Virginia COVID-19 Surveillance Data Update

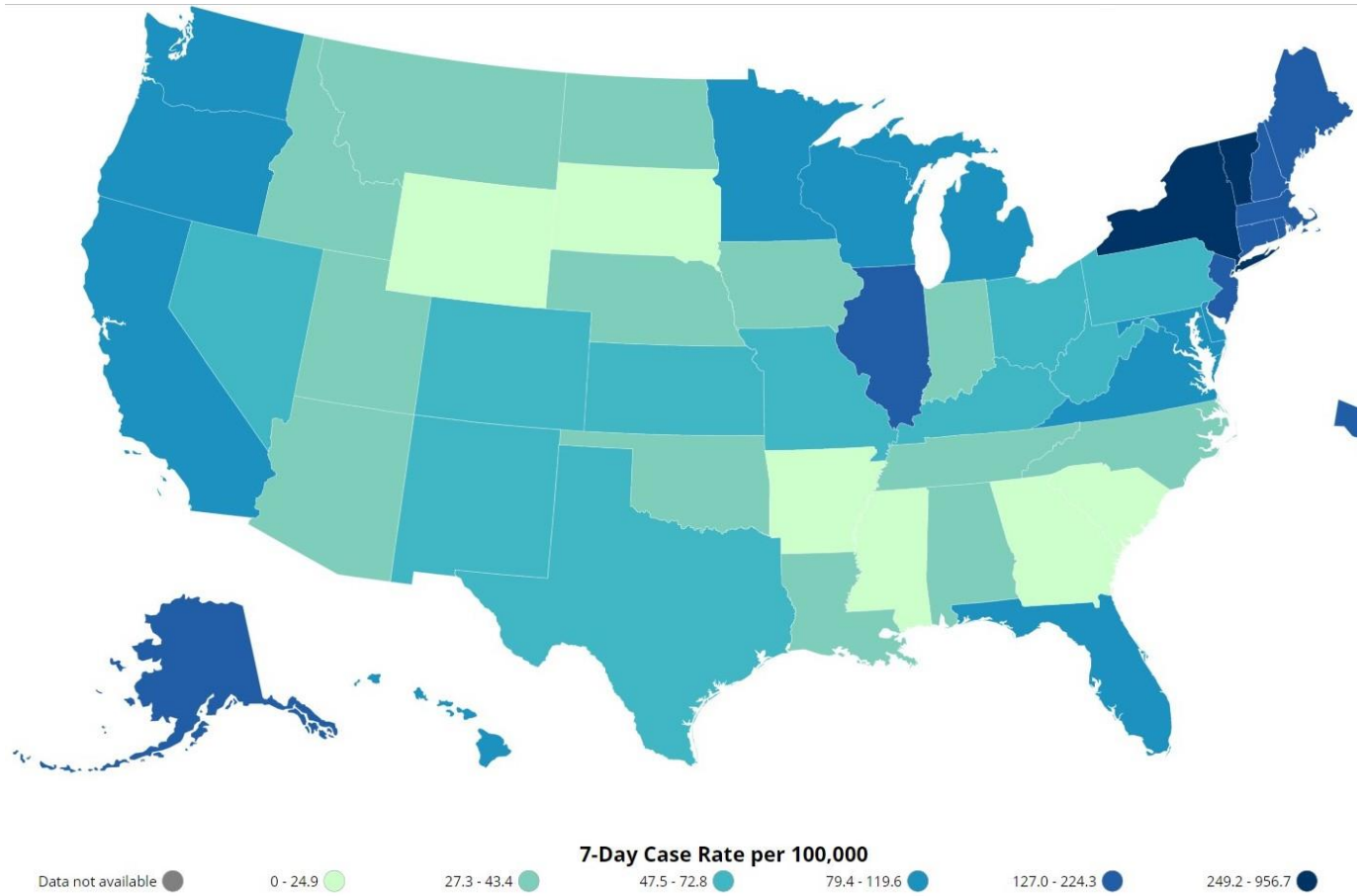
April 28, 2022

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

National: Weekly COVID-19 Case Rate

Updated 4/25/22

US COVID-19: 7-Day Case Rate per 100,000, by State/Territory



	Cases in the Last 7 Days Per 100k Population
Virginia	79.4 (-8.9%)
U.S.	93.4 (+18.2%)
Vermont	284.9 (+2.1%)
New York **New York City**	249.2 (+8.3%) 209.7 (+7.0%)
District of Columbia	224.3 (+90.1%)

Our Neighbors

Rates Higher than Virginia

District of Columbia, **223.3** (+90.1%)

Maryland, **92.2** (+17.2%)

Rates Lower than Virginia:

Kentucky, **65.8** (-4.5%)

West Virginia, **50.6** (+39.4%)

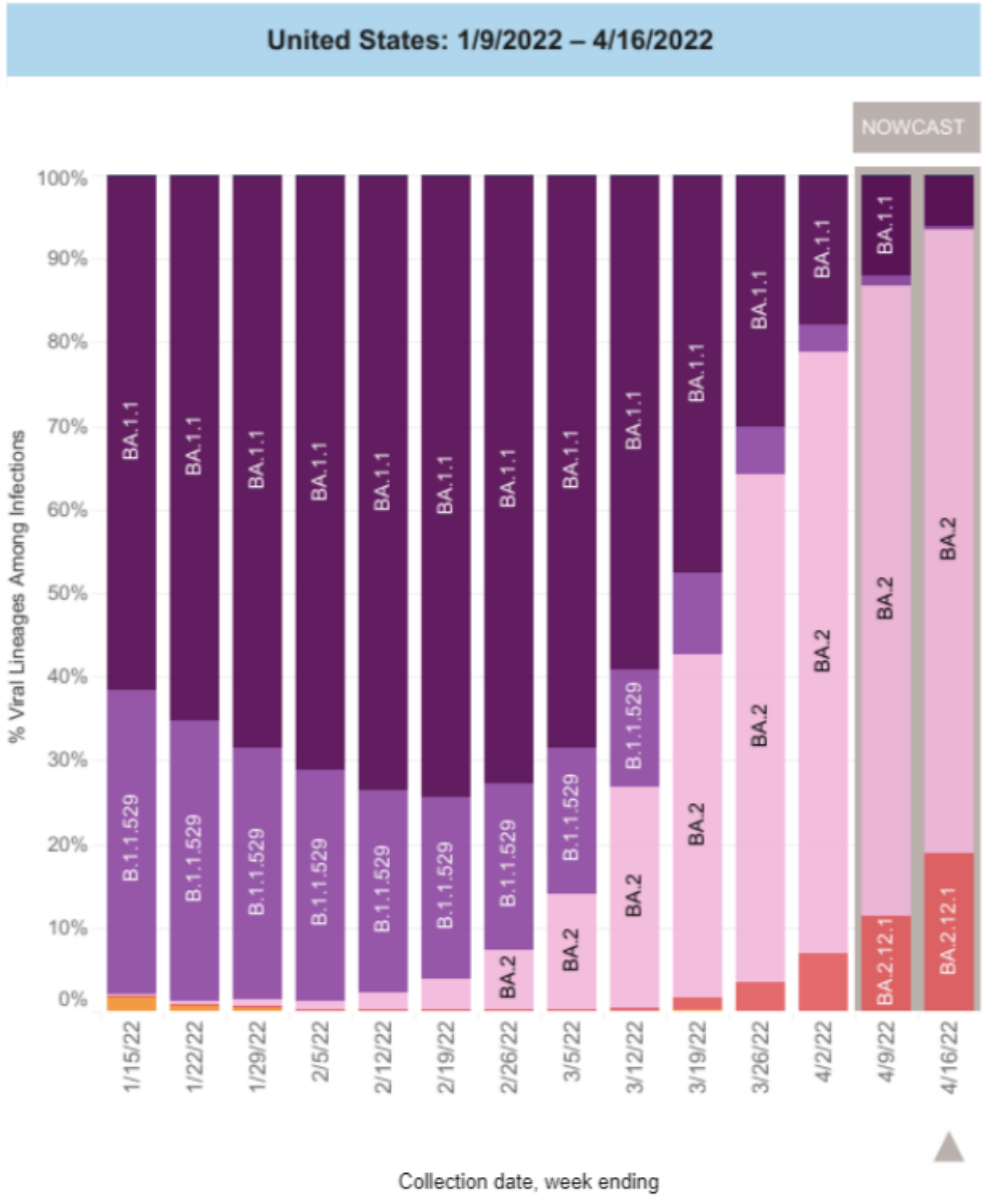
Tennessee, **37.2** (+13.1%)

North Carolina, **28.5** (-60.3%)

Source CDC COVID Data Tracker Please note rate change comparisons are from the previous week's data.

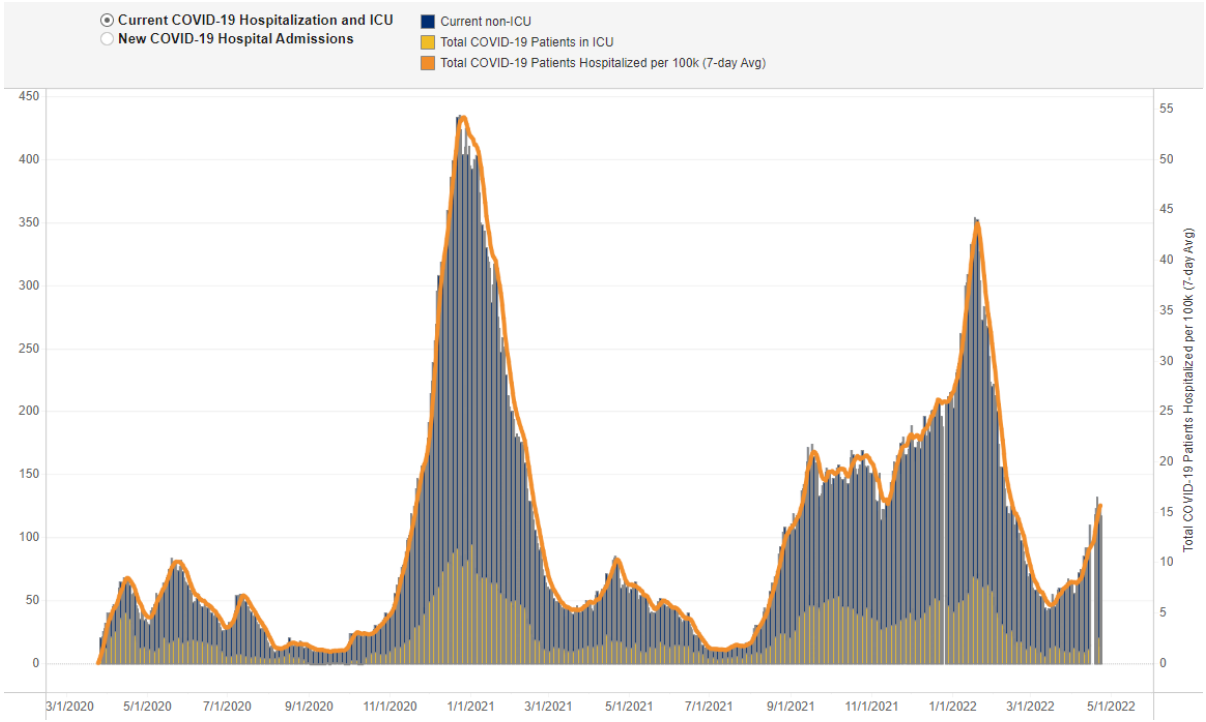
BA.2 and BA.2.12.1 Update

Updated 4/25/22



- Omicron BA.2 sublineages account for 93.4% of US cases, as of 4/16/22
  - BA.2.12.1, an offshoot of BA.2, now accounts for 19% of US cases
  - BA.2.12.1 has been associated with rising cases and hospitalizations in central NY state

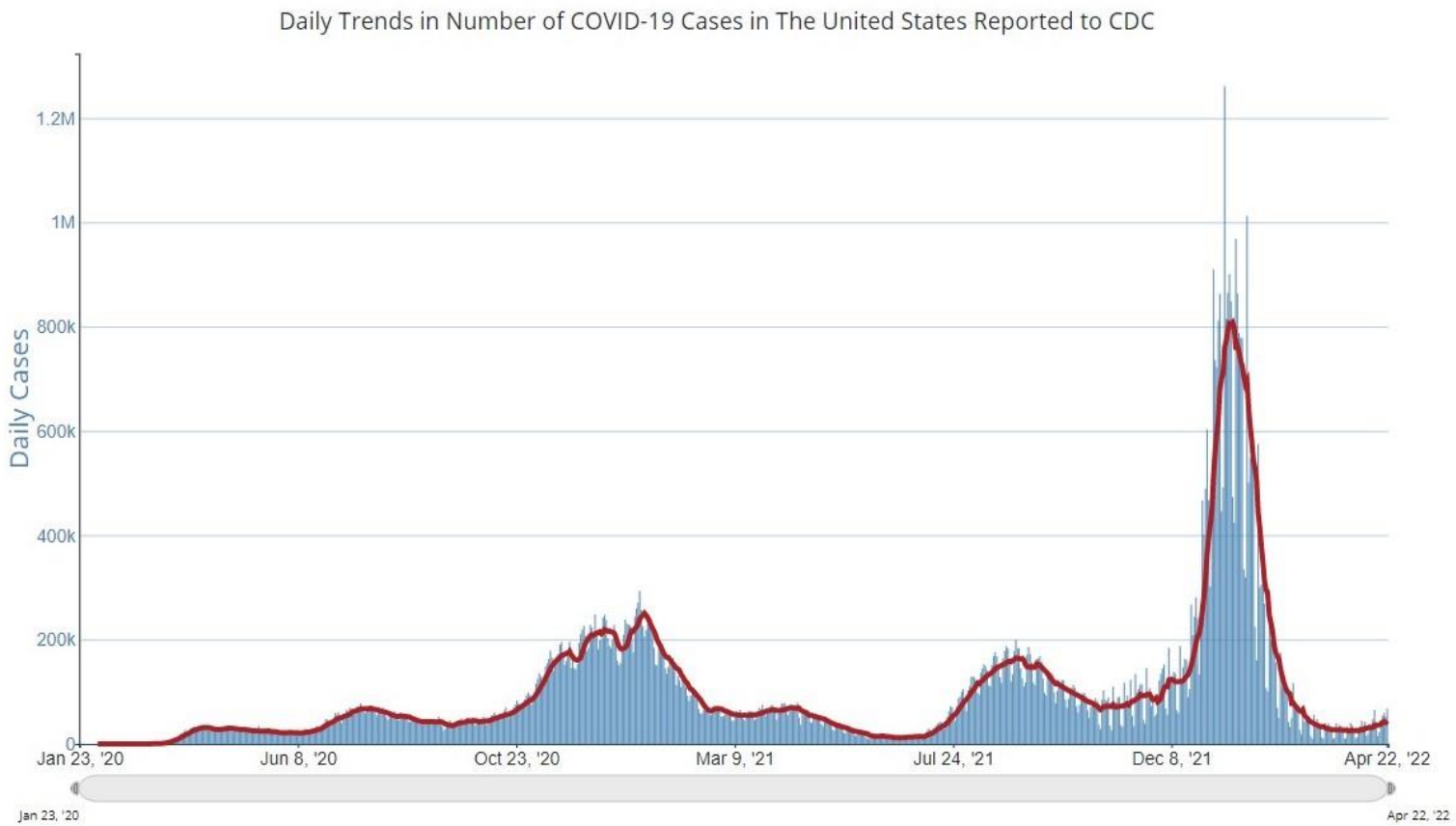
Central New York State Hospitalization Rates Rising



Source: CDC COVID Data Tracker: Variant Proportions; Daily Hospitalization Summary | Department of Health (ny.gov); New York State Department of Health Announces Emergence of Recently Identified, Highly Contagious Omicron Subvariants in New York and Urges Continued Vigilance Against COVID-19 (ny.gov)

National: Cases, Hospitalizations, and Deaths

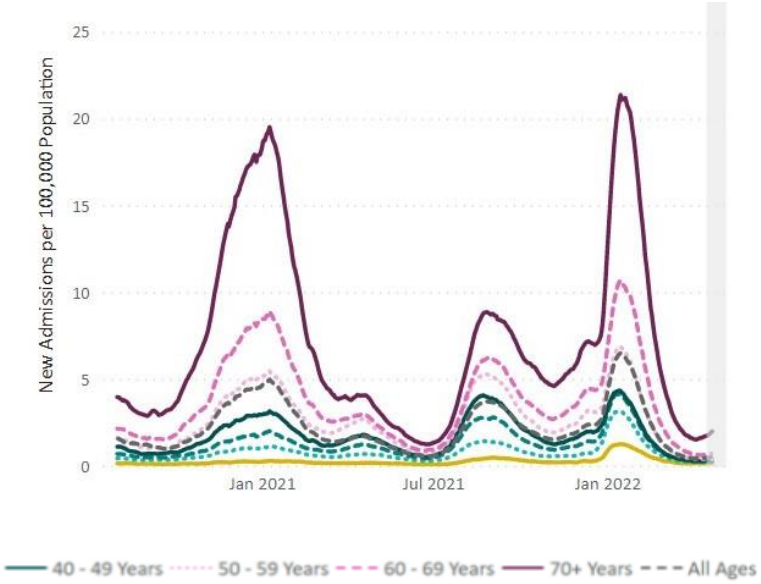
Updated 4/25/22



Compared to last week, **cases increased** to **44,308** (7-day MA) per day (+24.1%)

Hospitalizations decreased to **1,642** (7-day MA) per day (-6.6%)

Deaths decreased to **311** (7-day MA) per day (-18.2%)

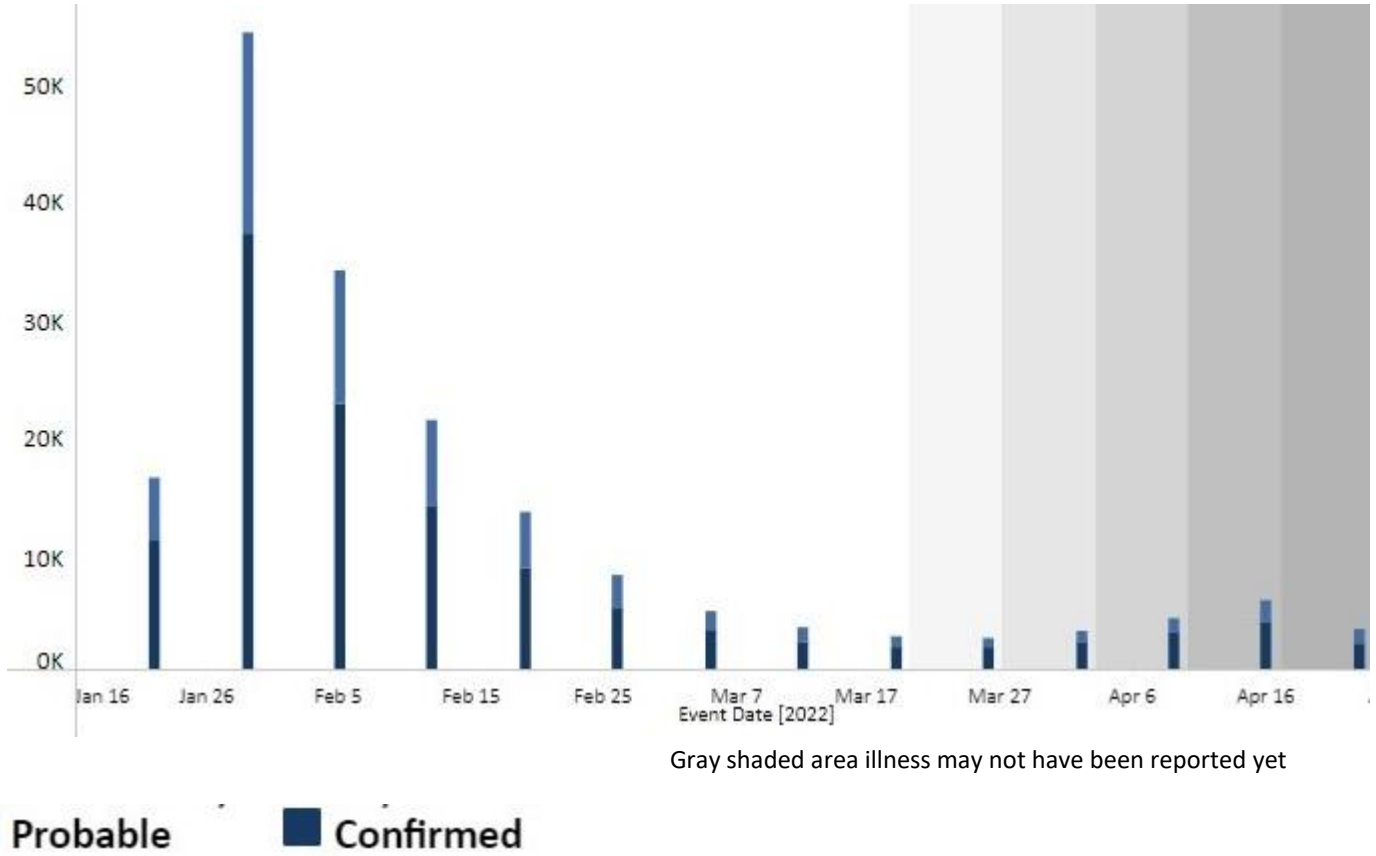


Source: CDC COVID Data Tracker

Virginia: Cases, Hospitalizations, and Deaths

Updated 4/25/22

Cases by Date of Illness for Virginia, Past 13 weeks



Gray shaded area illness may not have been reported yet

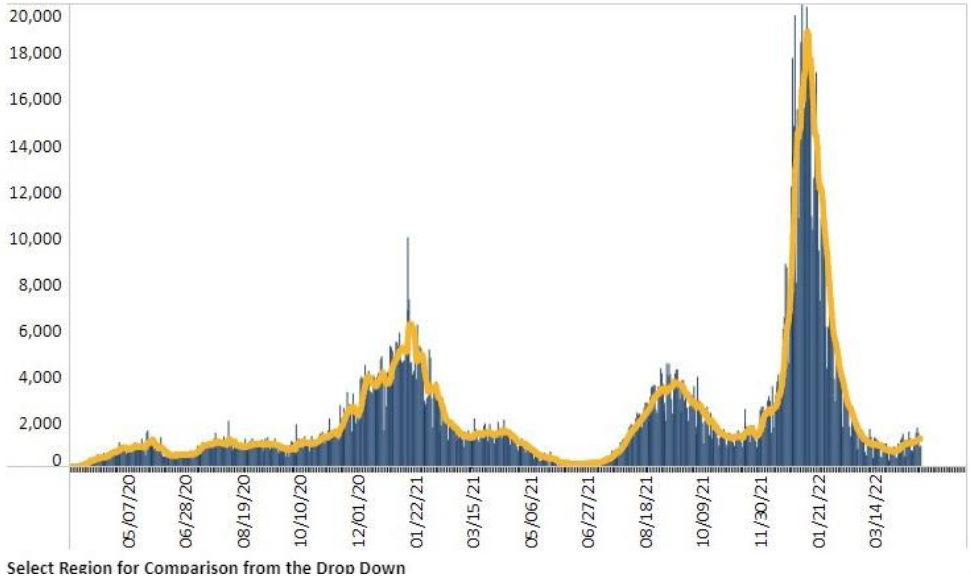
Compared to last week, **cases increased** to 1,143 (7-day MA) from 1,096 per day (+4.3%)

Hospitalizations increased to **162** per day (7-day MA) (+22.7%)

Deaths decreased to 3 (-33.3%) (Date of Death)

* Death Data is usually Delayed in Reporting

Cases by Date Reported, All Reporting Timeline

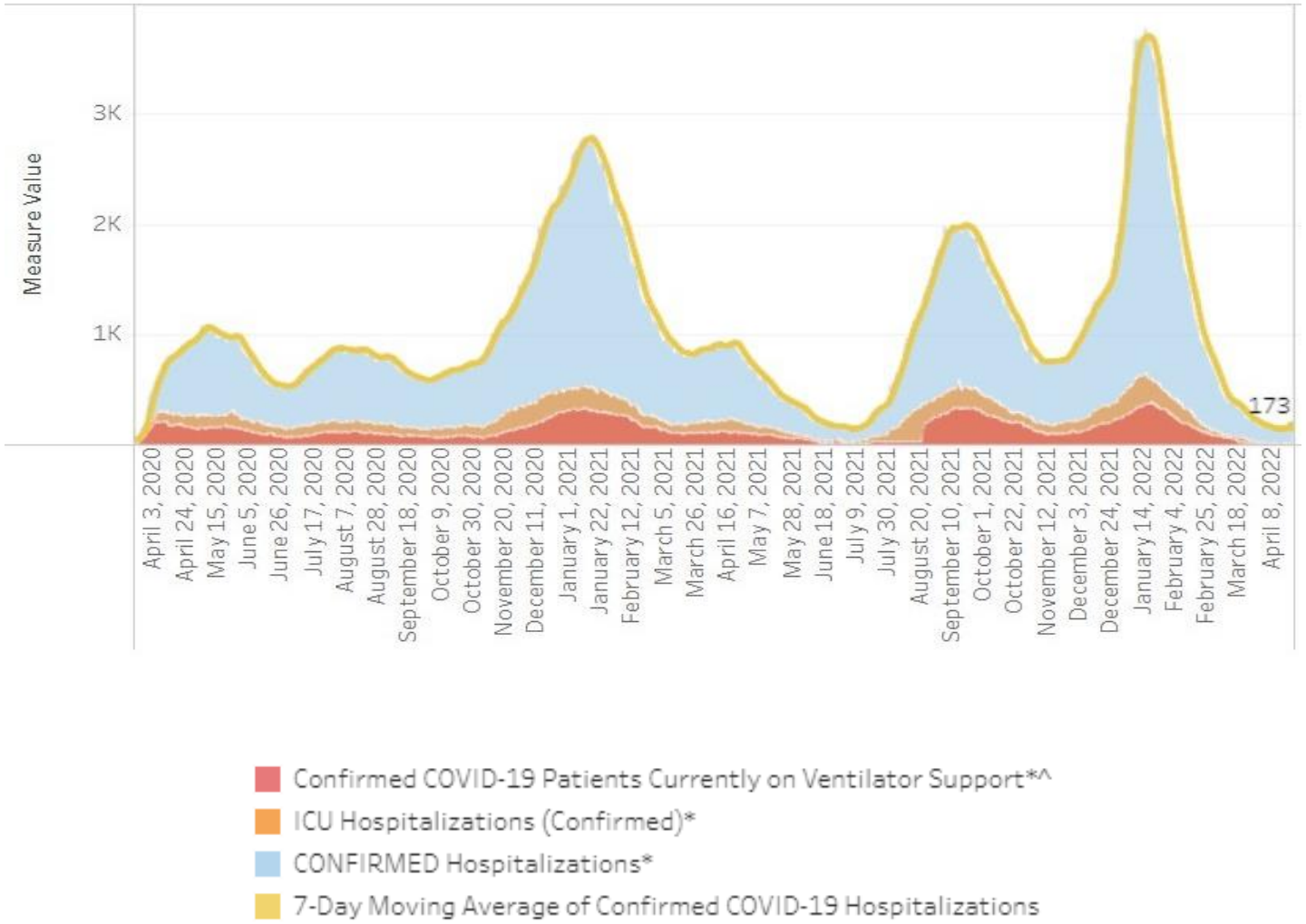


Source: Cases – Coronavirus (virginia.gov), Cases and Deaths - Coronavirus (virginia.gov), VHHA Hospitalizations – Coronavirus (virginia.gov), Data represent a 7-day moving average.

Virginia Hospitalization Trends

Updated 4/25/22

COVID-19 in Virginia Hospitals



- Compared to last week hospitalizations **increased to 162** (7-day MA) from 152 (+6.6%)
- Compared to last week ICU hospitalizations **decreased to 31** from 26 (-19.2%)

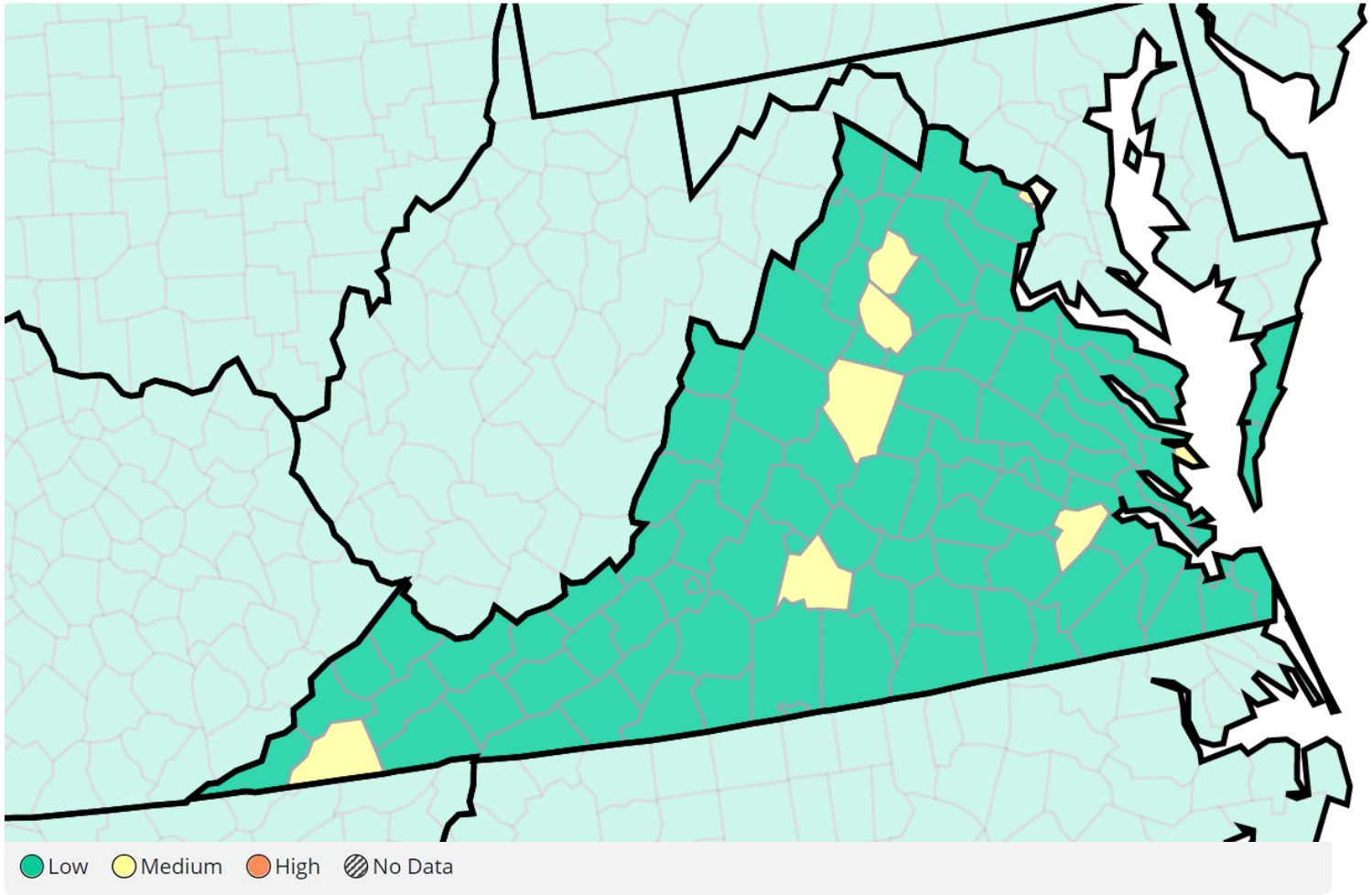
Source: VHHA Hospitalizations - Coronavirus (virginia.gov)

CDC COVID-19 Community Levels

Updated 4/22/22

Medium

- If you are immunocompromised or high risk for severe disease
  - Talk to your healthcare provider about whether you need to wear a mask and take other precautions (e.g., testing)
  - Have a plan for rapid testing if needed (e.g., having home tests or access to testing)
  - Talk to your healthcare provider about whether you are a candidate for treatments like oral antivirals, PrEP, and monoclonal antibodies
- If you have household or social contact with someone at high risk for severe disease
  - consider self-testing to detect infection before contact
  - consider wearing a mask when indoors with them
- Stay up to date with COVID-19 vaccines and boosters
- Maintain improved ventilation throughout indoor spaces when possible
- Follow CDC recommendations for isolation and quarantine, including getting tested if you are exposed to COVID-19 or have symptoms of COVID-19



Time Period: COVID-19 Community Levels were calculated on Thu Apr 21 2022. New COVID-19 cases per 100,000 population (7-day total) are calculated using data from Thu Apr 14 2022 - Wed Apr 20 2022. New COVID-19 admissions per 100,000 population (7-day total) and Percent of inpatient beds occupied by COVID-19 patients (7-day average) are calculated using data from Wed Apr 13 2022 - Tue Apr 19 2022.

Source: https://covid.cdc.gov/covid-data-tracker/#county-view?list_select_state=Virginia&data-type=CommunityLevels&null=CommunityLevels

COVID-19 Burden in Virginia LTCFs

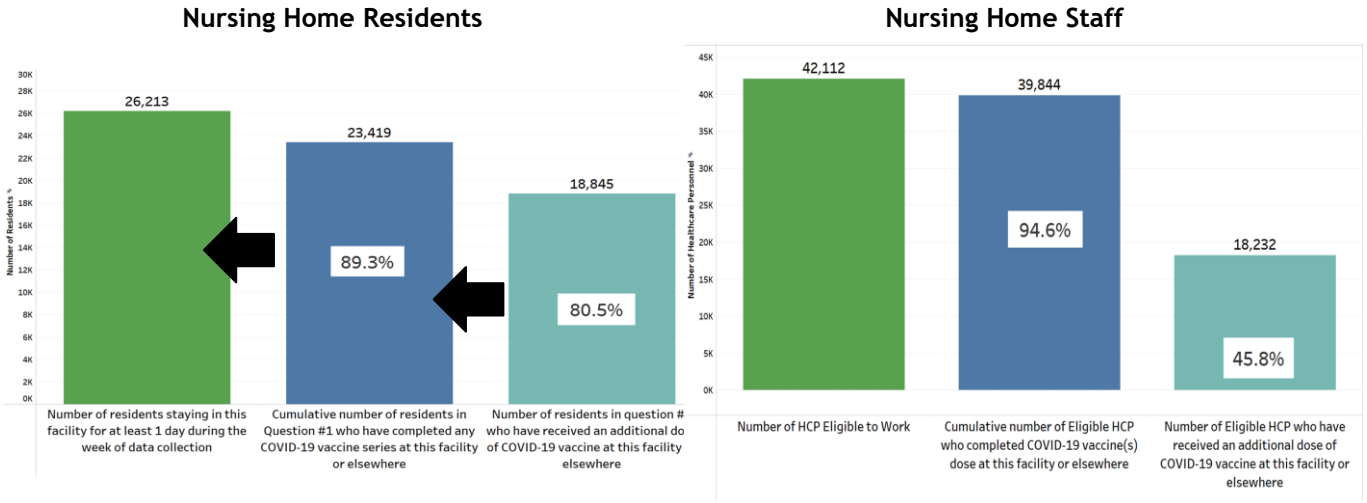
Questions can be directed to: hai@vdh.virginia.gov

Updated 4/25/2022

Key Trends

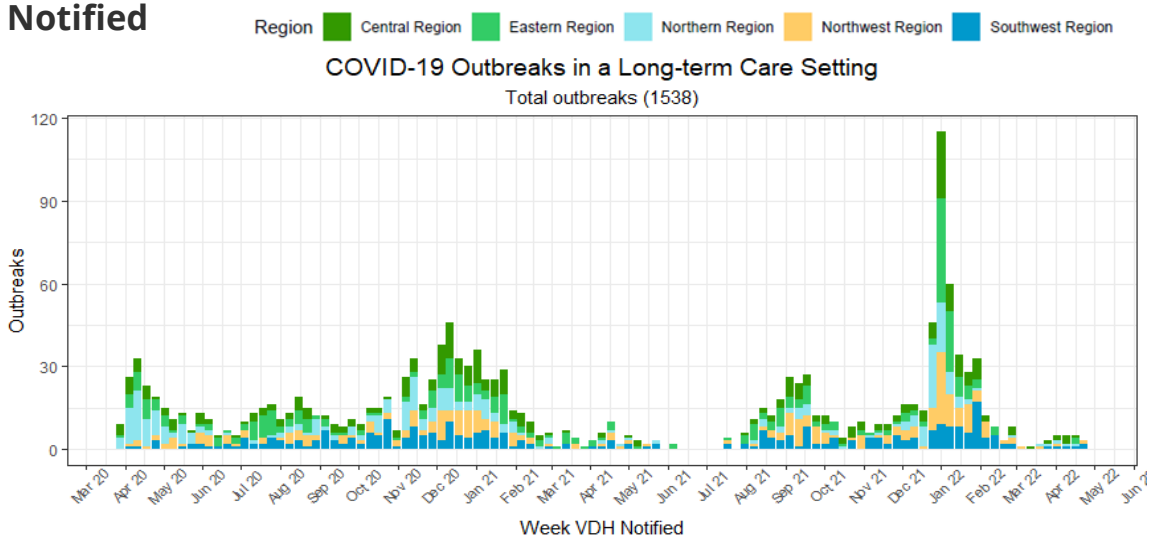
- There were 20 LTCF COVID-19 outbreaks reported in the past 30 days: 2 in Eastern, 6 in Central, 2 in Northwest, 4 in Northern, and 6 in Southwest *(see figure top right)*.
- The number of reported staff cases slightly increased and resident cases in nursing homes slightly increased since the last reporting week *(see figure bottom right)*.
  - For the reporting week ending April 24, 2022, 41 resident and 31 staff cases were reported to NHSN. Data for this reporting week are preliminary.
- For reporting week ending April 17, 2022, data reported by 281 nursing homes showed 89% of residents were fully vaccinated; data reported by 281 nursing homes showed 95% of staff were fully vaccinated *(see figures bottom left)*.Of the nursing home residents eligible to receive an additional dose or booster, **81% of residents have received an additional dose or booster** of COVID-19 vaccine.
  - Of the nursing home healthcare personnel eligible to receive an additional dose or booster, **46% of staff have received an additional dose or booster** of COVID-19 vaccine.

COVID-19 Booster Vaccination in Virginia Nursing Homes



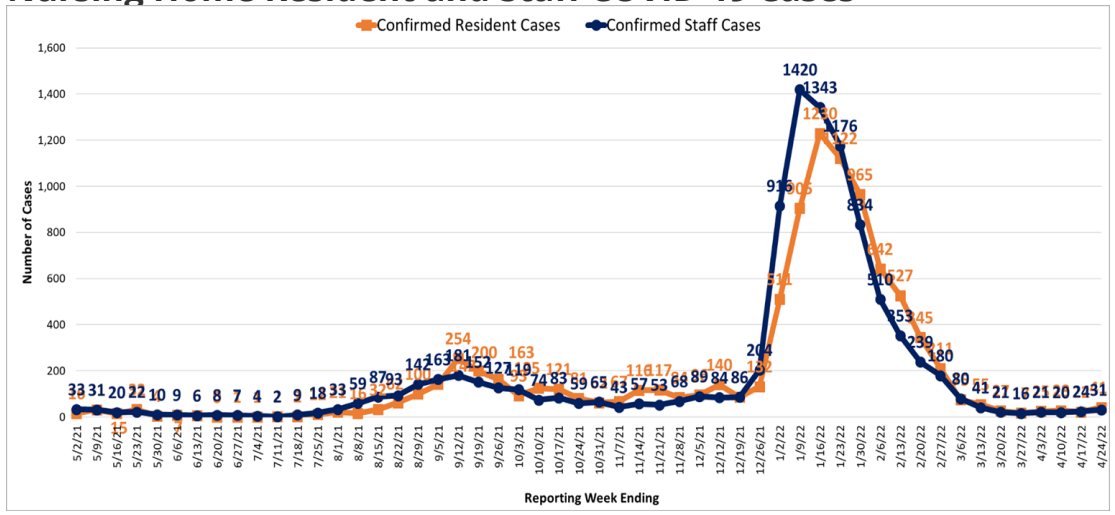
Data were reported by 286 Virginia nursing homes into the National Healthcare Safety Network (NHSN) as of 4/25/2022 and are subject to change, including booster eligibility per updated vaccine guidance. In Virginia, 281 nursing homes reported resident vaccination data for reporting week ending 04/17/2022; 281 nursing homes reported staff vaccination data for reporting week ending 04/17/2022. For staff type definitions, refer to NHSN Table of Instructions.

Number and Region of LTCF COVID-19 Outbreaks by Date VDH Notified



Outbreaks reported from nursing homes, assisted living facilities, and multicare facilities to VDH with a confirmed or suspected etiologic agent of SARS-CoV-2. Data are from the Virginia Outbreak Surveillance System as of 04/25/2022; data are retrospectively updated and subject to change.

Nursing Home Resident and Staff COVID-19 Cases

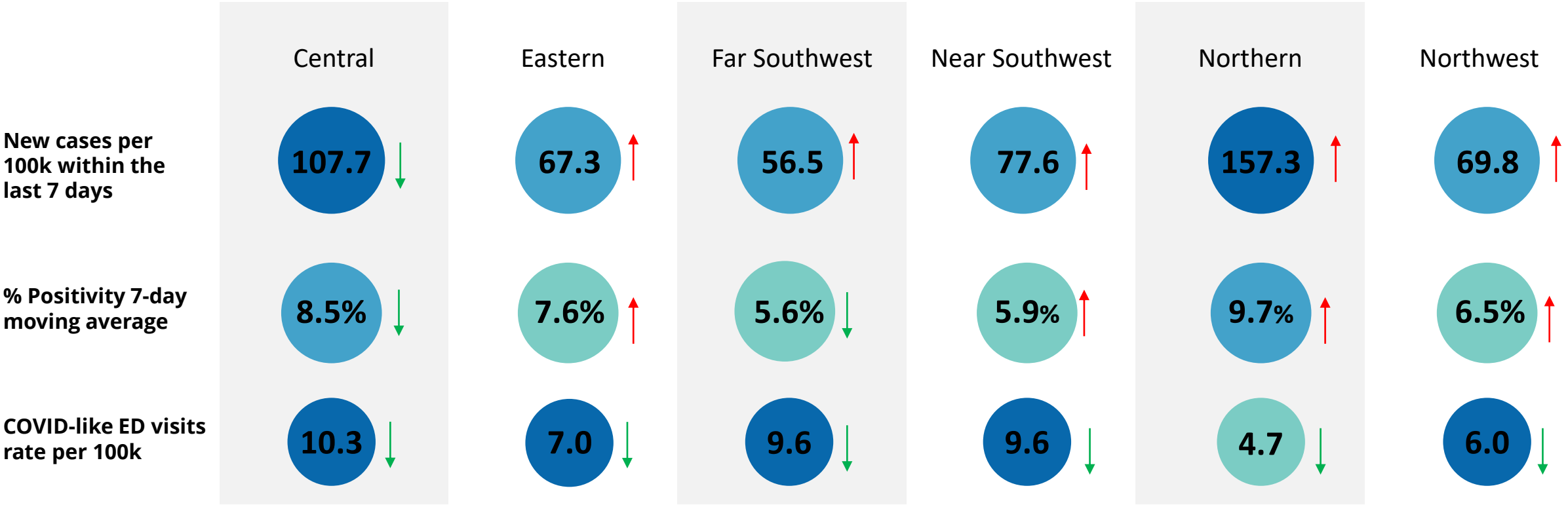


Data are from NHSN as of 4/25/2022 and are subject to change. For reporting information, please refer to the NHSN data collection forms: residents, staff.

Virginia: Regional Metric Summary

Updated 4/25/22

Metrics date: 4/25/2022



Burden	Level 0	Level 1	Level 2	Level 3	Level 4
New Cases	<10	10-49		50-100	>100
% Positivity	<3	3-5	5-8	8-10	>10
CLI ED Visits	<4		4-5.9		≥6

Symbol	Trend
↑	Increasing
↓	Decreasing
○	Fluctuating

Region Metrics – Coronavirus

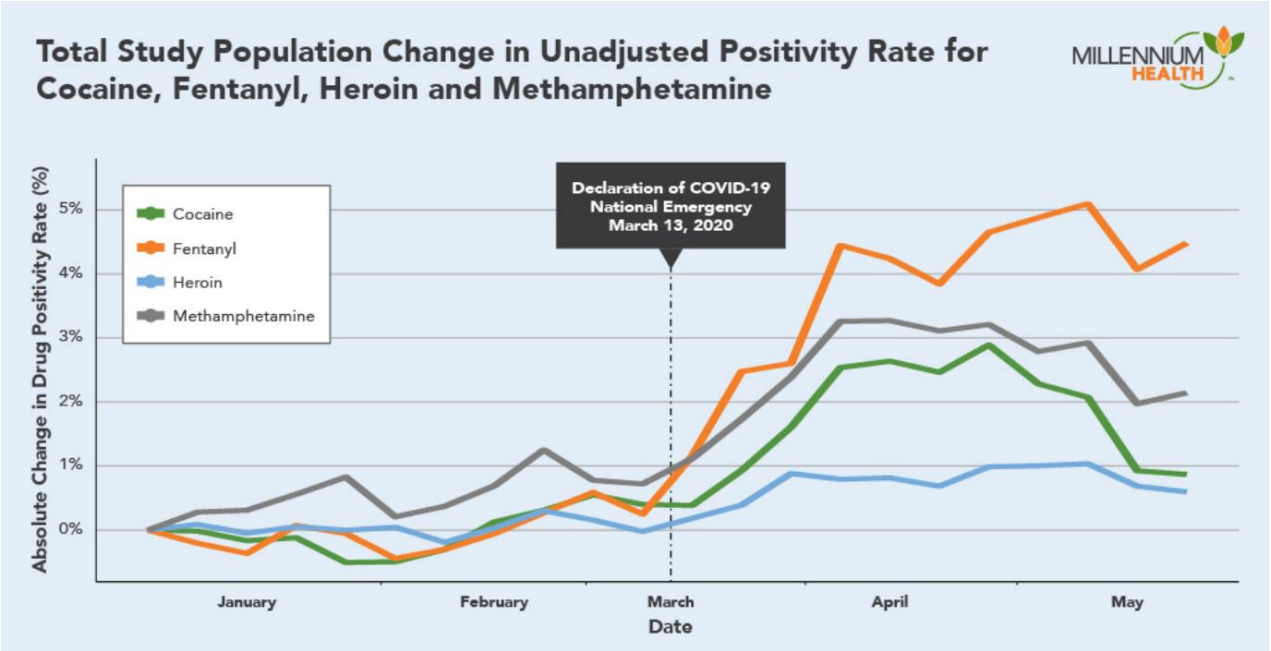
*Data represents a 7-day moving average, trends compared to 1 week ago comparing end of week totals

Substance Use Disorder (SUD) May Exacerbate Severe COVID-19 Outcomes

Updated 4/22

Background

- Researchers observed increases in substance use and drug overdoses since the COVID-19 pandemic was declared a national emergency.
- Drug overdoses deaths accelerated during the COVID-19 pandemic. More than 93,000 drug overdose deaths were estimated in the United States in 2020, the highest number of overdose deaths ever recorded.
- People with current or previous SUD were 1.5 times more likely to have COVID-19 than those who did not.
- People with current or previous SUD were more likely to experience severe COVID-19 outcomes: hospitalization (41% versus 30%) and death (9.6% versus 6.6%).



Compounding COVID-19 Challenges for those with SUD and in Recovery

- Reduced social support, increased social isolation and increased stress
- Disruption of regular SUD treatment
- Increased rates of drug use as potential coping mechanism and use in isolation
- Decreased access to substance use treatment, harm reduction services, and emergency services

Source: Signals Report COVID-19 Special Edition - Millennium Health LLC; Substance use disorders linked to COVID-19 susceptibility | National Institutes of Health (NIH)

Sensitive Population Groups Associated with Increased COVID-19 Risks

Updated 4/22

Opioid Users (heroin, fentanyl, morphine)

- Mechanism of Action: Causes slow breathing and decreased oxygen in blood and brain; increases risk for life-threatening overdose and damages the brain, heart, and lungs over time.
- Users are more susceptible to COVID-19 and at higher risk for more severe infections.
- COVID-19 hospitalization is 10.2 times more likely for those with opioid use disorder.

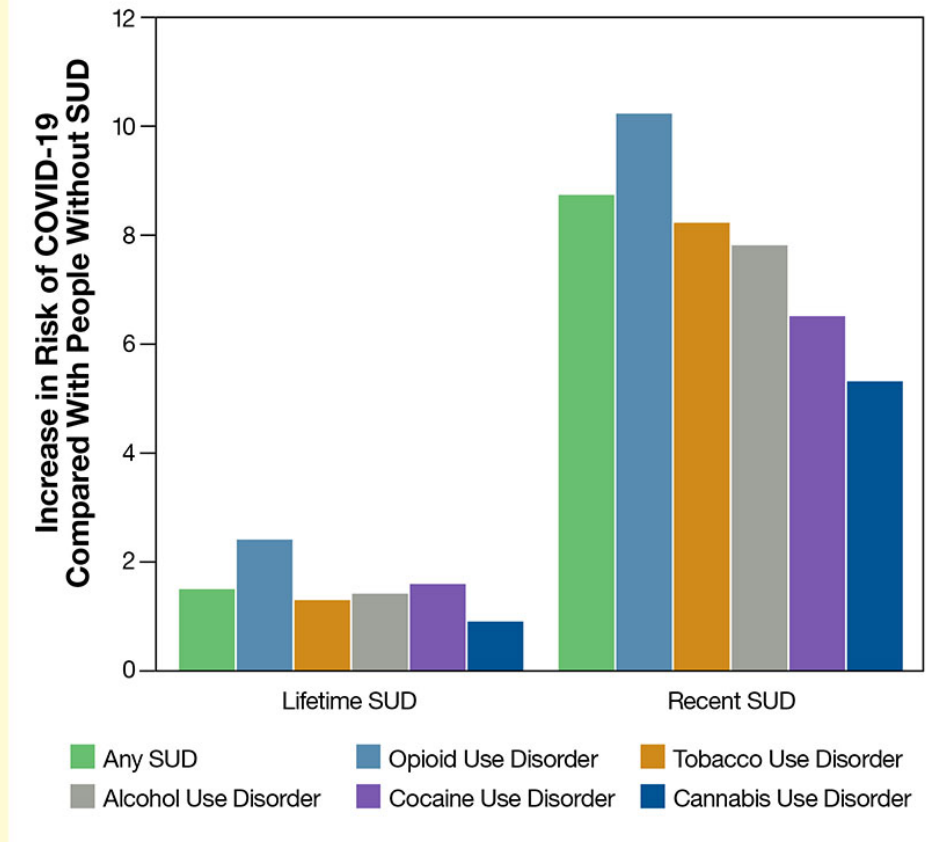
Stimulant Users (methamphetamine, cocaine, amphetamine)

- Mechanism of Action: Constricts the blood vessels and increases the risk for stroke, heart attacks, abnormal heart rhythm, seizures, and other conditions.
- Users are 6.5 times more likely to have COVID-19 and at higher risk for more severe infections
- COVID-19 hospitalization is 6.2 times more likely for those with stimulant use disorder

Homeless Population

- A high percentage of individuals with SUD experience homelessness
- People who experience homelessness and housing instability are at increased risk for COVID-19 due to higher rates of underlying health conditions and community spread in homeless shelters

People with a Lifetime or Recent SUD Diagnosis Are More Likely to Contract COVID-19 Than Those Without SUDs



Adapted from Wang et al 2020. Permission for use of data provided by Dr. N. Volkow.

Source: COVID-19 & Substance Use : NIDA , Substance use during the pandemic (apa.org) , Substance use and abuse, COVID-19-related distress : NIH

Hospitalization of Children Aged 5-11; Short-Term Exposure to Air Pollution and COVID-19

Updated 4/21/22

Hospitalizations of Children Aged 5–11 Years with Laboratory-Confirmed COVID-19 | April 19, 2022, CDC MMWR

Summary: COVID-NET data were analyzed to describe characteristics of COVID-19–associated hospitalizations among 1,475 U.S. children aged 5–11 from March 1, 2020–February 28, 2022, but mainly focusing on the period of early Omicron predominance.

Key Findings:

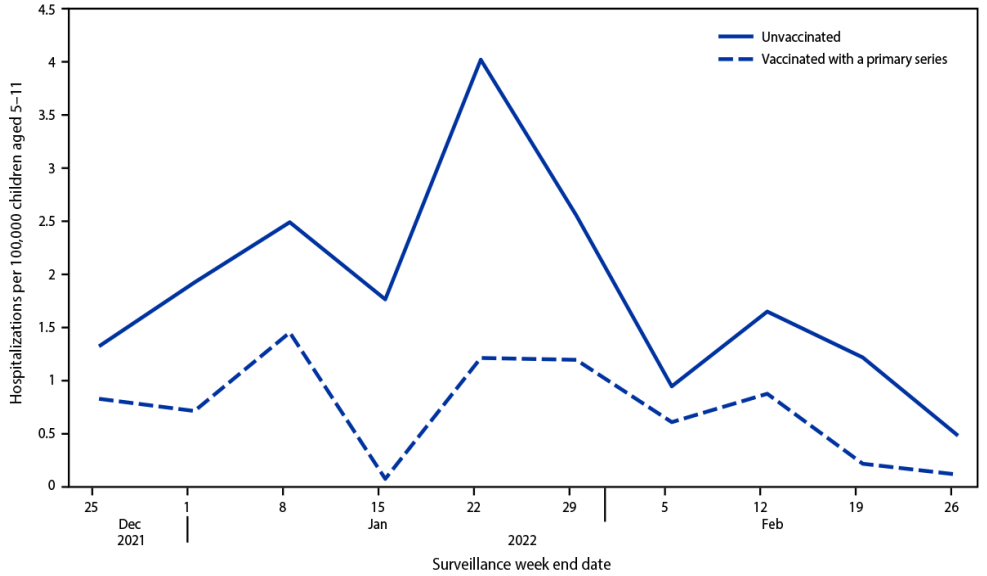
During the Omicron-predominant period :

- Cumulative **hospitalization rates among unvaccinated children** aged 5–11 years were **2.1 times as high** as those among vaccinated children.
- **87% of hospitalized children** aged 5–11 years **were unvaccinated** (301 unvaccinated; 48 vaccinated).
- Among **unvaccinated** children, the largest proportion were **Black (34%),** followed by **White (31%),** and **Hispanic (19%).**
- There were **no significant differences for severe outcomes by vaccination status** (however the number of vaccinated children was very small; n = 48).

Across all variants:

- **32%** of hospitalized children aged 5–11 years had **severe COVID-19**
- The **risk** for severe COVID-19 among hospitalized children was **significantly higher among those with diabetes** (aRR = 2.5) and **obesity** (aRR = 1.2). Risk for severe disease was lower among children with asthma (aRR = 0.8), and those with immunocompromising conditions (aRR = 0.7)

Weekly Hospitalization Rates Among Children Aged 5-11 by Vaccination Status



Association of Short-term Air Pollution Exposure With SARS-CoV-2 Infection Among Young Adults in Sweden | April 20, 2022

Summary: A case-crossover study linking 425 participants who are part of the prospective BAMSE (Children, Allergy Milieu, Stockholm, Epidemiology [in Swedish]) birth cohort to the Swedish national infectious disease registry to identify cases with positive COVID-19 results from May 5, 2020, to March 31, 2021. Daily ambient air pollution levels at the individual residential address was calculated to estimate the association between short-term ambient air pollution and a positive PCR test.

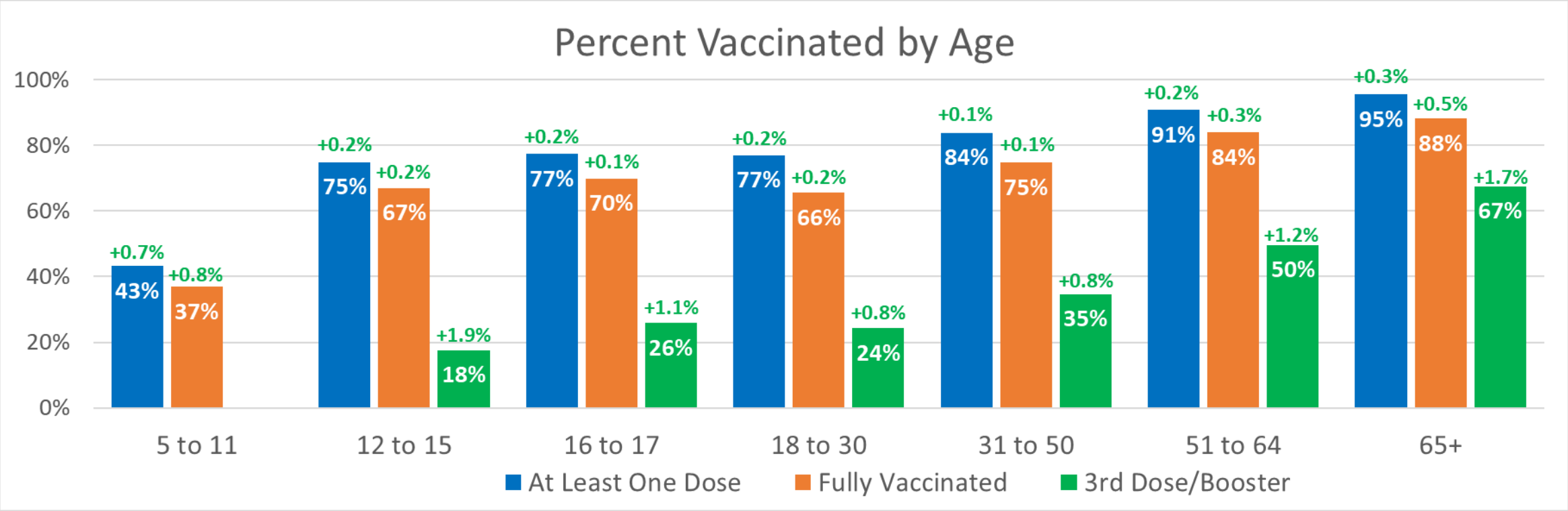
Key Findings: Exposure to the following pollutants increased the risk of a positive SARS-CoV-2 PCR test:

- Exposure to **fine particulate matter** ($PM_{2.5}$) **two days before** a test was associated with a relative **increase of 6.8%** (95% CI, 2.1%-11.8%)
- Exposure to **particulate matter** (PM_{10}) **two days before** a test was associated with a relative **increase of 6.9%** (95% CI, 2.0%-12.1%)
- Exposure to **black carbon one day before** a test was associated with a relative **increase of 5.8%** (95% CI, 0.3%-11.6%)
- There was no observed association for exposure to nitrogen oxides

- The authors of the study speculate that increased levels of short-term air pollution plays a role in manifesting the disease (symptoms) for those who have been infected with the virus rather than contributing to the transmission of the virus (since median incubation period is 5 days).

Virginia: Vaccination by Age Groups

Updated 4/25/22



Virginia Vaccination by Age

- ✓ **73.2%** **(+0.4%)** of the Total Population is Fully Vaccinated
- ✓ **38.9%** **(-0.8%)** of the Total Population is "Up-to-Date" with their Vaccinations
- ✓ **56.3%** **(+0.2%)** of the Eligible Population and **34.9%** **(+1.3%)** of Total Population Vaccinated with 3rd Dose/Booster
- ✓ **92.6%** **(+0.3%)** of the Adult (18+) Population Vaccinated with at Least one Dose
- ✓ **58.4%** **(+0.5%)** of 5 to 17 year olds Vaccinated with at Least One Dose

- Green percent represents percent increase from two weeks prior

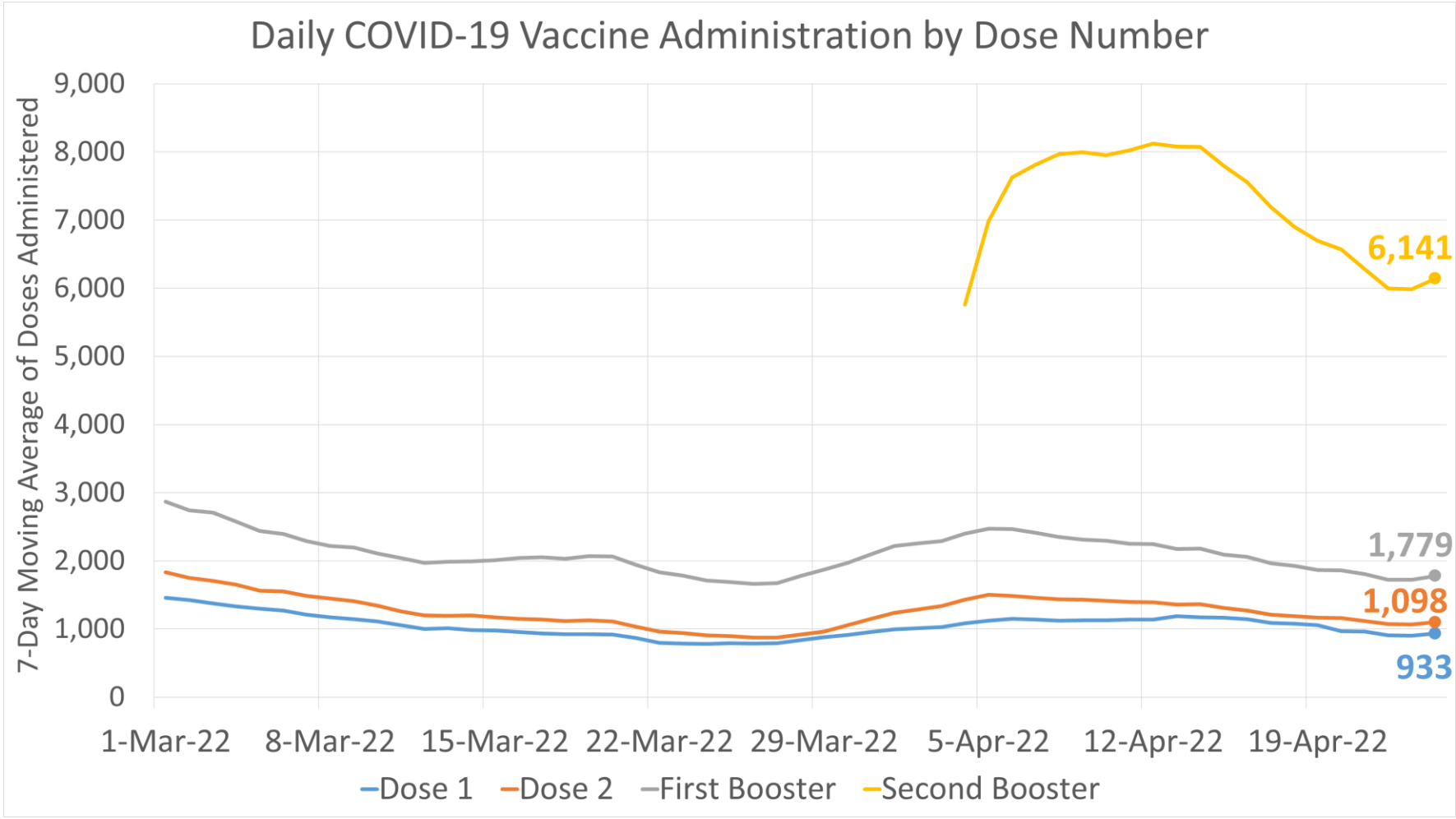
Source: COVID-19 in Virginia: Vaccine Summary, Keep Virginia Safe Tournament | Metaculus

Virginia: Vaccine Demand by Dose Number

Updated 4/27/22

Second Booster Administrations Have Started

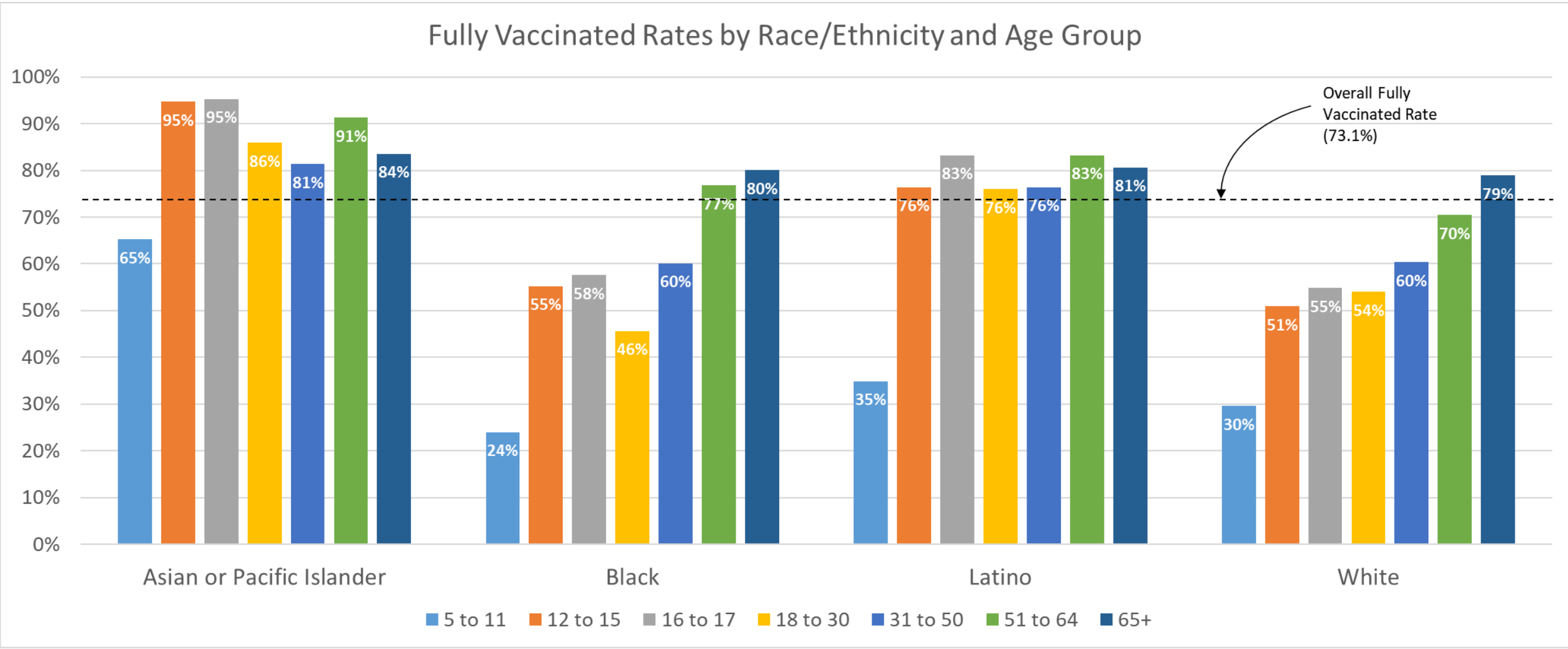
- Statewide, over **188,000** individuals have received their Second Booster
  - This accounts for about 6.3% of individuals with a First Booster
  - Average daily administrations of Second Boosters exceeded 6,000 last week



Federal doses not included in this number
Source: [COVID-19 Vaccine Summary – Coronavirus (virginia.gov)]

Virginia: Vaccination by Race/Ethnicity and Age

Updated 4/25/22

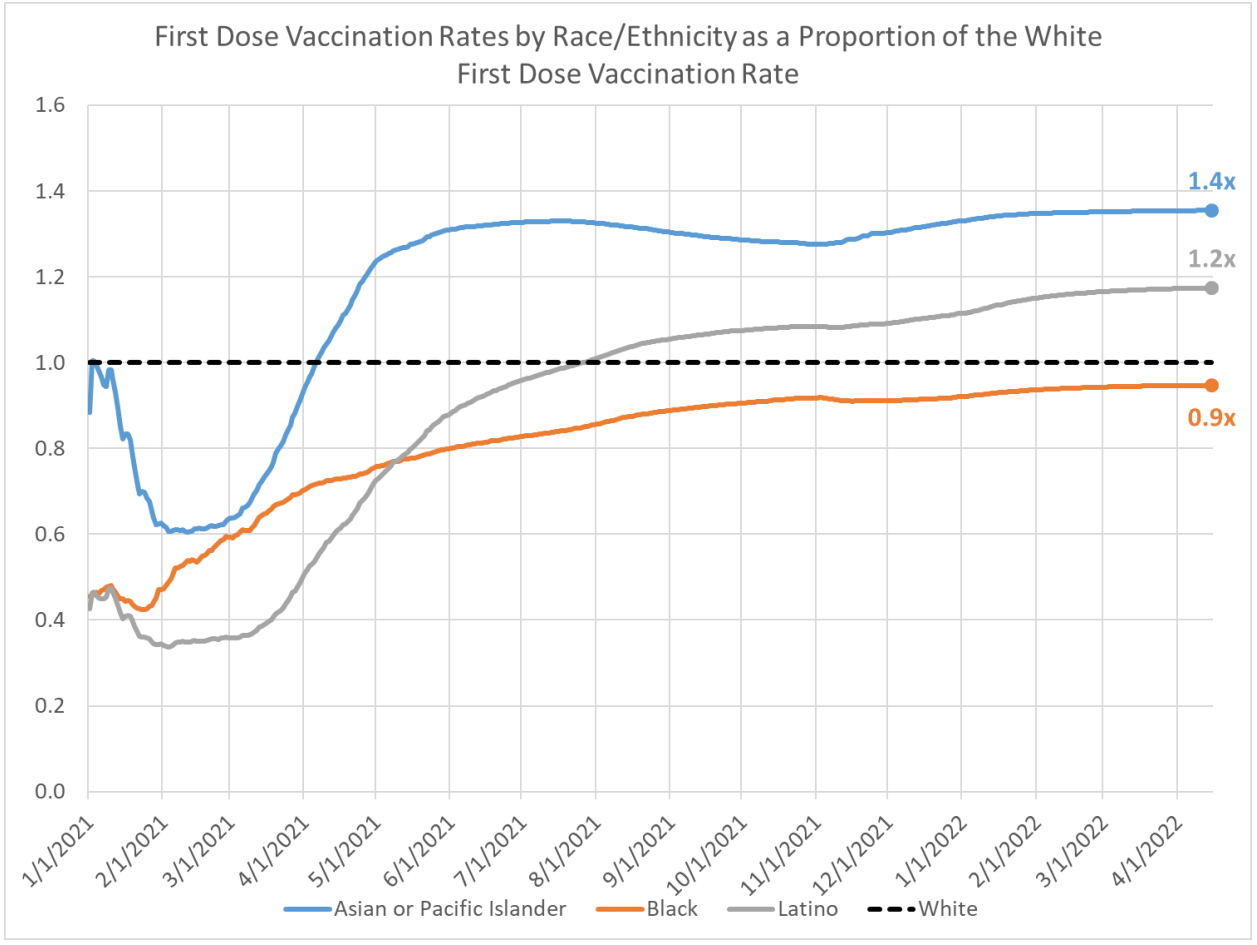


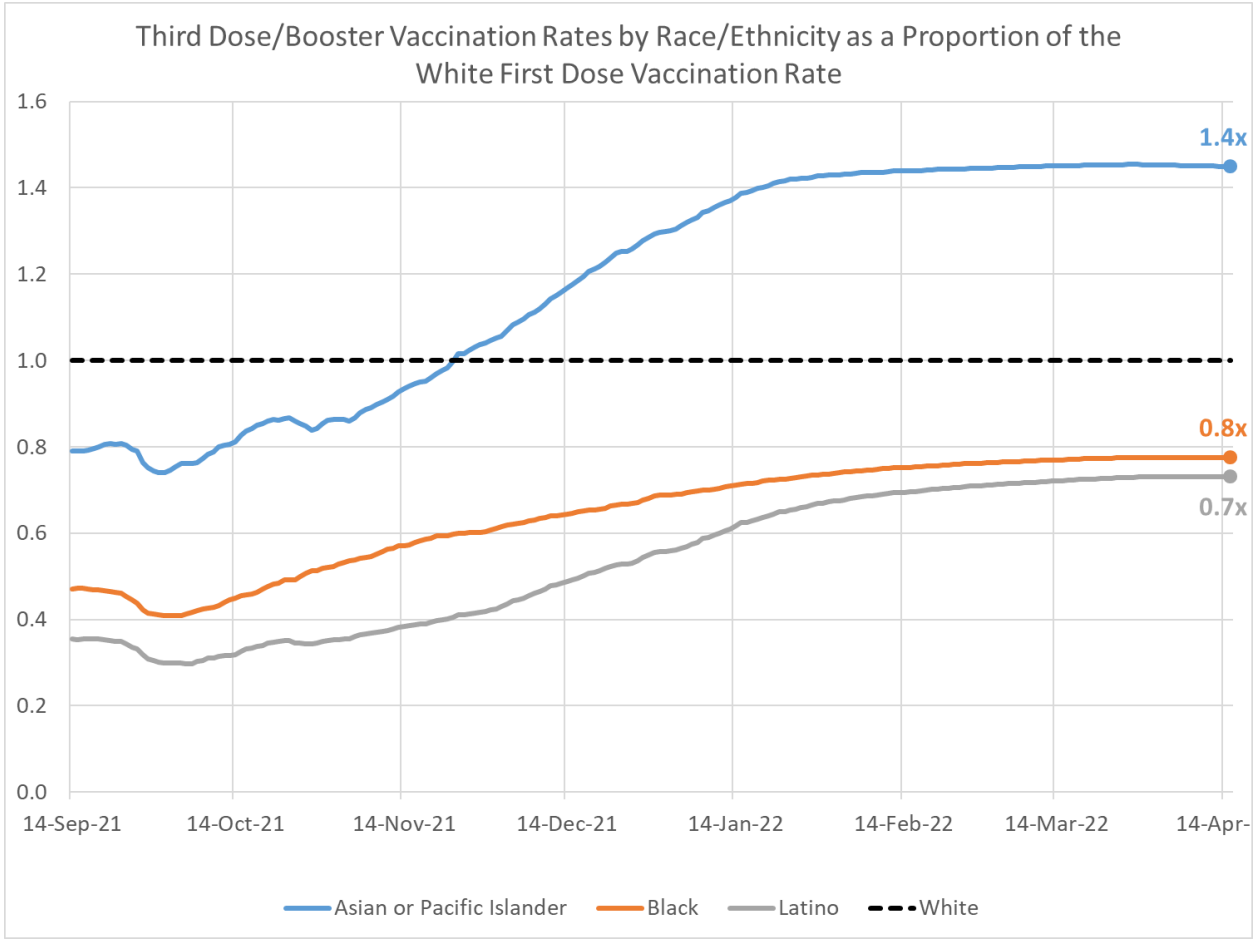
Source: [COVID-19 Vaccine Summary – Coronavirus (virginia.gov)]

Virginia: Vaccination Parity by Race/Ethnicity

Updated 4/25/22

- The Black Population's Vaccination Rates are currently at 0.9x relative to the White Population's Rates
- The Parity between Latino and White Populations is much lower for Latinos when it comes to Third Dose/Booster Rates relative to First Dose (**0.7x** vs **1.2x**)



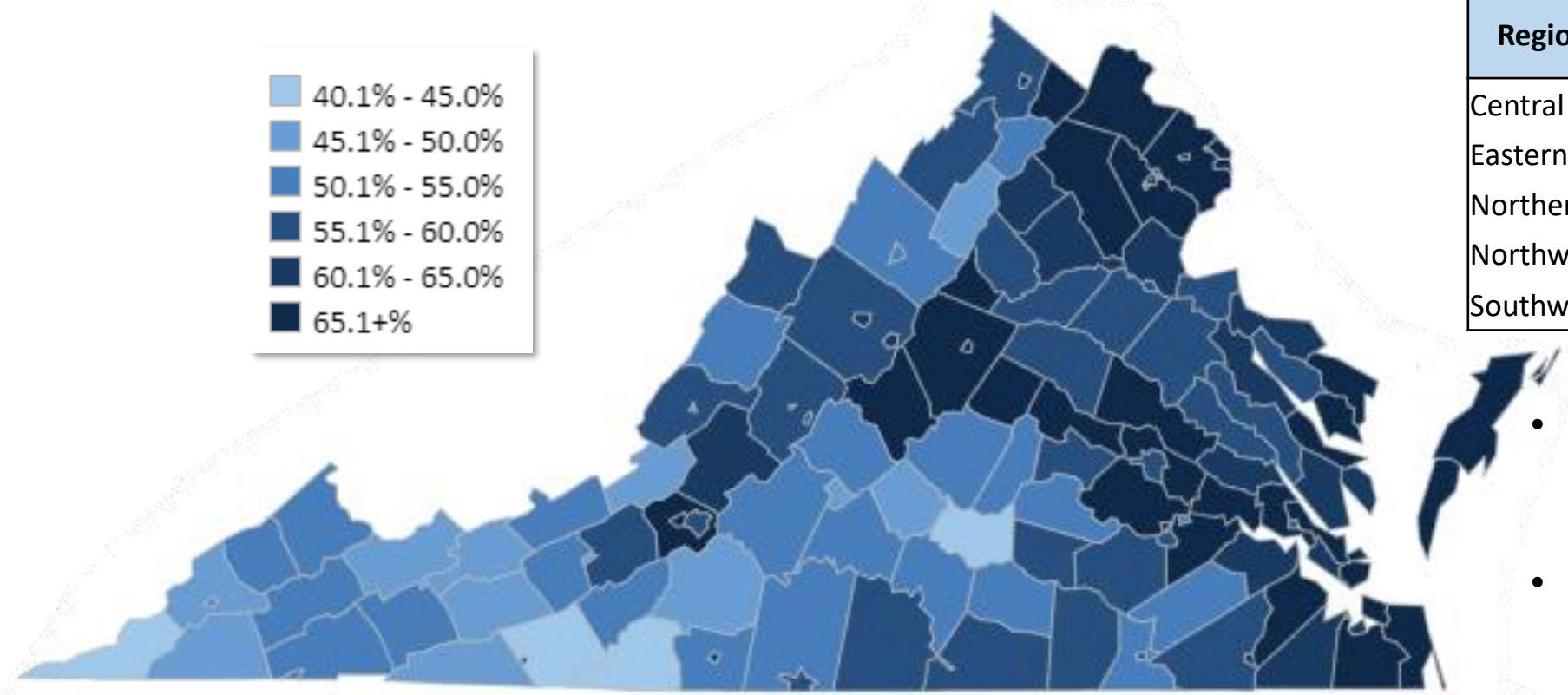


Source: [COVID-19 Vaccine Summary – Coronavirus (virginia.gov)]

Virginia: Vaccination across the Commonwealth by Geography

Updated 4/25/22

Percent of the Total Population Fully Vaccinated by Locality



2013 SRHP Isserman Classification	5 to 11	12 to 17	16 to 17	18 to 30	31 to 50	51 to 64	65+	Grand Total
Mixed Urban	41%	69%	73%	68%	69%	81%	88%	72%
Urban	38%	69%	75%	60%	72%	82%	86%	70%
Mixed Rural	25%	49%	56%	54%	60%	73%	82%	62%
Rural	17%	41%	47%	48%	54%	69%	78%	58%
Grand Total	**34%**	**62%**	**67%**	**59%**	**67%**	**78%**	**84%**	**67%**

Federal doses not included in this number
Source: [COVID-19 Vaccine Summary – Coronavirus (virginia.gov)]

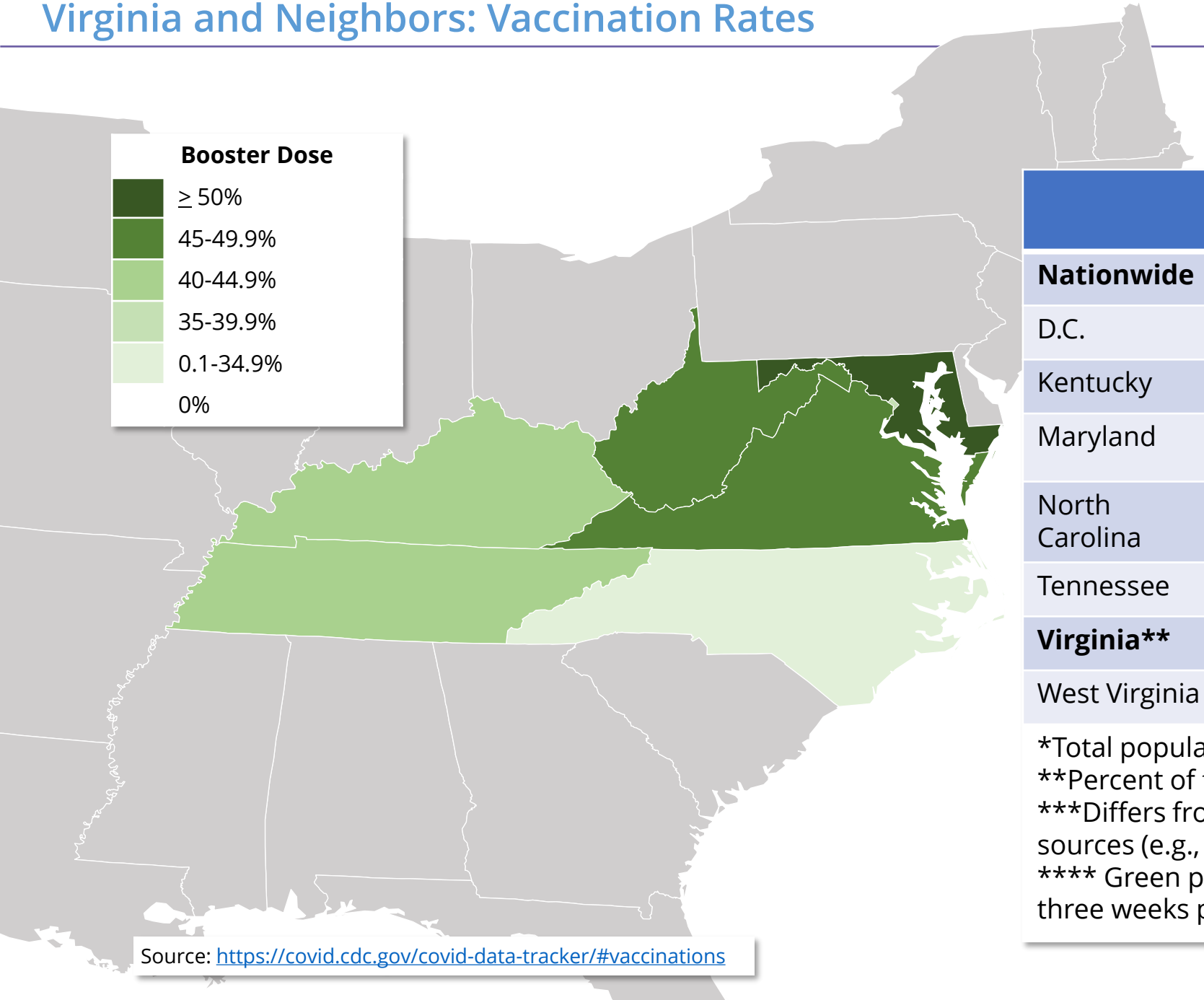
Vaccination Rates by Region

Region Name	Fully Vaccinated	Up-to-Date
Central	62.9%	38.3%
Eastern	58.9%	33.6%
Northern	73.7%	47.6%
Northwest	60.5%	36.4%
Southwest	53.5%	30.2%

- 21 out of 133 Localities have a fully vaccinated rate below 50%
- 15 out of 133 Localities have a fully vaccinated rate above 70%
- There is a disparity across Urban and Rural areas by Age Groups, with Rural Adolescents the Lowest Vaccinated group

Virginia and Neighbors: Vaccination Rates

Updated 4/25/22



Source: https://covid.cdc.gov/covid-data-tracker/#vaccinations

	At Least One Dose*	Fully Vaccinated*	Booster Dose**
Nationwide	**77.5% (+0.4%)**	**66.1% (+0.5%)**	**45.6% (+1.3%)**
D.C.	95.0% (+0.0%)	73.9% (+0.8%)	37.9% (+3.8%)
Kentucky	66.1% (+0.3%)	57.3% (+0.4%)	44.1% (+0.9%)
Maryland	86.3% (+-0.2%)	75.5% (+-0.4%)	50.6% (+1.2%)
North Carolina	84.0% (+0.6%)	60.9% (+1%)	26.4% (+1.1%)
Tennessee	62.1% (+0.3%)	54.4% (+0.4%)	43.8% (+1.4%)
Virginia**	**85.5% (+0.4%)**	**73.1% (+0.4%)**	**47.1% (+0.9%)**
West Virginia	64.9% (+0.3%)	57.5% (+0.3%)	45.6% (+1.3%)

*Total population, includes out-of-state vaccinations
**Percent of fully vaccinated people with a booster dose
***Differs from previous slide because all vaccination sources (e.g., federal) are included
**** Green percent represents percent increase from three weeks prior