

COVID-19 Modeling

March 8, 2022

Presentation available at:
dfr.vermont.gov

Overview

As Vermont passes the two-year anniversary of its first reported COVID-19 case, the situation in the state continues to improve from the height of the Omicron wave. Over half a million Vermonters have also now been fully vaccinated against COVID-19.

Vermont is averaging 140 cases per day on a seven-day average—a 93% decrease since the Omicron peak. The pace of case decline has slowed both in Vermont and New England as infections reach more stable low levels. CDC modeling indicates cases are expected to remain low in Vermont, the Northeast, and across the United States throughout the month of March.

Hospitalizations continue to see significant decreases: new hospital admissions are down 36% this week (down 78% from the Omicron peak); those currently hospitalized are down 21% this week (down 78% from the Omicron peak); and those currently in the ICU are down 42% this week (down 88% from the Omicron peak). The state has recorded 16 consecutive days of fewer than 10 Vermonters in the ICU for COVID-19.

Hospitalizations continue to be more common among older Vermonters: those over 65 are more than 19 times more likely to be hospitalized for COVID than those under 24. Unvaccinated adults are also at increased risk with quadruple the rate of hospitalization compared to their boosted peers.

Most fortunately, the seven-day fatality rate is below one for the first time in two months as fewer COVID-19 deaths are occurring. Our thoughts continue to be with the families and friends of those who have lost loved ones to COVID-19. Modeling forecasts COVID-19 deaths will decline steadily in the coming weeks.

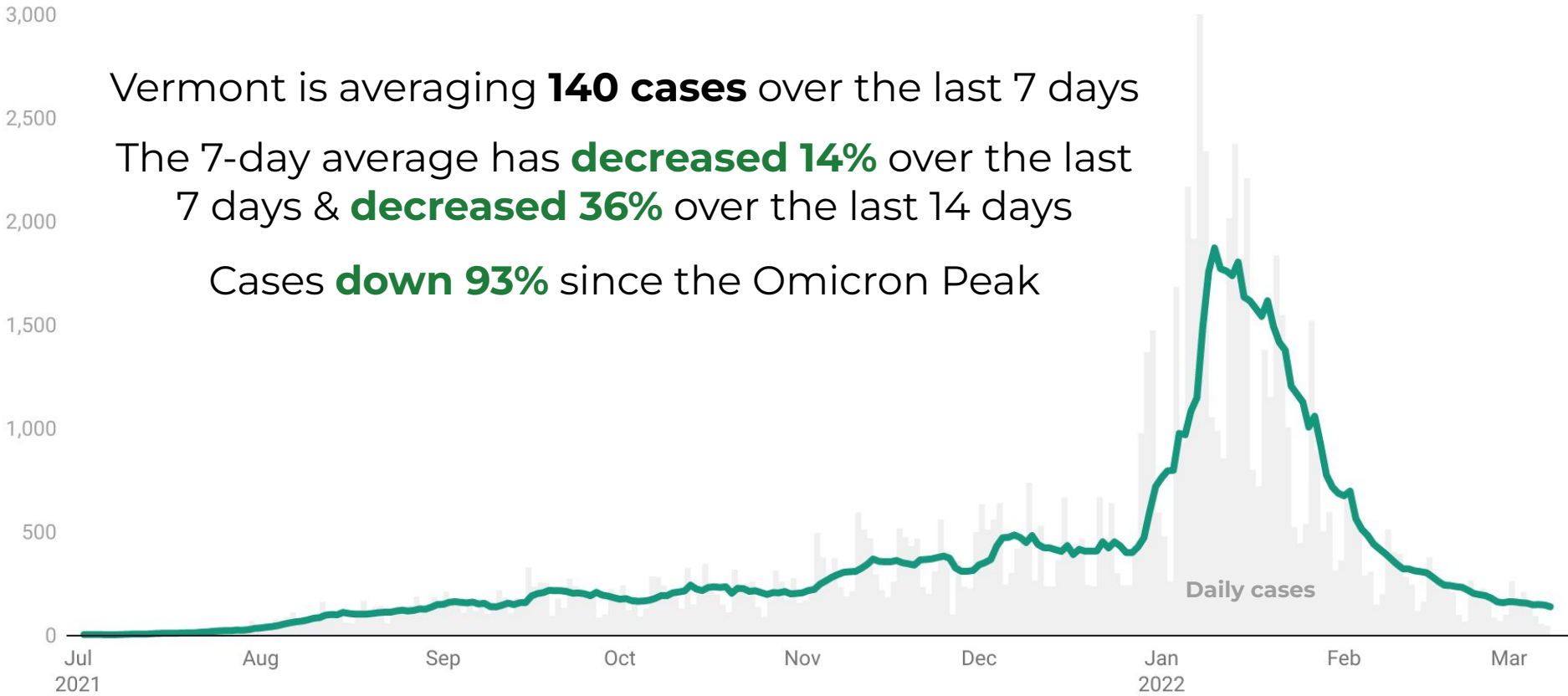
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Vermont Case Data

Vermont New COVID-19 Cases

7-Day Average



Source: VDH—March 8, 2022; created with Datawrapper

Vermont New Weekly COVID-19

14,000

12,000

10,000

8,000

6,000

4,000

2,000

0

Vermont reported 983 new COVID-19 cases this week,
164 fewer cases compared to last week

First week since August 2021 with fewer than 1,000 new
COVID-19 cases

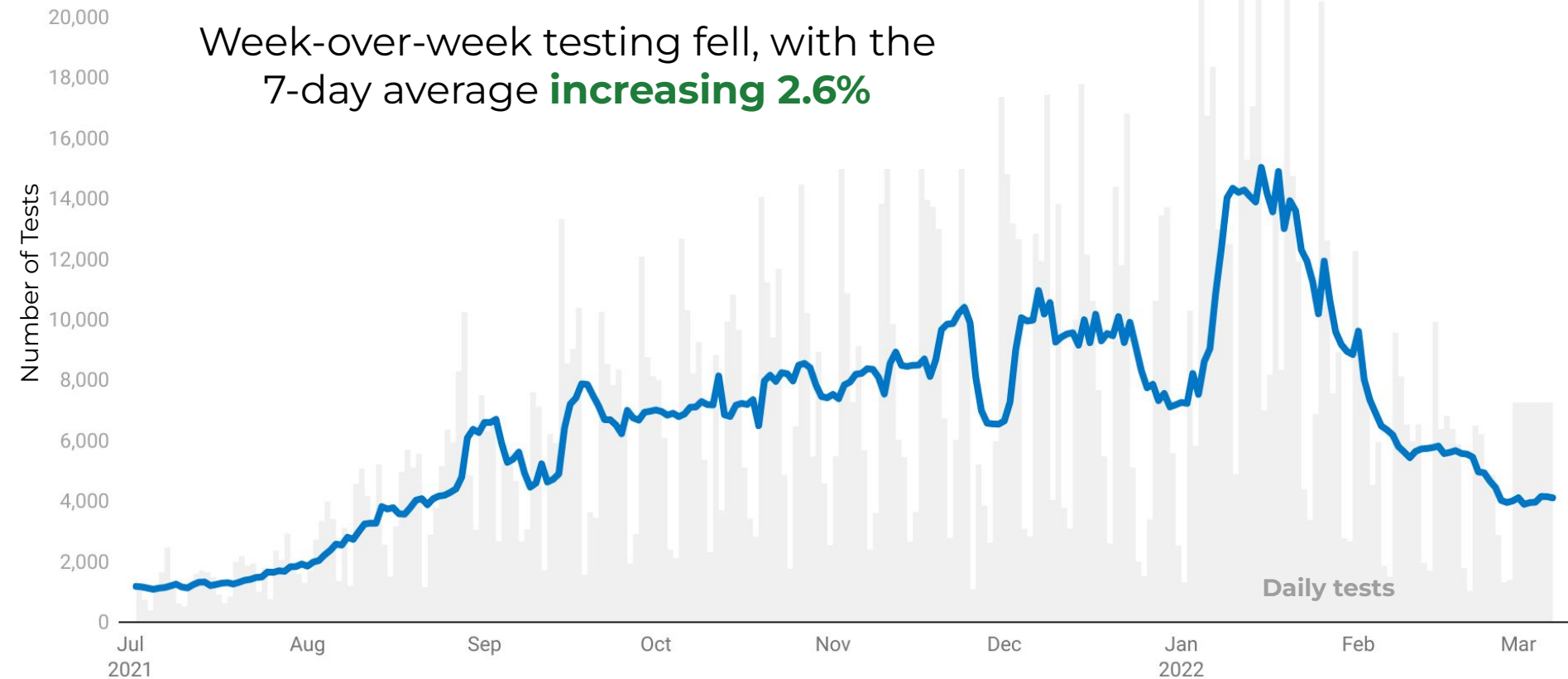


Source: VDH—March 8, 2022; created with Datawrapper

Vermont COVID-19 PCR Testing

7-Day Average

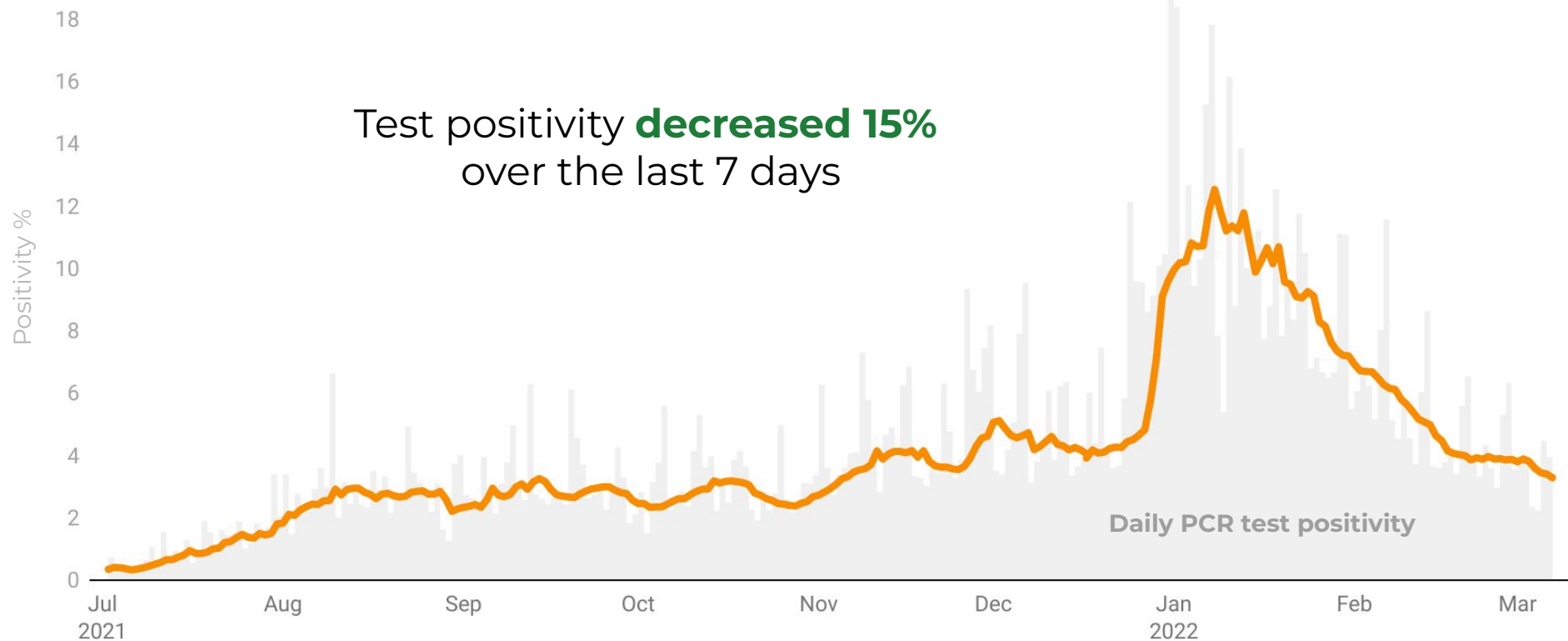
Week-over-week testing fell, with the 7-day average **increasing 2.6%**



Daily tests

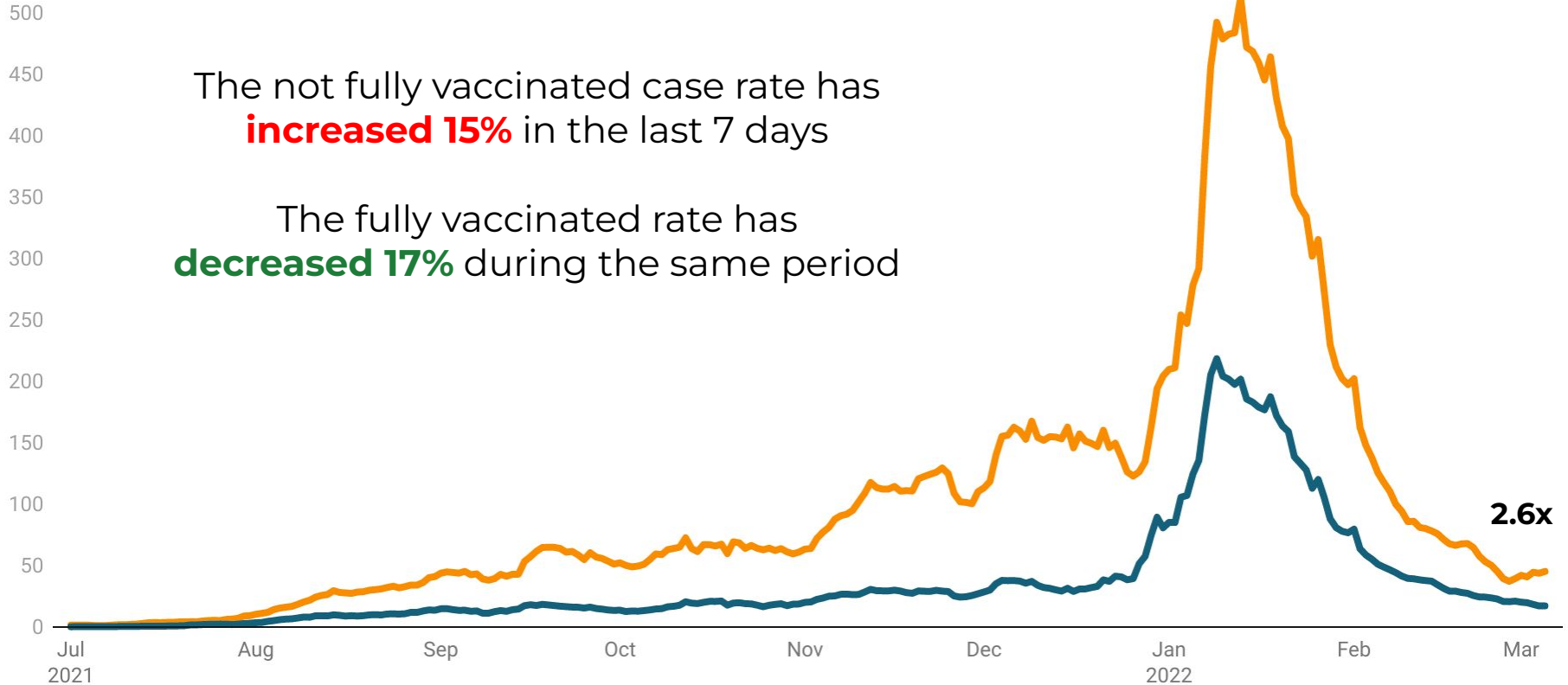
Vermont PCR Test Positivity

7-Day Positivity Rate



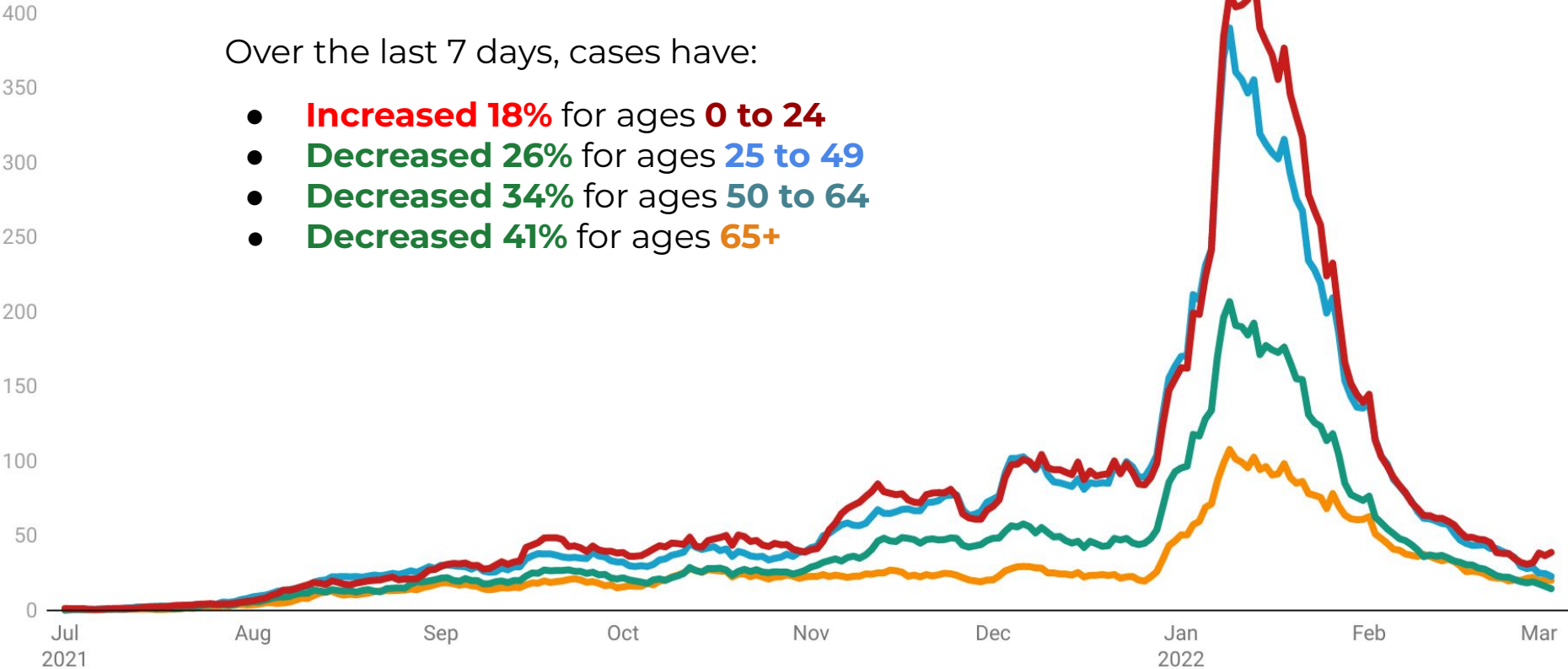
Vermont COVID-19 New Case Rates Per 100K (7-Day Average)

— Not Fully Vaccinated Case Rate — Fully Vaccinated Case Rate



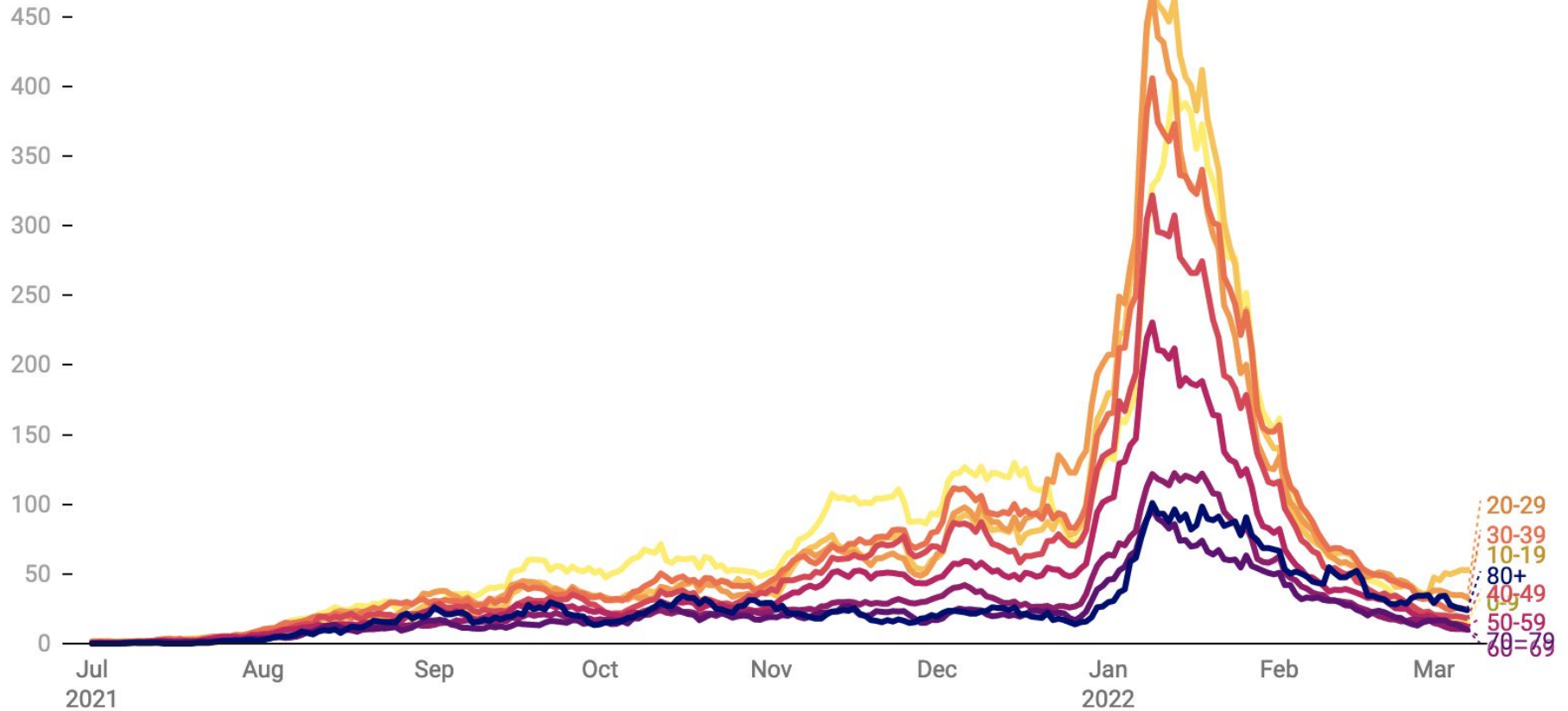
Vermont Case Rates Per 100K By Age (7-Day Average)

0 to 24 24 to 49 50 to 64 65+



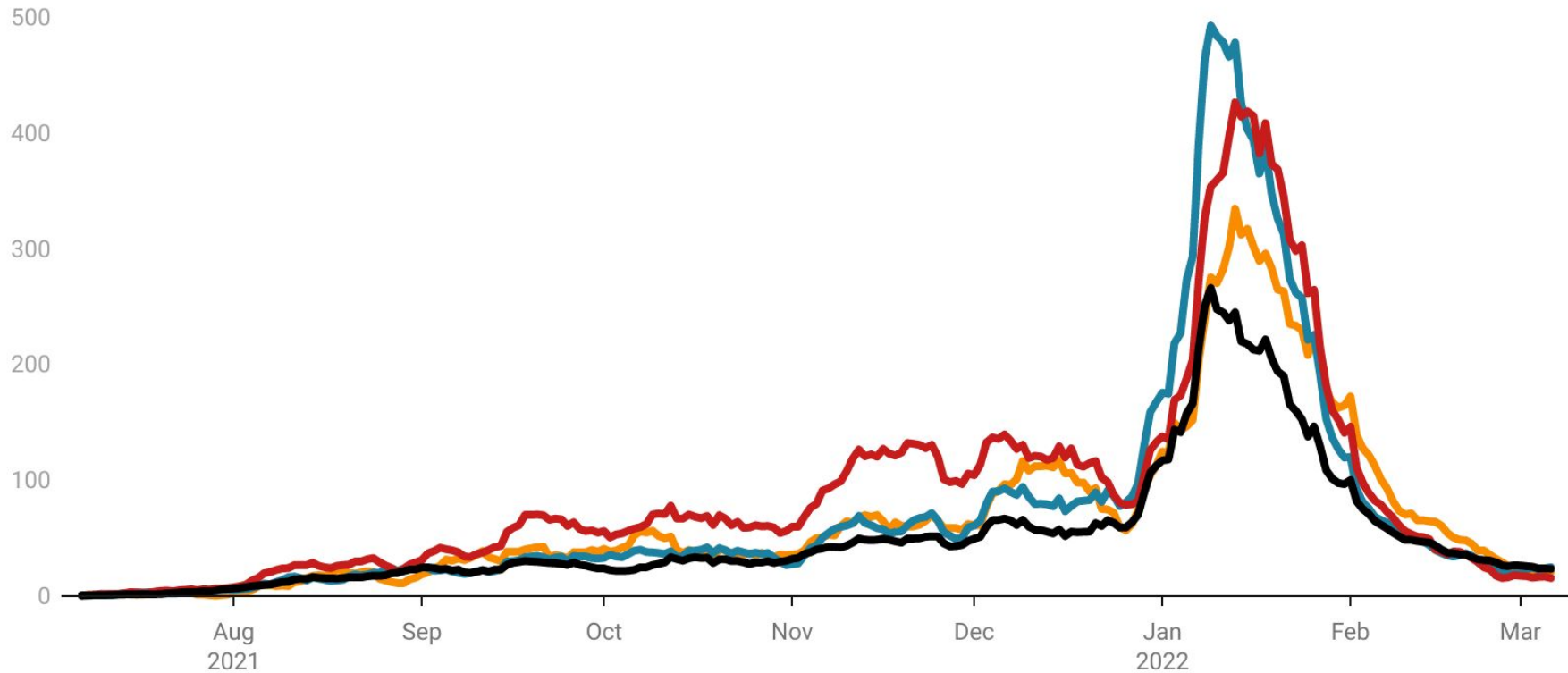
Source: VDH—March 8, 2022; created with Datawrapper

VT COVID-19 Infections per 100K by Age Group



Vermont Covid-19 Case Rates by Age (7-Day Average)

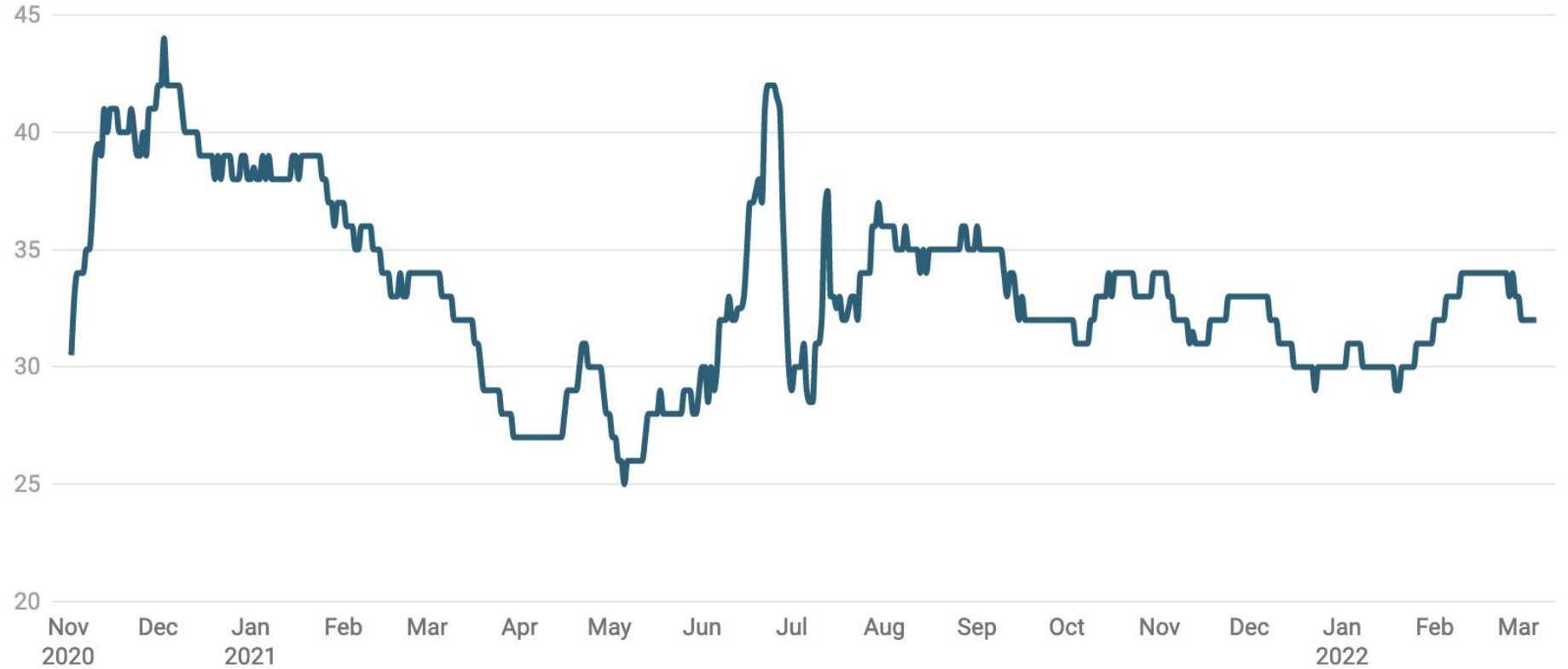
0-4 5-11 12-18 19+



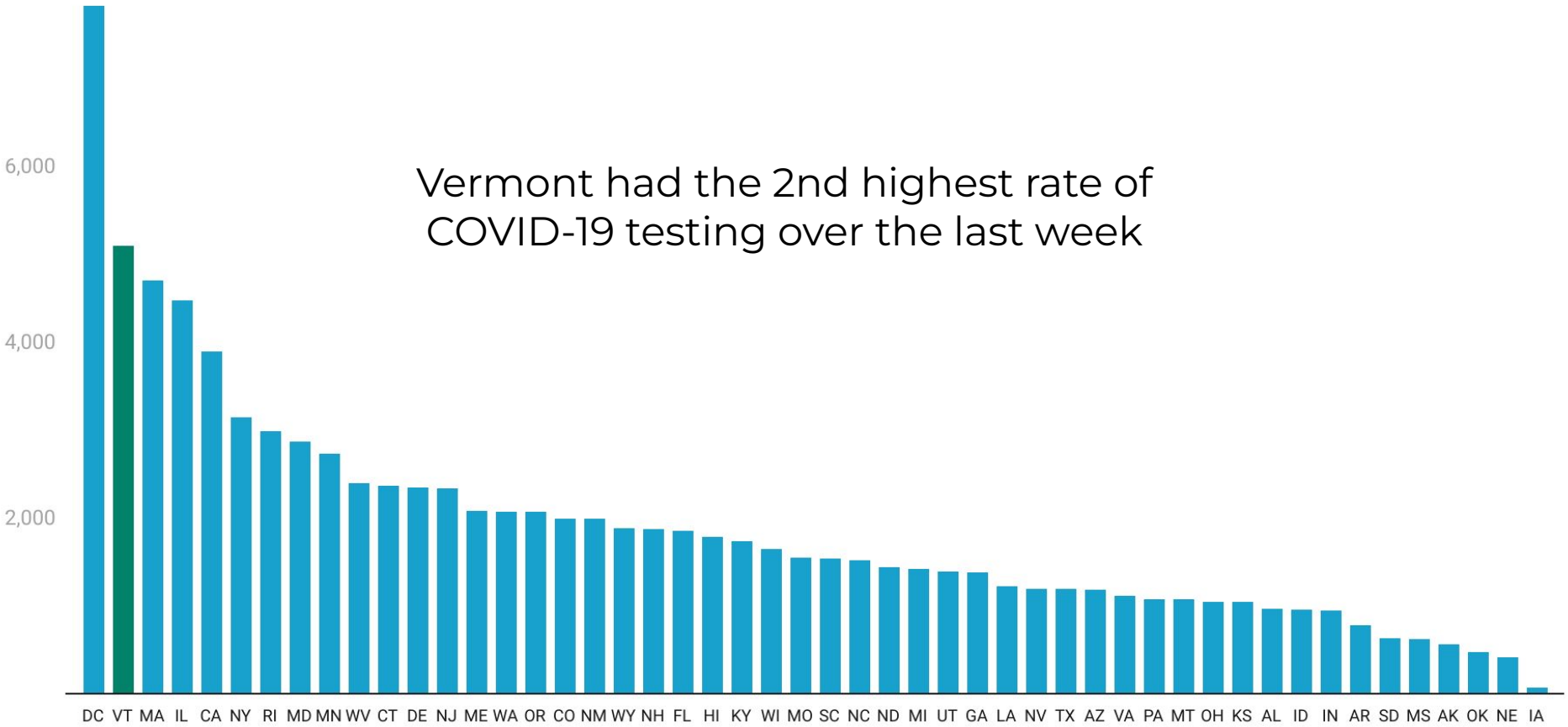
Source: VDH—March 2, 2022; created with Datawrapper

Age of Infected Vermonters

Median age of COVID positive individuals in VT over the last 14 days.

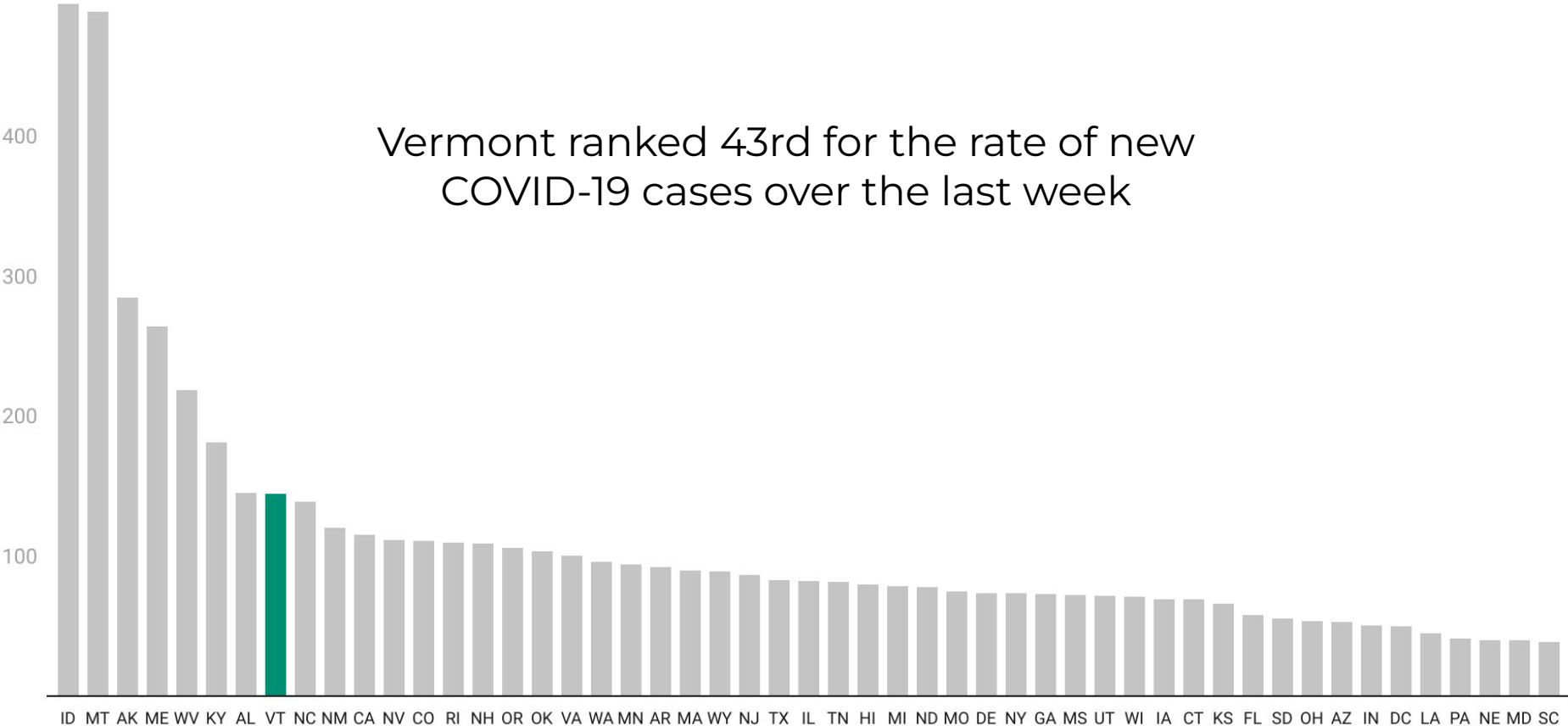


COVID-19 Testing Per 100K Last 7 Days



Source: CDC—March 8, 2022; Created with Datawrapper

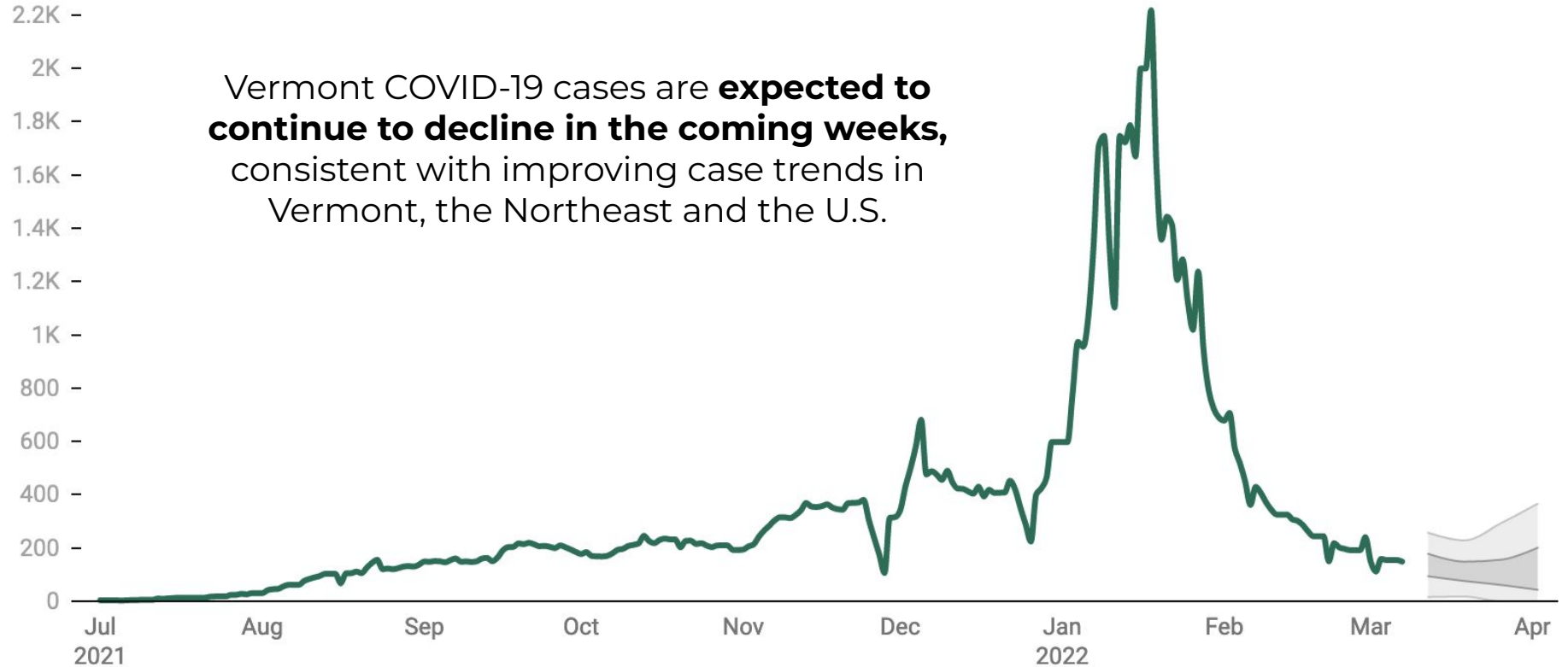
National COVID-19 Case Rates Per 100K Last 7 Days



Source: CDC—March 8, 2022; Created with Datawrapper

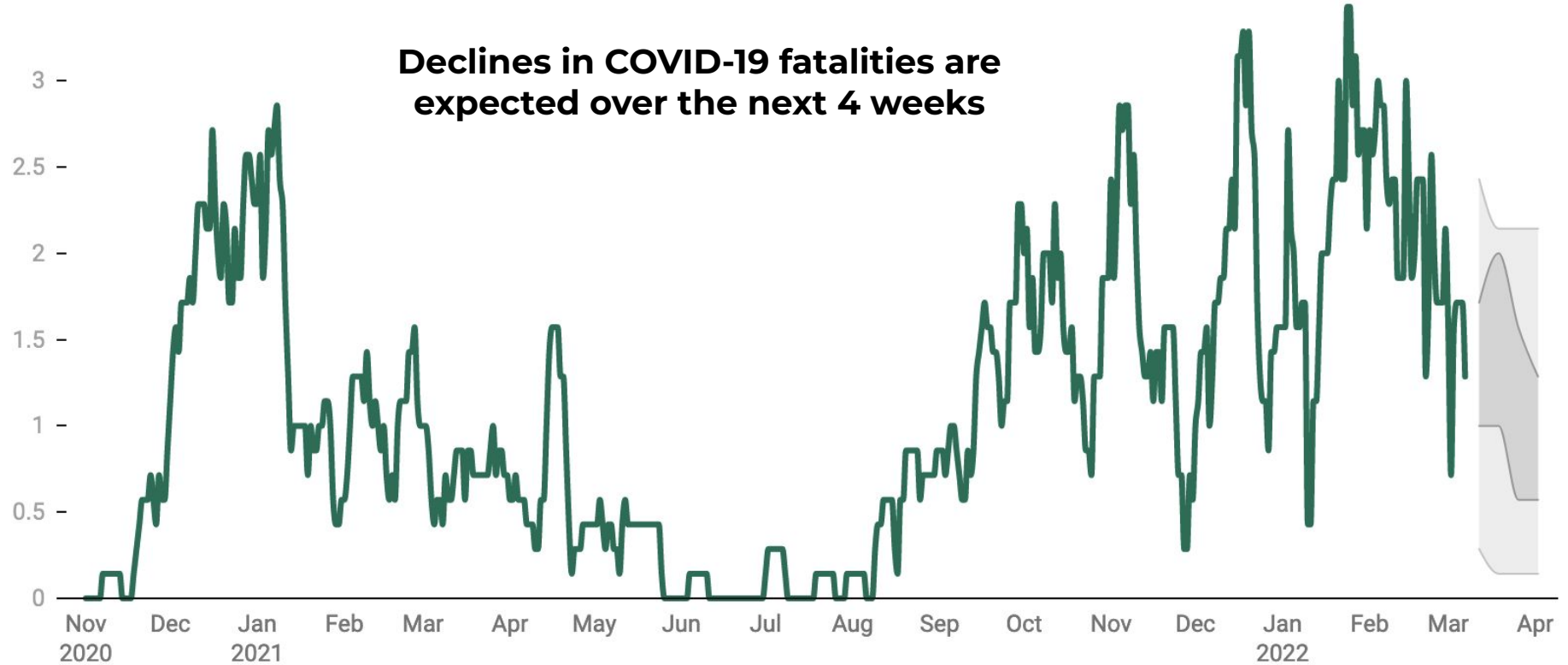
VT COVID-19 Infection Confidence Intervals

Calculated as a 7-day mean. Inner and outer bands represent 50% and 95% confidence intervals, respectively.



VT COVID-19 Death Confidence Intervals

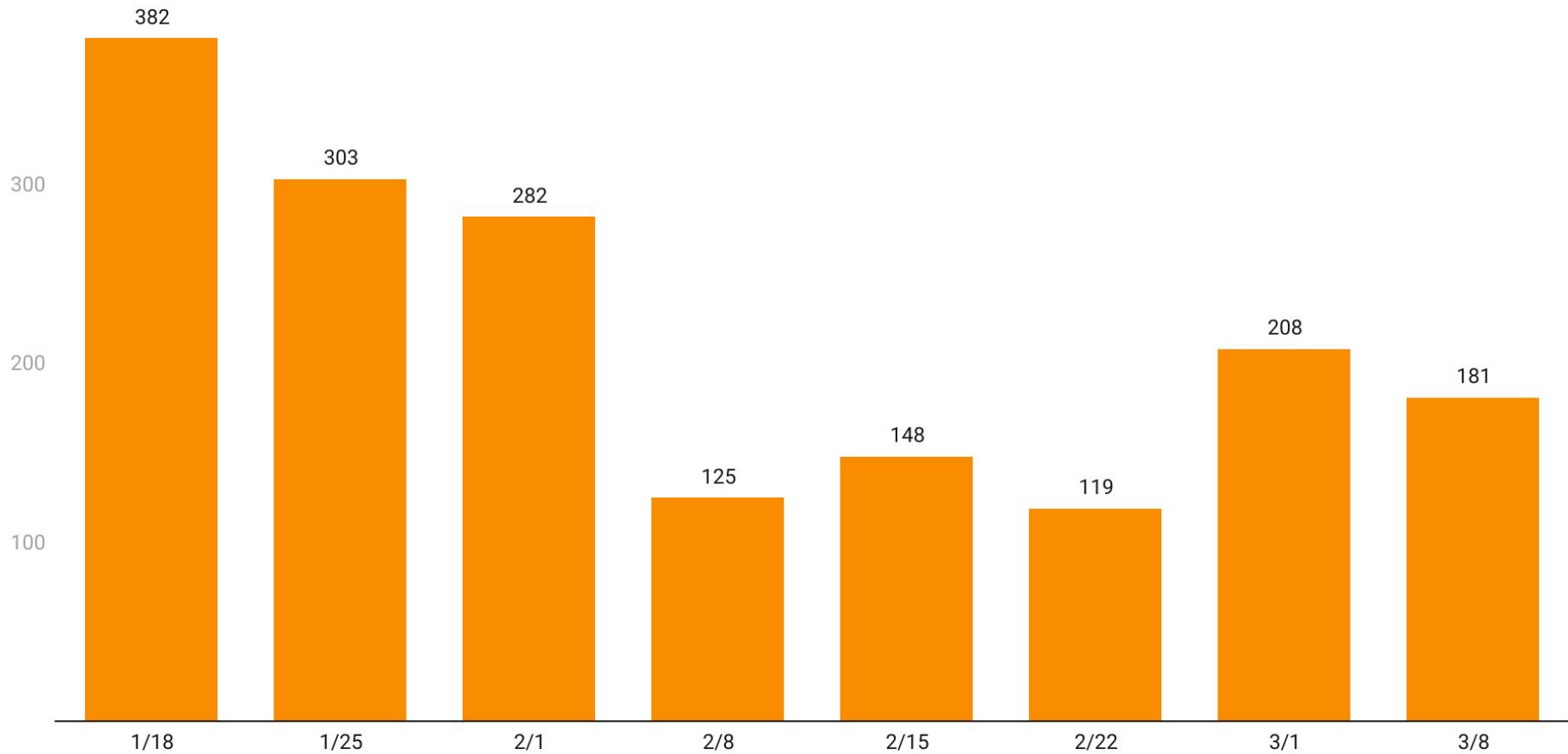
Calculated as a 7-day mean. Inner and outer bands represent 50% and 95% confidence intervals, respectively.



Active Outbreaks in Long Term Care Facilities

Facility Name	Total COVID-19 Cases
Mayo Residential Care	6
Riverbend Residential Care Home	7
The Residence at Quarry Hill	12
Heaton Woods	12
Vergennes Residential Care	16
Kirby House	26
Brownway Residence	32
Bel-Aire Center	52
Greensboro Nursing Home	Not Shown
Thompson House	Not Shown
Total (shown)	163

Weekly COVID-19 College Cases

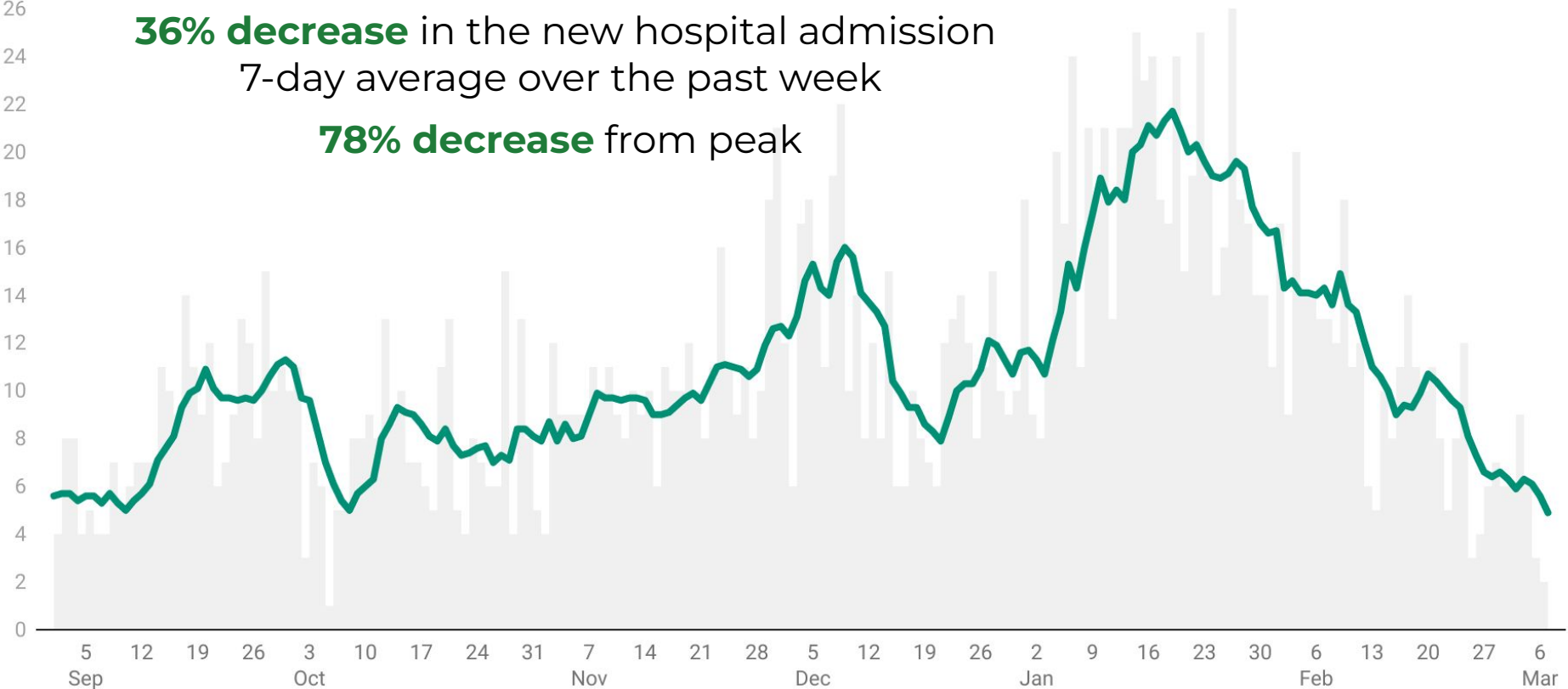


Source: Vermont College Reporting—March 8, 2022; created with Datawrapper

Vermont Hospitalization Data

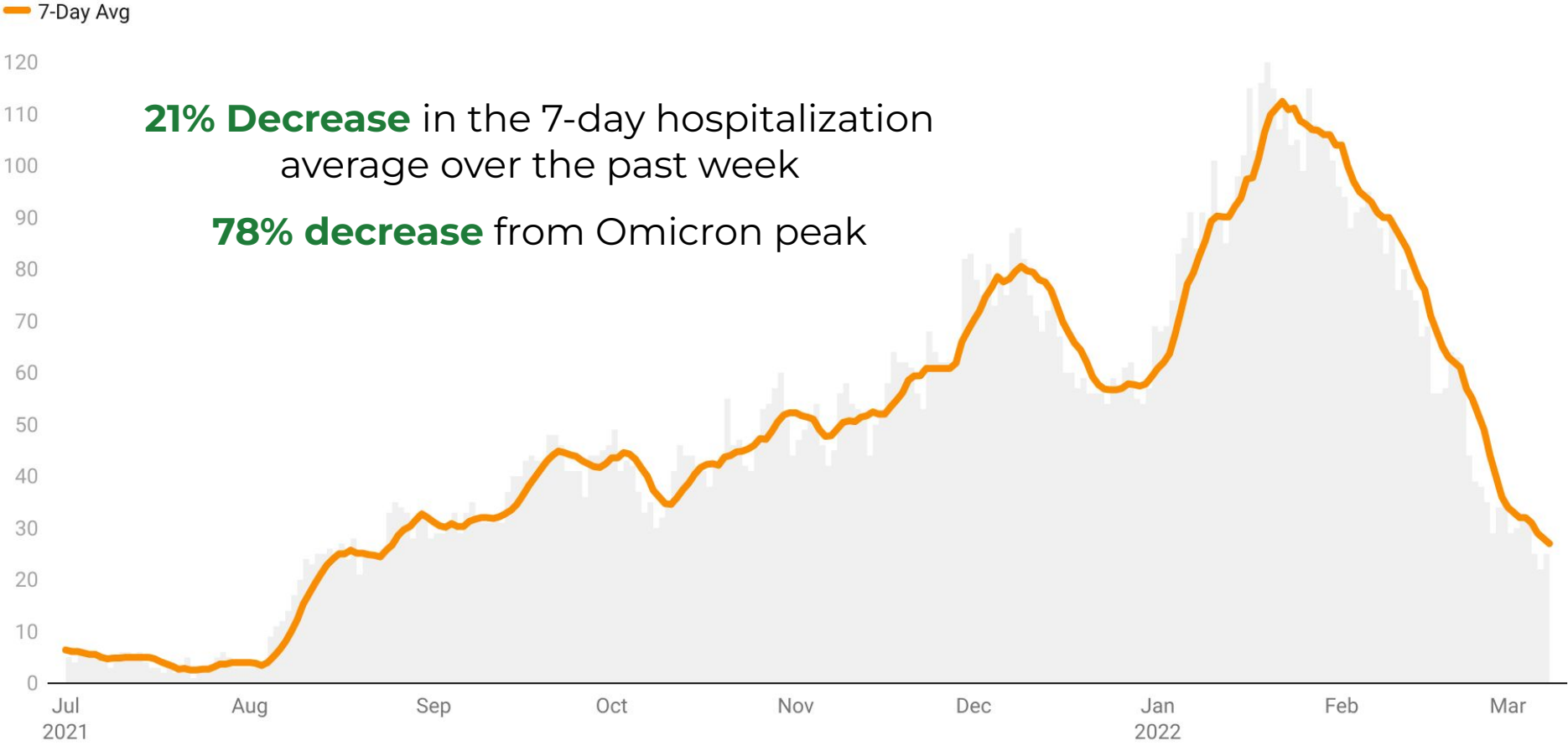
Vermont New COVID-19 Hospital Admissions

7-Day Average



Source: HHS—March 7, 2022; created with Datawrapper

Vermont COVID-19 Patients Currently Hospitalized



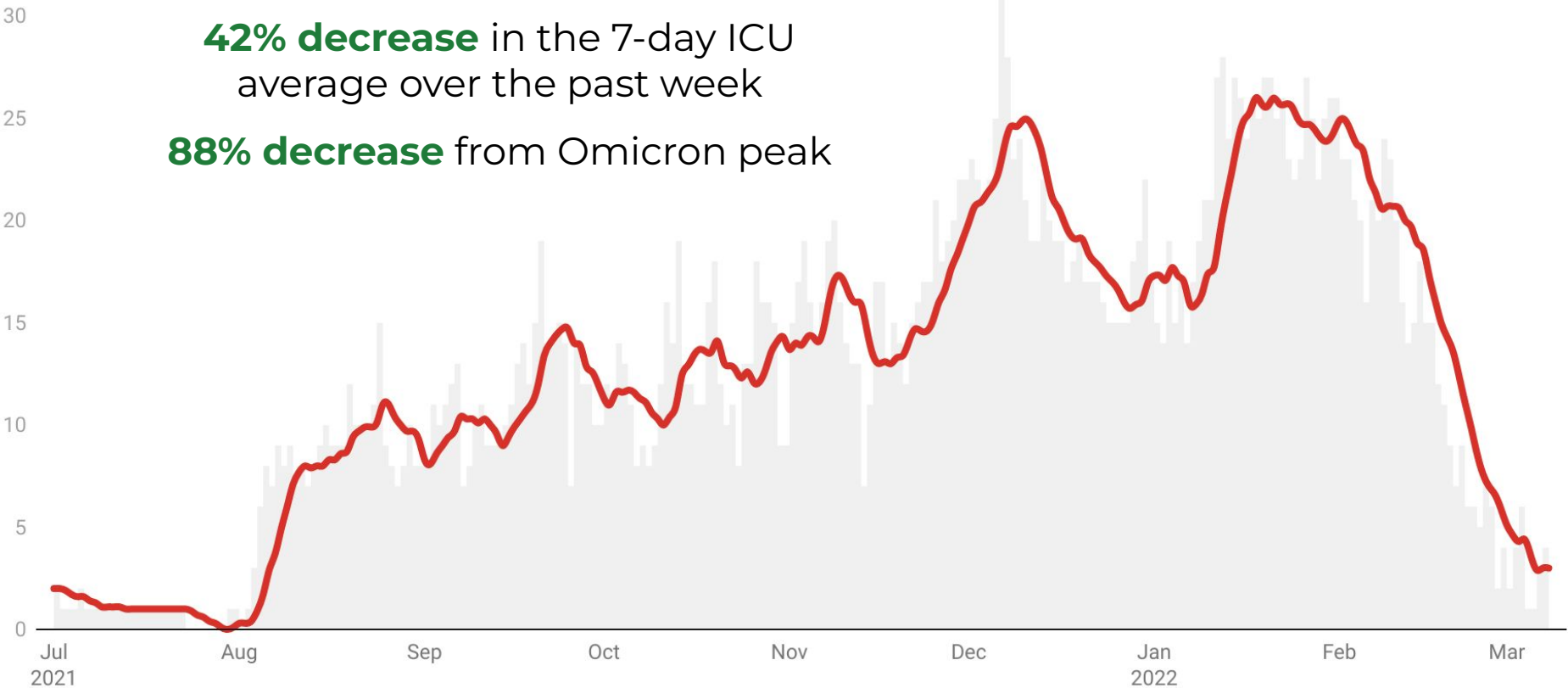
Source: VDH—March 8, 2022; created with Datawrapper

Vermont COVID-19 Patients Currently in the ICU

7-Day Avg

42% decrease in the 7-day ICU average over the past week

88% decrease from Omicron peak



Source: VDH—March 8, 2022; created with Datawrapper

Vermonters Hospitalized for Influenza

7-Day Hospitalized for Influenza

6

Reported influenza hospitalizations in Vermont remain low

4

2

0

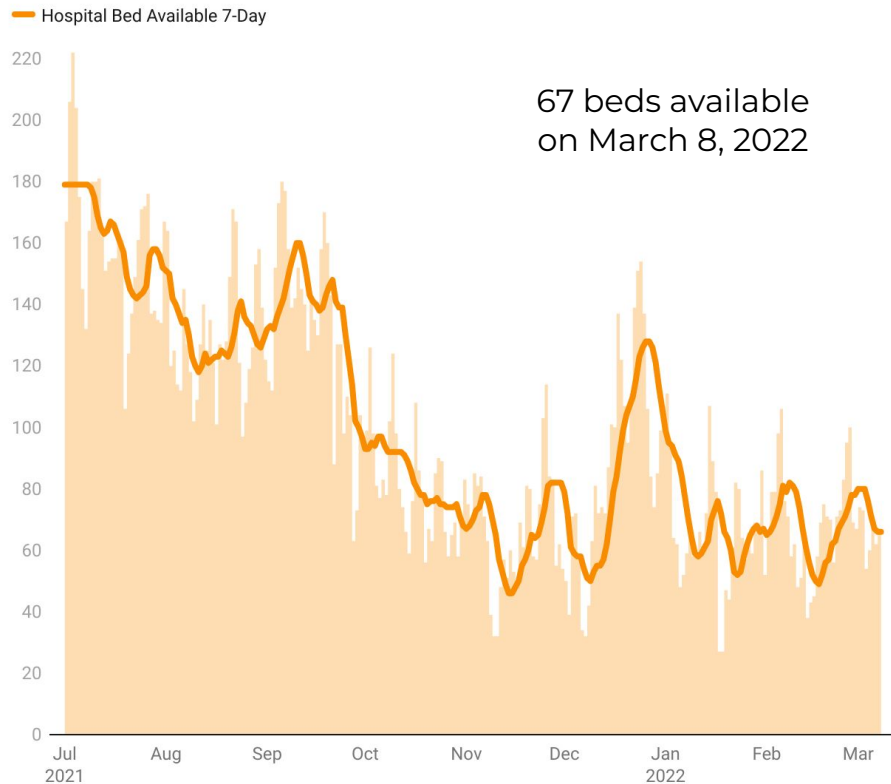


Source: HHS—March 7, 2022; Created with Datawrapper

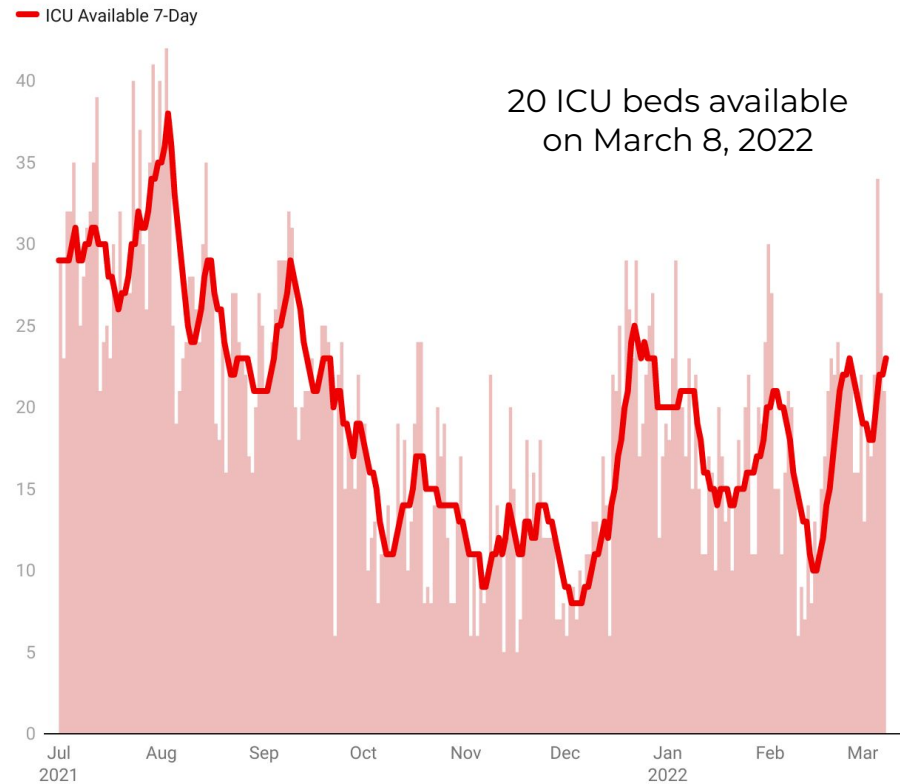
Vermont Hospital Metrics

(7-Day Averages)

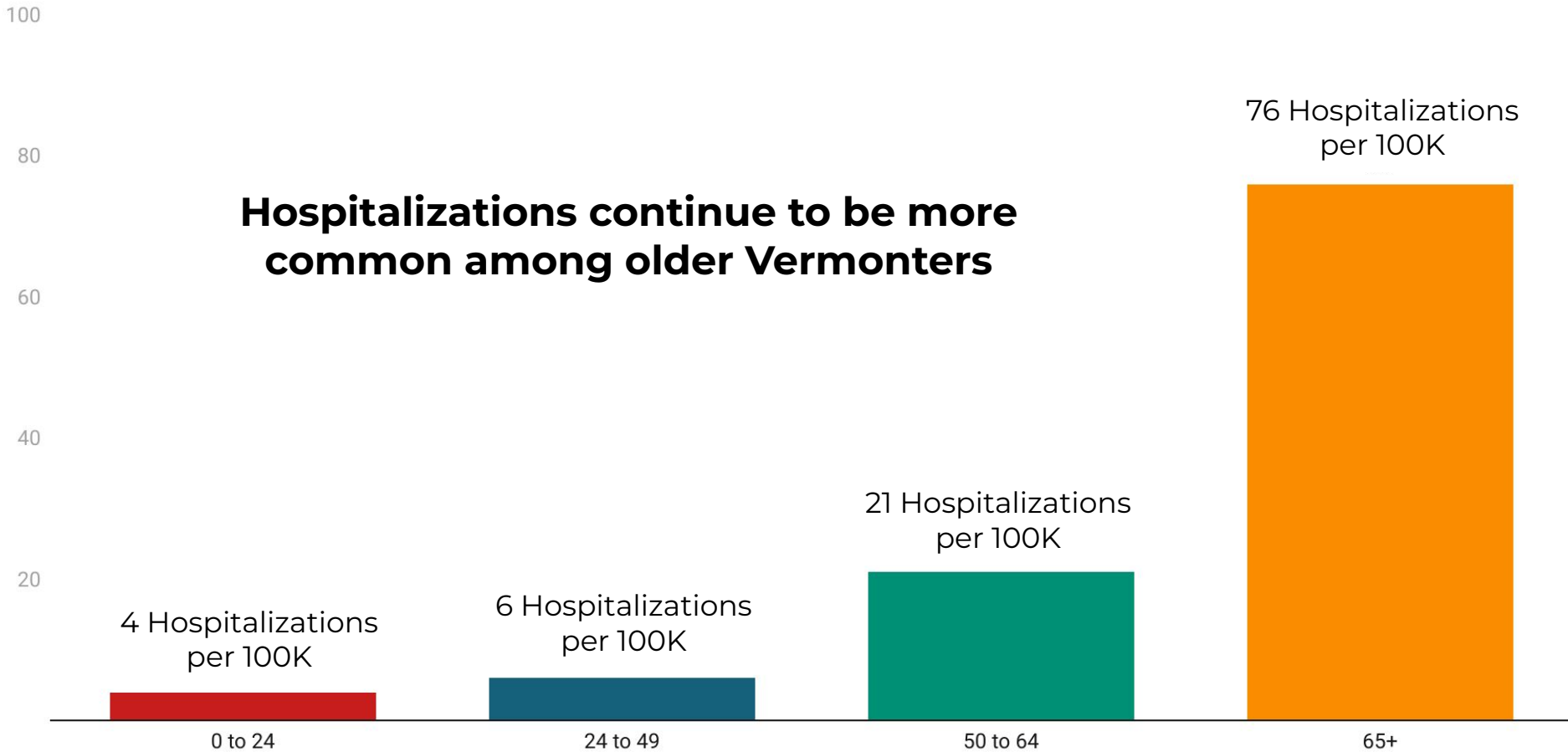
Vermont Hospital Beds Available Since July 1, 2021



Vermont ICU Beds Available Since July 1, 2021



COVID-19 Hospitalization Rate Per 100K By Age Over The Last 6 Weeks



Hospitalizations continue to be more common among older Vermonters

Source: VDH—March 5, 2022; created with Datawrapper

COVID-19 Hospitalizations By Vaccination Status Per 100K

Measured Among Vermont's 18 & Over Population Over the Last 6 Weeks

100

74 Hospitalizations
per 100K

Those 18+ & **not fully vaccinated** were nearly
4x more likely to be hospitalized from COVID-19
over the last 6 weeks compared to those
fully vaccinated & boosted

27 Hospitalizations
per 100K

17 Hospitalizations
per 100K

Not Fully Vaccinated

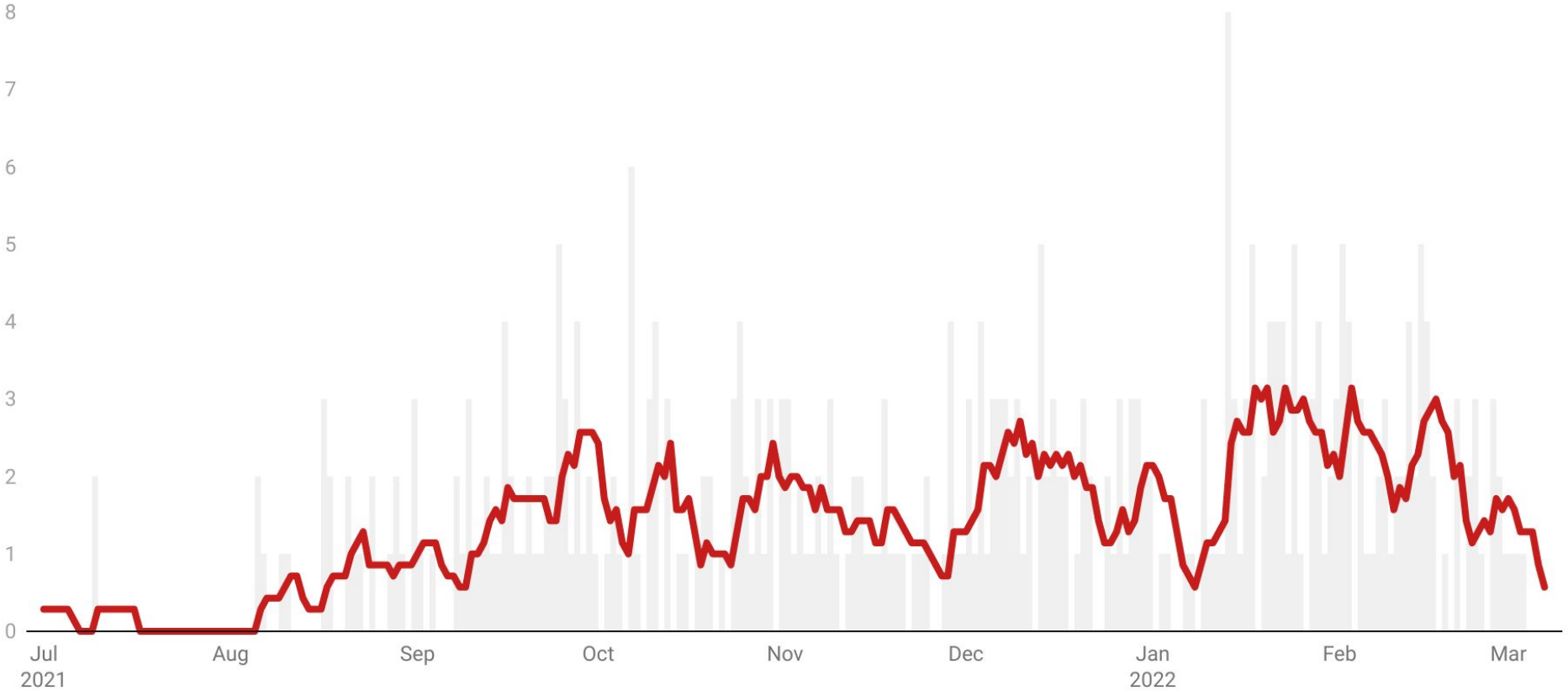
Fully Vaccinated But Not Boosted

Fully Vaccinated & Boosted

Vermont Fatality Data

Vermont COVID-19 Fatalities

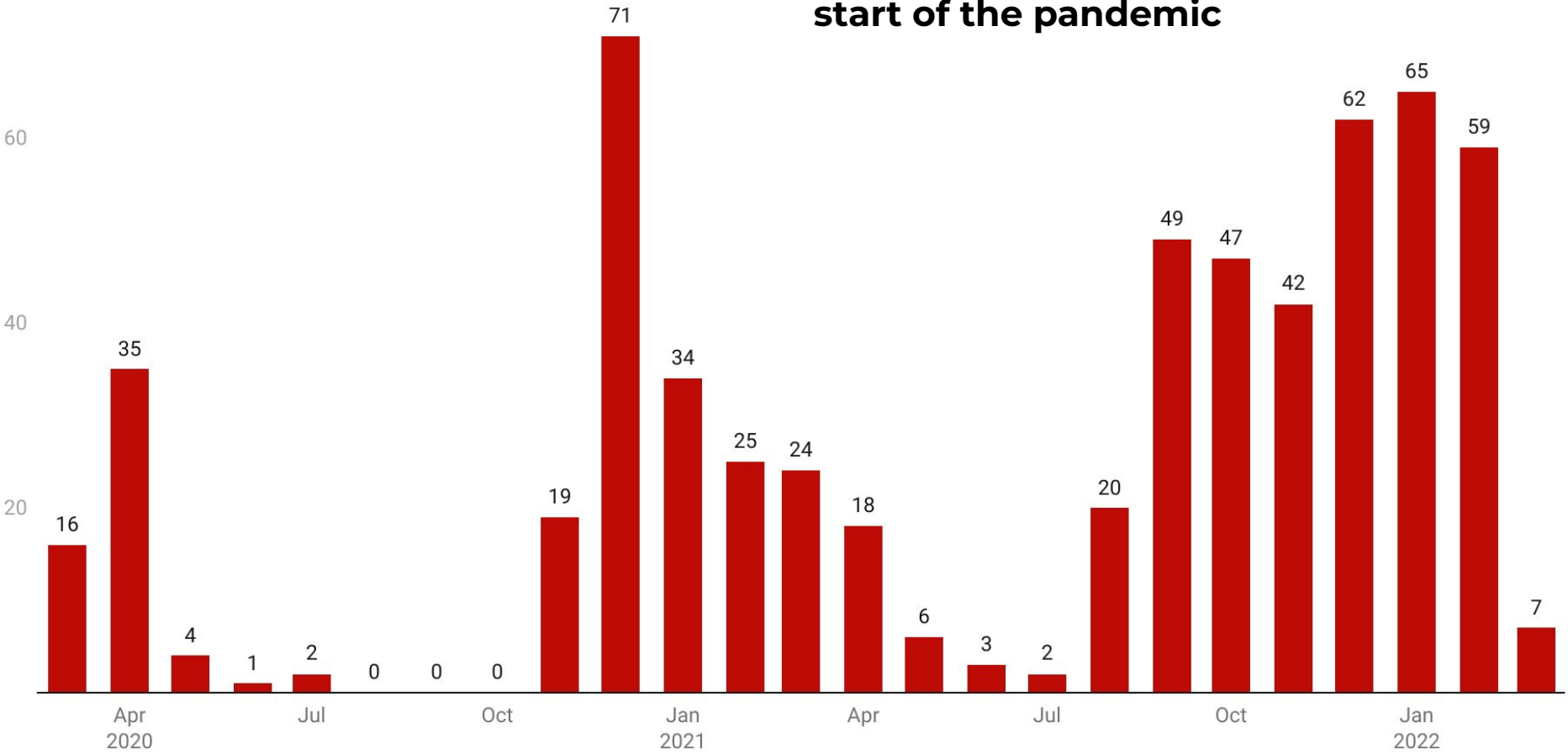
7-Day Average



Source: VDH—March 8, 2022; created with Datawrapper

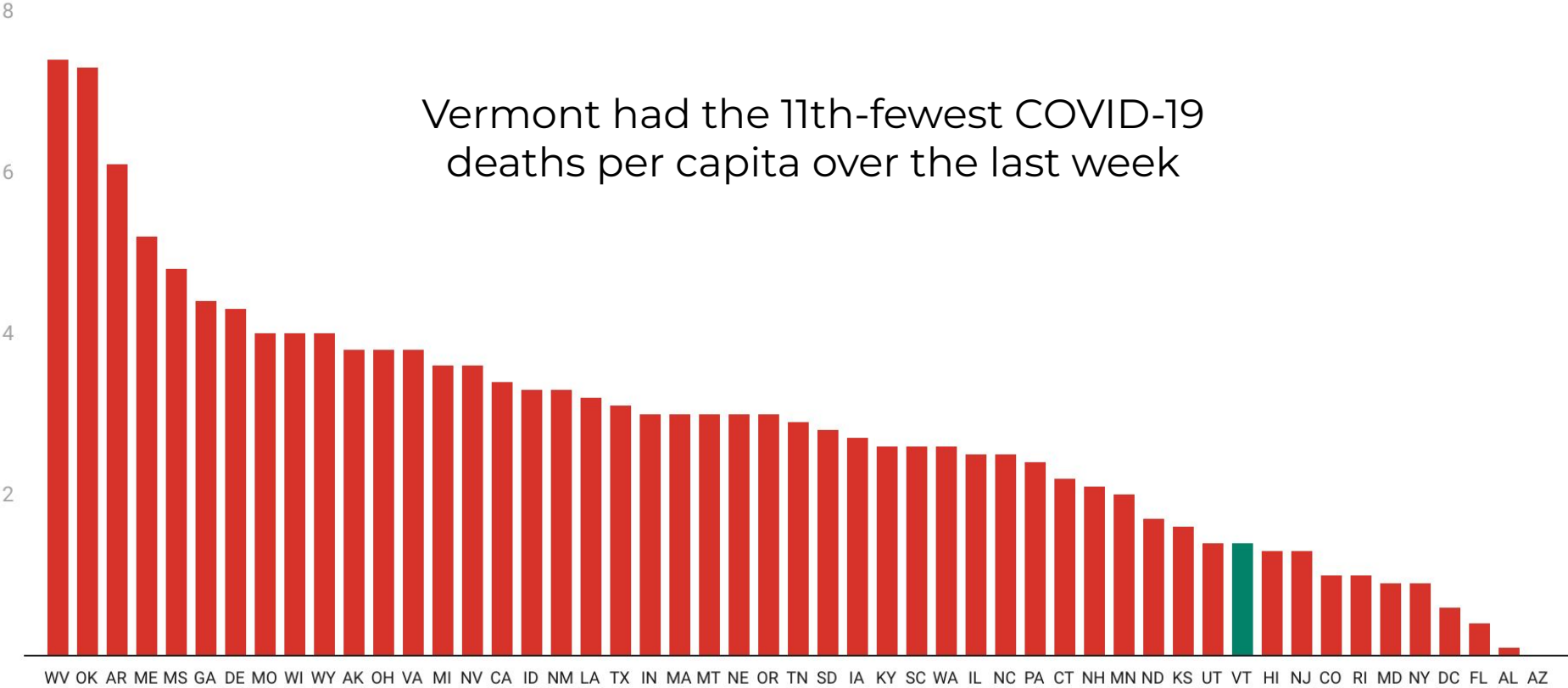
Monthly Covid-19 Deaths In Vermont

608 COVID-19 deaths since the start of the pandemic



Source: VDH—March 8, 2022; created with Datawrapper; deaths attributed to month in which death occurred rather than reported

COVID-19 Deaths Per 100K Last 7 Days



Source: CDC—March 8, 2022; Created with Datawrapper

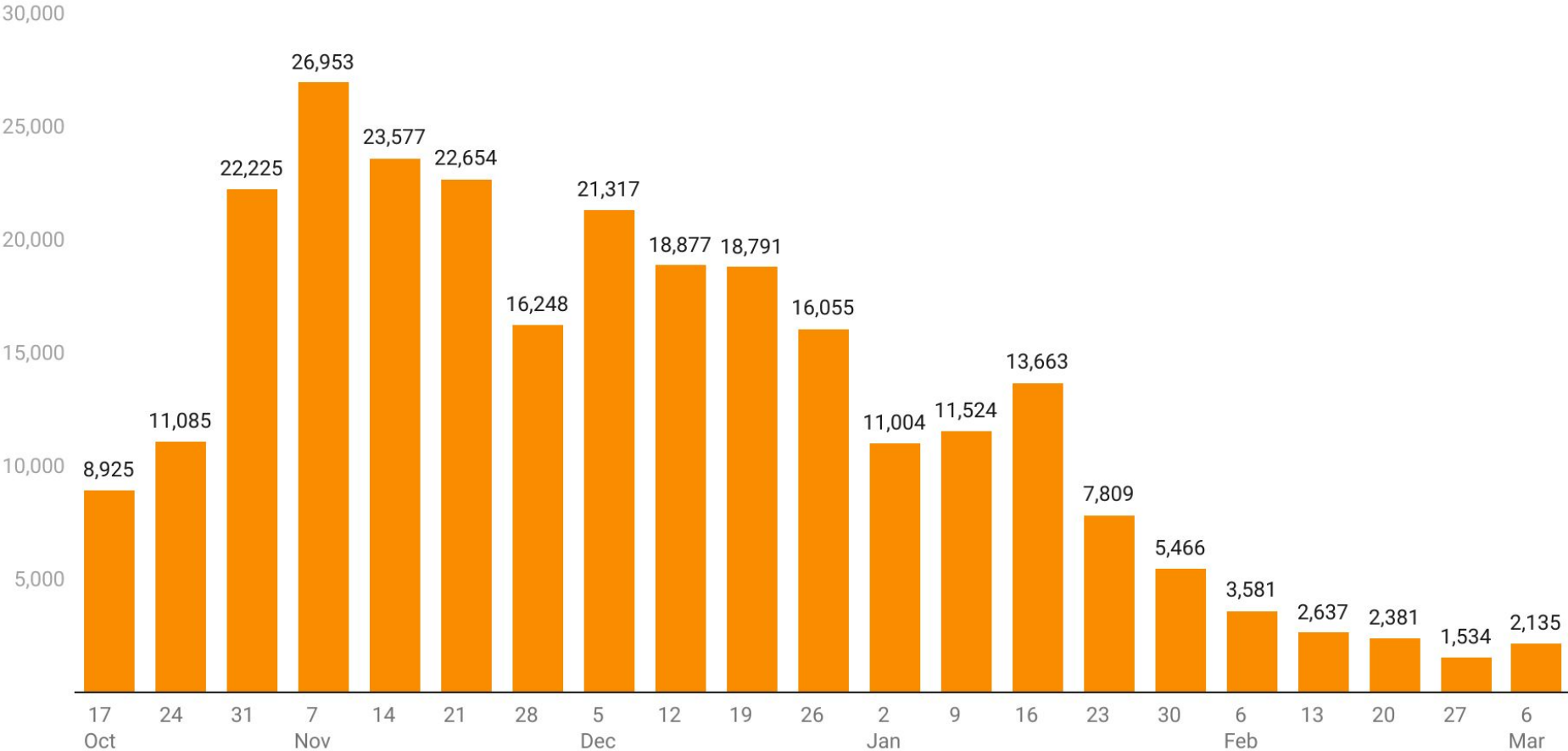
Vermont Vaccination Data

Vermont CDC Vaccine Scorecard

Vaccine Metric	Ranking
Doses Administered per 100K	1
% At Least 1 Dose (5+ Population)	1 (tied)
% Fully Vaccinated (5+ Population)	2
% At Least 1 Dose (Full Population)	3
% Fully Vaccinated (Full Population)	2
% Fully Vaccinated (65 & Over)	1 (tied)

Booster Metric	Ranking
% of Fully Vaccinated w/ booster dose	1
% of Fully vaccinated 12+ w/ booster doses	1
% of Fully vaccinated 18+ w/ booster doses	1
% of Fully vaccinated 65+ w/ booster doses	3

Vermont: Booster Shots Administered By Week



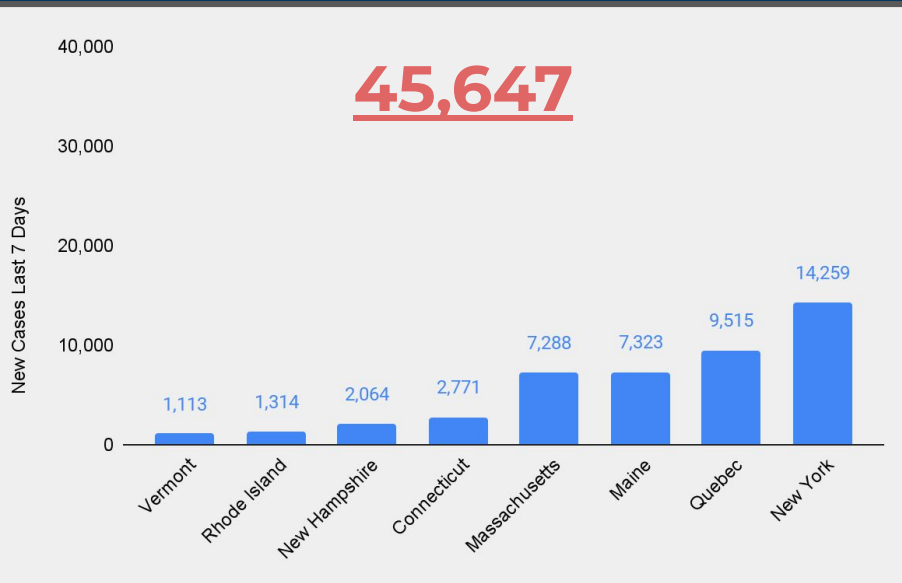
Source: CDC—March 8, 2022; created with Datawrapper

Regional Data

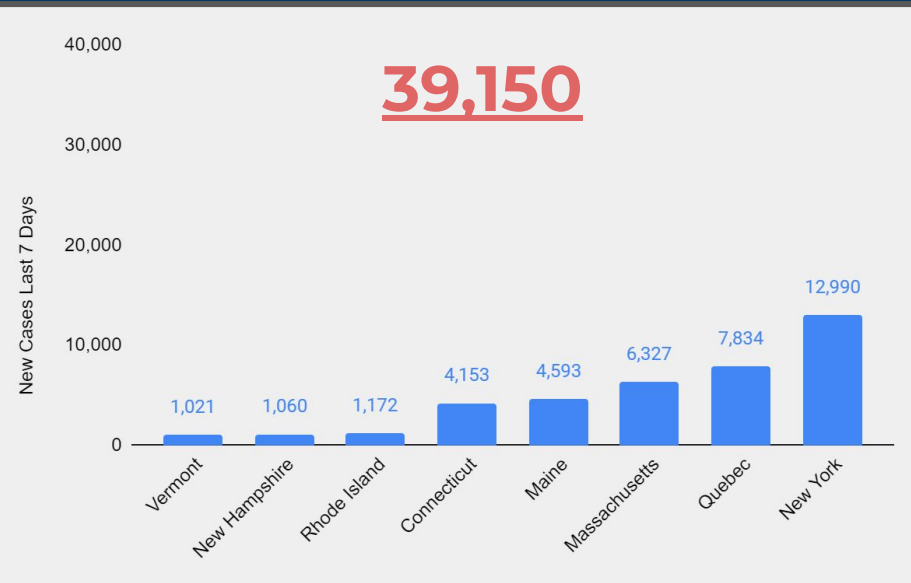
Northeast Regional Cases

14% Decrease in New Cases

New Cases February 22th to February 28th



New Cases March 1st to March 7th



Weekly Northeast Regional Cases

1000000

750000

500000

250000

0

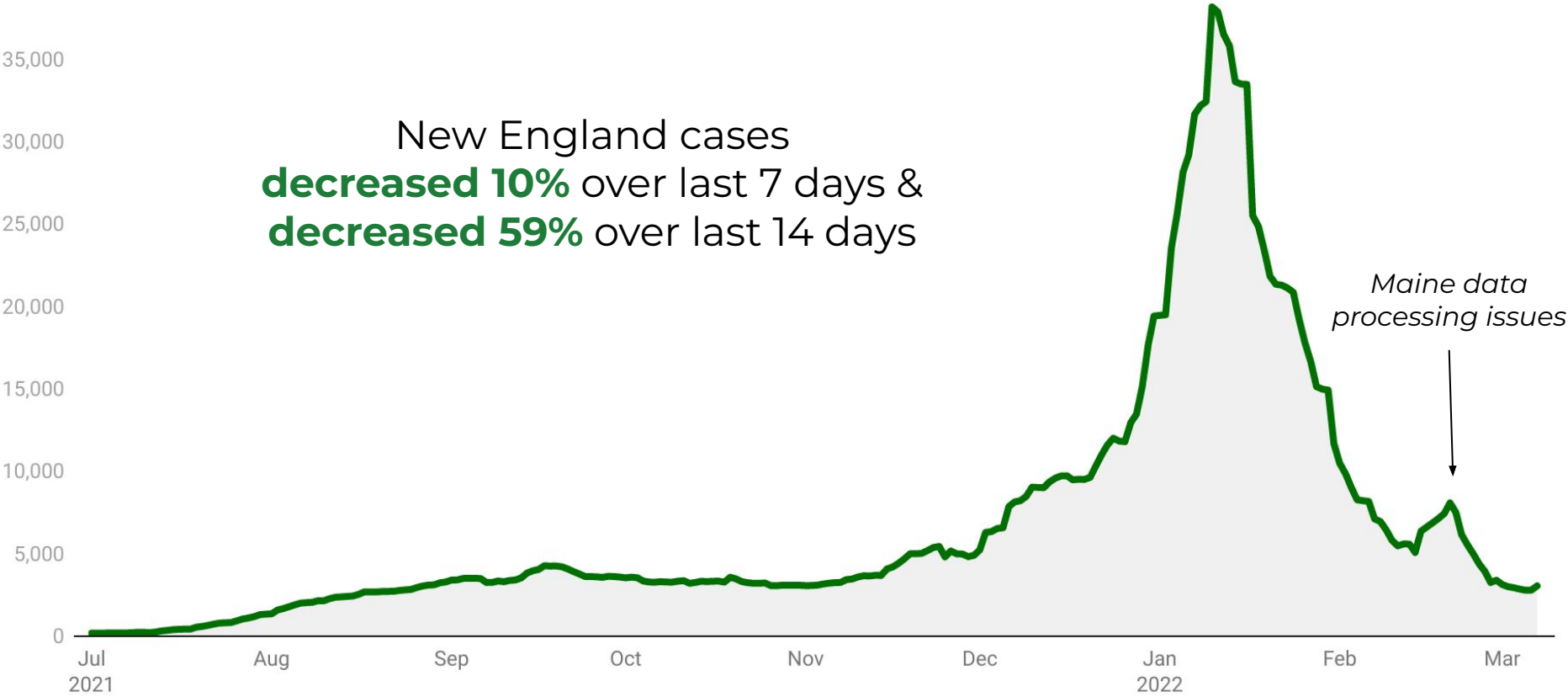
6,497 fewer cases this week compared to last week

3/16/20 4/20/20 5/25/20 6/29/20 8/3/20 9/7/20 10/12/20 11/16/20 12/21/20 1/25/21 3/1/21 4/5/21 5/10/21 6/14/21 7/19/21 8/23/21 9/27/21 11/1/21 12/6/21 1/10/22 2/14/22

Sources: State Health Depts.—March 2, 2022 (includes: CT, ME, MA, NH, NY, QC, RI & VT)

New England COVID-19 Cases

— New England 7-Day Case Average



Sources: State Health Depts.—March 7, 2022 (includes: CT, ME, MA, NH, RI & VT)

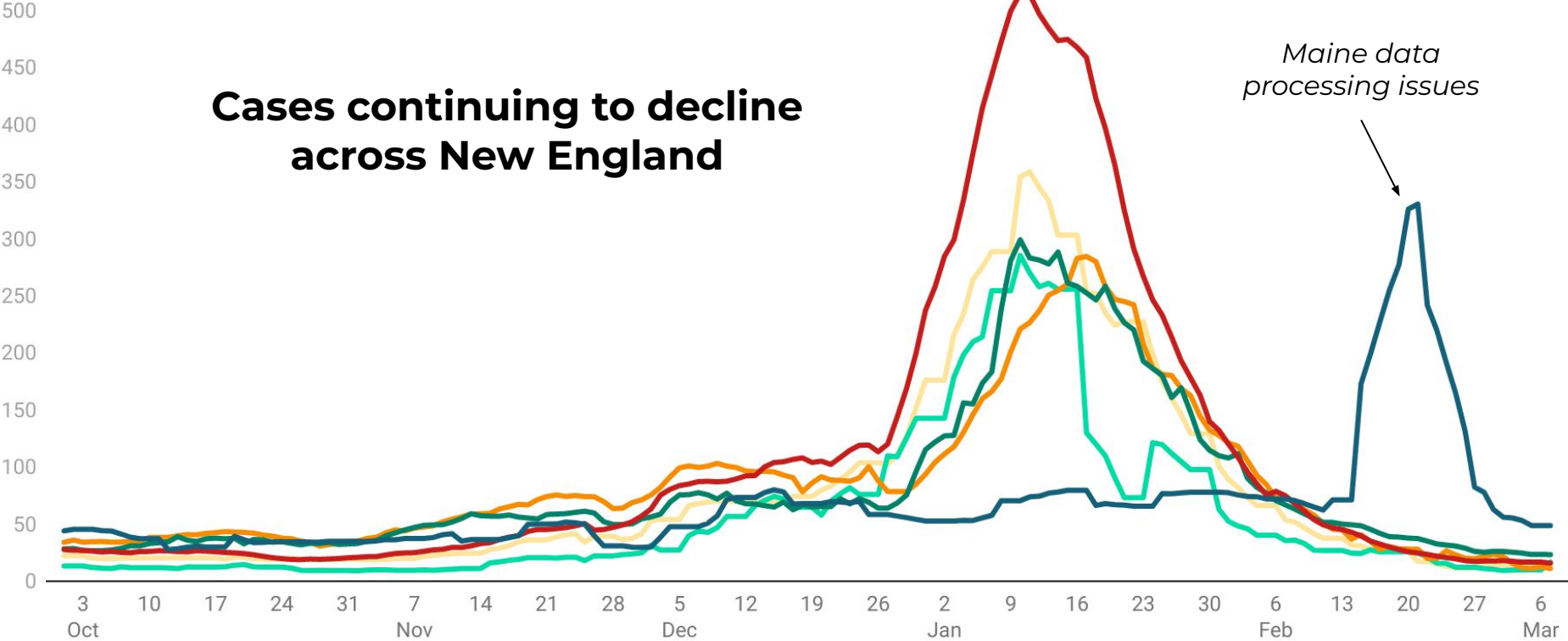
New England COVID-19 Case Trends

7-Day Average Cases Per 100K

Massachusetts Connecticut Rhode Island Maine New Hampshire Vermont

Cases continuing to decline across New England

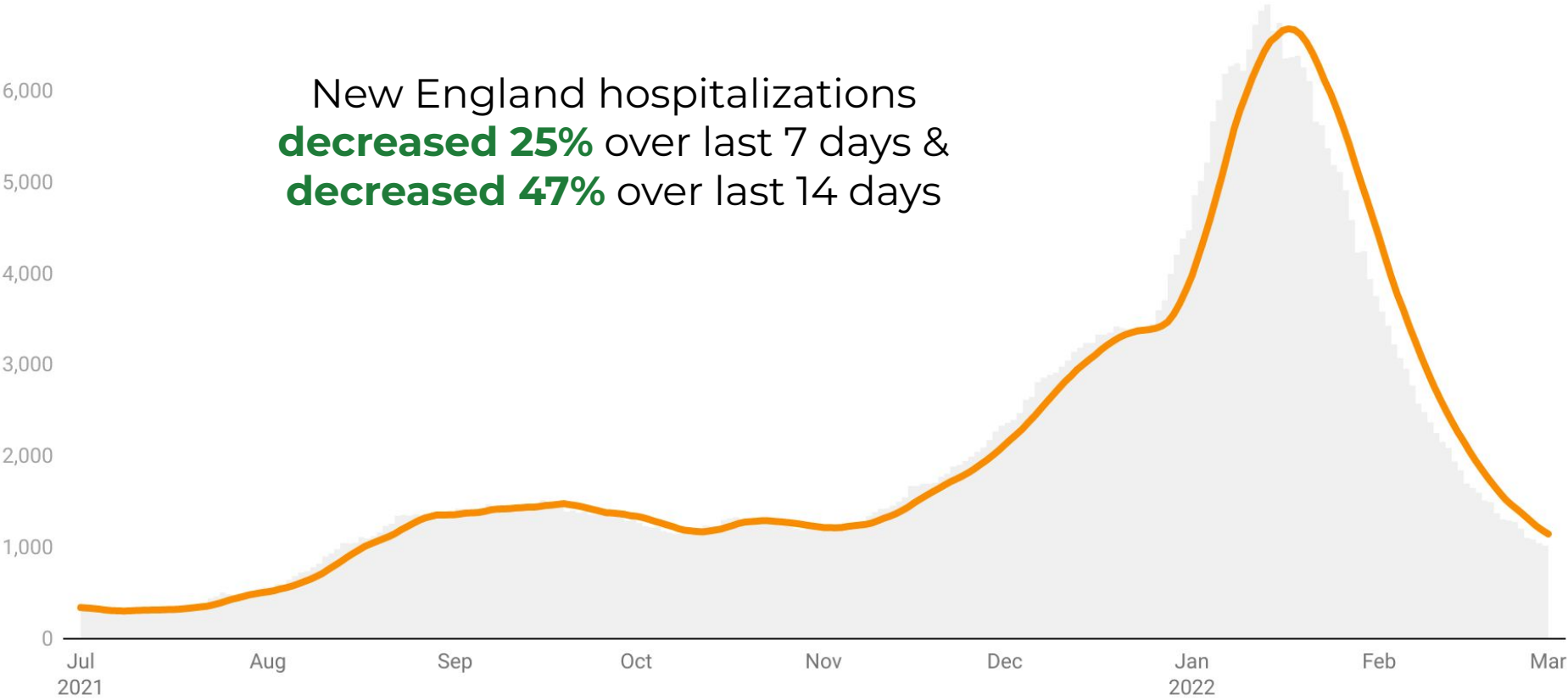
Maine data processing issues



Sources: State Health Depts.—March 7, 2022 (includes: CT, ME, MA, NH, RI & VT)

New England COVID-19 Hospitalizations

7-Day Average

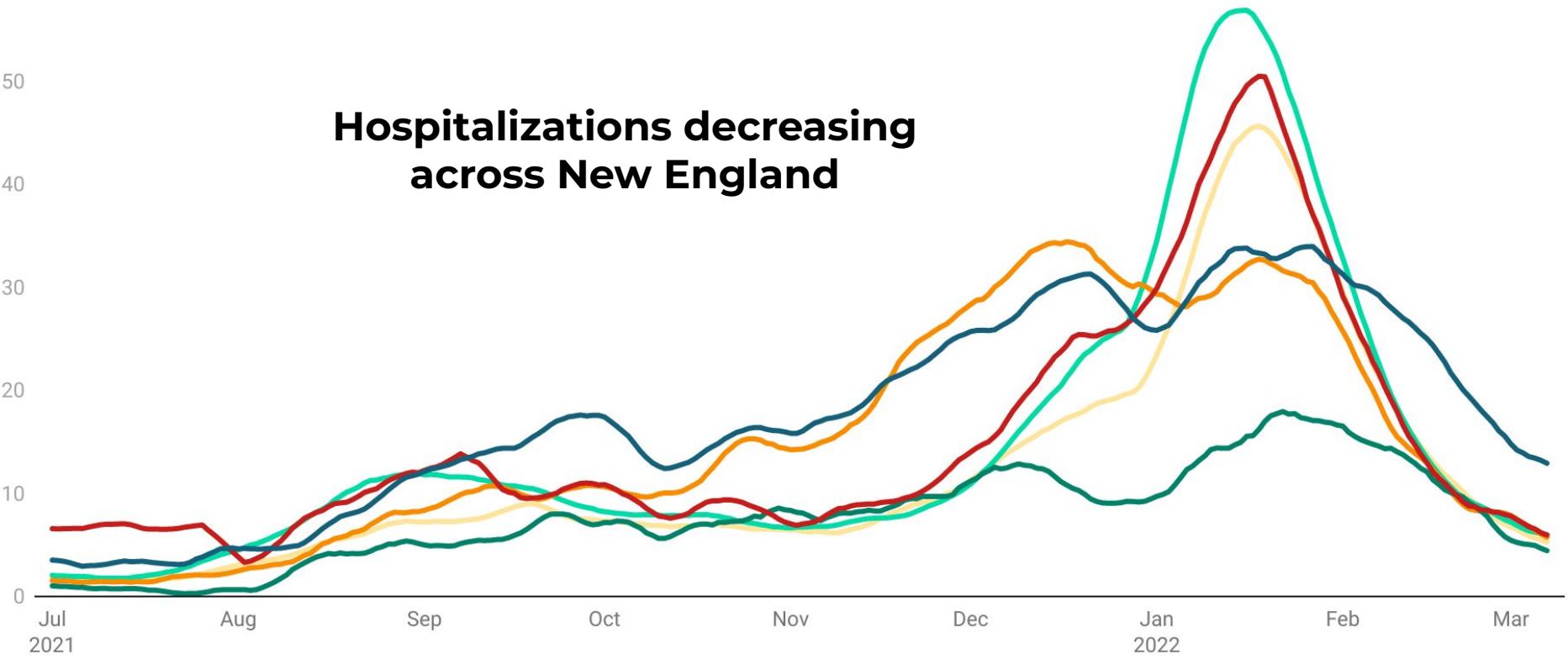


Sources: HHS—March 7, 2022 (includes: CT, ME, MA, NH, RI & VT)

New England COVID-19 Hospitalizations Trends

7-Day Average Hospitalizations Per 100K

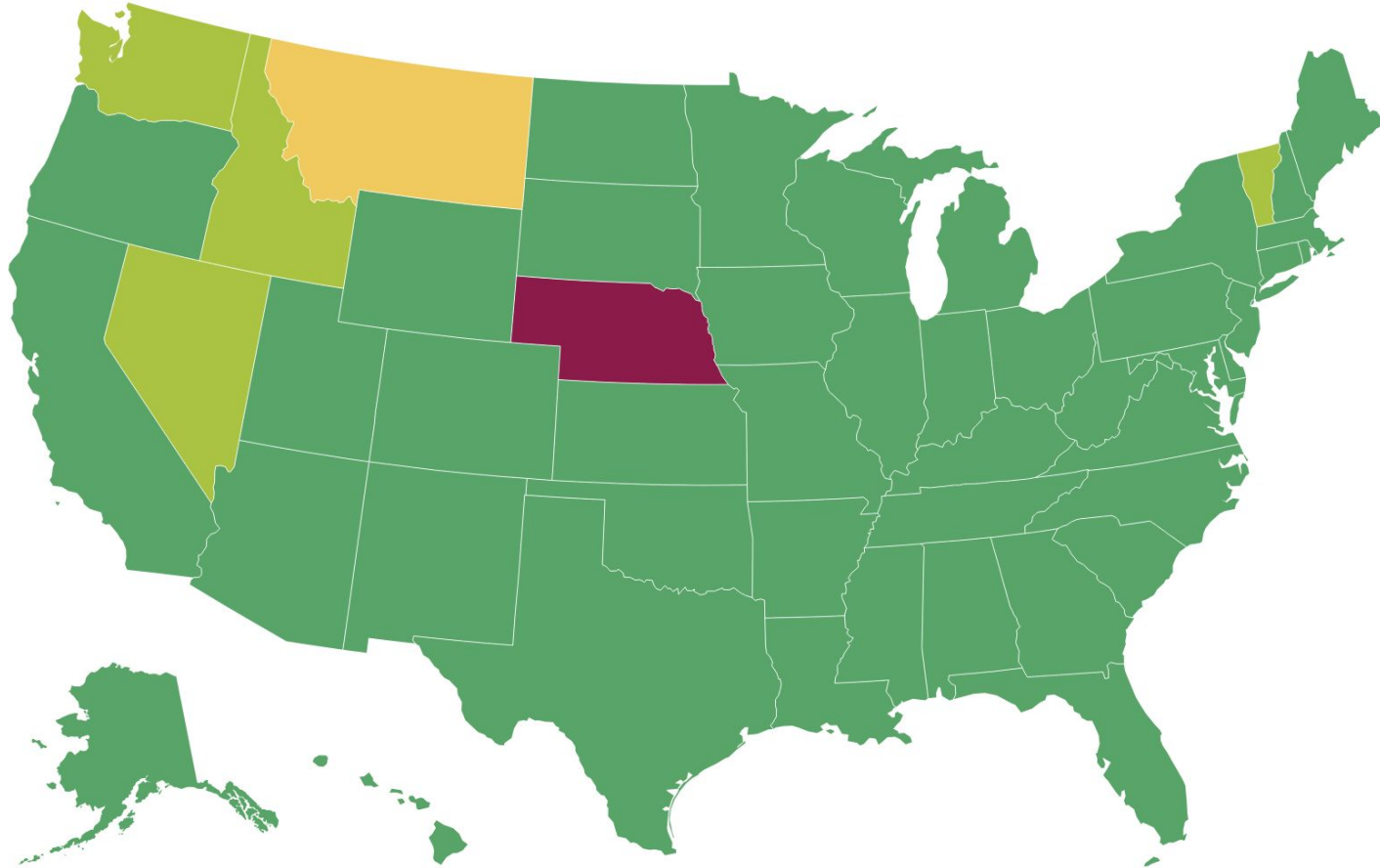
Massachusetts Connecticut Rhode Island Maine New Hampshire Vermont



Sources: HHS—March 7, 2022 (includes: CT, ME, MA, NH, RI & VT)

National Data

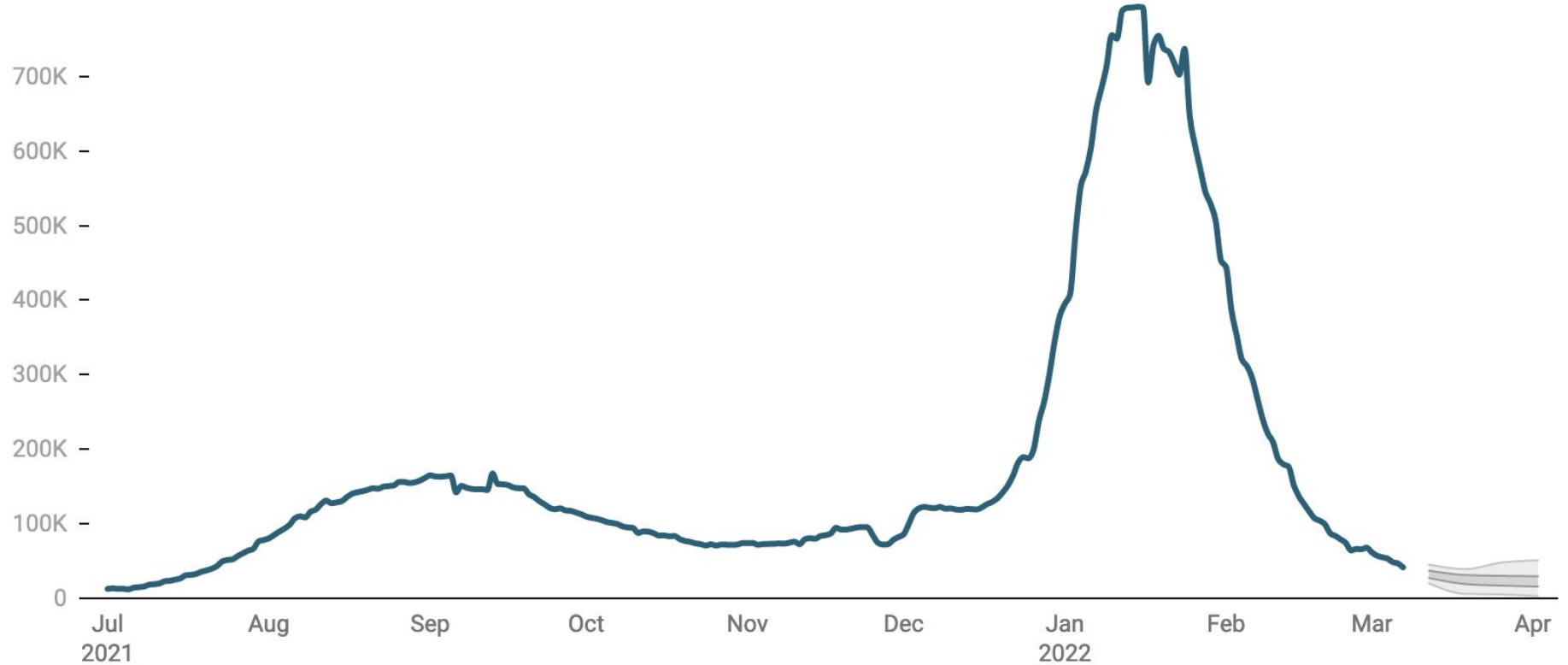
Week Over Week Percent Change in COVID-19 Infections



Source: JHU—March 8, 2022; Maine cases elevated due to processing of significant case backlog

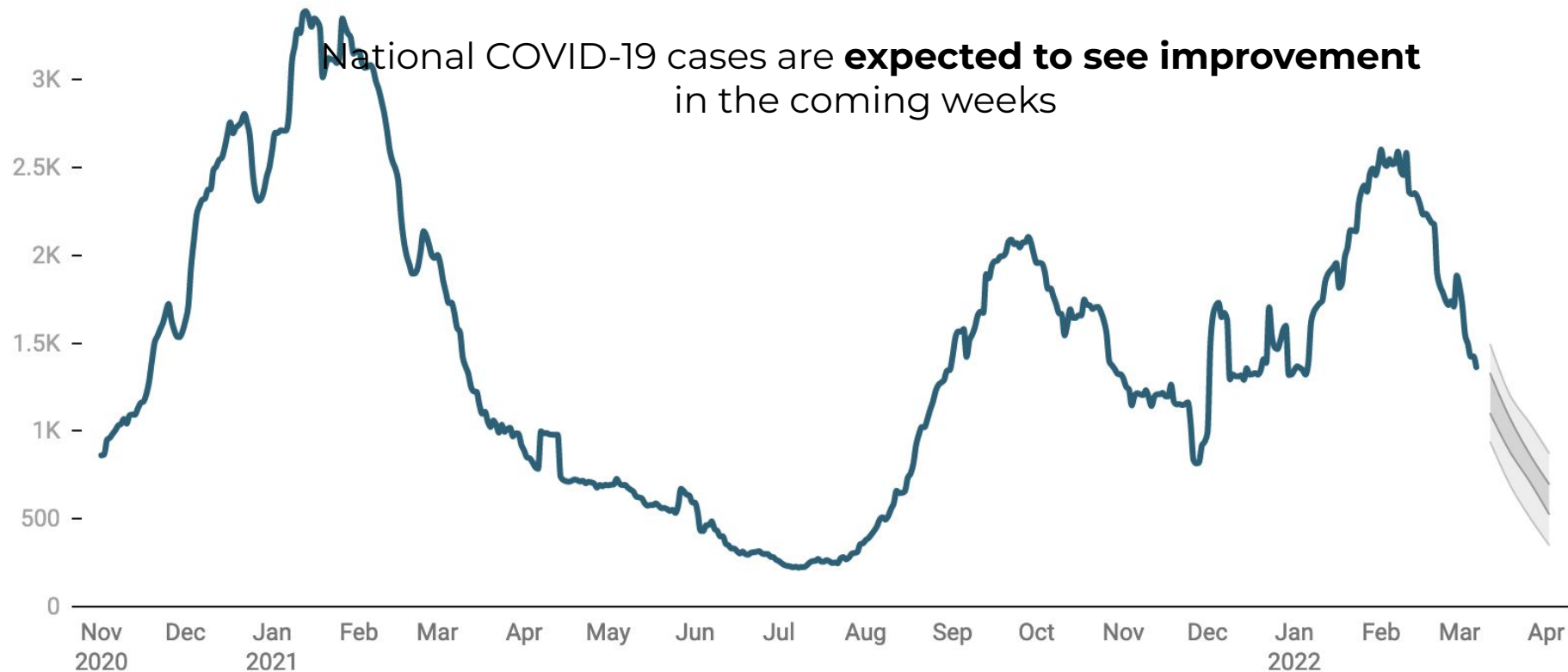
US COVID-19 Death Confidence Intervals

Calculated as a 7-day mean. Inner and outer bands represent 50% and 95% confidence intervals, respectively.



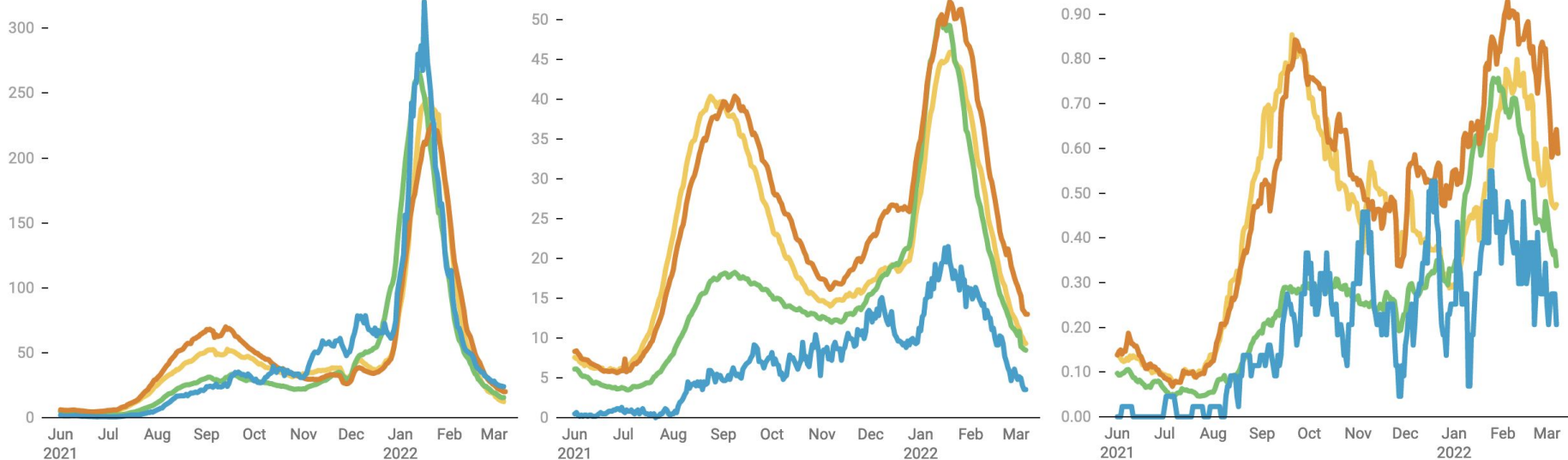
US COVID-19 Death Confidence Intervals

Calculated as a 7-day mean. Inner and outer bands represent 50% and 95% confidence intervals, respectively.



Infections, Hospitalizations, & Deaths by Percentage of State Population Vaccinated

■ Bottom Third Vaccinated States
 ■ Middle Third Vaccinated States
 ■ Top Third Vaccinated States
 ■ Vermont



Infections per 100K

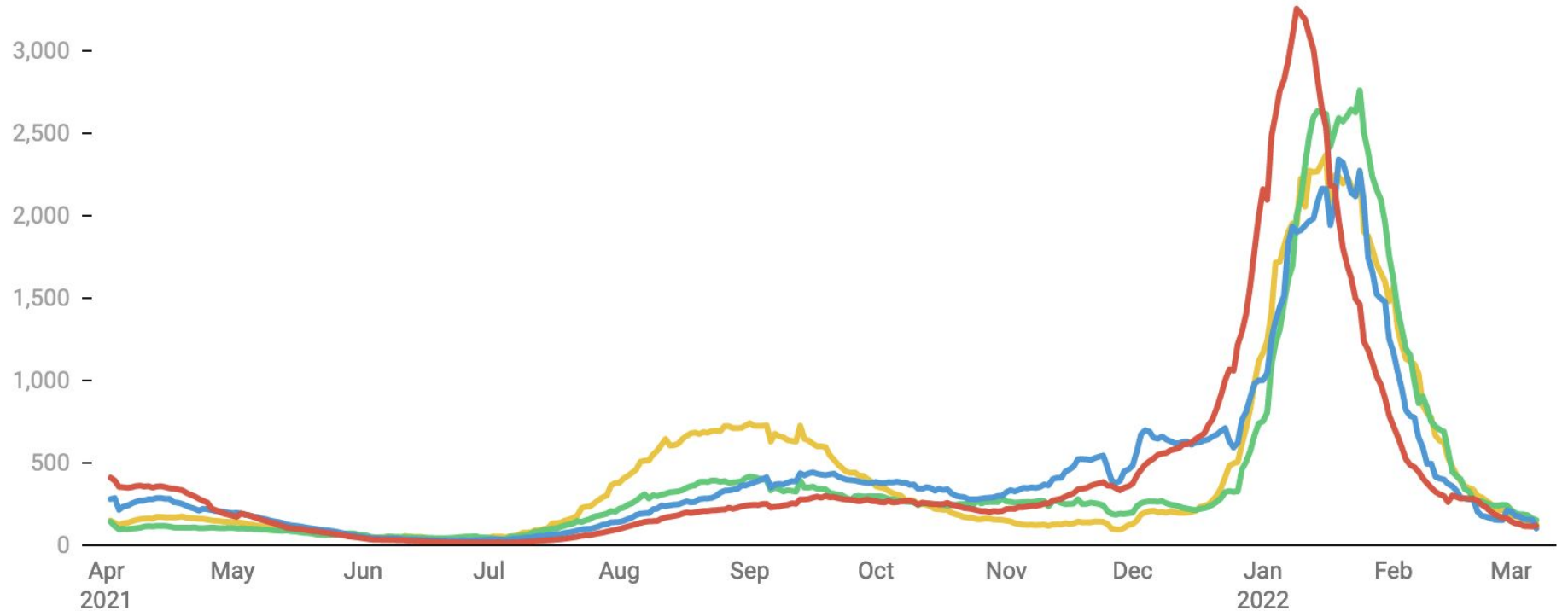
Hospitalizations per 100K
(Current)

Deaths per 100K

Daily COVID-19 Cases per Million in US Regions

Calculated as a 7-day moving average. Definitions of North, Midwest, South, and West taken from the U.S. Census bureau.

— Northeast — Midwest — South — West

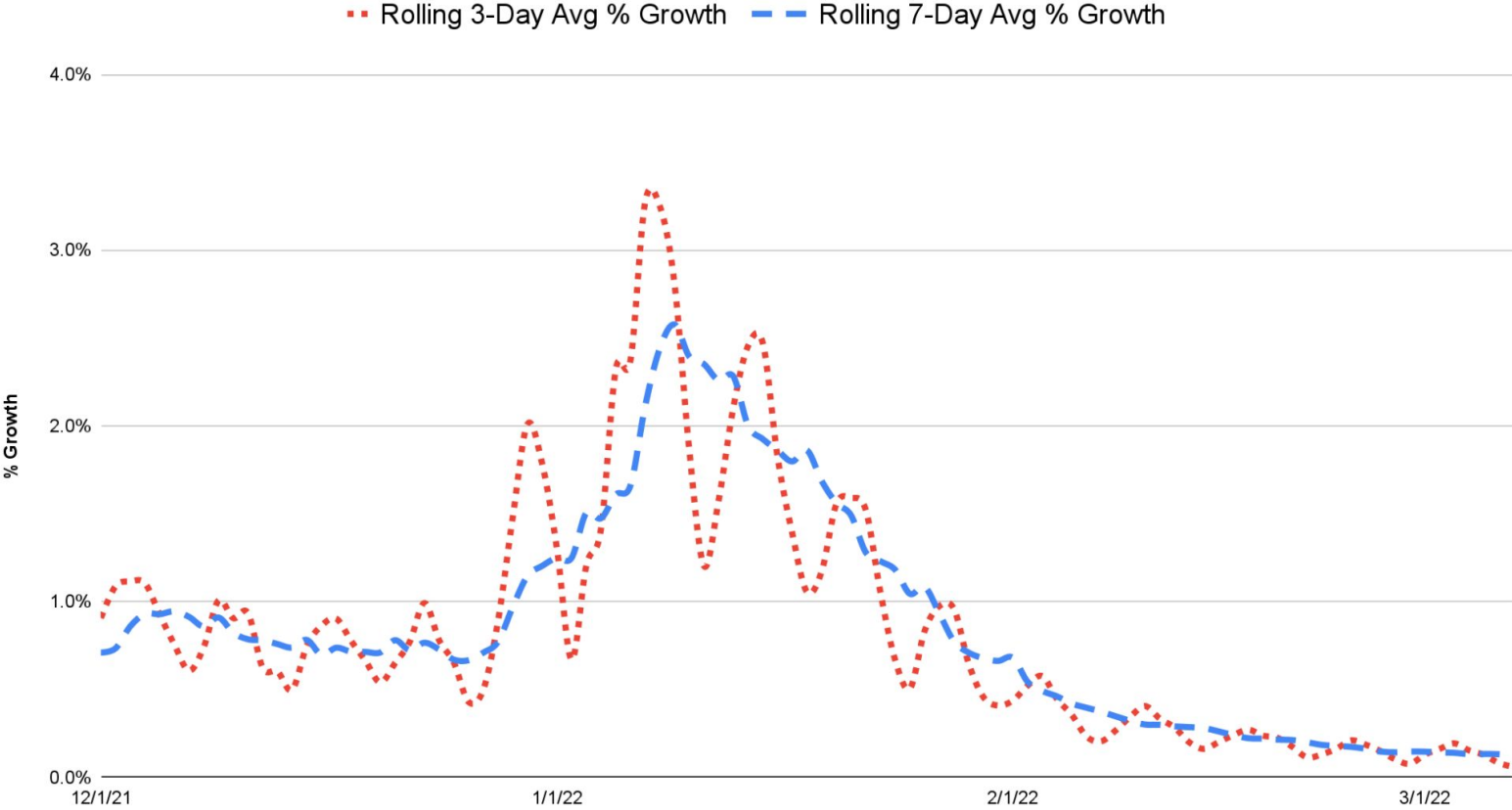


RESTART VERMONT

Reopening Metrics

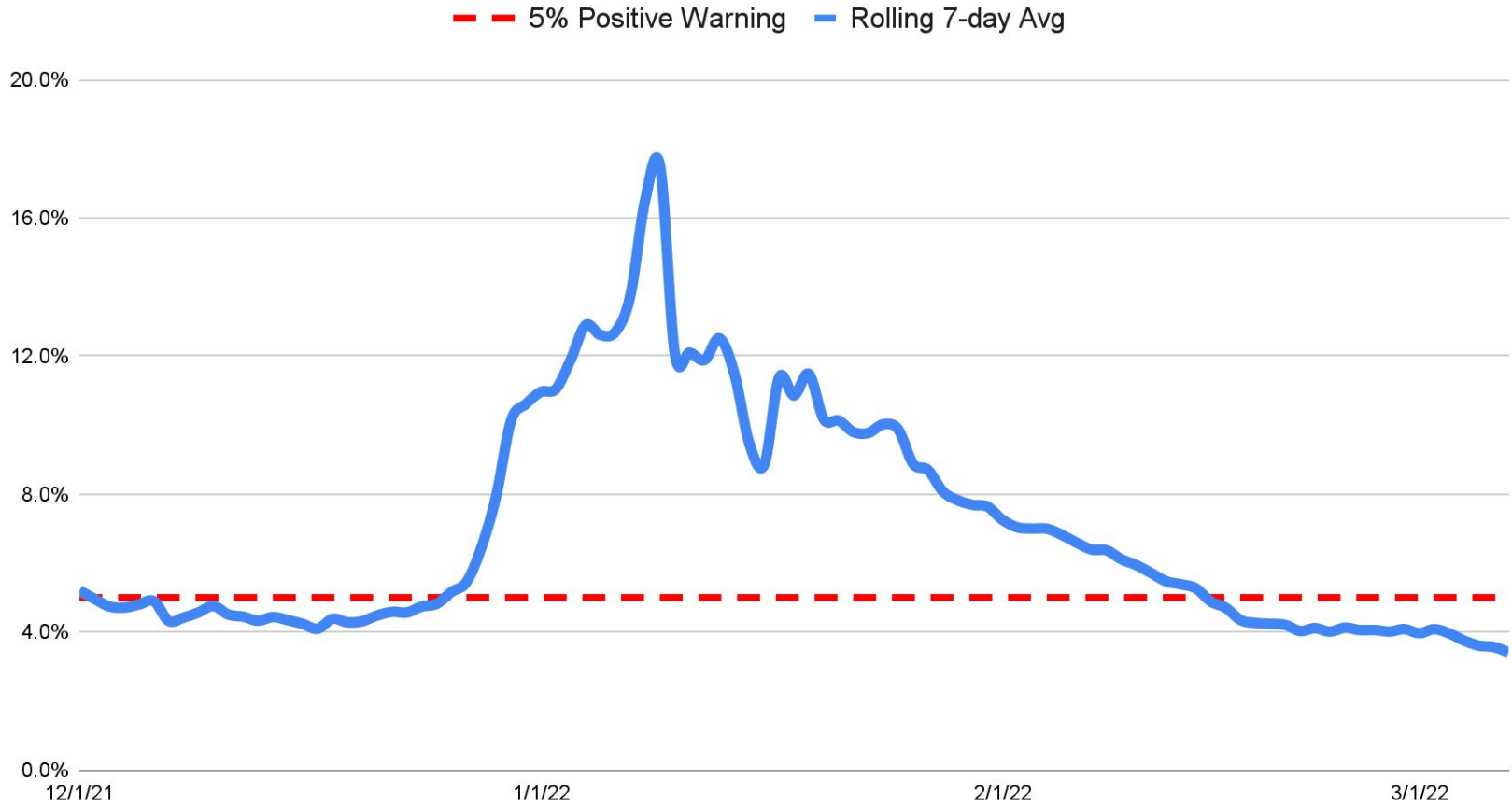
1. Syndromic Surveillance (*retired*)
2. Viral Growth & Reproductive Rates
3. Percentage of New Positive Tests
4. Hospital & Critical Care Bed Capacity
5. Testing Volume

Viral Growth & Reproductive Rates



Source: Vermont Department of Health

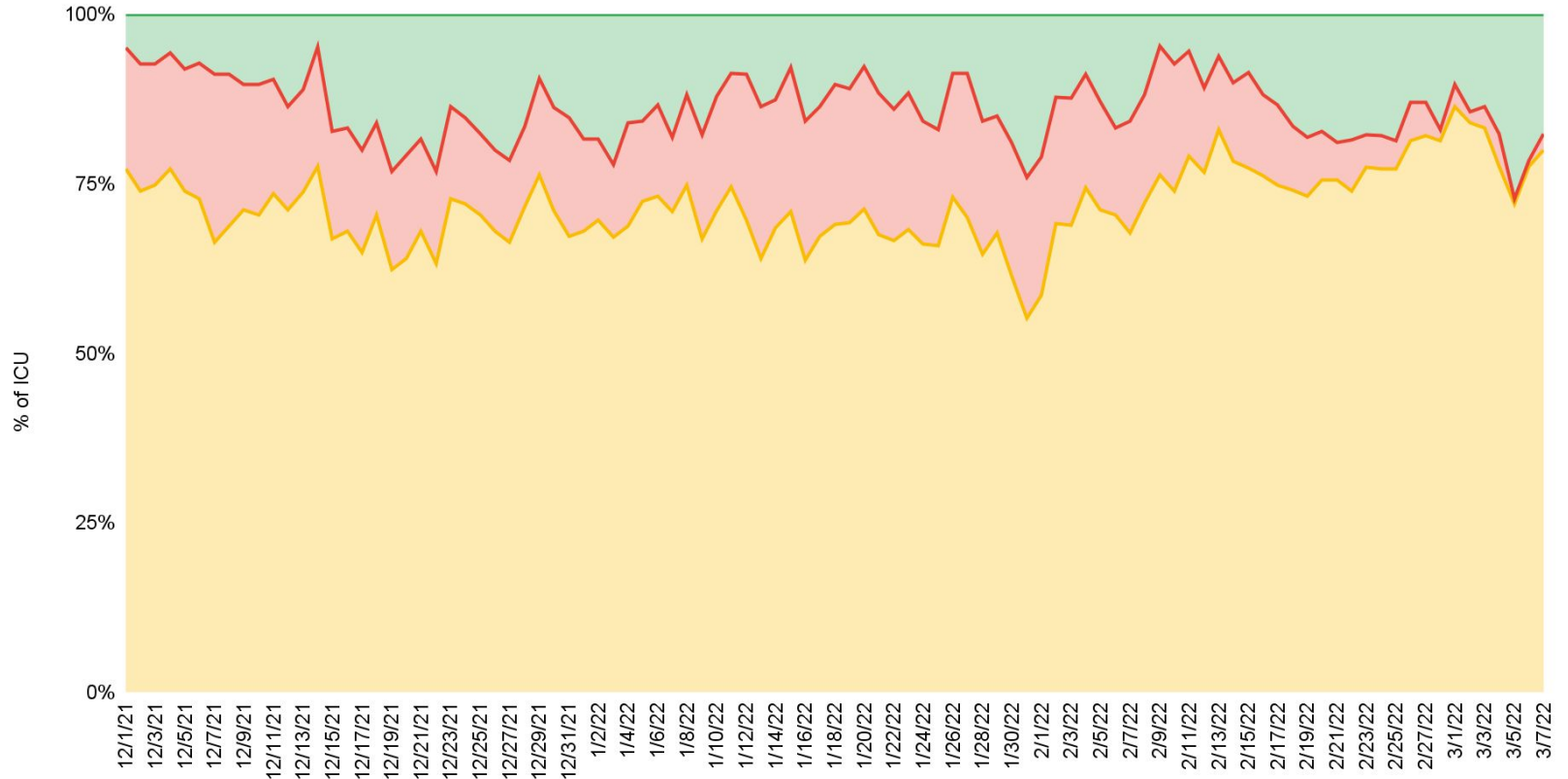
Test Positivity



Source: Vermont Department of Health; 7-day positivity calculated as positive tests last seven days/tests last seven days

Critical Care Beds

Open ICU COVID ICU non-COVID ICU



Vermont Testing

