*May 20th, 2022*

## KEY TAKEAWAYS

- Statewide case-rates continue to increase. Most of Virginia is still experiencing "Low" or "Medium" community levels.
- Transmission rates ($R_e$) are above one for Virginia and in all six regions. 31 of 35 health districts are in growth trajectories, including 24 in surge trajectories.
- The CDC estimates that the BA.2.12.1 Omicron subvariant is now dominant in the mid-Atlantic region. It accounts for about 56% of sequenced cases in Virginia. The BA.2 subvariant accounts for a further 43% of new cases.
- Models project continued case growth across the state, with cases peaking in the summer. However the impact in terms of hospitalizations and deaths is likely to be lower compared to past surges.

**32.7 per 100k**
*Average Daily Cases Week Ending May 16th, 2022*

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

**857 / 966**
*Average Daily 1st / 2nd Doses May 13th, 2022*

**1,697 / 5,396**
*Average 1st / 2nd Boosters May 13th, 2022*

**(Vaccine estimates are preliminary)**

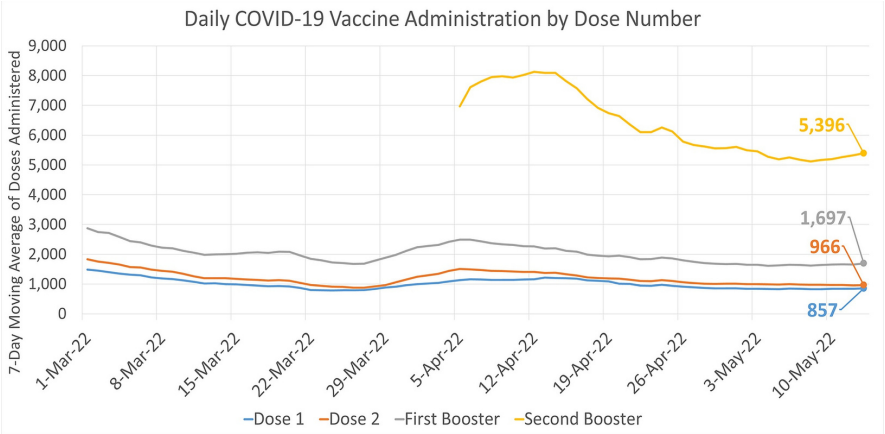
## KEY FIGURES

### Reproduction Rate
**(Based on Confirmation Date)**

| Region | $R_e$ May 13th | Weekly Change |
|---|---|---|
| **Statewide** | **1.111** | **0.030** |
| Central | 1.096 | -0.020 |
| Eastern | 1.090 | 0.065 |
| Far SW | 1.026 | 0.017 |
| Near SW | 1.124 | 0.084 |
| Northern | 1.115 | 0.025 |
| Northwest | 1.155 | 0.049 |

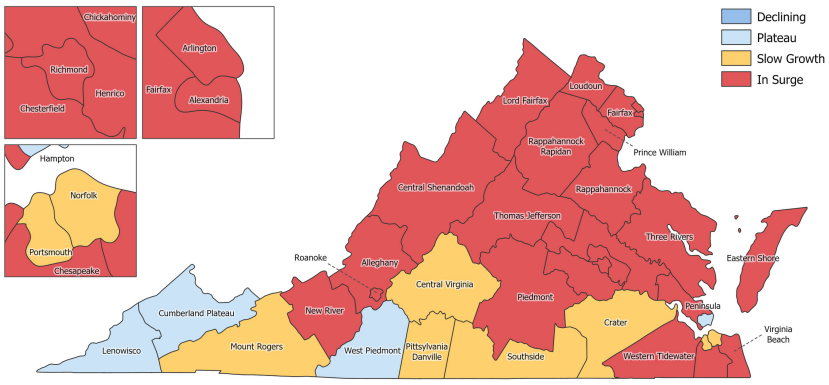
### Vaccine Administrations

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




### Growth Trajectories: 24 Health Districts in Surge

| Status | # Districts (prev week) |
|---|---|
| Declining | 0 (2) |
| Plateau | 4 (0) |
| Slow Growth | 7 (11) |
| In Surge | 24 (22) |



UNIVERSITY of VIRGINIA
BIOCOMPLEXITY INSTITUTE

# UVA COVID-19 MODEL WEEKLY UPDATE

VDH VIRGINIA DEPARTMENT OF HEALTH

## 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 model uses scenarios to explore the potential paths the pandemic may take under different conditions. Model projections take a variety of factors into account, including current variants, vaccine uptake, vaccination rates (including boosters), previous infection, waning immunity, weather, and behavioral responses (e.g., mask-wearing, social distancing). The "**Adaptive**" scenario represents the current course of the pandemic, projecting it forward with no major changes. The "**Adaptive-VariantBA2**" scenario adjusts for the Omicron BA.2 subvariant's enhanced transmissibility (30% more than BA.1), assuming that BA.2 will reach 95% prevalence by mid-May. The new "**Adaptive-VariantBA2_12**" scenario adjusts for the BA.2.12.1 subvariant's even greater transmissibility (30% more than BA.2). It assumes BA.2.12.1 becomes dominant by June and reaches 95% prevalence by July, taking over from BA.2. The new "**Adaptive-VariantBA2_12-IncreasedControl**" scenario adds increased prevention 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.

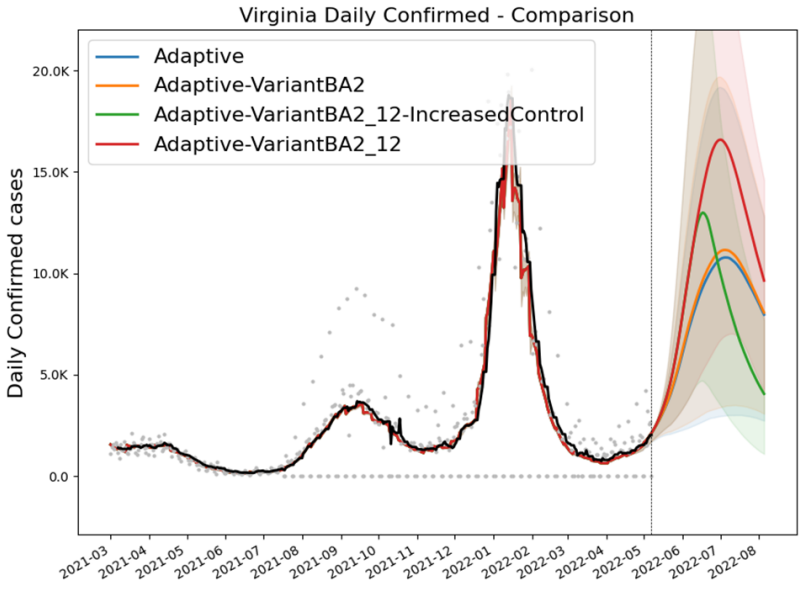
## MODEL RESULTS

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 75,000 weekly cases in early-July.

The "**Adaptive-VariantBA2**" scenario (orange) shows a slightly faster and larger surge. It peaks at 78,000 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 115,000 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 90,000 weekly cases in mid-June, before falling back below 40,000 by August.

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.




*Date of Latest Model Run: 2022-05-11*
*Date of Next Model Run: 2022-05-25*

**Please note:** The data and projections shown here reflect reported cases. During the Omicron wave, testing shortages resulted in far fewer infections being reported as cases. Therefore, despite appearances, we expect fewer total infections than we experienced in January. See page three of last week's modeling report for more details.