

February 25th, 2022

KEY TAKEAWAYS

- Case rates are continuing their steep decline across Virginia. As was the case last week, 34 of 35 districts are in decline.
- For the third week in a row, the statewide effective reproduction number (R_e) is around 0.7, and well below 0.85 for all regions.
- High case rates persist in the Far Southwest, in the Lynchburg area, and in the western parts of Southside. Residents in these areas should consider masking when in indoor public places.
- The CDC has adjusted their BA.2 subvariant proportion estimates. They now suggest BA.2 represents 4.7% of new cases in Virginia. Models indicate the subvariant may become dominant by April.
- Models project that BA.2 may slow, but not stop, case declines across the Commonwealth. Models do not anticipate a BA.2 related surge in the near future.

31 per 100k
Average Daily Cases
Week Ending Feb. 20, 2022

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

1,676 / 2,482
Average Daily 1st / 2nd Doses
Feb. 20, 2022

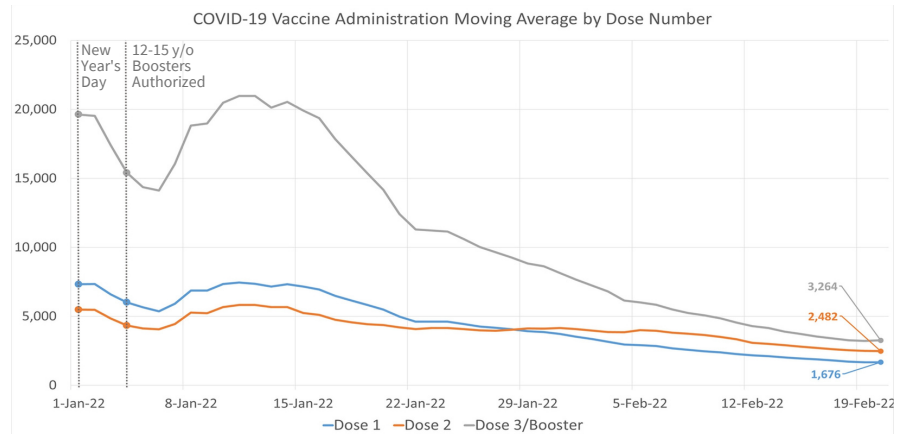
3,264
Average Daily Boosters
Feb. 20, 2022

KEY FIGURES

Reproduction Rate (Based on Confirmation Date)

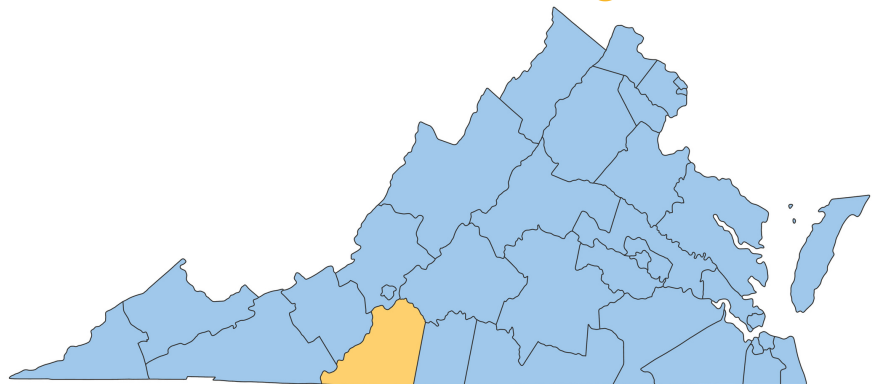
Region	R_e Feb. 21st	Weekly Change
Statewide	0.705	0.038
Central	0.710	0.093
Eastern	0.734	0.261
Far SW	0.674	-0.090
Near SW	0.693	-0.132
Northern	0.824	0.183
Northwest	0.716	-0.028

Vaccine Administrations



Growth Trajectories: 0 Health Districts in Surge

Status	# Districts (prev week)
Declining	34 (34)
Plateau	0 (0)
Slow Growth	1 (1)
In Surge	0 (0)



THE MODEL

The UVA COVID-19 Model and these 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 county-level Susceptible, Exposed, Infected, Recovered (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.
The model improves 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. As the [CDC now estimates](#) that the Omicron variant represents >99% of all new cases in Virginia, all prior Delta variant scenarios have been retired. All current scenarios are based on the immune escape and transmission profiles of the Omicron variant. As before, models use [COVIDcast](#) surveys to estimate county-level vaccine uptake. They then assume that vaccinations increase steadily in each county until this value is reached and 40% of vaccinated individuals receive a booster.

The new "**Adaptive**" scenario assumes that Omicron is as transmissible as Delta but adds an immune escape of 80%. This represents the current course of the pandemic and assumes that there will be no significant changes in interventions or transmission rates in the near future. Note that this scenario was called "Adaptive-Omicron" until January 21st.

The "**Adaptive-Spring**" scenario is meant to approximate the epidemic trajectory seen in the Spring of 2021. In this scenario, transmission rates from now until mid-March are manually set to reflect the falling transmission rates from the same time last year, then boosted by Omicron's enhanced transmissibility and immune escape. The "**Adaptive-DecreaseControl**" scenario explores the effects of a hypothetical increase in transmission rates. It is meant to demonstrate that continuing preventive measures are important despite Omicron's milder illness. The "**Adaptive-VariantBA2**" scenario adjusts for the new Omicron BA.2 subvariant's enhanced transmissibility, and assumes it will reach 95% prevalence by April 1st.

MODEL RESULTS

Unchanged: The current course "**Adaptive**" scenario (blue) shows a continued decline in case rates, reaching fewer than 1,000 daily cases by the end of February. The "**Adaptive-Spring**" scenario (green) is similar, but the quicker decline in case rates results in 3,500 fewer cases by April.

The "**Adaptive-DecreaseControl**" (shown here in orange) projects a slower decline and results in 23,500 additional cases by April and keeps Virginia above 1,000 daily cases until mid-March.

The "**Adaptive-VariantBA2**" (maroon) projects an even slower long-term decline, but no second surge. It keeps Virginia above 1,000 daily cases until mid-March, and above 500 until mid-April.

Please do your part to drive down cases. [Practice good prevention](#), including indoor masking, social distancing, self-isolating when sick, and [get vaccinated and boosted](#) as soon as possible.

