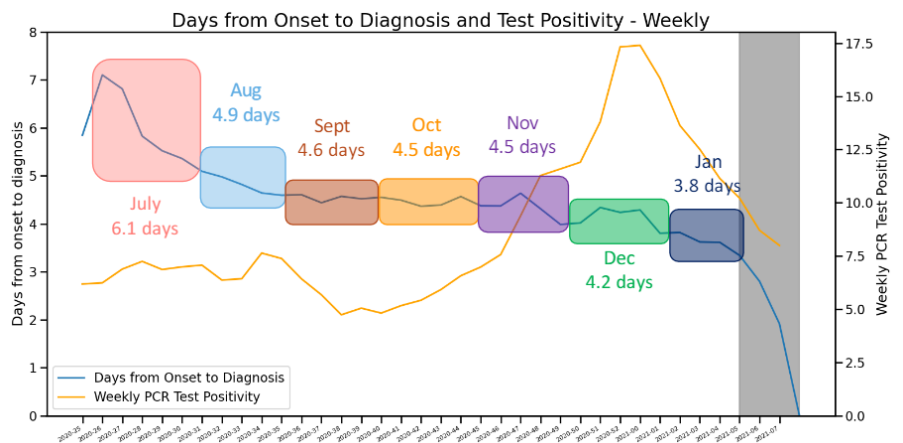
Potential Peak Average Daily Cases,
 Week Ending June 20, 2021 with New Variants &
 Pandemic Fatigue

KEY FIGURES

Reproduction Rate (Based on Confirmation Date)

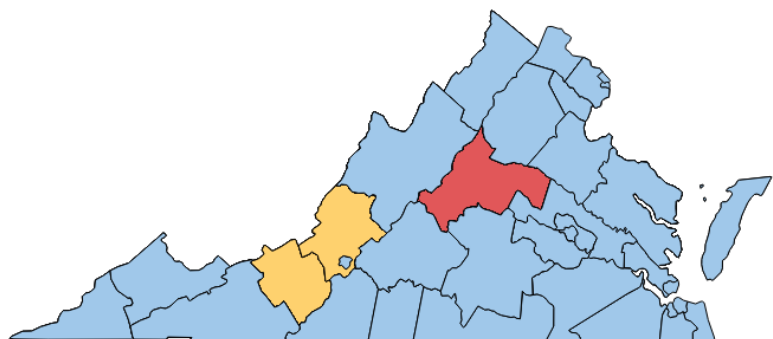
Region	R _e Feb 22	Weekly Change
State-wide	0.721	-0.157
Central	0.619	-0.332
Eastern	0.777	-0.049
Far SW	0.610	-0.142
Near SW	0.806	-0.092
Northern	0.643	-0.232
Northwest	0.972	0.089

Case Detection



Growth Trajectories: 1 Health District in Surge

Status	# Districts (prev week)
Declining	32 (30)
Plateau	0 (1)
Slow Growth	2 (4)
In Surge	1 (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.

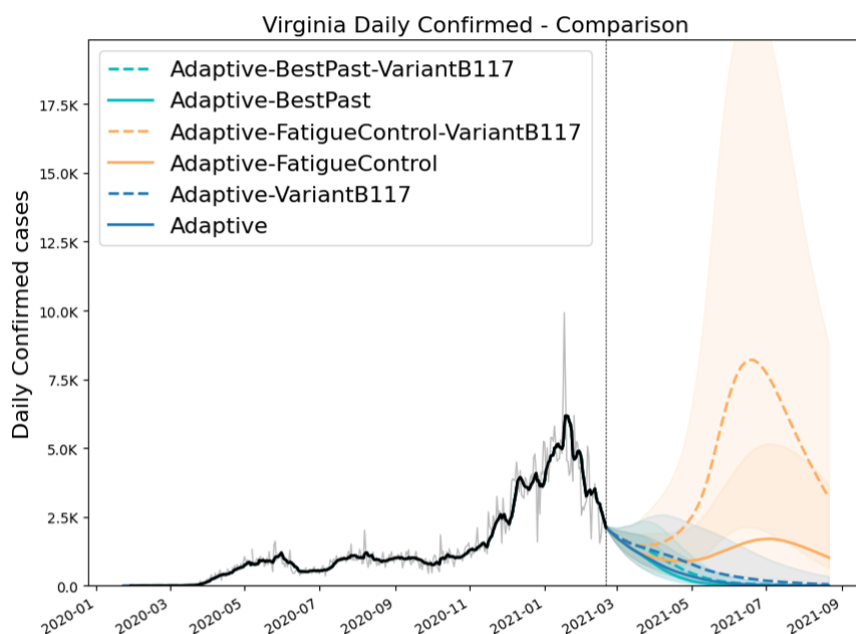
COVID-19 is a novel virus causing a global pandemic and response. The model improves as we learn more about it.

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 three "what-if" or planning scenarios. The "Best Past Control" scenario projects what may occur if localities match the lowest rates of transmission seen earlier in the summer. This scenario also includes an optimistic vaccine rollout scenario, meeting public targets. The "Fatigued Control" scenario does the opposite, projecting the highest transmission rates forward and using a pessimistic vaccine rollout scenario. The "New Variants" scenario projects the potential impact of new variants, including a 40% increase in transmission, with the B.1.1.7 variant becoming dominant in late March.

MODEL RESULTS

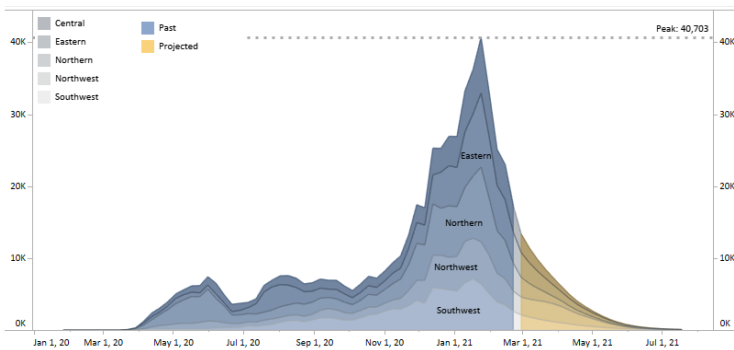
The model results are encouraging again this week. Most model scenarios show that weekly cases have already peaked at just over 68 average daily cases per 100,000 residents during the week ending January 24th. However, if Virginians relax their behavior as new variants take hold, we could face another larger peak in the summer. Under the Fatigued Control, Variant B.1.1.7 scenario, cases would reach 97 average daily cases per 100,000 the week ending June 20th. 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.**



SHIFTING WINDS

Last week the US surpassed half a million deaths from COVID-19. It is a shocking milestone, especially when noting it accounts for over 20 percent of global deaths according to data presented by [John Hopkins University](#). Nevertheless, it comes at a time when COVID-19 cases are down significantly from winter peaks, and declining or plateauing in all states. Despite some weather disruptions last week, vaccine distribution has been rising steadily. Spring is also around the corner. Warmer weather brings open windows and outdoor activities, both of which can reduce COVID spread. Variants and pandemic fatigue remain substantial concerns.

Virginia



New COVID-19 cases in Virginia are declining as quickly as they rose over the holidays. However, pandemic fatigue and new variants pose a substantial risk. For this scenario to play out we all need to do our part to stop the spread.

Red Flags

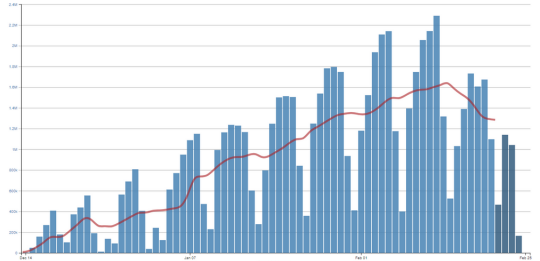
While the news is good in most of the state, several colleges and universities are experiencing outbreaks. Half of the top ten [hot spots](#) are in zip codes associated with colleges and universities, including zip codes in Charlottesville, Richmond, Lexington and Blacksburg. Some spikes were [associated](#) with students returning to campus. However, officials at the University of Virginia [cite](#) widespread noncompliance with safety protocols as the cause of increasing cases there, while high case numbers persist on other campuses. Blue Ridge Health District, which includes Charlottesville, is in a surge trajectory this week, while New River, encompassing Blacksburg, is in slow growth. Alleghany Health District is also in slow growth.

A Forewarning

These campus outbreaks provide a warning. Even without new variants entering the picture, the model suggests that pandemic fatigue could result in another surge over the summer, extending the pandemic into the fall. Although lower than the winter peak, the model suggests this peak could be higher than peaks seen during last summer's surges. If new variants are added to this mix, the summer surge could top the peak Virginia experienced in January.

The projected peak of the "Fatigue Control-Variant B.1.1.7" scenario is much higher this week than last. This is because the new variants in the model accelerate transmission rates. If case declines are rapid new variants may slow those declines down a bit, but not stop it. However, this same effect can push plateaus into growth, and growth into surges. When coupled with relaxed prevention, the model suggests even small increases can lead to large projected surges. Unfortunately, the B.1.1.7 variant [was identified](#) on the UVA campus. Virginia's health is in our hands. Do [your part](#) to stop the spread.

Total Vaccine Doses Administered in the US



Strong winter storms disrupted vaccine events and shipments last week but the upward trend is clear. As the weather clears vaccine rates are expected to resume this promising trend. [CDC](#).

Despite some red flags, cases in Virginia continue to decline in most areas. As in the rest of the nation, winter weather disrupted Virginia's vaccination efforts. Vaccination rates should rebound next week. If these trends continue, the model suggests Virginia has already seen its peak of new COVID-19 cases. If all goes well, Virginia could see case counts decline to levels not seen since last June. The new variant, the model suggests, may only delay this by a few weeks. Noting improvements in key metrics and vaccination rates, Governor Northam [eased some public health restrictions](#) on Wednesday. However, the course of this pandemic continues to shift rapidly. For this scenario to play out we all need to do our part to stop the spread.