May 6th, 2022

KEY TAKEAWAYS

- 28 of Virginia's 35 Health Districts are now in growth trajectories, including 11 in surge. Case growth is widespread in Virginia.

- Nationally, 10 states and the District of Columbia are in growth trajectories, mostly in the Northeast.

- Omicron variants BA.2 and BA.2.12.1 now account for almost all sequenced cases in Virginia and nationally. The CDC estimates that BA.2.12.1 is now responsible for about 40% of new cases in Virginia.

- BA.2 is more transmissible than the original Omicron variant (BA.1), and BA.2.12.1 is even more transmissible than BA.2. Due to this growth advantage, we expect BA.2.12.1 to become the dominant variant in the coming weeks.

- Vaccination is effective at preventing severe disease and death caused by these Omicron variants. It reduces, but does not eliminate, the risk of infection and transmission.

18.8 per 100k
*Average Daily Cases
Week Ending May 2nd, 2022*

(187 per 100k)
*Adaptive Scenario
Forecast Average Daily
Cases, **Already Peaked**
on January 16th, 2022*

824 / 971
*Average Daily 1st / 2nd Doses
May 1st, 2022*

1,619 / 5,395
*Average 1st / 2nd Boosters
May 1st, 2022*

(Vaccine estimates are preliminary)

KEY FIGURES

Reproduction Rate
(Based on Confirmation Date)

| Region	R_e May 2nd	Weekly Change
Statewide	**1.024**	**-0.020**
Central	1.020	0.064
Eastern	1.108	0.050
Far SW	0.832	-0.149
Near SW	0.991	-0.152
Northern	1.051	0.029
Northwest	0.839	-0.293

Vaccine Administrations
Note: This week's vaccination estimates are preliminary and subject to change.

Daily COVID-19 Vaccine Administration by Dose Number

—Dose 1 —Dose 2 —First Booster —Second Booster
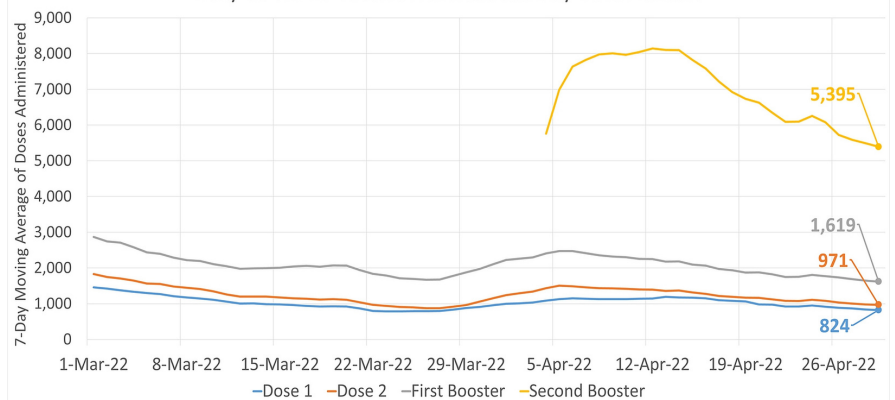
Growth Trajectories: 11 Health Districts in Surge

Status	# Districts (prev week)
Declining	5 (10)
Plateau	2 (7)
Slow Growth	17 (16)
In Surge	11 (2)

Legend:
Declining
Plateau
Slow Growth
In Surge
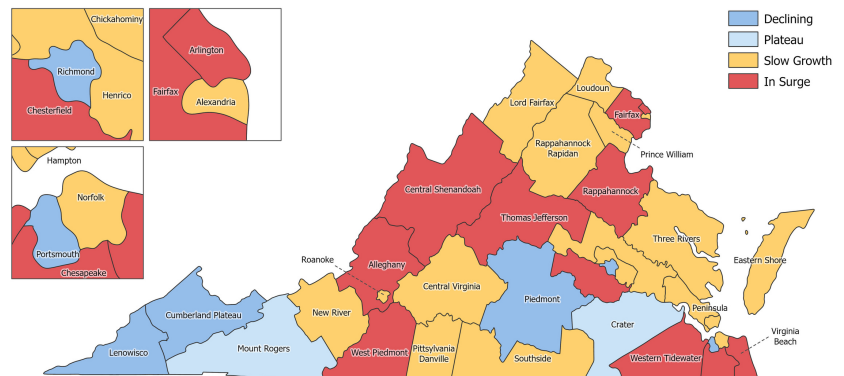
THE MODEL

The UVA COVID-19 Model and 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 health district-level **S**usceptible, **E**xposed, **I**nfected, **R**ecovered (SEIR) model designed to evaluate policy options and provide projections of future cases based on the current course of the pandemic. The Institute is also able to model alternative scenarios to estimate the impact of changing health behaviors and state policy.

COVID-19 is a novel virus, and the variant mix changes periodically. These models improve as we learn more.

THE SCENARIOS

Unchanged: The models use various scenarios to explore the path the pandemic is likely to take under differing conditions. The CDC estimates that the Omicron variant and its subvariants represent >99% of all new cases in Virginia. As such, current scenarios are based on the immune escape and transmission profiles of these variants. As before, models use COVIDcast surveys to estimate county-level vaccine acceptance levels. They then assume that vaccinations increase in each county until they reach this value. Afterwards, we assume that 40% of vaccinated individuals will receive a booster at the same rate.

As always, the "**Adaptive**" scenario represents the current course of the pandemic. It assumes that there will be no major changes in interventions or transmissibility. It also does not track changes in seasonal forcing, variant proportions, or public vigilance. Rather, it is a basic projection of current trends. The "**Adaptive-VariantBA2**" scenario adjusts for the Omicron BA.2 subvariant's enhanced transmissibility. It assumes that BA.2 will reach 95% prevalence by May. It also assumes that BA.2 is 30% more infectious than BA.1. The new "**Adaptive-VariantBA2_12**" scenario adjusts for the BA.2.12.1 subvariant's even greater transmissibility. It assumes BA.2.12.1 becomes dominant by June and reaches 95% prevalence by July. It also assumes that BA.2.12.1 is 30% more infectious than BA.2. The new "**Adaptive-VariantBA2_12-IncreasedControl**" scenario adds increased mitigation strategies and seasonality to the "Adaptive-VariantBA2_12" scenario. These include increased home testing, masking, and self-isolation when sick. This scenario is meant to model the potential public response to a new summer surge. It assumes that these interventions will have a 25% reduction in community transmission and start in June.

MODEL RESULTS

Unchanged: The current course "**Adaptive**" scenario is shown in blue. It projects a slow but steady rise, reaching 20,000 weekly cases by June and peaking at 38,000 weekly cases in mid-July.

The "**Adaptive-VariantBA2**" scenario (orange) shows a slightly faster and larger surge. It peaks at 44,000 weekly cases in early July.

The "**Adaptive-VariantBA2_12**" scenario, shown in red, projects a large surge. It reaches 40,000 weekly cases by June and peaks at nearly 77,000 in the first week of July. The new "**Adaptive-VariantBA2_12-IncreasedControl**" scenario is shown in green. It is identical to "Adaptive-VariantBA2_12" until June 1st. From there, rates quickly peak at 42,000 weekly cases in mid-June.

Please do your part to drive down cases. Always practice good prevention. Consider masking in indoor public areas and self-isolating when sick. Also please get vaccinated and boosted.

Virginia Daily Confirmed - Comparison

Legend:
- Adaptive
- Adaptive-VariantBA2
- Adaptive-VariantBA2_12-IncreasedControl
- Adaptive-VariantBA2_12

Date of Latest Model Run: 2022-04-27
Date of Next Model Run: 2022-05-11

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VIRGINIA'S HEALTH IS IN OUR HANDS. Do your part, stop the spread.