June 24, 2022

KEY TAKEAWAYS

- 17 Virginia counties are at high community levels, and 63 are at medium. Residents of these counties should follow recommended prevention measures as appropriate.
- BA.4 and BA.5 Omicron subvariants continue to make inroads, and may account for a third of new cases in HHS Region 3, which includes Virginia. These subvariants have stronger immune escape properties than previous Omicron subvariants but so far show no evidence of increased transmission rates or severity.
- 28 of Virginia's 35 health districts are in declining trajectories, and an additional 3 are in plateau. Model projections show continued declines, thought BA.4 and BA.5 may cause a bump up in cases in late summer.

29.1 per 100k
Average Daily Cases Week Ending June 20, 2022

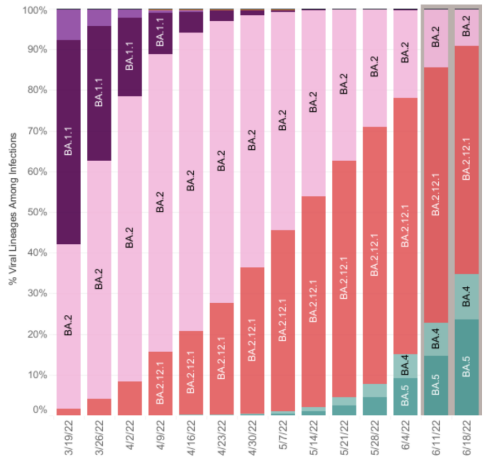
0.902
Statewide Reproductive Number as of June 20, 2022

17
*Virginia Localities at **High** CDC Community Levels as of June 23, 2022*

63
*Virginia Localities at **Medium** CDC Community Levels as of June 20, 2022*

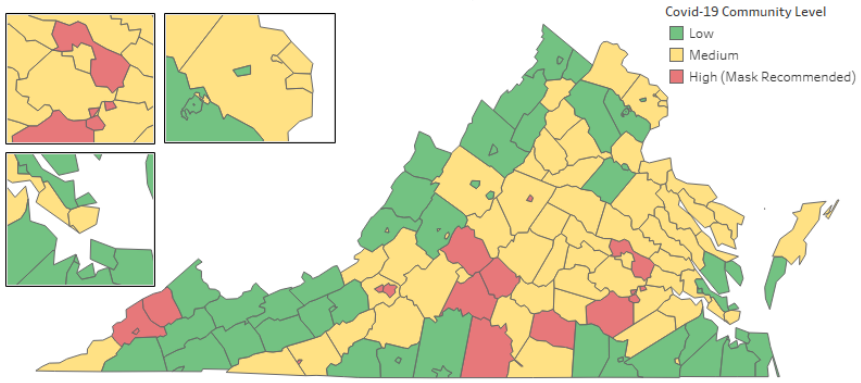
KEY FIGURES

Variant Mix - HHS Region 3



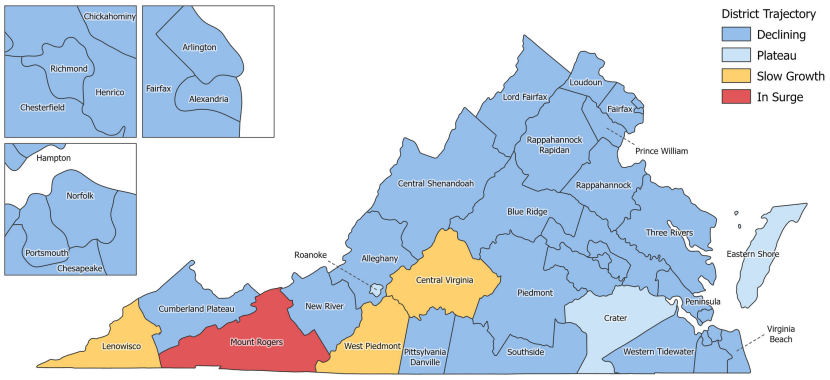
CDC Community Levels

As of June 23,2022



Growth Trajectories: One Health District in Surge

Status	# Districts (prev week)
Declining	28 (15)
Plateau	3 (5)
Slow Growth	3 (8)
In Surge	1 (7)



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

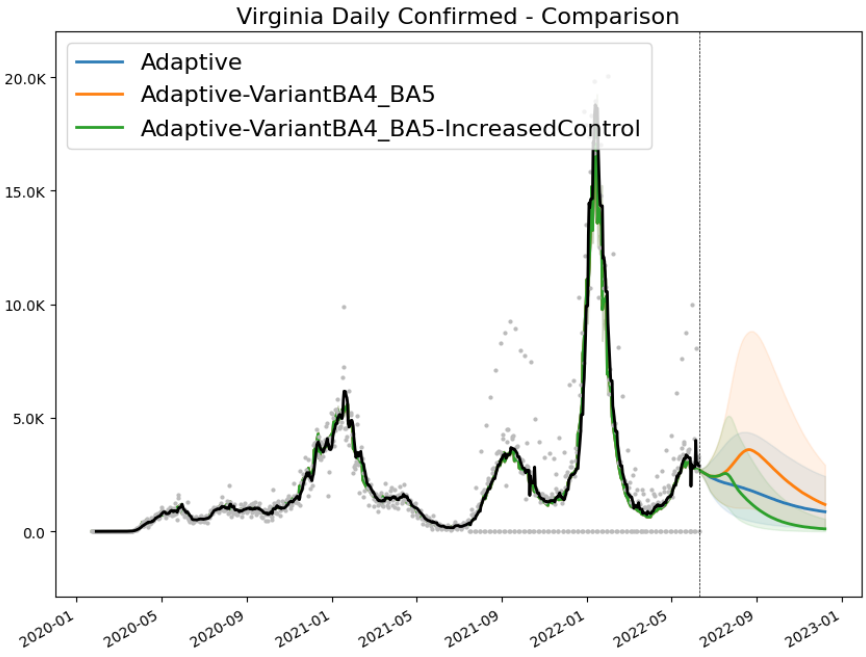
Unchanged: The model uses scenarios to explore the potential paths the pandemic may take under different conditions. Model projections take a variety of factors into account, including current variants, vaccine uptake, vaccination rates (including boosters), previous infection, waning immunity, weather, 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 new "**Adaptive-VariantBA4_BA5**" assumes these two variants become dominant in Virginia by July 1st. In this scenario, these variants have an 80% increase in immune escape compared to BA.2.12.1, but a 20% decreased transmission advantage. The new "**Adaptive-VariantBA4_BA5-IncreasedControl**" scenario adds seasonality and increased prevention efforts to the "Adaptive-VariantBA4_BA5" scenario. These efforts include increased home testing, masking, and self-isolation when sick. This scenario explores the potential public response to a new summer surge, assuming that these could cause a 25% reduction in transmission, and will begin in 30 days.

MODEL RESULTS

Updated: As always, the current course "**Adaptive**" scenario is shown in blue. If the current course persists, this scenario projects a slow but steady decline in cases. In this scenario Virginia reaches fewer than 2,000 daily cases by early August.

The new "**Adaptive-VariantBA4_BA5**" scenario, shown in orange, projects a small surge with the peak occurring in early August with roughly 3,500 daily cases.

The more optimistic "**Adaptive-BA4_BA5-IncreasedControl**" scenario is shown here in green. It is identical to "Adaptive-VariantBA4_BA5" until mid-July. From there, rates quickly fall through the rest of the year reaching fewer than 1,000 daily cases by September. This scenario shows the importance of Virginians continuing to practice appropriate prevention and following the prevention guidelines for the CDC Community Level in their area.



Date of Latest Model Run: 2022-06-15
Date of Next Model Run: 2022-06-29

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. This suggests fewer total infections than experienced in January. Please see page three of the May 13th modeling report for more details.