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VDH VIRGINIA DEPARTMENT OF HEALTH

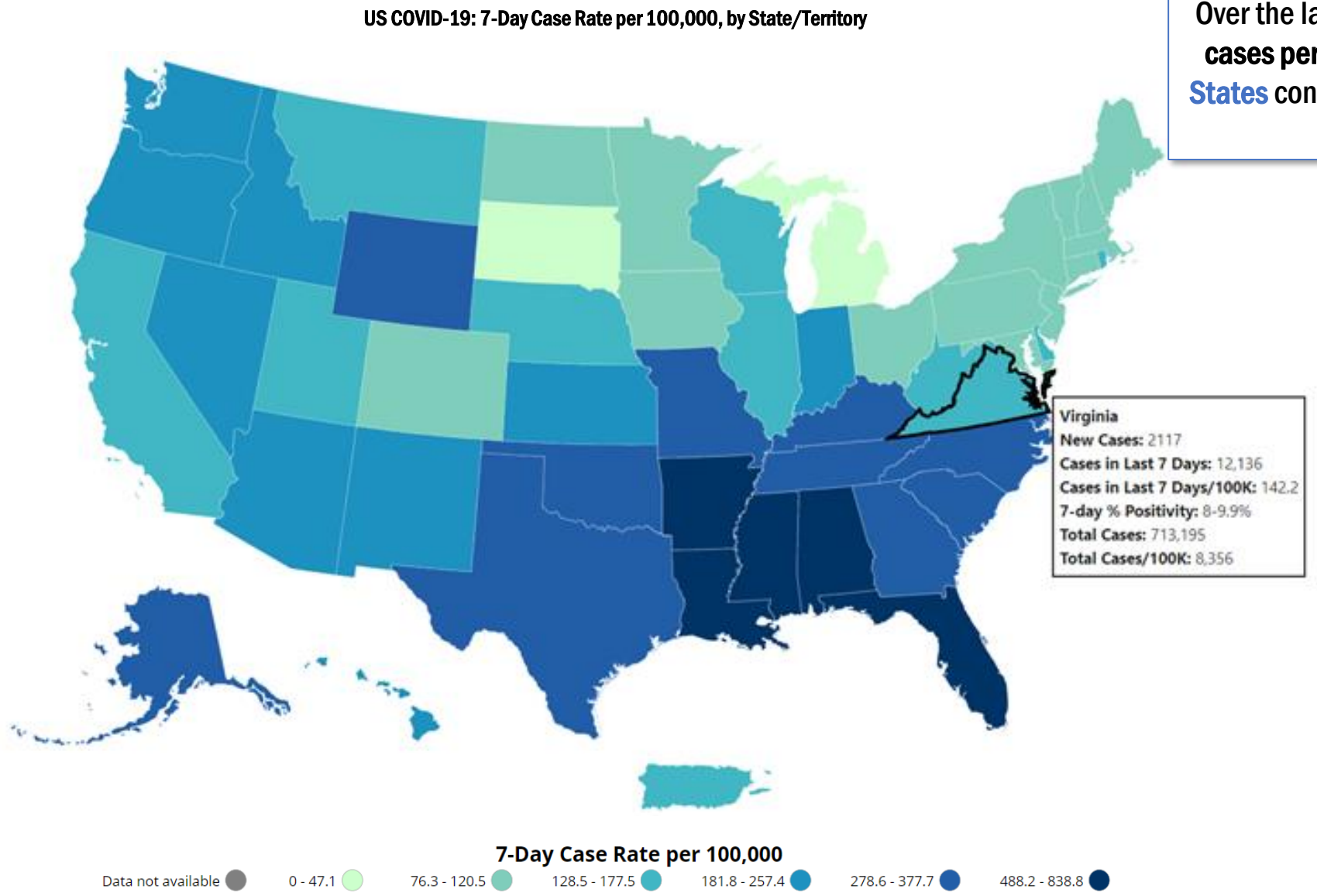
COVID-19 Surveillance Data Update

August 12, 2021

National: Weekly New Cases per 100k

Updated 08/11

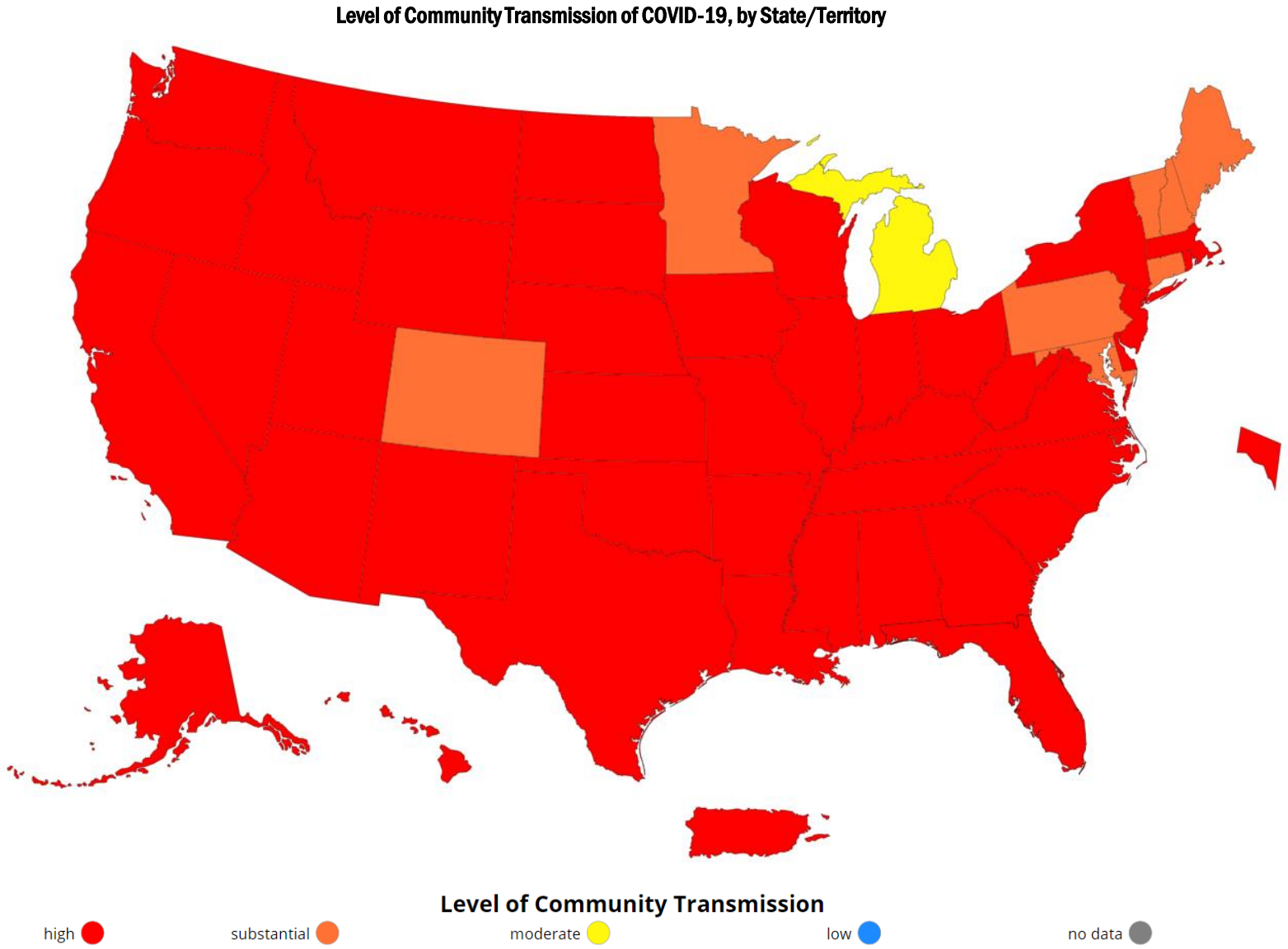
Over the last 7 days, Virginia had **142.2** new confirmed **cases per week per 100,000** compared to The United States confirmed cases of **239.0** per week per 100,000



Source: CDC COVID Data Tracker

National: Community Transmission Levels

Updated 08/11



	Cases in the Last 7 Days Per 100k Population
Virginia	142.2
U.S.	239.0
Louisiana	838.8
Florida	689.5
Mississippi	632.4

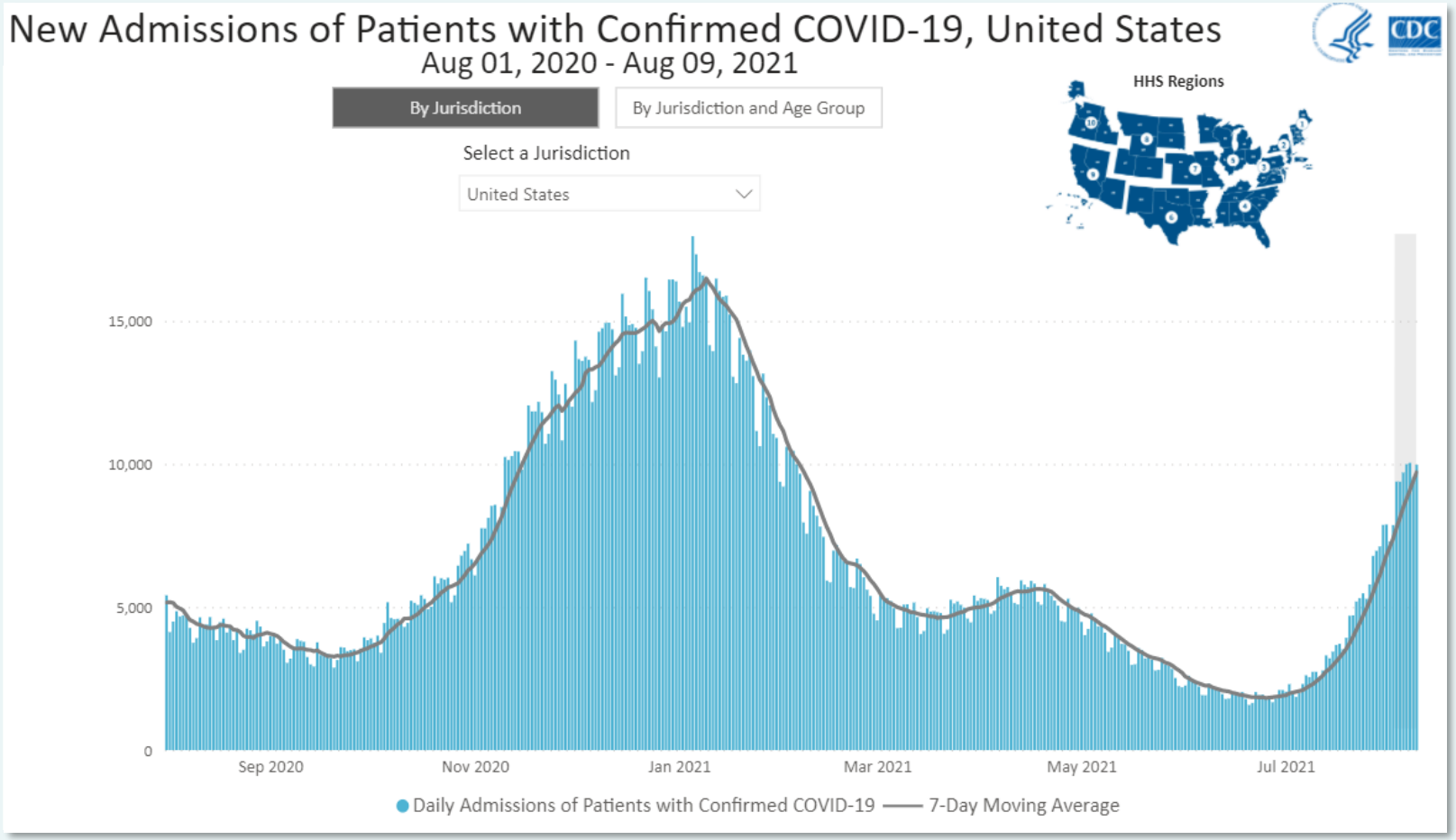
Indicator	Total new cases per 100k persons in the past 7 days
Low Transmission	0-9.99
Moderate Transmission	10-49.99
Substantial Transmission	50-99.99
High Transmission	≥ 100

Source: CDC COVID Data Tracker

National: Weekly Hospitalizations

Updated 08/11

Daily Trend in Number of New COVID-19 Hospital Admissions in the United States



2,495,000
Total New Admissions

9,712
Current 7-day Average

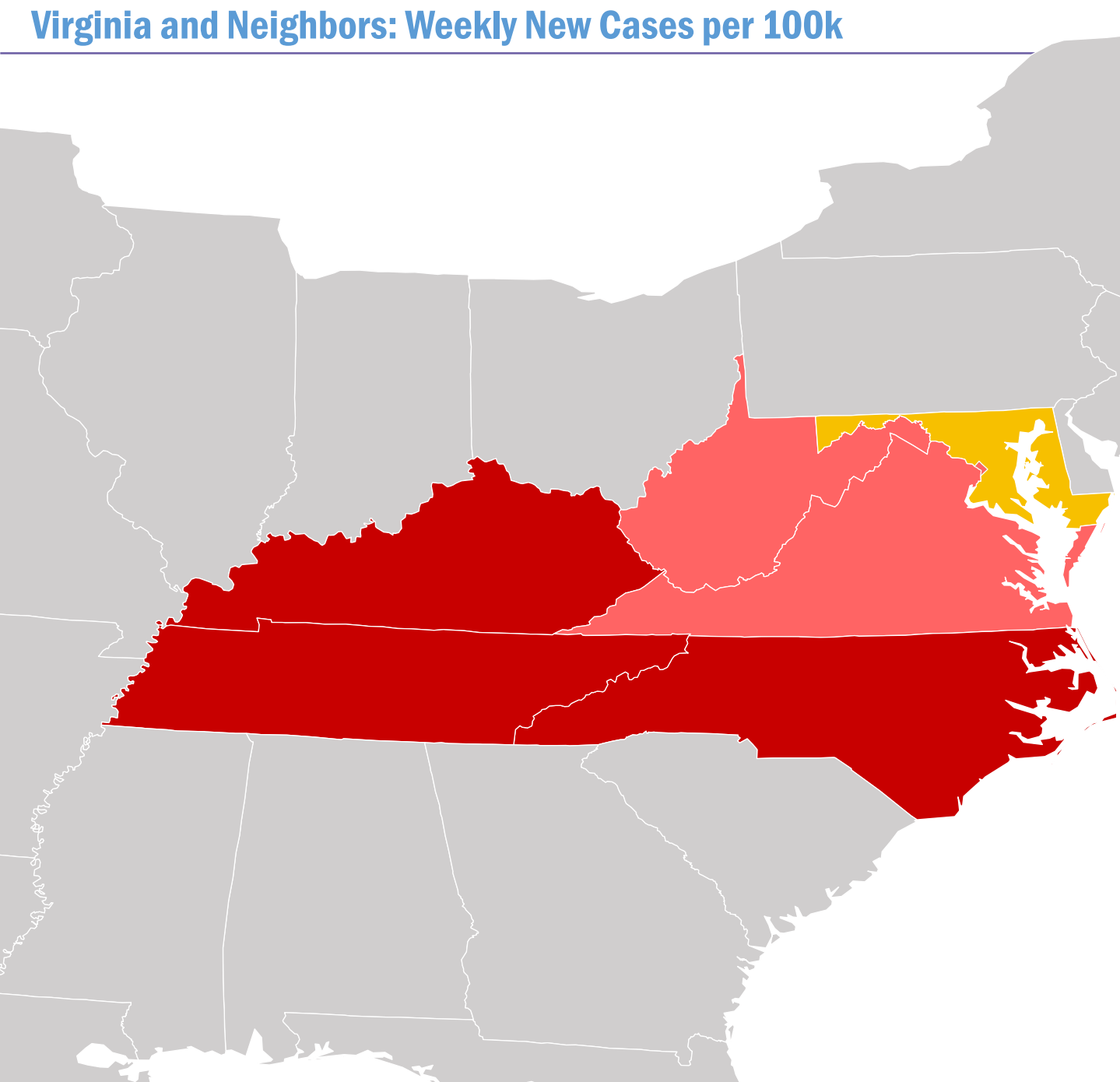
+31.3
% Change in 7-day Average

-41.1%
% Change from peak 7-day Average (Jan 2021)

Source: CDC COVID Data Tracker

Virginia and Neighbors: Weekly New Cases per 100k

Updated 08/11



Over the last 7 days, Virginia had **142.2** (+46%) new confirmed **cases per week per 100k**

Rates Higher than Virginia:

North Carolina, **295.9**, (+86%)
Tennessee, **288.6** (+23%)
Kentucky, **278.8** (+32%)
West Virginia, **151.1** (+72%)

Rates Lower than Virginia:

District of Columbia, **128.5** (+64%)
Maryland, **90.4** (+61%)

Legend	New cases per 100k population per week
Light Green	5-9
Yellow	10-49
Orange	50-99
Light Red	100-199
Red	200-499

Source and thresholds provided by CDC, HealthData.gov

Virginia and Neighbors: Cases, Testing, and Vaccination

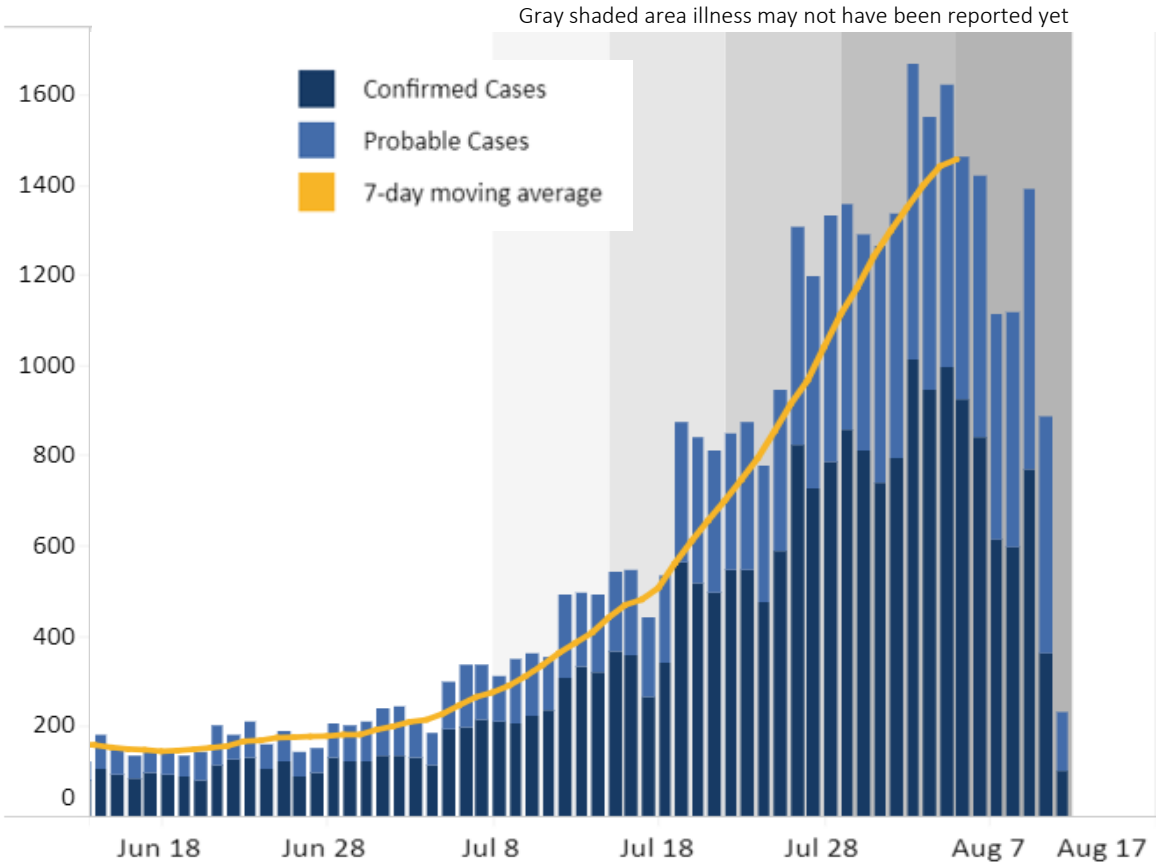
Updated 08/11

	Weekly New Cases Per 100,000 Population	PCR Percent Positive	Fully Vaccinated > 12 Years Old
Virginia	142.2	8-9.9%	64.5%
District of Columbia	128.5	3-4.9%	64.6%
Maryland	90.4	5-7.9%	69.8%
West Virginia	151.1	8-9.9%	45.1%
Kentucky	278.8	10-14.9%	54.4%
Tennessee	288.6	15-19.9%	46.5%
North Carolina	295.9	10-14.9%	51.7%

Source: CDC COVID Data Tracker

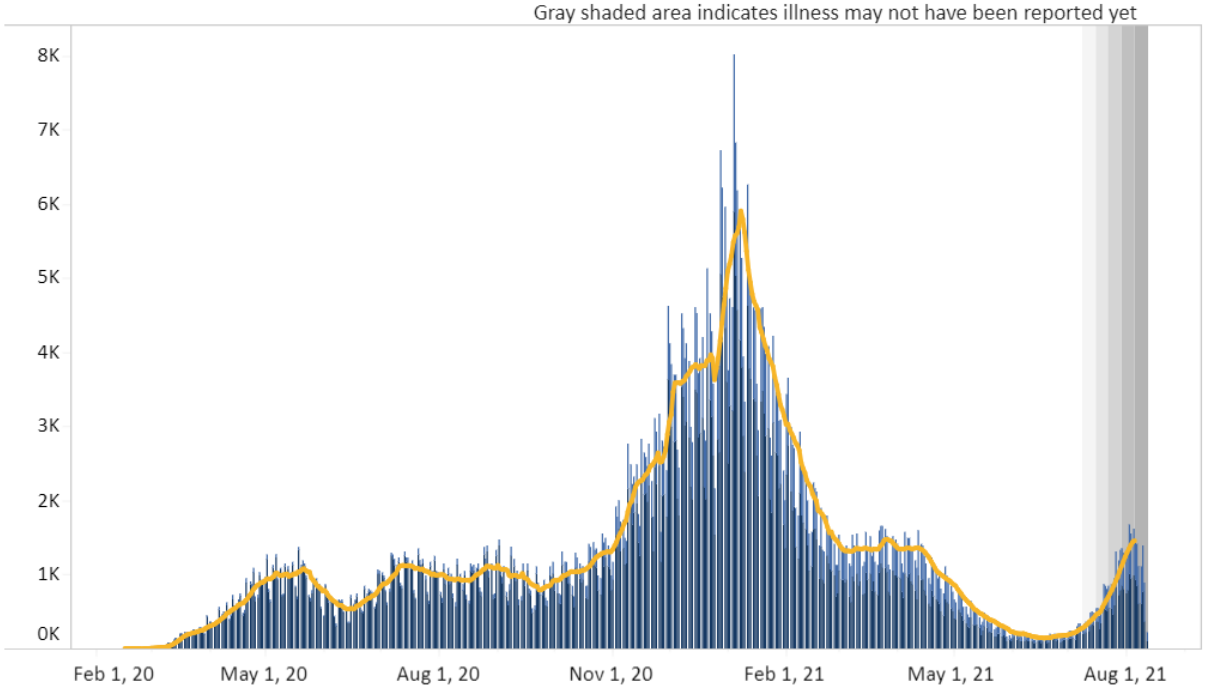
Virginia: Cases, Hospitalizations, and Deaths

Cases by Date of Symptom Onset, last 60 days



- Compared to last week, **cases** increased to 1,820 (7-day MA) per day (+61%)
  - 42% higher than the mid-March low of 2021
  - 255% higher than the summer low of 2020
  - 1311% higher than the Mid-June low of 2021
- **Hospitalizations** increased to 832 per day (+48%)
- **Deaths** increased to 5.3 per day (+77%)

Cases, All Reporting Timeline



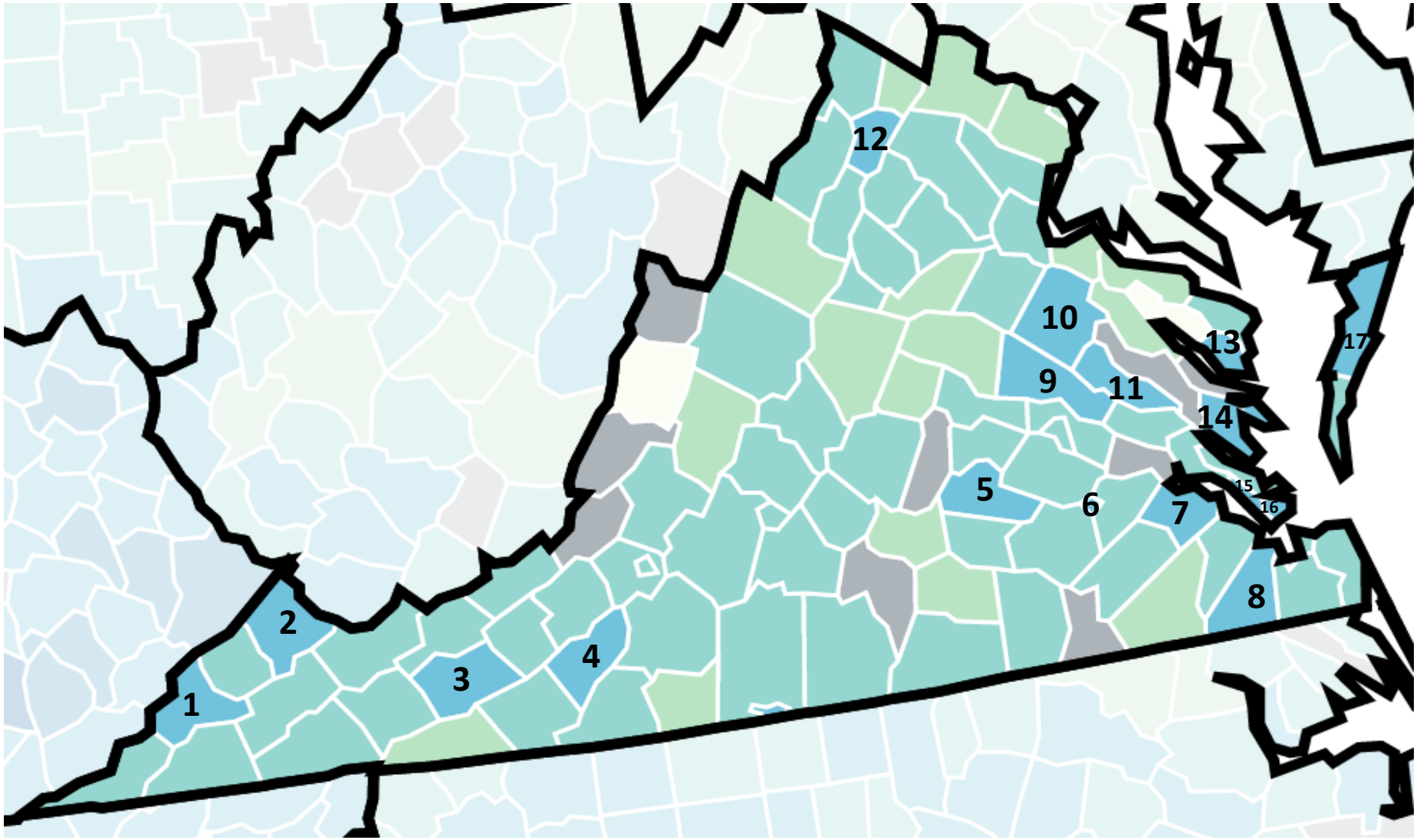
Source: Cases – Coronavirus (virginia.gov), Key Measures – Coronavirus (virginia.gov)
Data represent a 7-day moving average

Virginia: Weekly Total of Cases per 100k by County

Updated 08/011

Highest Case Rate Counties, Greater than 200 per 100k

1. Wise County
2. Buchanan County
3. Wythe County
4. Floyd County
5. Amelia County
6. Petersburg City
7. Surry County
8. Suffolk City
9. Hanover County
10. Caroline County
11. King William County
12. Warren County
13. Lancaster County
14. Gloucester County
15. Newport News City
16. Hampton City
17. Accomack County



Source: CDC COVID Data Tracker

Virginia: Regional Metric Summary

Updated 08/12

Metrics date: 08/12/2021

	Central	Eastern	Far Southwest	Near Southwest	Northern	Northwest
New cases per 100k within the last 7 days	170.4 ↑	188.8 ↑	212.2 ↑	167.4 ↑	91.6 ↑	151.2 ↑
% Positivity 7-day moving average	8.2% ↑	12.3% ↑	9.0% ↑	9.5% ↑	4.5% ↑	7.3% ↑
COVID-like ED visits rate per 100k	15.8 ↑	15.0 ↑	13.7 ↑	14.2 ↑	5.9 ↑	8.7 ↑

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

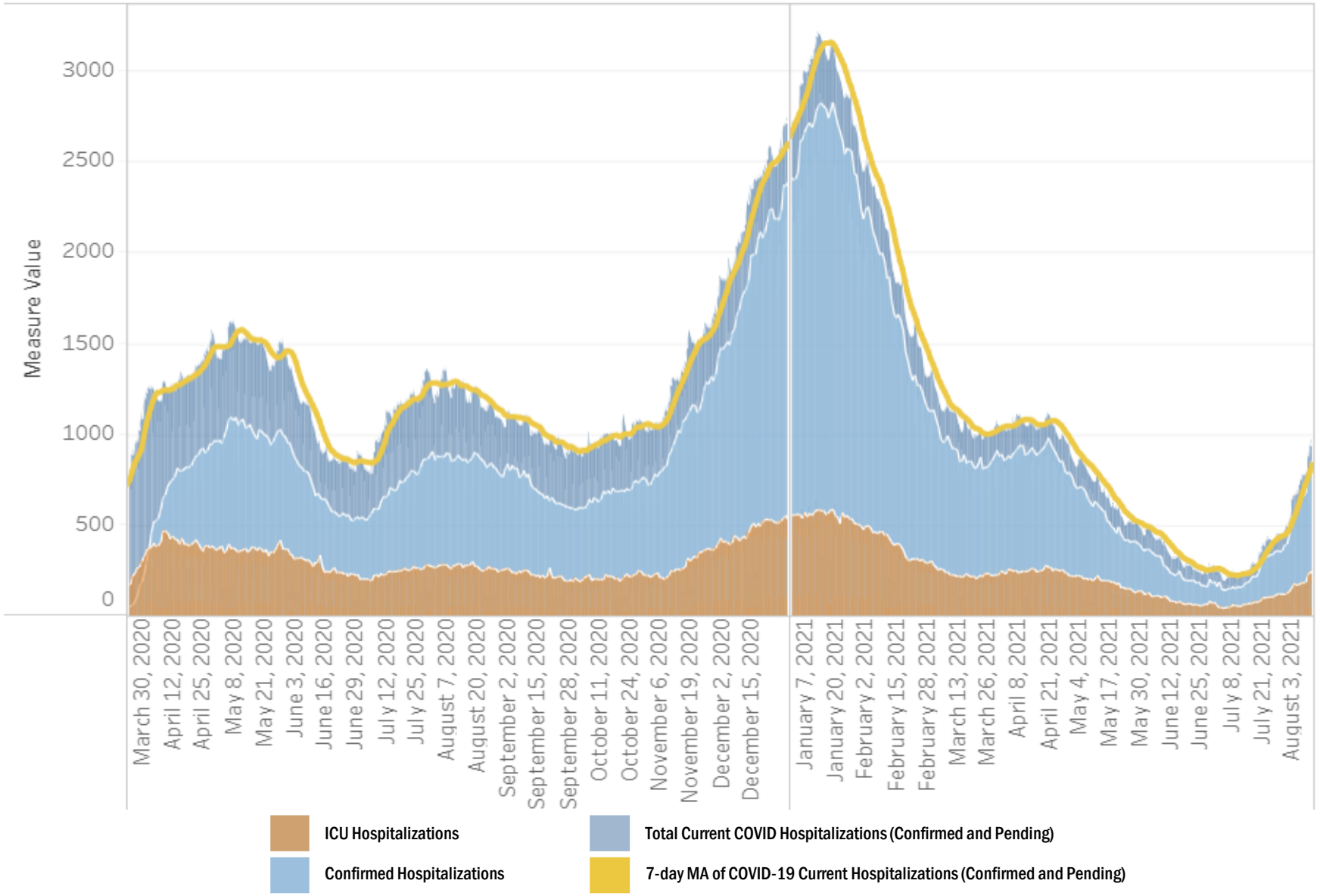
Symbol	Trend
↑	Increasing
↓	Decreasing
○	Fluctuating

Source: Region Metrics – Coronavirus

Data represents a 7-day moving average, trends compared to 1 week ago

Virginia: COVID-19 in Virginia Hospitals

Updated 08/12



832
Current 7-day Average Current Hospitalizations

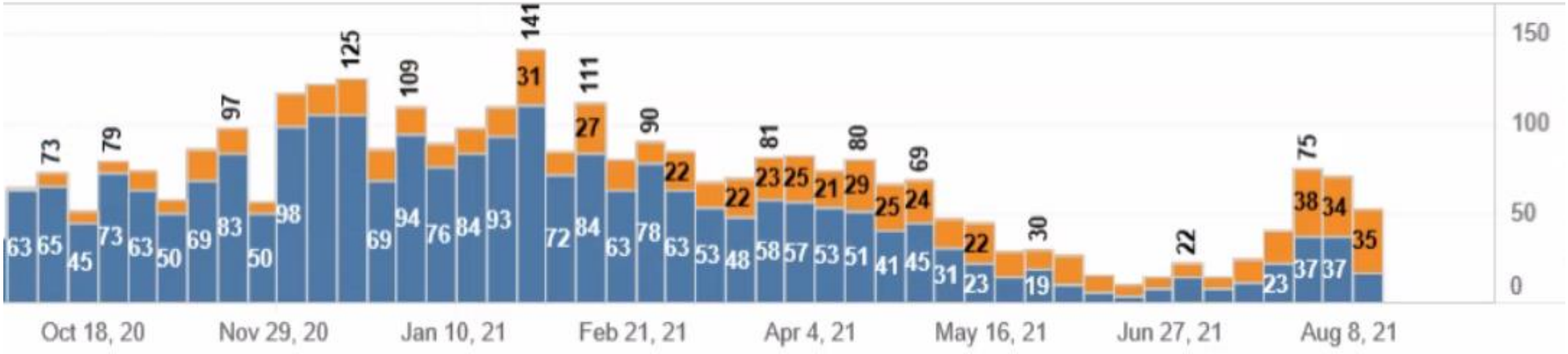
+48.0%
% Change in 7-day Average

-73.6%
% Change from peak 7-day Average (Jan 2021)

Source: [VHHA Hospitalizations – Coronavirus (virginia.gov)]

Virginia: Outbreaks by Week

Distinct Count of Outbreaks, Blue Bars are Confirmed Outbreaks

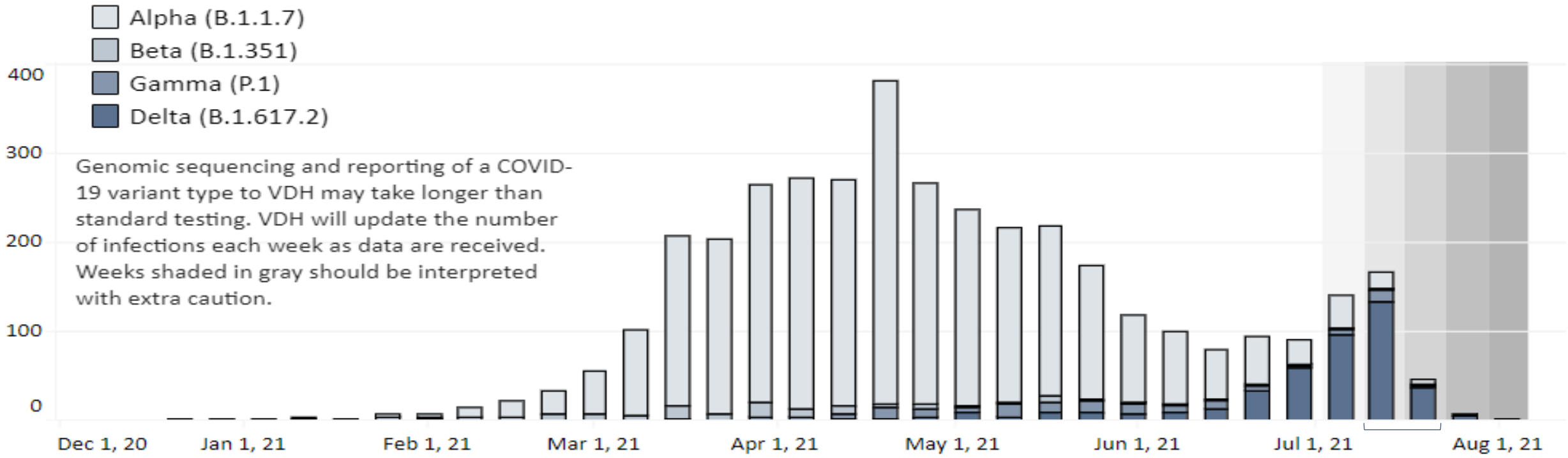


Date of OEpi Notified

Sources: https://dataviz.vdh.virginia.gov/views/COVID-19VOSSQAReport/DailyReporting

Number of Variant of Concern Infections Reported to VDH by Week

Updated 08/06

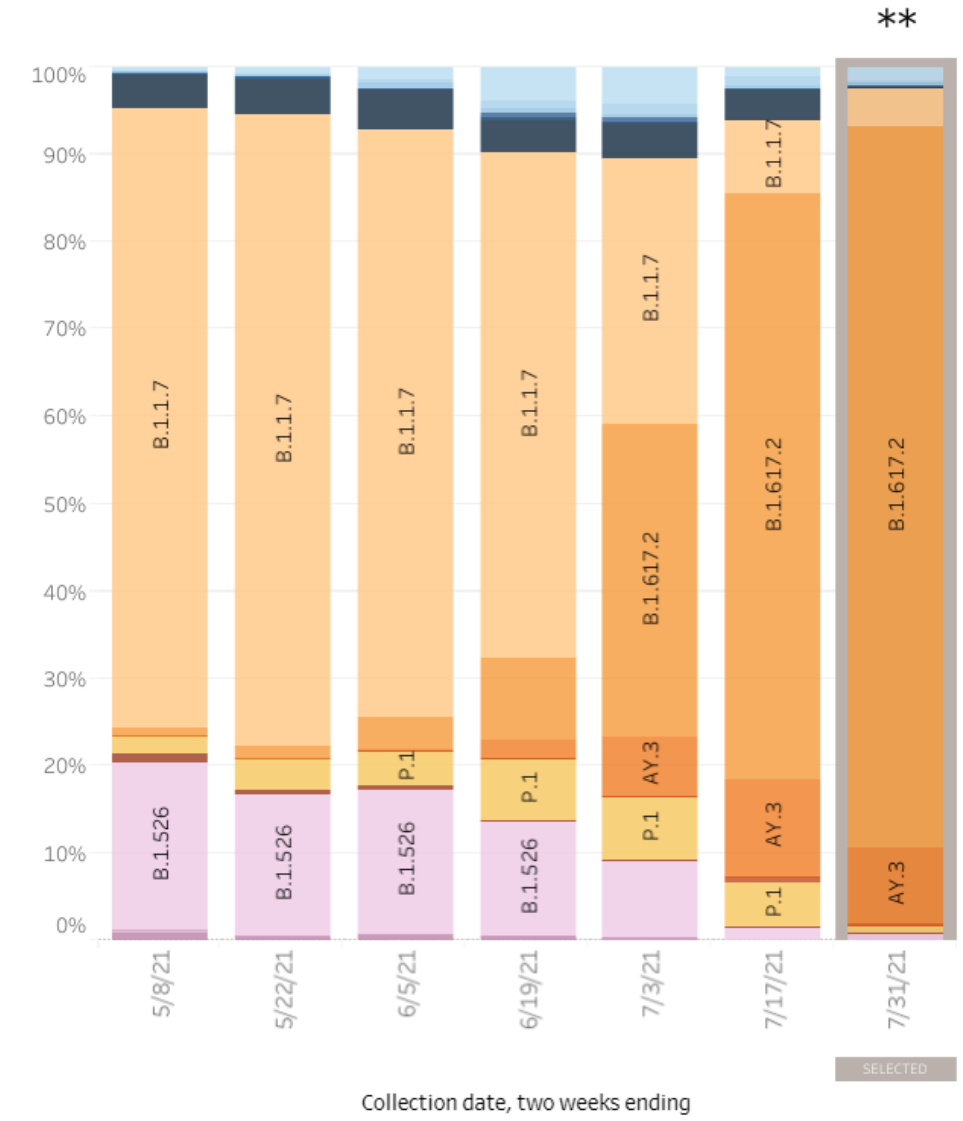


	Week Ending 7/10/2021	Week Ending 7/17/2021	Percent Change
Alpha	10.8%	10.9%	+0.9%
Beta	0%	0%	0%
Gamma	9.6%	8.7%	-9.4%
Delta	79.6%	80.4%	+1.0%

Sources: Variants of Concern – Coronavirus (virginia.gov), Data updated on Fridays

Virginia Region: CDC Estimated Proportions of SARS-CoV-2 Lineages

HHS Region 3: 4/25/2021 – 7/31/2021



HHS Region 3: 7/18/2021 – 7/31/2021 NOWCAST

Region 3 - Delaware, District of Columbia, Maryland, Pennsylvania, Virginia, and West Virginia

WHO label	Lineage #	Type	%Total	95%PI
Alpha	B.1.1.7	VOC	4.3%	0.0-11.1%
Beta	B.1.351	VOC	0.0%	0.0-2.2%
Gamma	P.1	VOC	0.8%	0.0-4.4%
Delta	B.1.617.2	VOC	82.5%	71.1-93.3%
	AY.3	VOC	8.9%	2.2-17.8%
	AY.2	VOC	0.2%	0.0-2.2%
	AY.1	VOC	0.0%	0.0-2.2%
Eta	B.1.525	VOI	0.0%	0.0-2.2%
Iota	B.1.526	VOI	0.7%	0.0-4.4%
	B.1.621		1.6%	0.0-6.7%
	Other*		0.5%	0.0-2.2%
	B.1.621.1		0.4%	0.0-2.2%
	B.1.628		0.2%	0.0-2.2%
	A.2.5		0.0%	0.0-2.2%
	B.1.626		0.0%	0.0-2.2%
	B.1.429	VOI	0.0%	0.0-2.2%
	B.1.427	VOI	0.0%	0.0-2.2%

* Enumerated lineages are VOI/VOC or are circulating >1% in at least one HHS region during at least one two week period; remaining lineages are aggregated as "Other".
** These data include Nowcast estimates, which are modeled projections that may differ from weighted estimates generated at later dates
# Sublineages of P.1 and B.1.351 (P.1.1, P.1.2, B.1.351.2, B.1.351.3) are aggregated with the parent lineage and included in parent lineage's proportion. AY.3.1 is agregated with its parent lineage AY.3.

Sources: CDC COVID Data Tracker, Data updated on Tuesdays, ** These data include Nowcast estimates, which are modeled projections

Recent Literature of Possible Interest to VDH

Kirzinger et al. summarized the findings of the Kaiser Family Foundation's July 27th vaccination survey

- KFF has been conducting monthly surveys of adults since December 2020 related to COVID vaccination in the U.S.
- 17 percent are highly resistant to getting vaccinated and 10 percent report that they will "wait and see"
- The non-elderly uninsured, Republicans, and rural residents are the least likely to be vaccinated
- The "wait and see" group is disproportionately Hispanic, while the highly resistant group is more white
- News about the variants has made about 20 percent of the unvaccinated more likely to get vaccinated

Gadaleta et al. studied the use of wearable sensors and machine learning to passively detect COVID-19

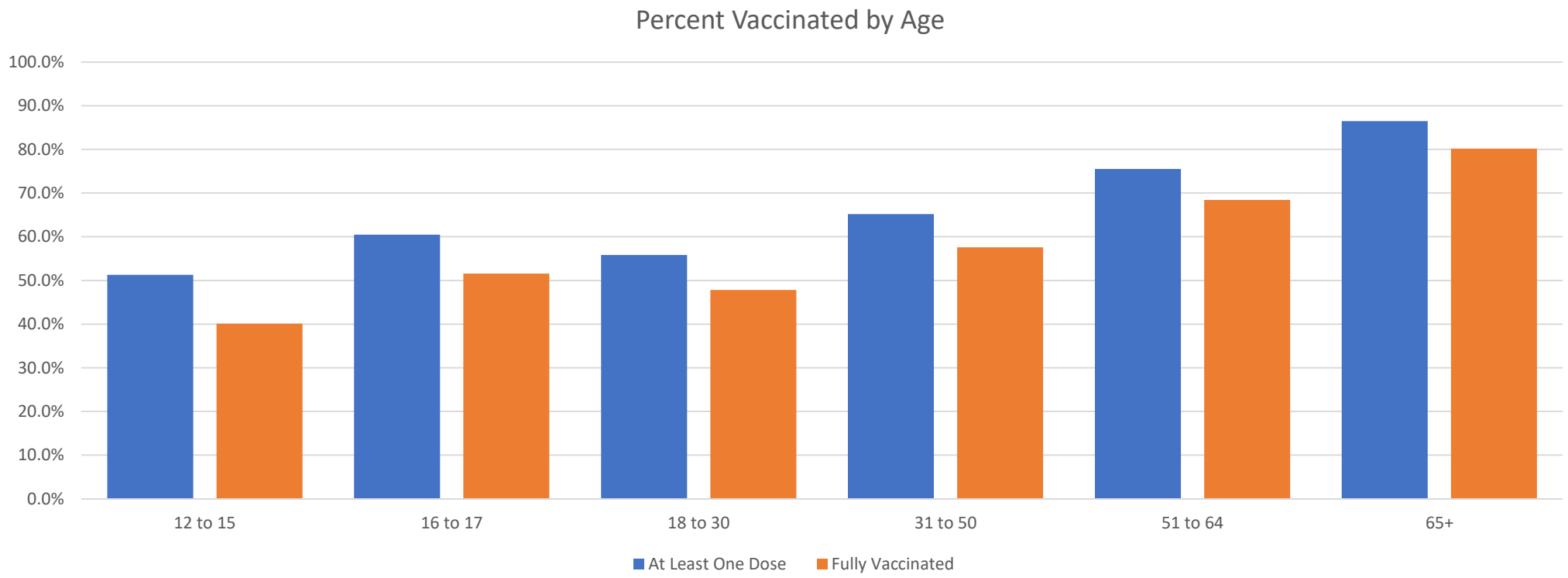
- They had smartwatch and fitness sensor data from 38,911 individuals from March 25, 2020, to April 3, 2021
- Using self-reported symptoms, testing data, and sensor data, the authors trained decision tree models to detect cases one day before the onset of symptoms, the day of symptom onset, and in the asymptomatic
- For predictions one day before symptom onset, their model had sensitivity of .78 and a specificity of .72
- While these values are much worse than PCR tests, this type of surveillance could result in earlier case detection

Giardina et al. used an agent-based model to understand the likelihood of spread in elementary schools with the delta variant and different mitigation measures

- They simulated a school with 638 students where 70 percent of parents, teachers, and staff were vaccinated
- Assuming no special mitigation measures are taken, the likelihood of in-school transmission in a month will be more than 50 percent if the community rate of spread is 4 cases per day per 100,000 people or higher
- Interventions such as masking or improved ventilation can reduce the risk by 40 percent
- Vaccinating children under the age of 12 would also greatly reduce the risk of in-school transmission

Virginia: Vaccination by Age Groups

Updated 08/11



Virginia Vaccination by Age

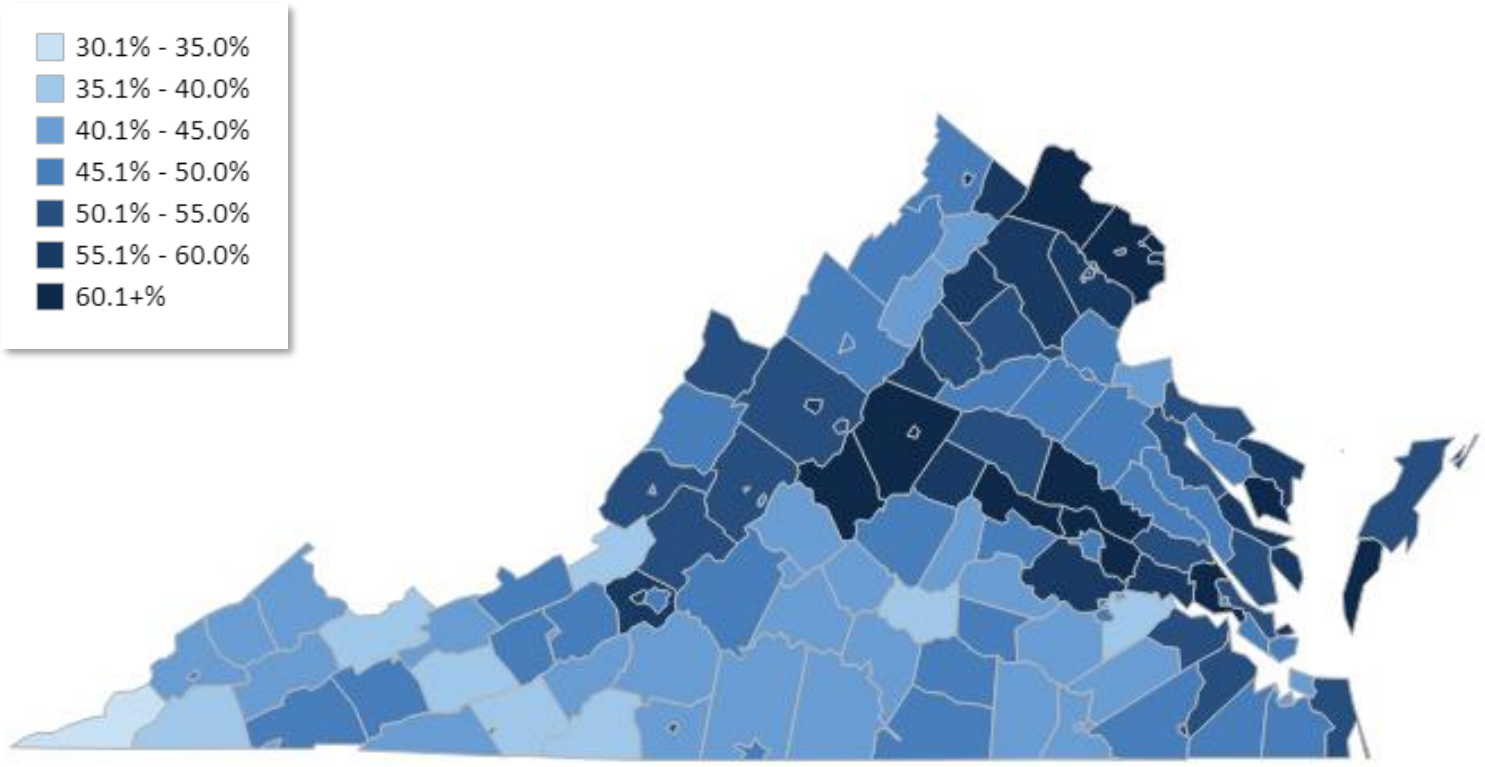
- ✓ **73.6%** of the Adult (18+) Population Vaccinated with at Least One Dose
- ✓ **64.0%** of the Eligible (12+) Population Fully Vaccinated
- ✓ **86.7%** of Virginians 65+ and **54.3%** of 12 to 17 year olds have received at least one dose
- ✓ **54.9%** of the Total Population has been Fully Vaccinated

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

Virginia: Vaccination across the Commonwealth

Updated 08/11

Percent of the Total Population with at Least One Dose by Locality



First Dose Vaccination Rate by Region for Total Population

Region Name	1st Dose Vaccination
Central	52.1%
Eastern	47.8%
Northern	61.4%
Northwest	50.9%
Southwest	45.0%

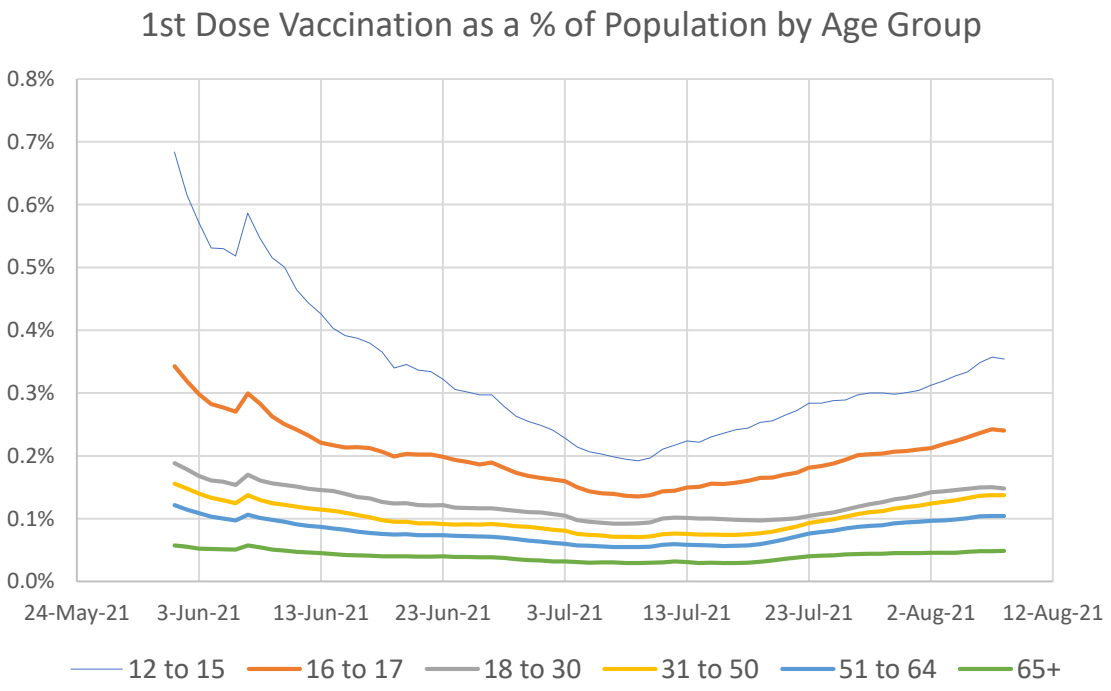
Federal doses not included in this number

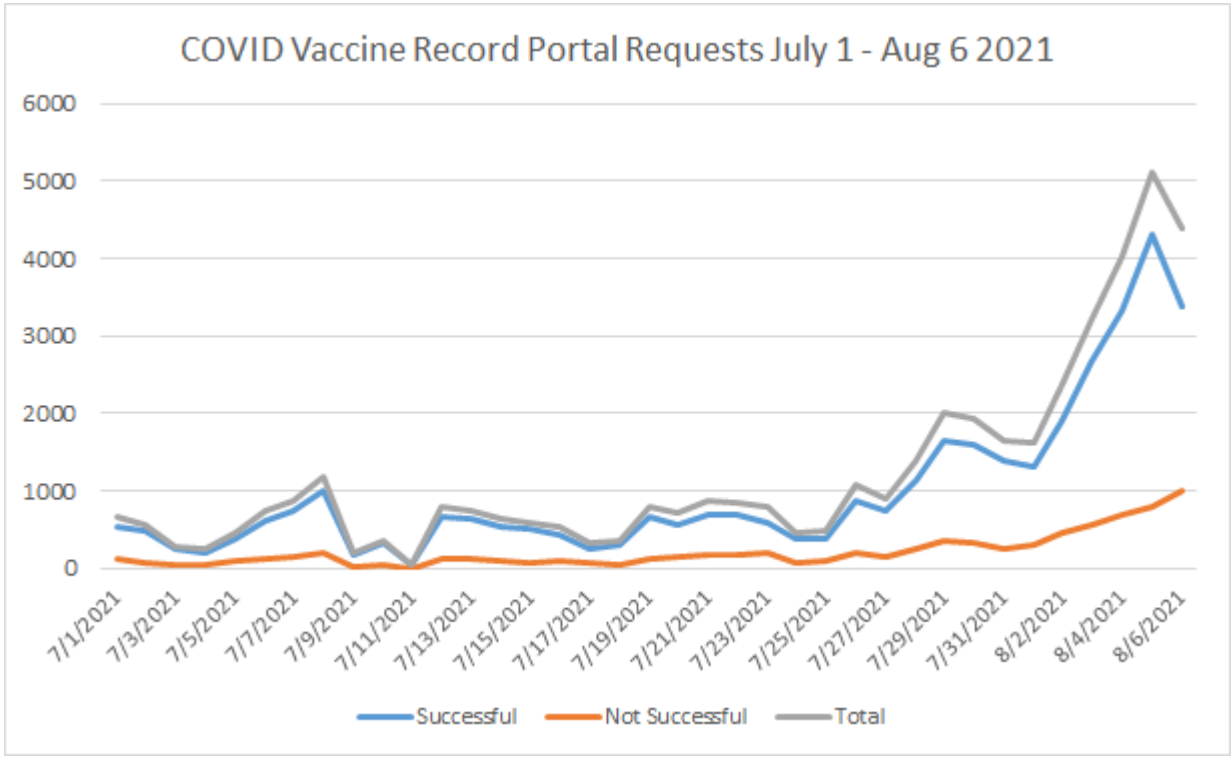
Source: COVID-19 Vaccine Summary – Coronavirus (virginia.gov)

Virginia: Increasing Vaccine Demand

Vaccinations per day are increasing after a long period of decline

- First Doses have continued to increase over the past 3 weeks after a month of decline
- All Age groups are seeing higher vaccination rates, but adolescents have been increasing at the fastest rate
- There has been corresponding sharp increase in Vaccine Record Portal Requests



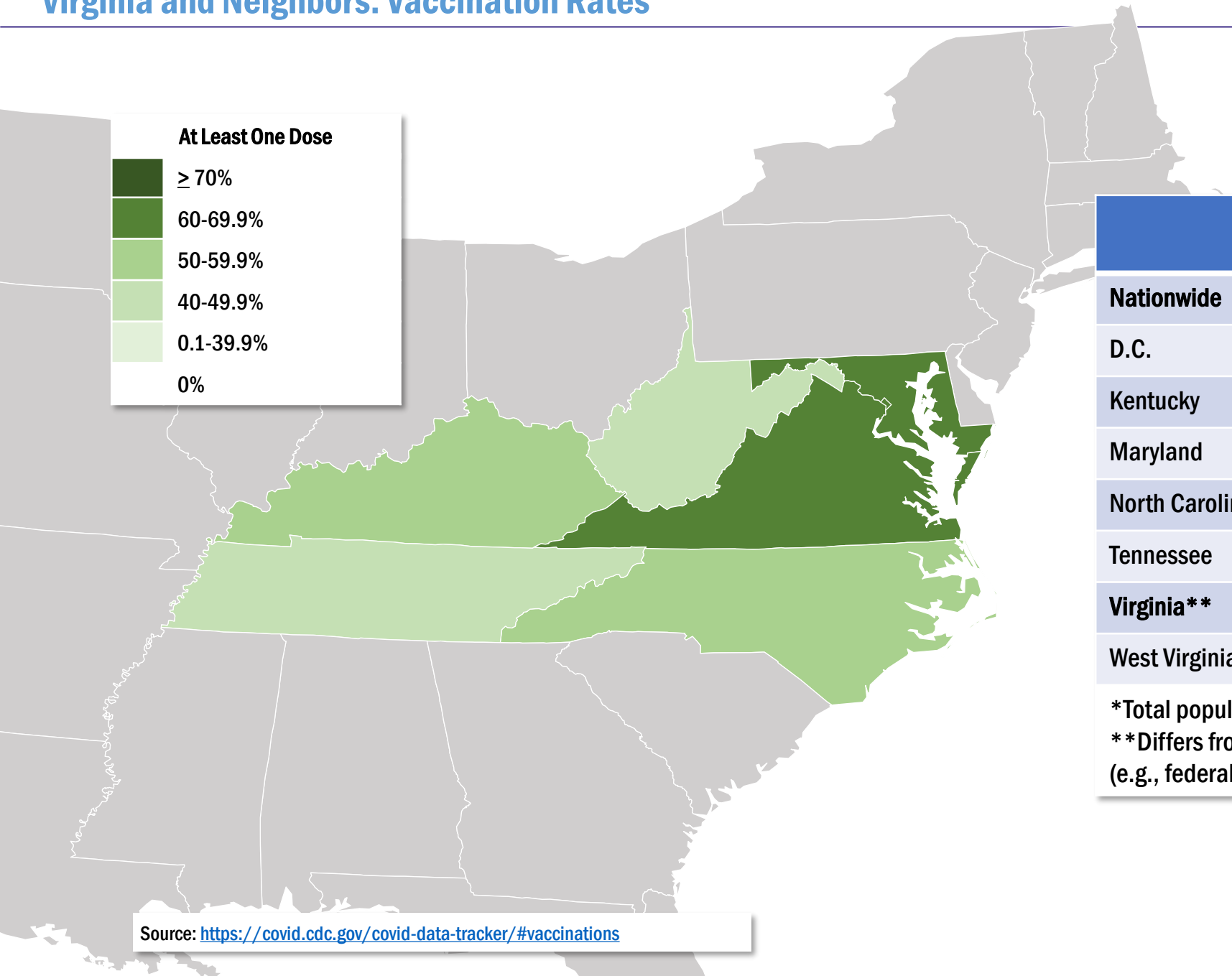


Federal doses not included in this number

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

Virginia and Neighbors: Vaccination Rates

Updated 08/12



	At Least One Dose*	Fully Vaccinated*
Nationwide	**59.1%**	**50.3%**
D.C.	65.3%	55.8%
Kentucky	53.8%	46.4%
Maryland	66.0%	59.6%
North Carolina	52.6%	44.4%
Tennessee	46.4%	39.8%
Virginia**	**63.1%**	**55.3%**
West Virginia	46.3%	39.2%

*Total population, includes out-of-state vaccinations
**Differs from previous slide because all vaccination sources (e.g., federal) are included

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