

COVID-19 Modeling

April 5, 2022

Presentation available at:
dfr.vermont.gov

Overview

Week over week, Vermont's COVID-19 case load increased by 70, with the state averaging 150 confirmed infections per day. This increase comes as the proportion of the BA.2 Omicron subvariant grew 11% to an estimated 84% of all New England cases.

Hospital admissions for COVID decreased this week. On average over the last seven days, four Vermonters per day were admitted to the hospital for the virus. Patients in the ICU remained in the low single digits. Three more fatalities were reported this week in Vermont.

The number of booster doses administered in Vermont increased this week with the recommendation that those 50 and older and those with certain underlying health conditions receive a second booster dose of either the Pfizer or Moderna vaccine.

Cases across New England increased this week from 2,480 to 3,020 cases per day (+22%), still down considerably from the 38,000 cases per day at the height of the Omicron wave. Case growth appears to be largely concentrated in southern New England, specifically Connecticut (+75%) and Massachusetts (+22%). Additionally, Boston wastewater testing shows an increase in viral levels, but current trends continue to remain far below Omicron peak levels.

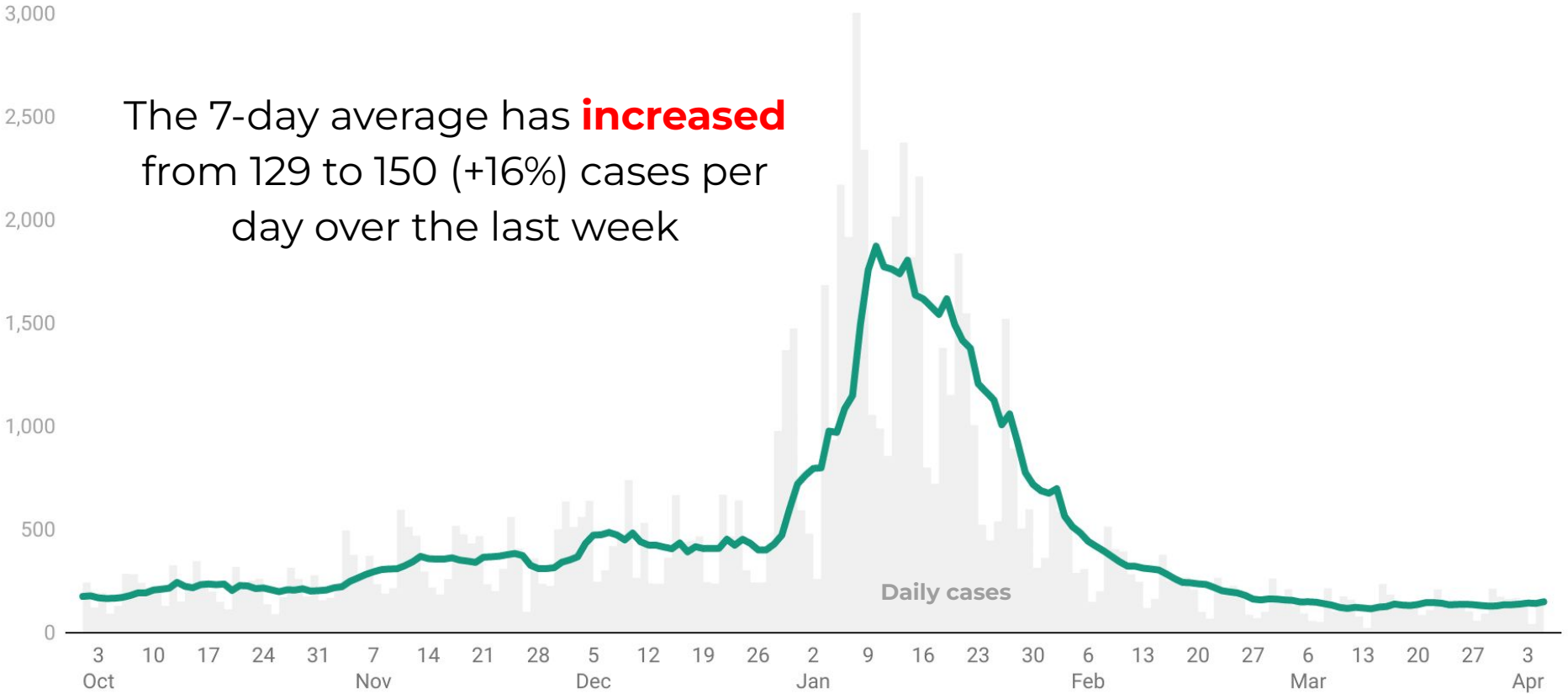
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Vermont Case Data

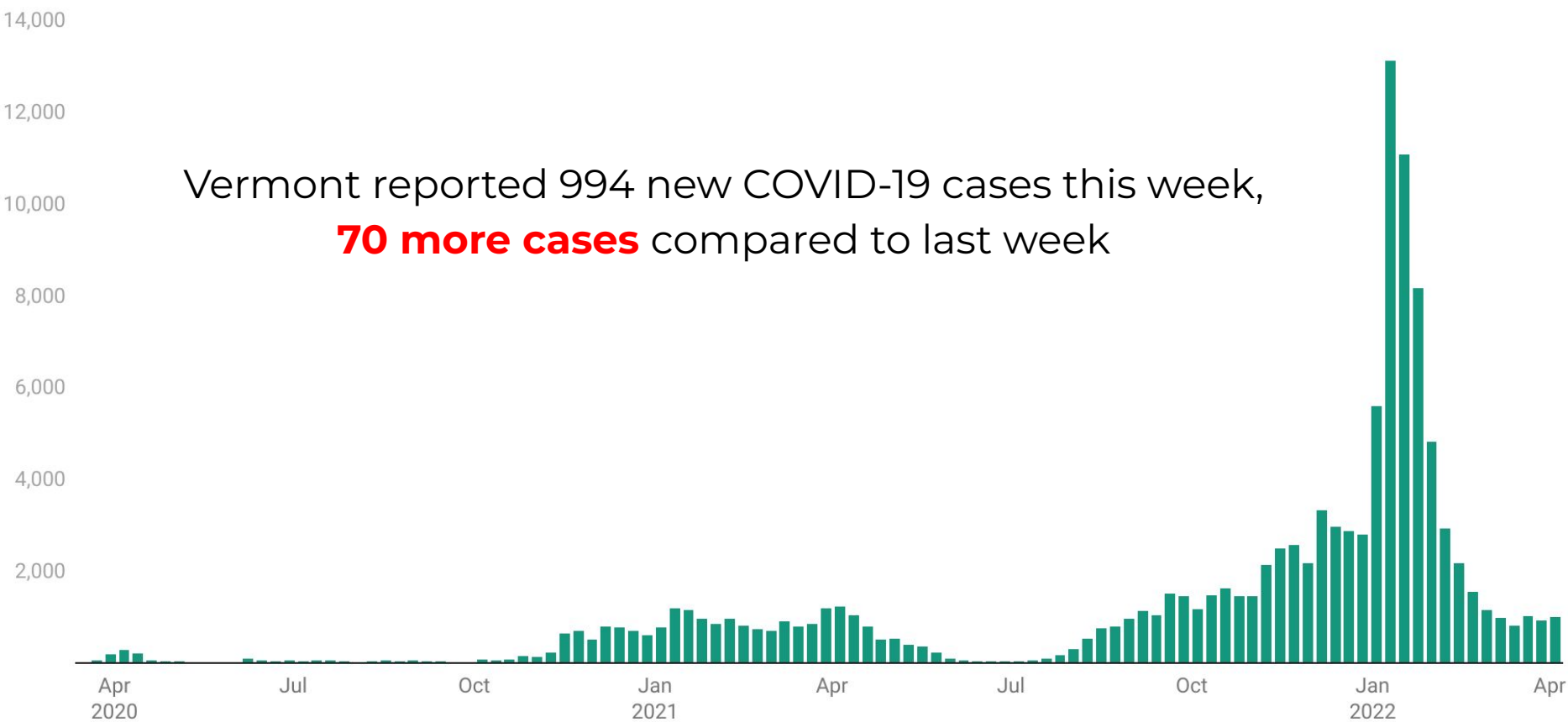
Vermont New COVID-19 Cases

7-Day Average



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

Vermont New Weekly COVID-19



Vermont reported 994 new COVID-19 cases this week,
70 more cases compared to last week

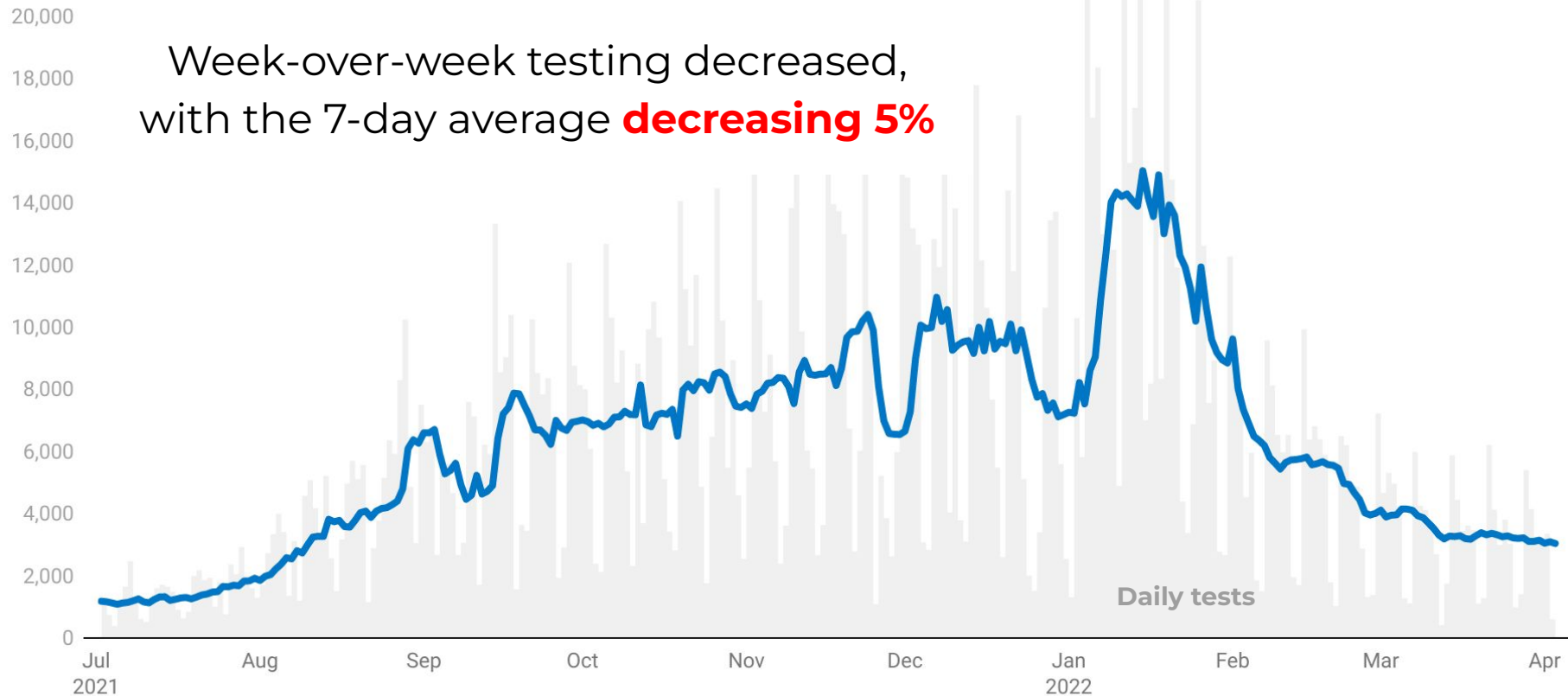
Source: VDH—April 4, 2022; created with Datawrapper

Vermont COVID-19 PCR Testing

7-Day Average

Week-over-week testing decreased,
with the 7-day average **decreasing 5%**

Number of Tests



Daily tests

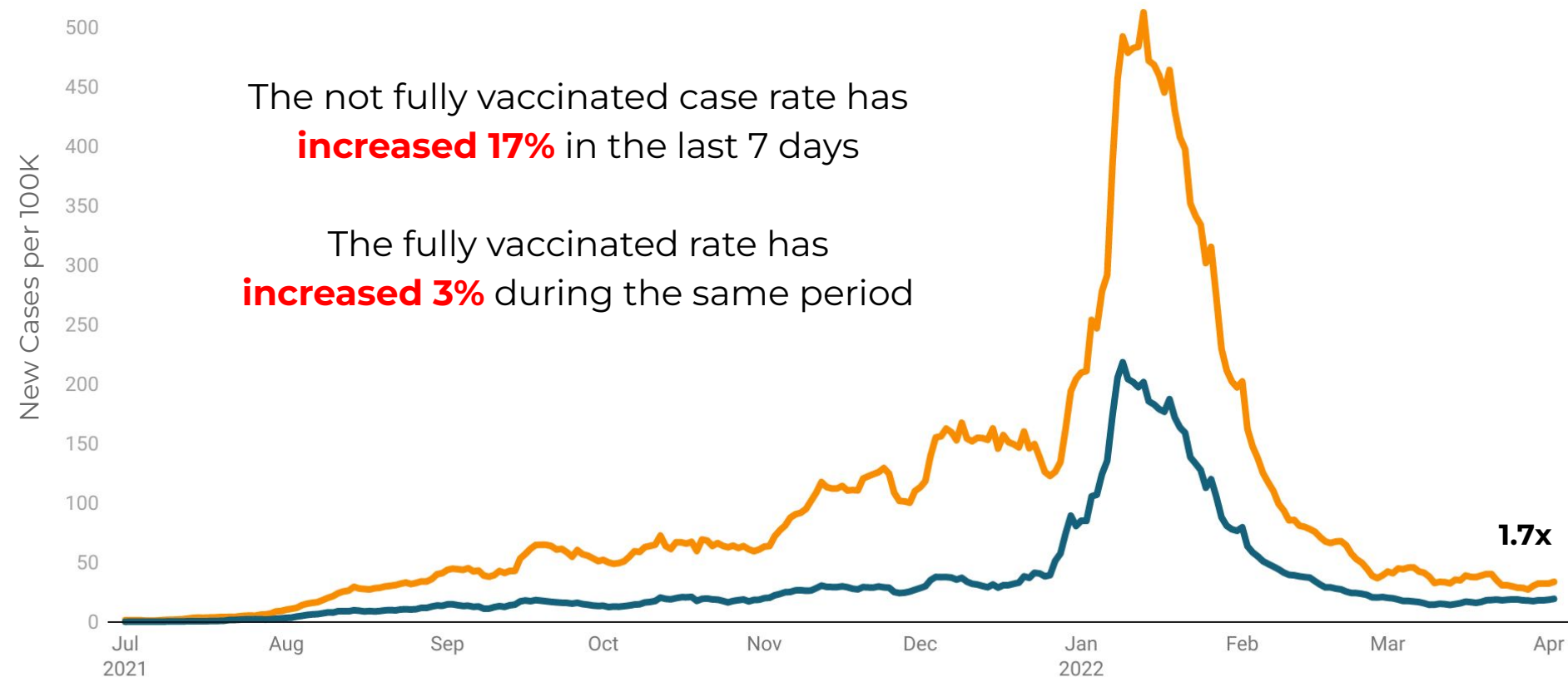
Vermont PCR Test Positivity

7-Day Positivity Rate

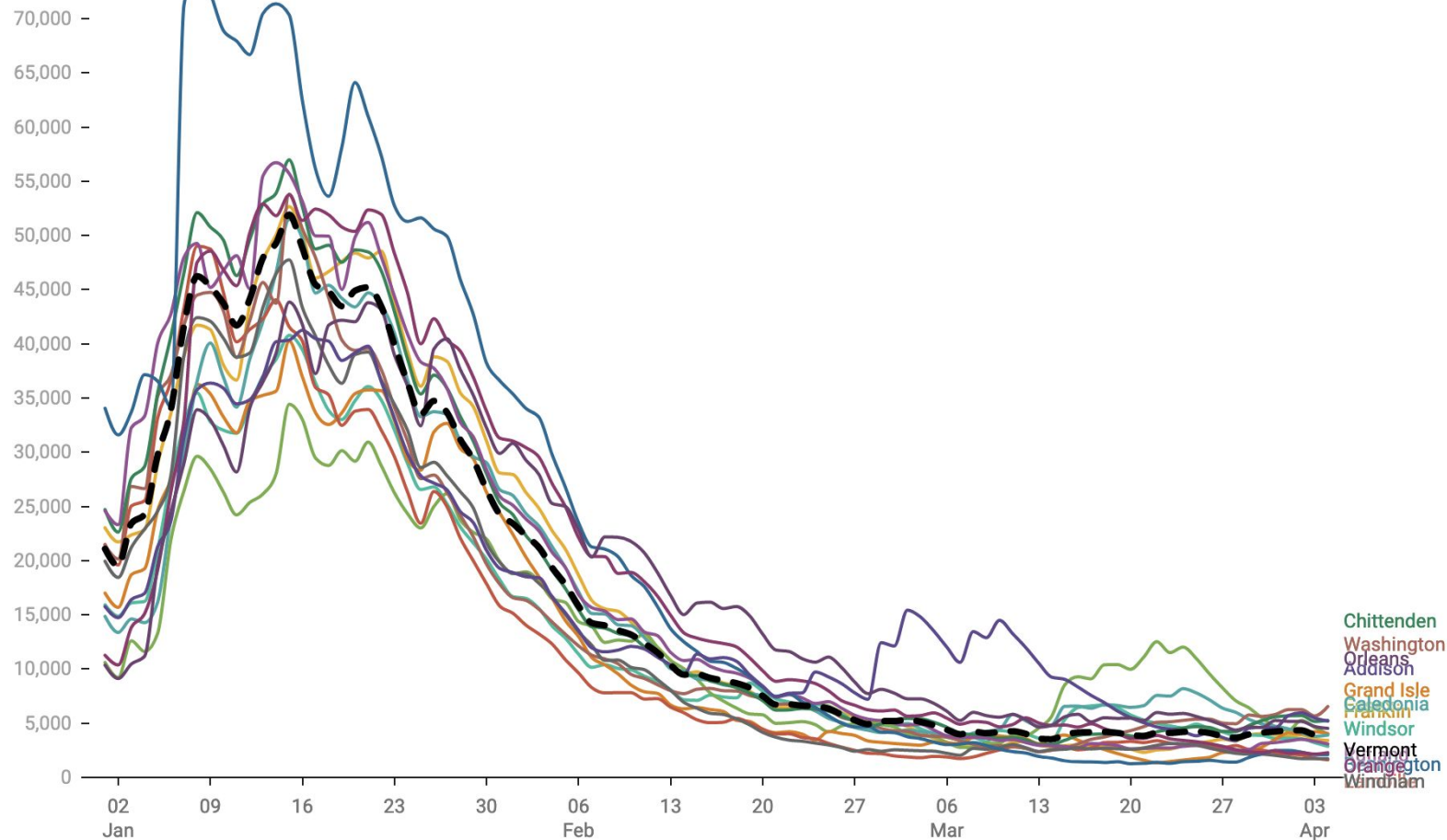


Vermont COVID-19 New Case Rates Per 100K (7-Day Average)

Not Fully Vaccinated Case Rate Fully Vaccinated Case Rate



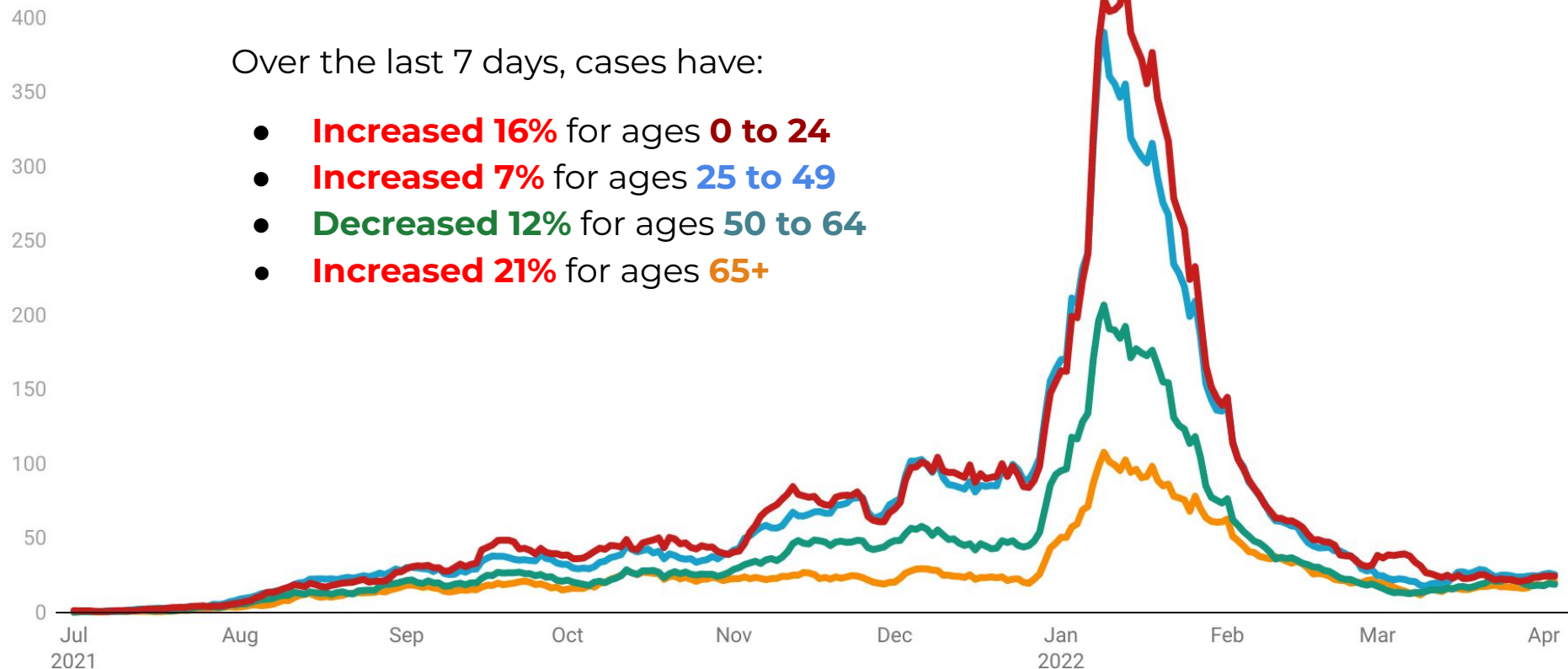
Estimated Active Cases per Million in All Vermont Counties



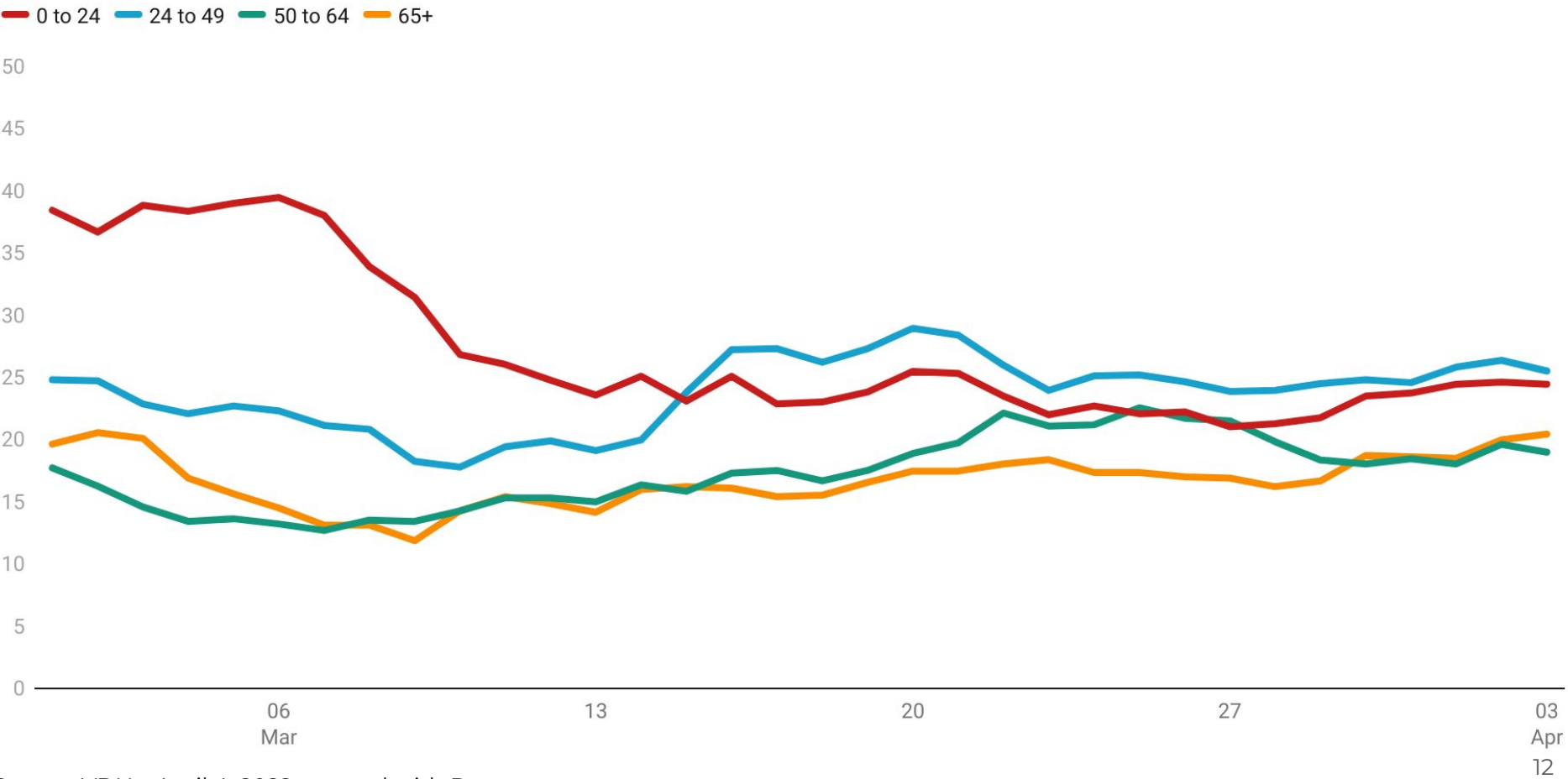
Source: VDH—April 4, 2022; created with Datawrapper

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

— 0 to 24 — 24 to 49 — 50 to 64 — 65+

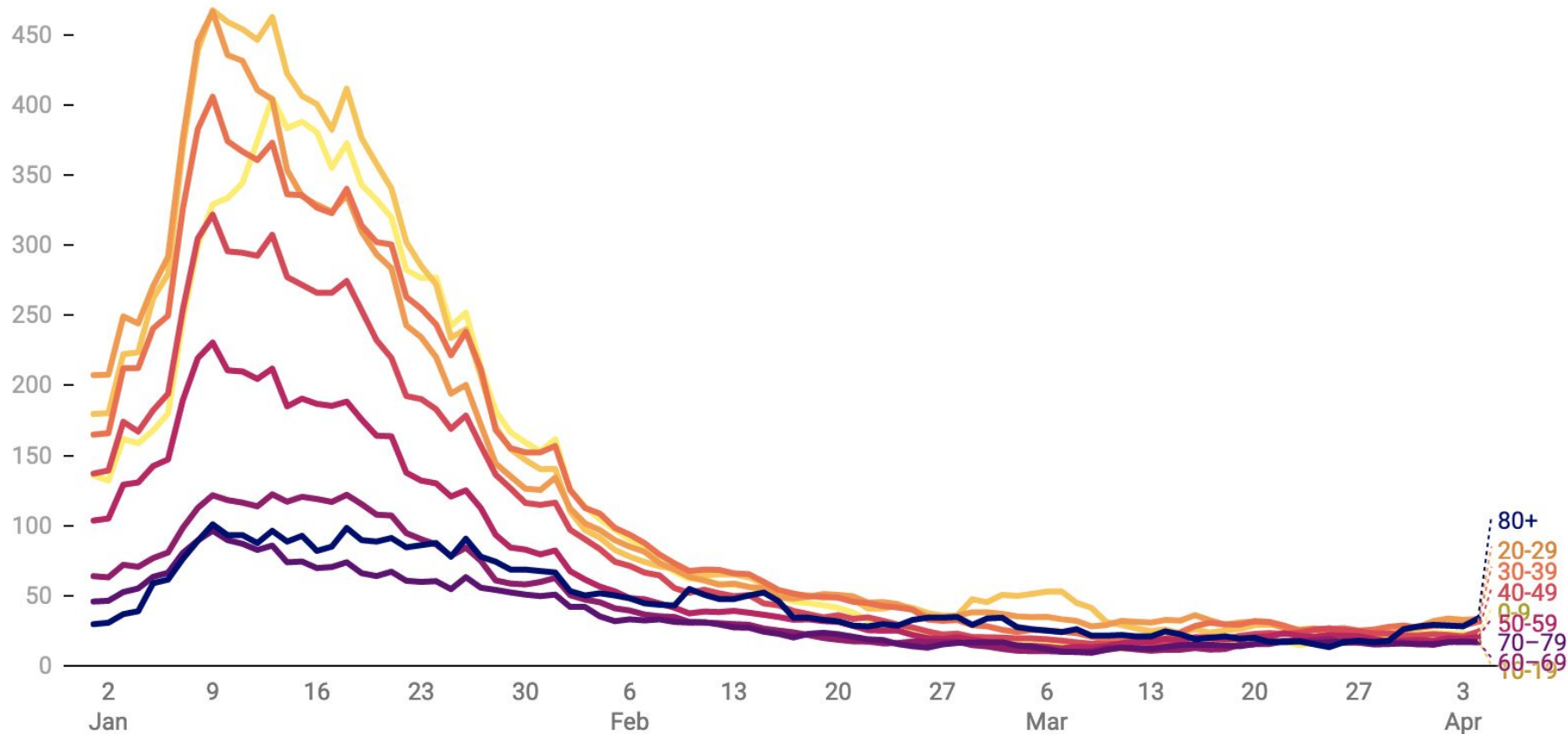


Vermont Case Rates Per 100K By Age (7-Day Average) Since March 1st



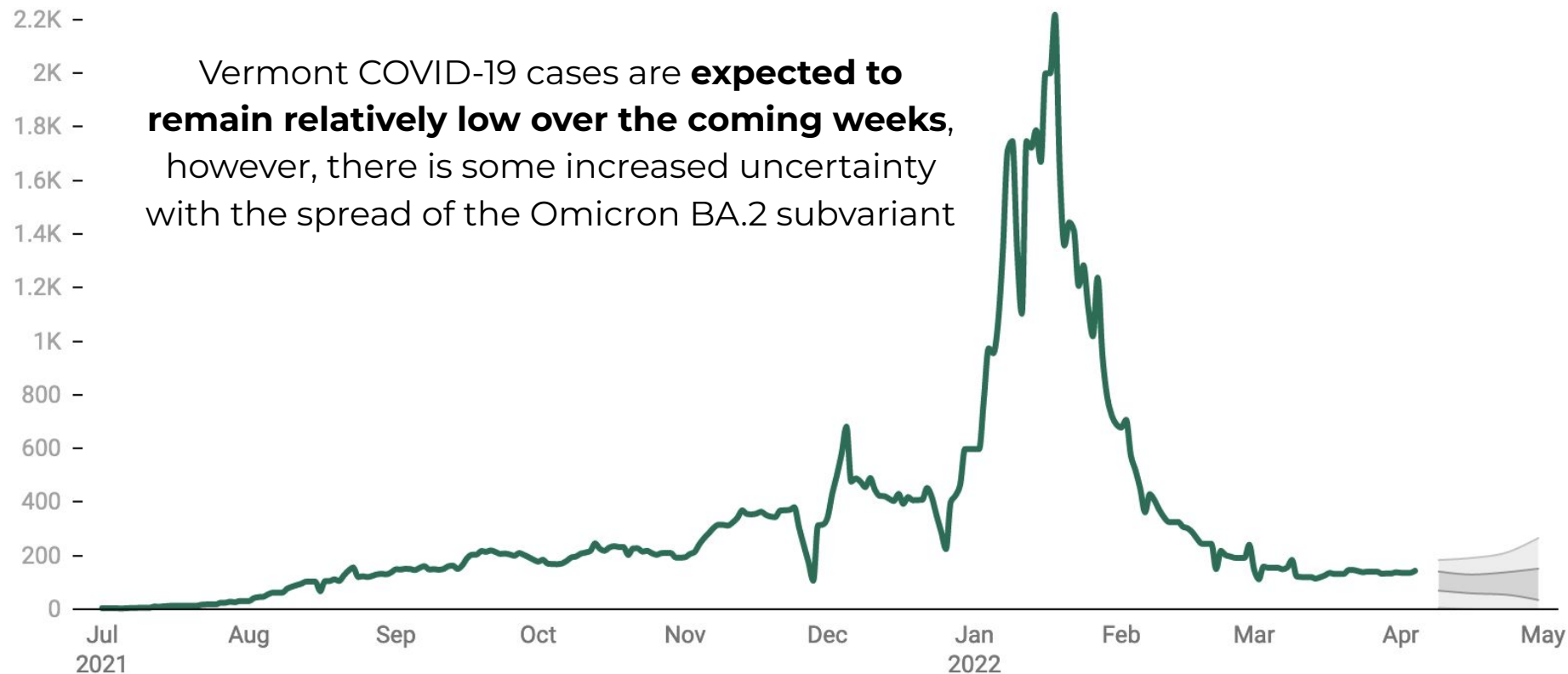
Source: VDH—April 4, 2022; created with Datawrapper

VT COVID-19 Infections per 100K by Age Group



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

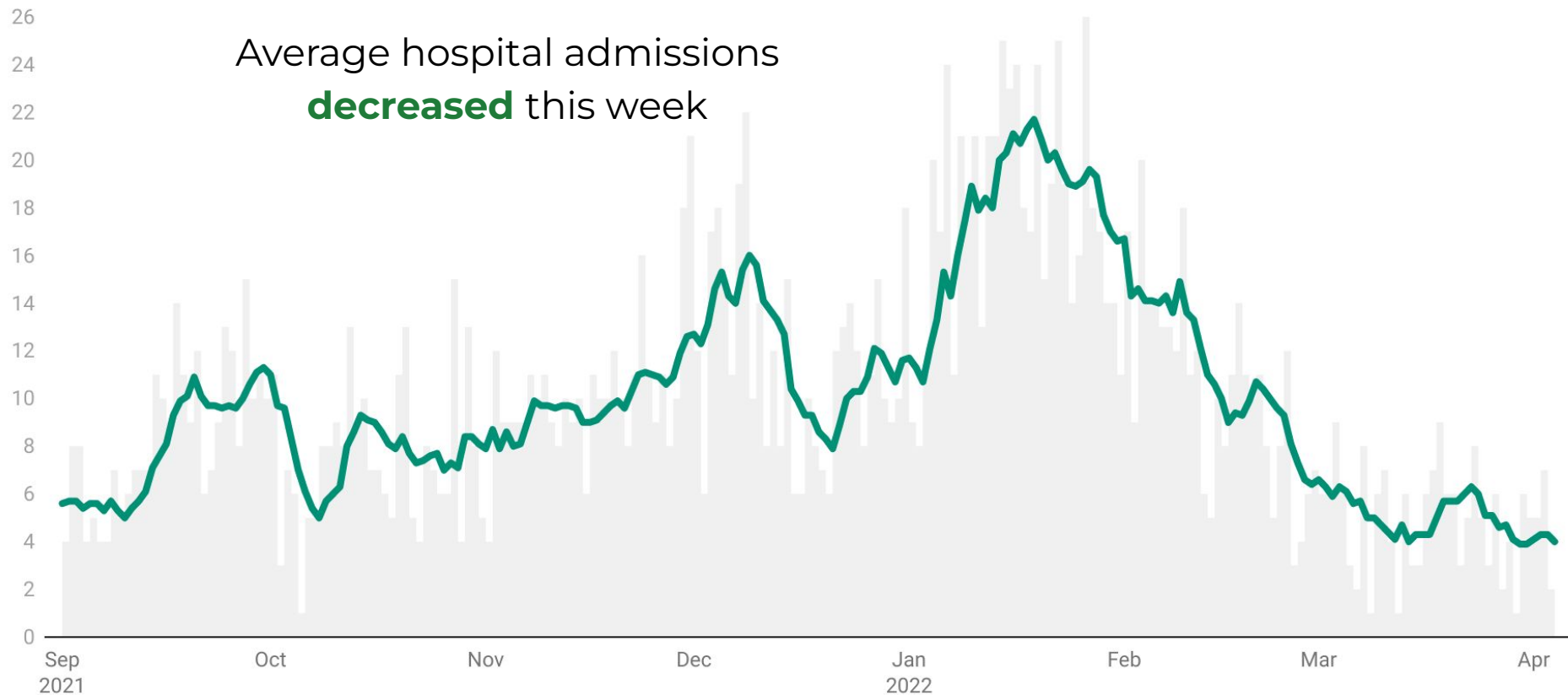
Facility Name	Total COVID-19 Cases
Bel-Aire Center	67
Springfield Rivers Nursing & Rehab	66
Helen Porter Healthcare & Rehabilitation Center	30
Greensboro Nursing home	24
Thompson House	12
Our Lady of Providence	9
Converse Home	6
Total	214

Source: Vermont Department of Health—April 5, 2022 (reporting Monday through previous Sunday); 'Active' defined as less than 28 days since most recent case's specimen collection date or illness start date (whichever is later); *privacy suppressions include facility w/ <25 staff and residents and/or >75% of facility infected

Vermont Hospitalization Data

Vermont New COVID-19 Hospital Admissions

7-Day Average



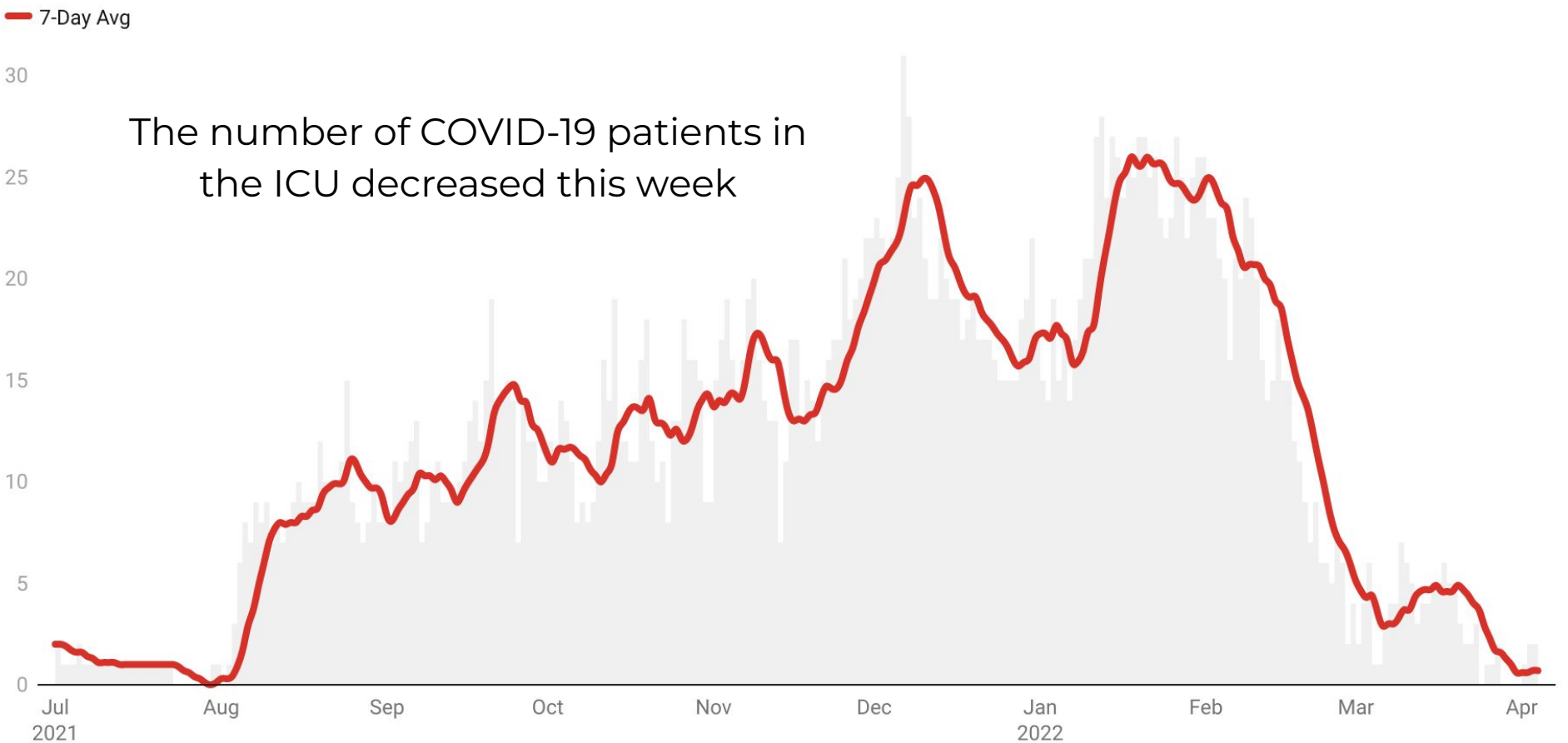
Source: HHS—April 4, 2022; created with Datawrapper

Vermont COVID-19 Patients Currently Hospitalized



Source: VDH—April 4, 2022; created with Datawrapper

Vermont COVID-19 Patients Currently in the ICU

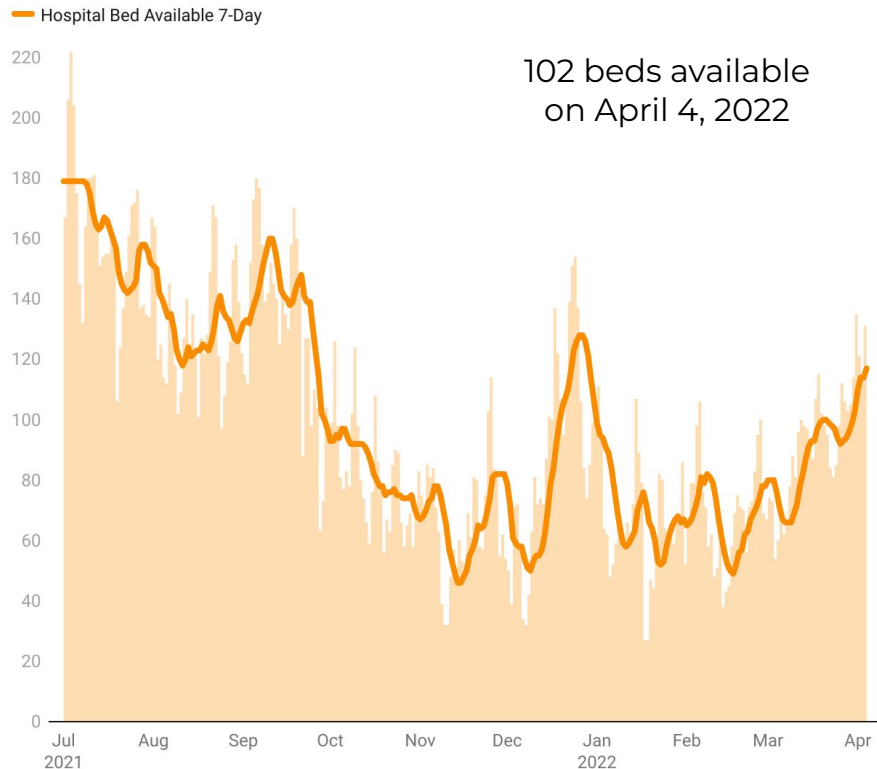


Source: VDH—April 4, 2022; created with Datawrapper

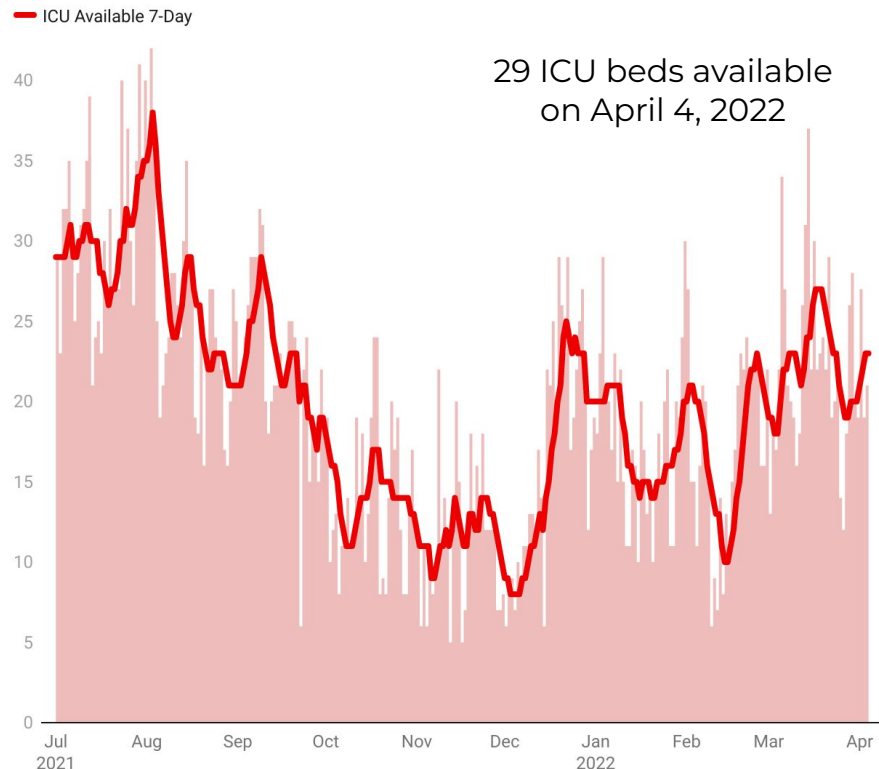
Vermont Hospital Metrics

(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

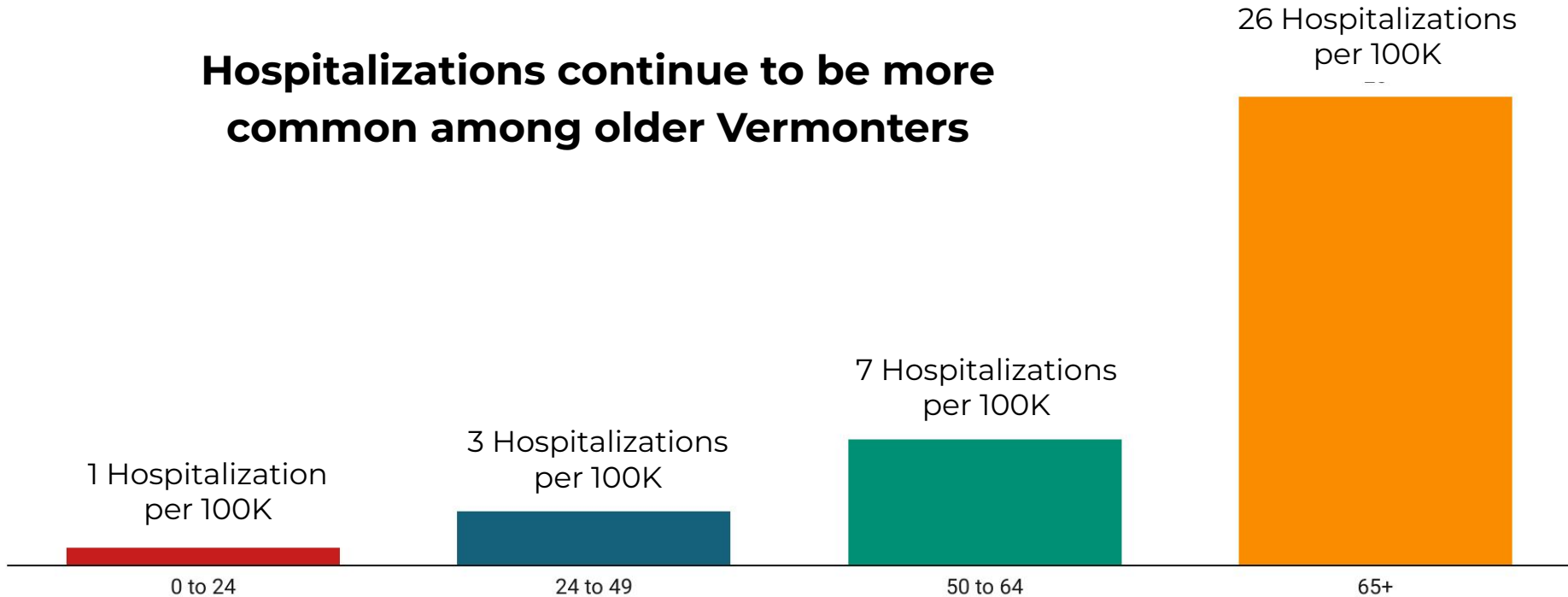
40

30

20

10

Hospitalizations continue to be more common among older Vermonters



COVID-19 Hospitalizations By Vaccination Status Per 100K

Measured Over the Last 6 Weeks

40

Those 18+ & **not fully vaccinated** were nearly **3.1x more** likely to be hospitalized from COVID-19 over the last 6 weeks compared to those **fully vaccinated & boosted**

COVID-19 Hospitalizations per 100K

30

24 Hospitalizations
per 100K

20

10

7 Hospitalizations
per 100K

8 Hospitalizations
per 100K

Not Fully Vaccinated

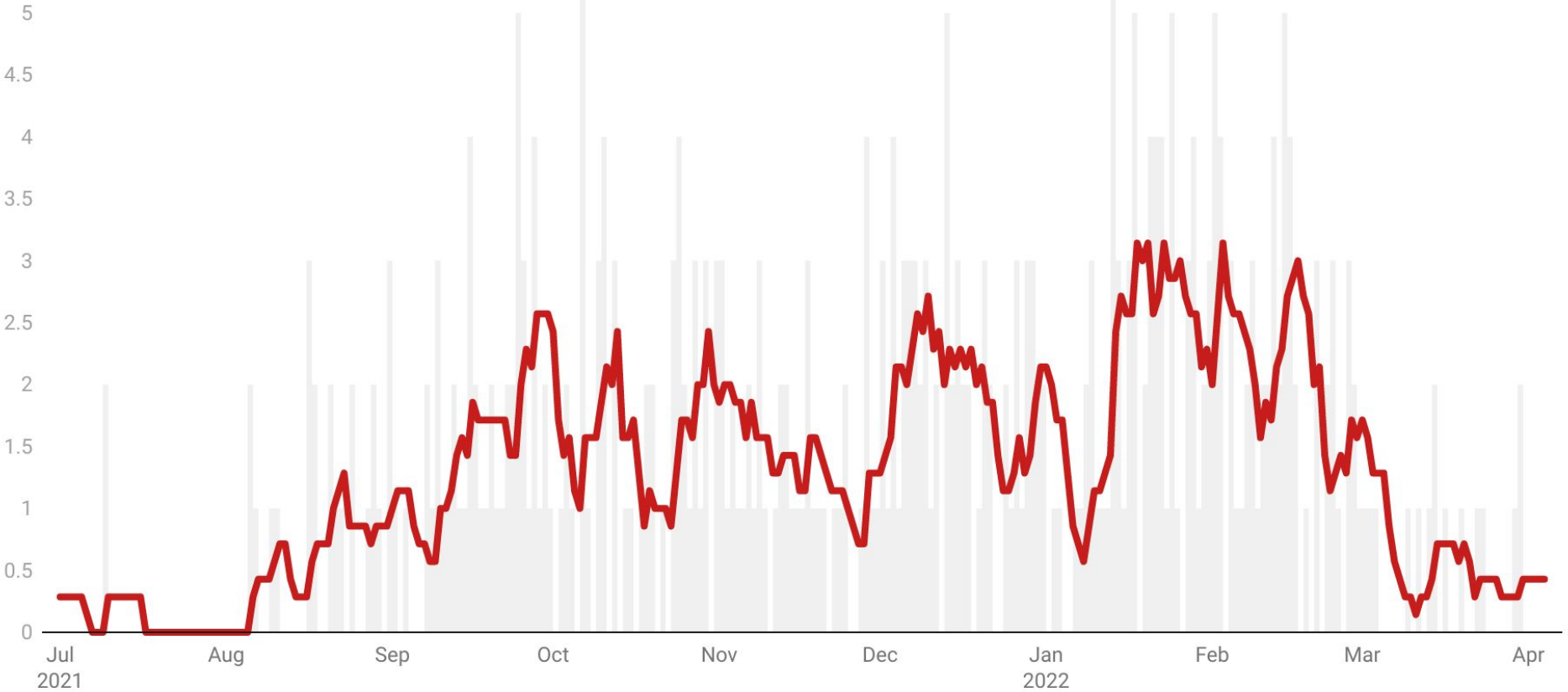
Fully Vaccinated But Not Boosted

Fully Vaccinated & Boosted

Vermont Fatality Data

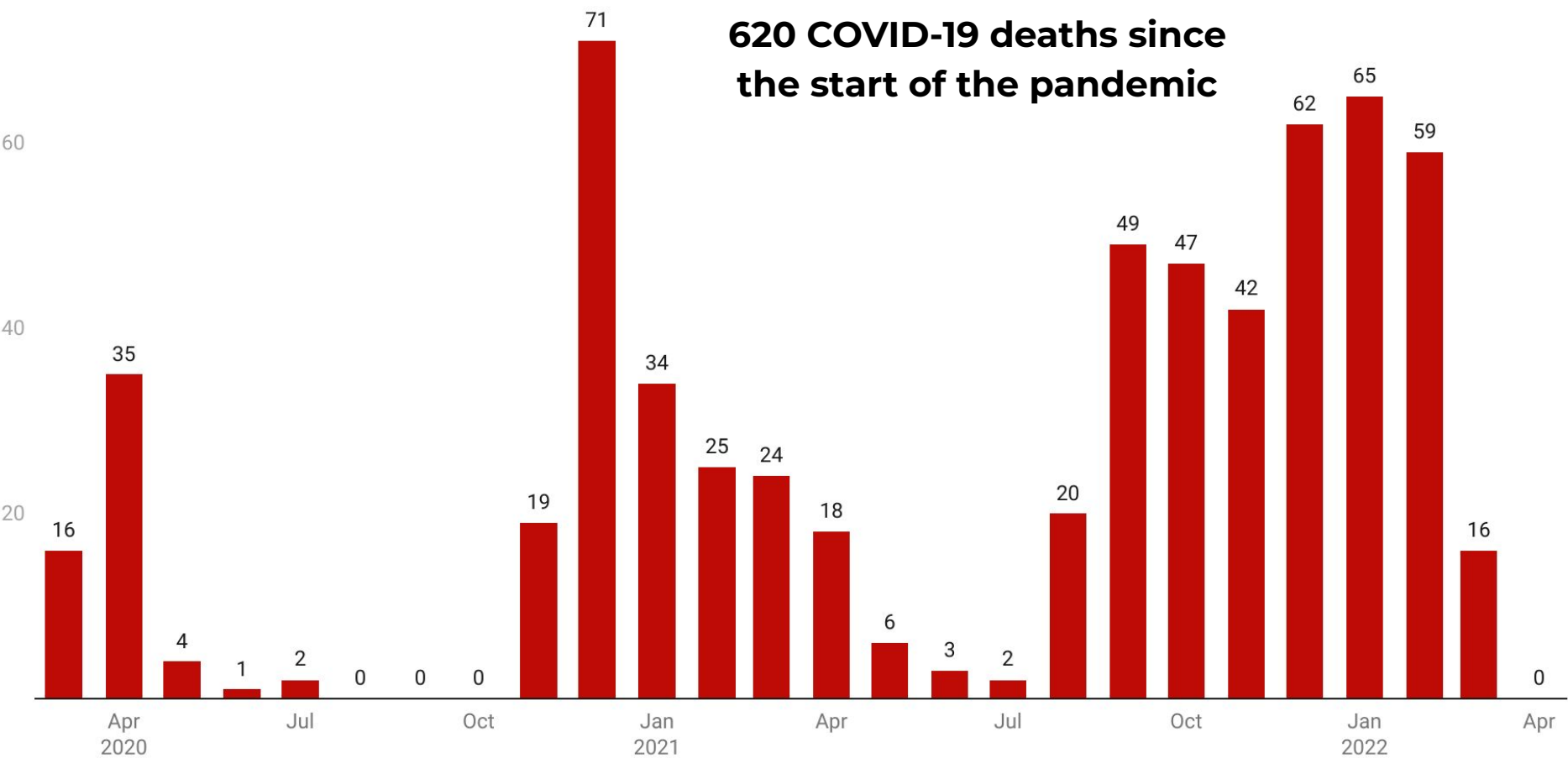
Vermont COVID-19 Fatalities

7-Day Average



Source: VDH—April 4, 2022; created with Datawrapper

Monthly Covid-19 Deaths In Vermont



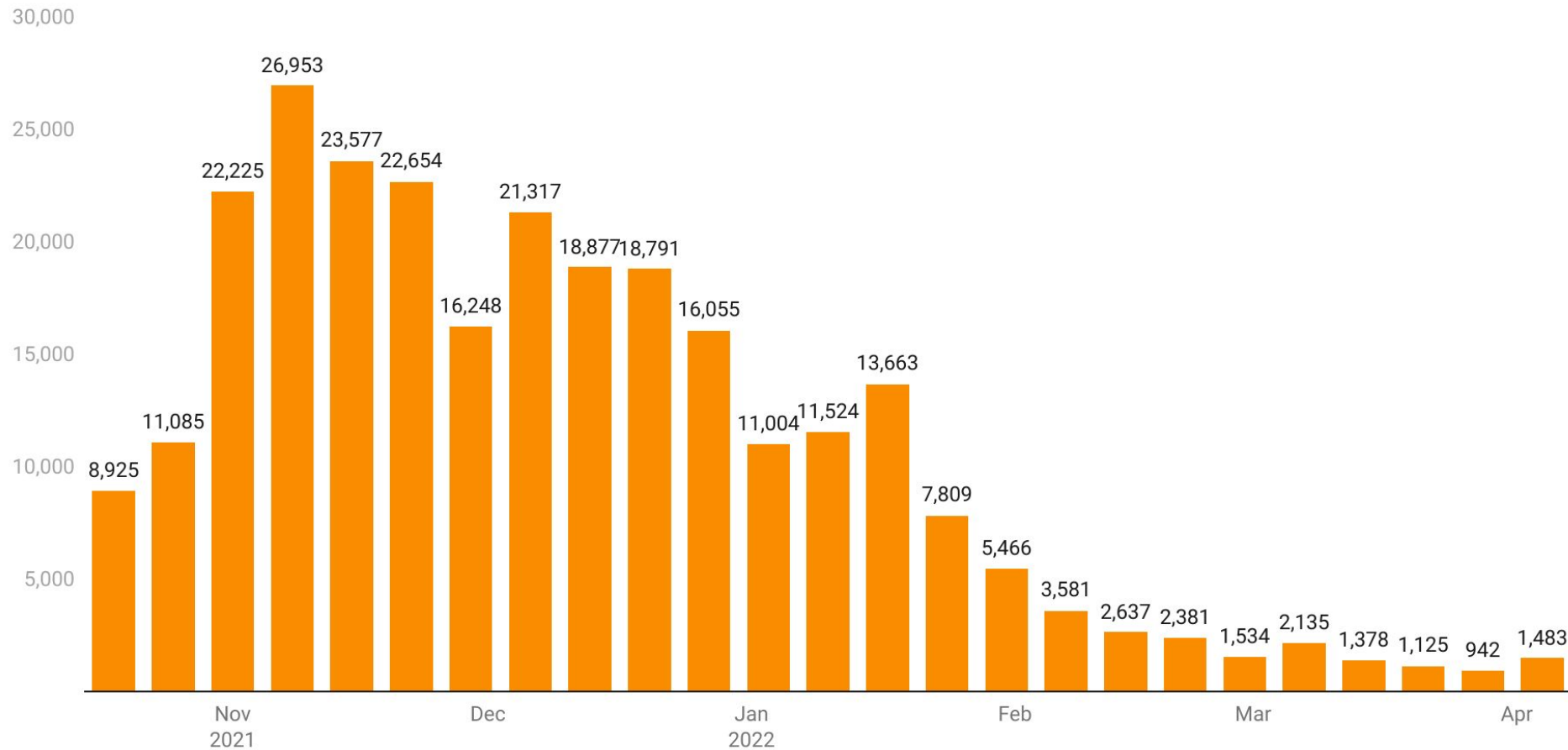
Vermont Vaccination Data

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

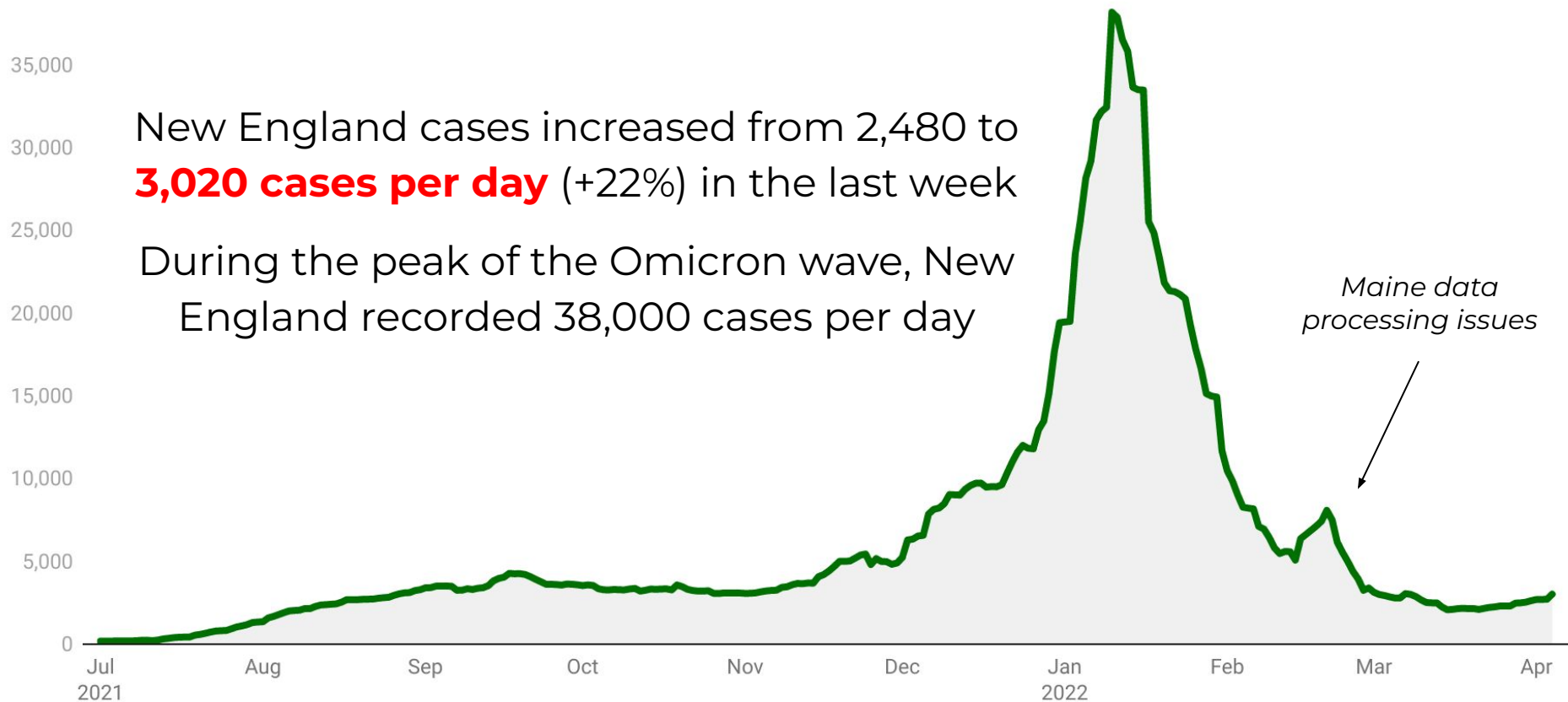


Source: CDC—April 4, 2022; created with Datawrapper

Regional Data

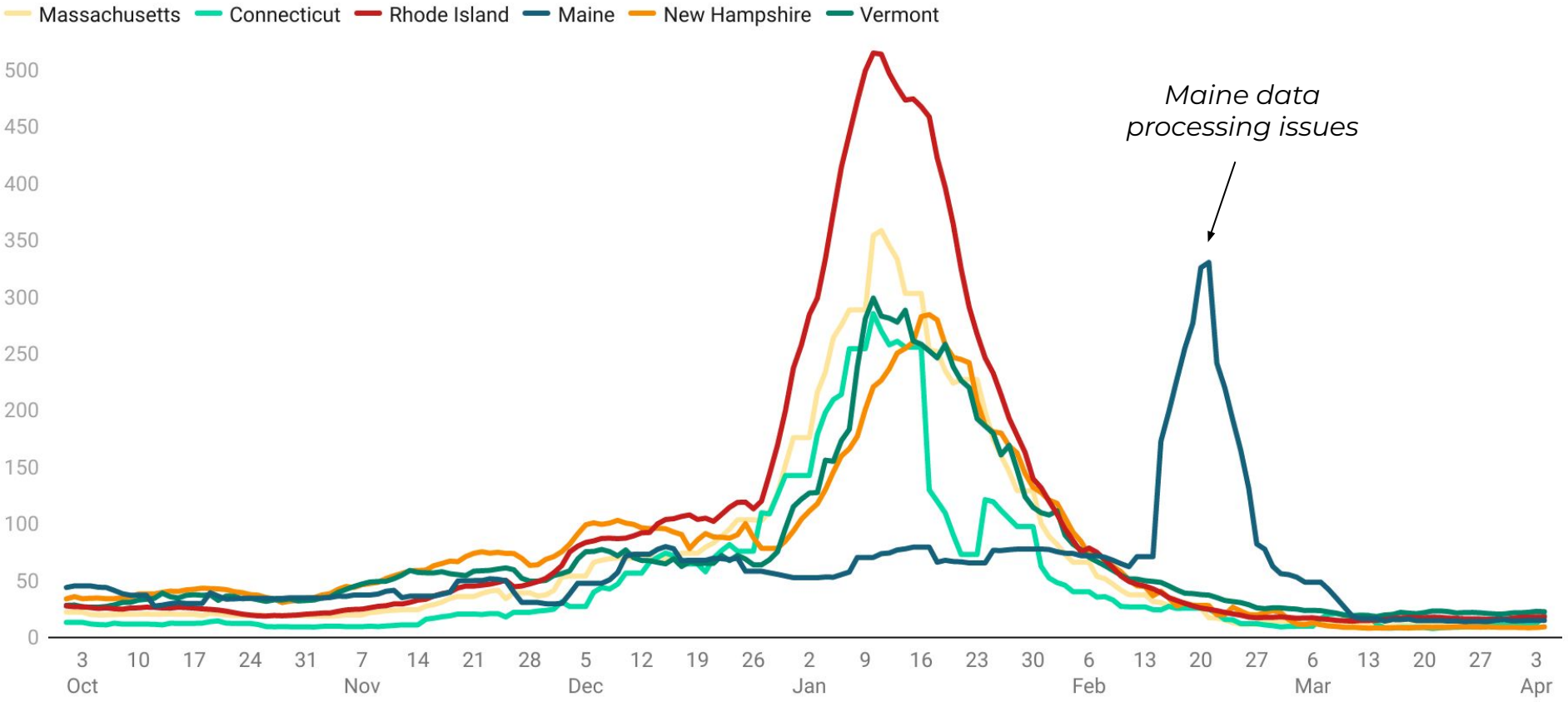
New England COVID-19 Cases

— New England 7-Day Case Average



New England COVID-19 Case Trends

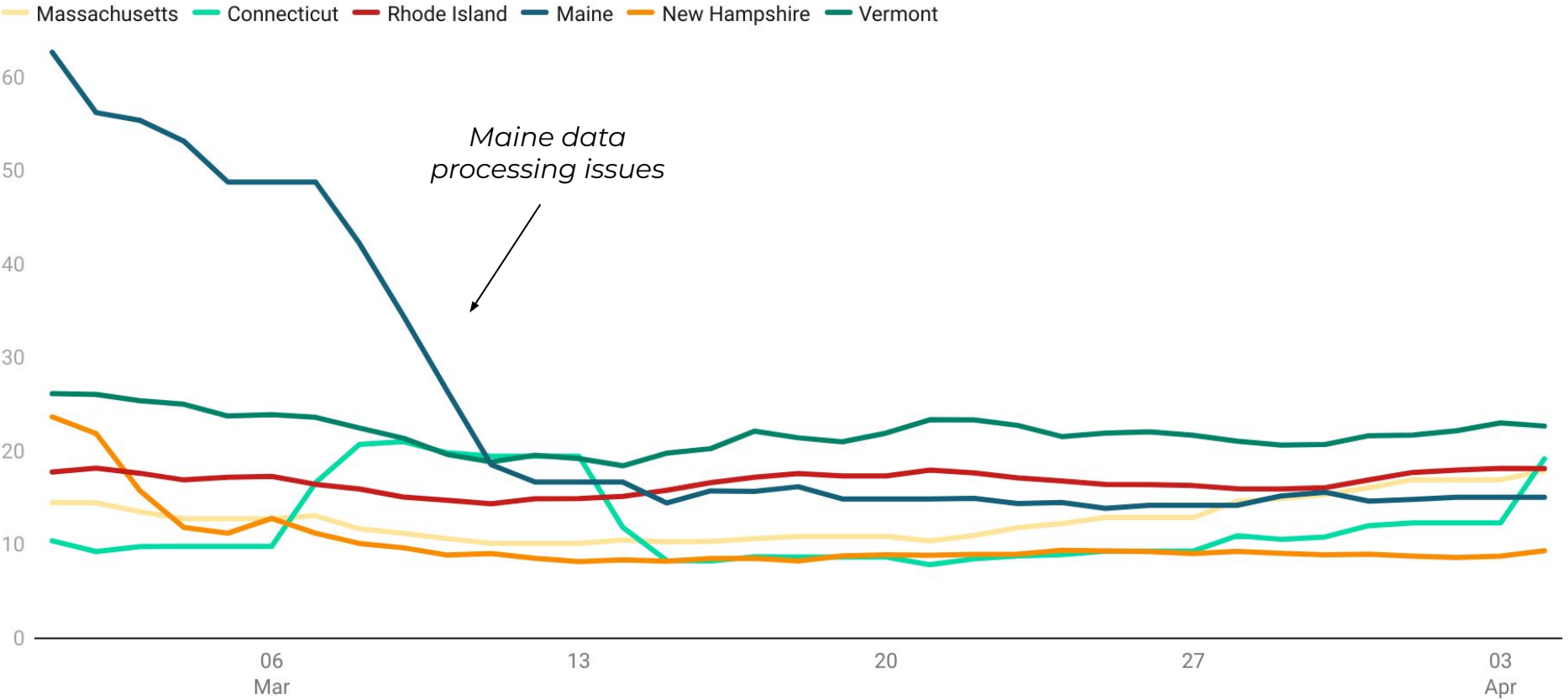
7-Day Average Cases Per 100K



Sources: State Health Depts.—April 4, 2022 (includes: CT, ME, MA, NH, RI & VT)

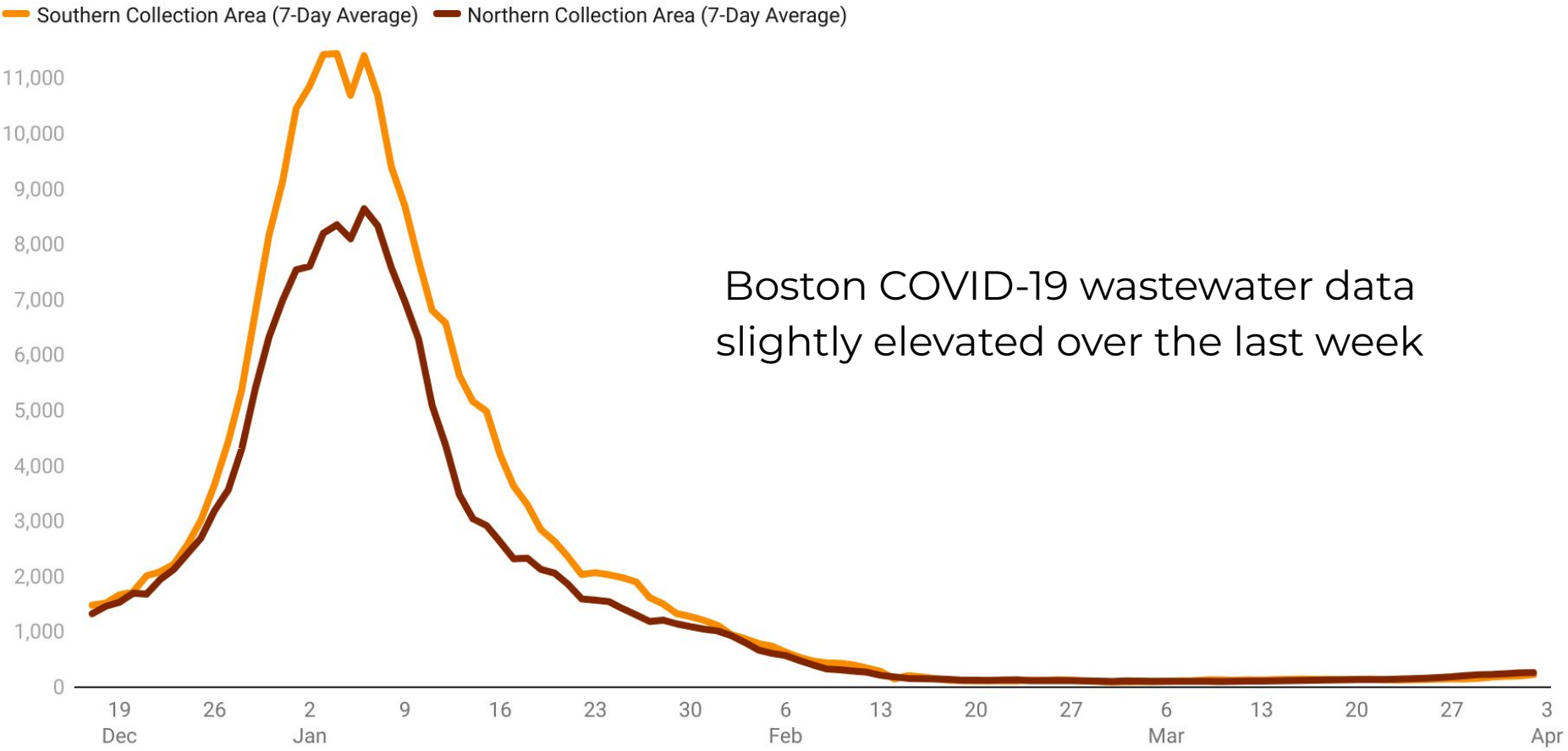
New England COVID-19 Case Trends Since March 1st

7-Day Average Cases Per 100K



Sources: State Health Depts.—April 4, 2022 (includes: CT, ME, MA, NH, RI & VT)

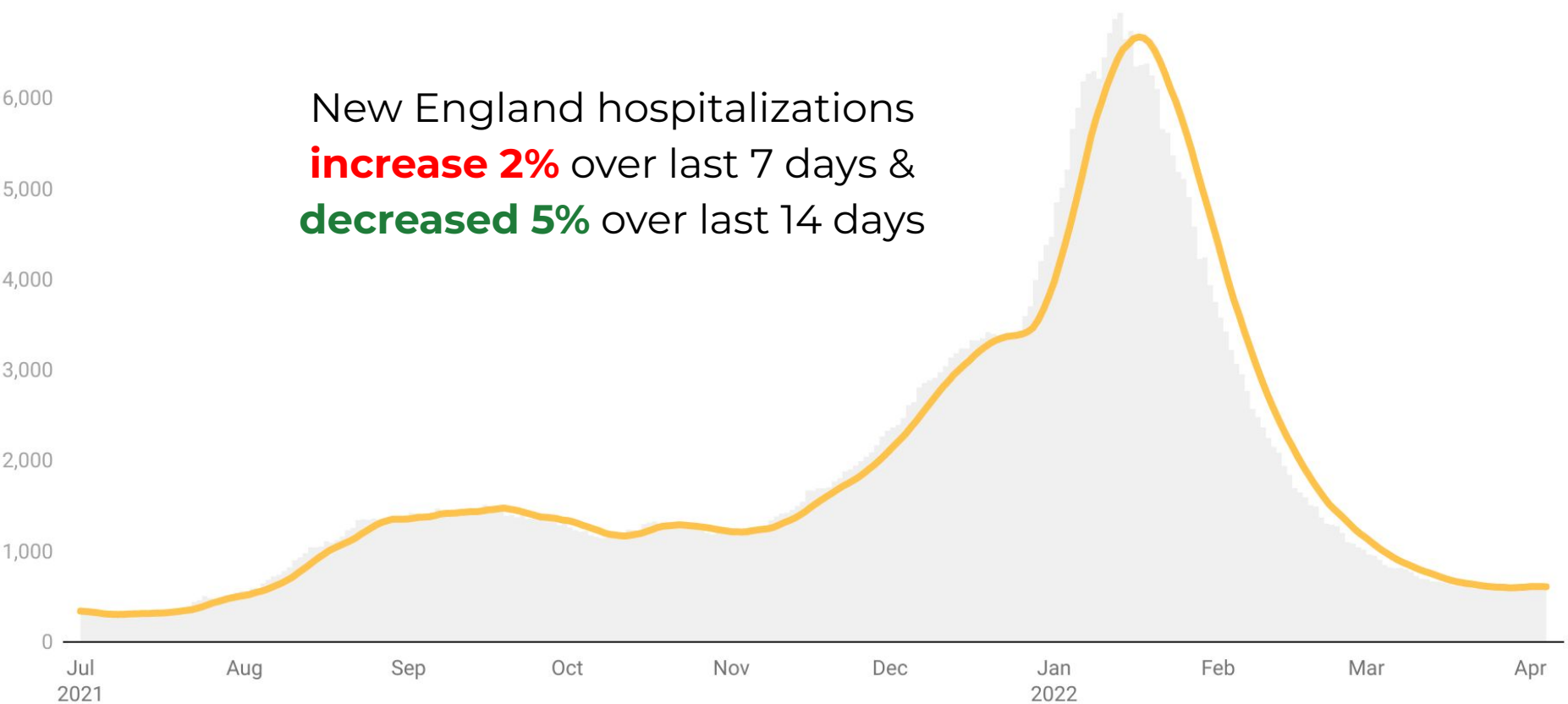
Boston Wastewater COVID-19 Detection



Source: Massachusetts Water Resources Authority; April 4, 2022

New England COVID-19 Hospitalizations

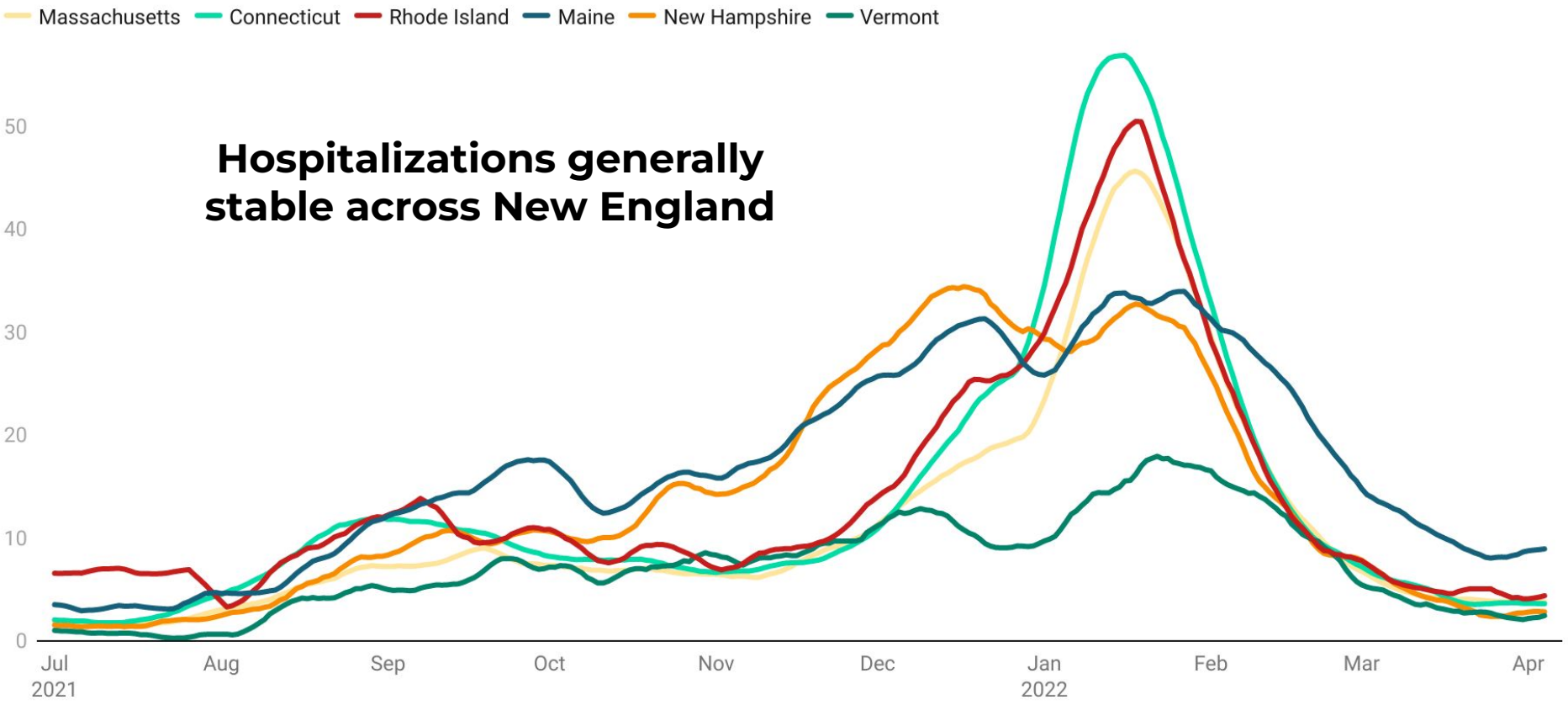
7-Day Average



Sources: HHS—April 4, 2022 (includes: CT, ME, MA, NH, RI & VT)

New England COVID-19 Hospitalizations Trends

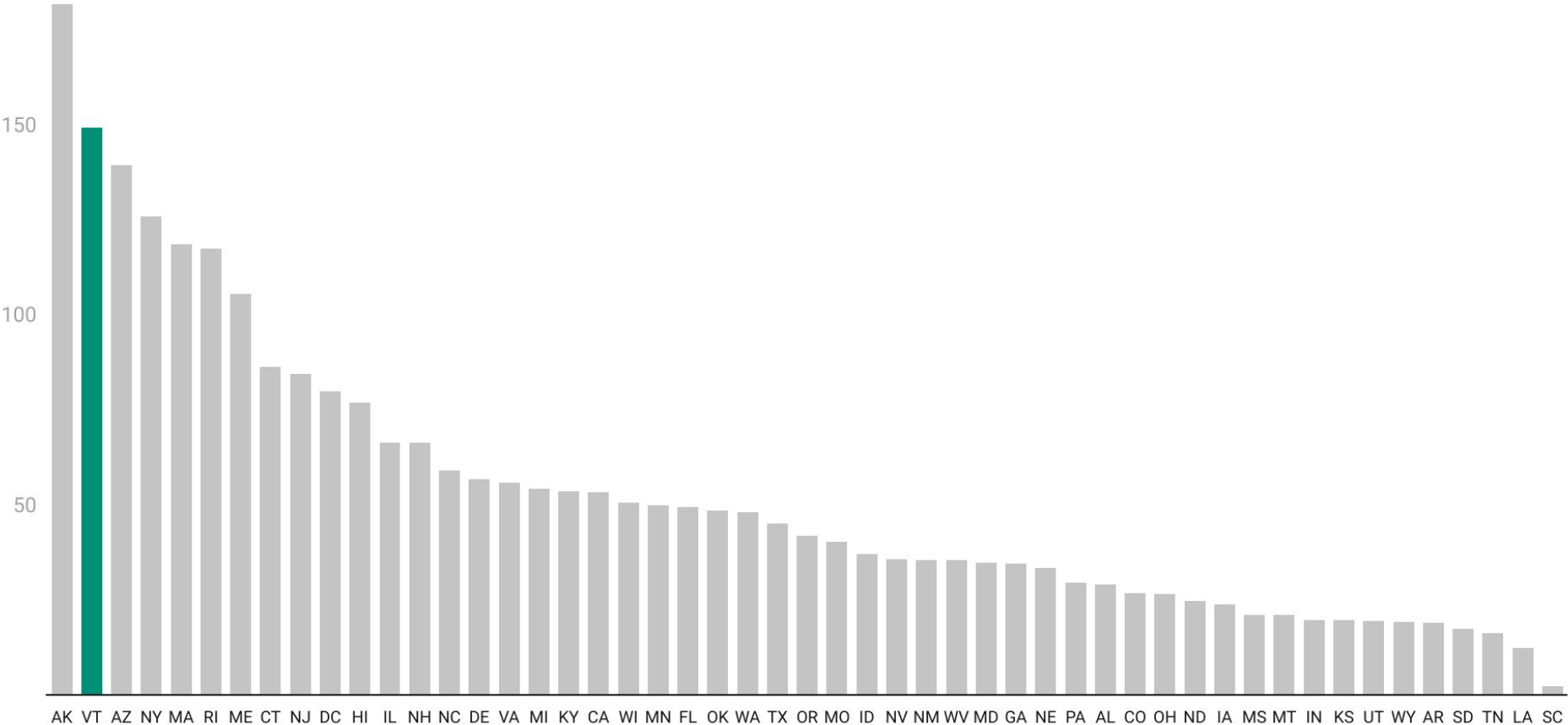
7-Day Average Hospitalizations Per 100K



Sources: HHS—April 4, 2022 (includes: CT, ME, MA, NH, RI & VT)

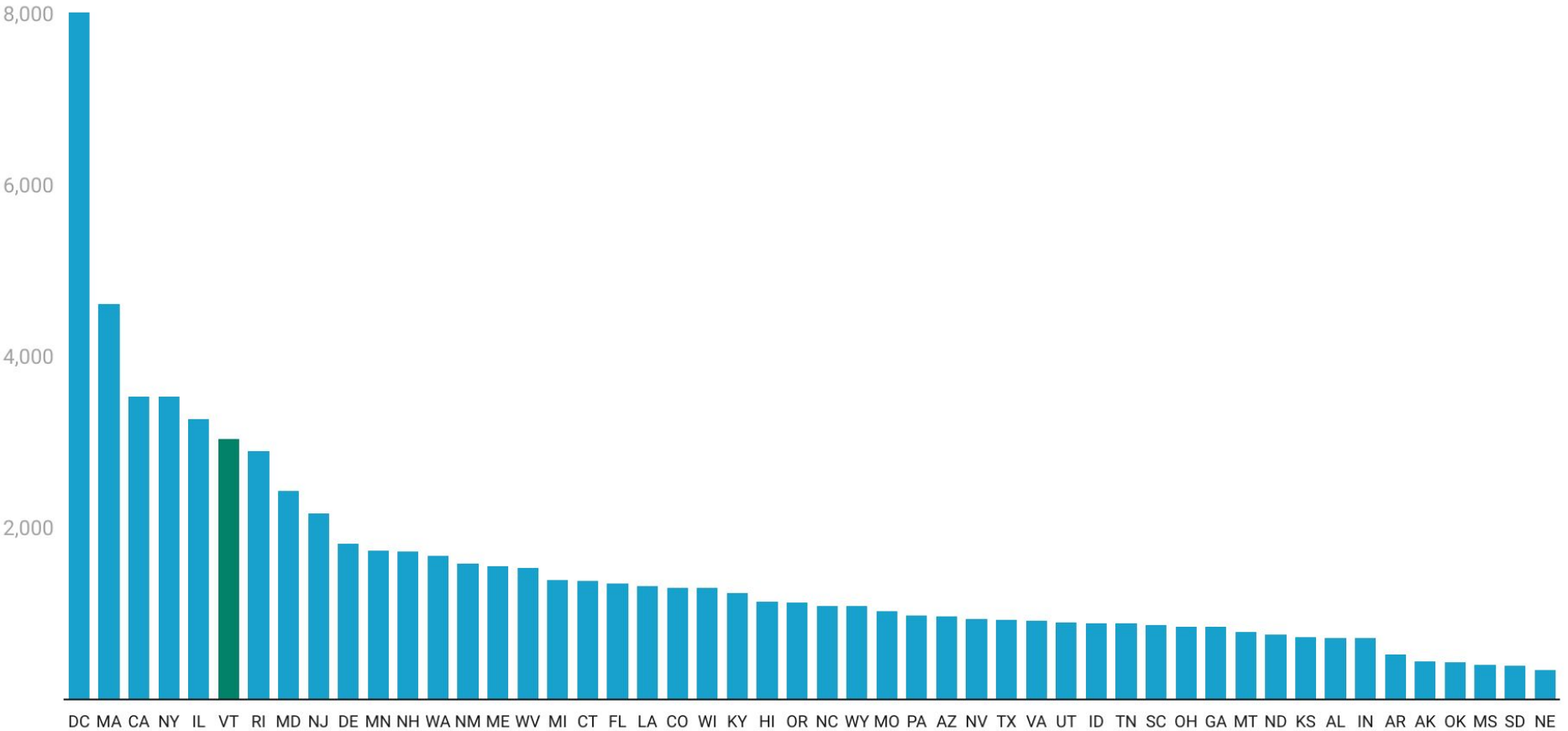
National Data

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



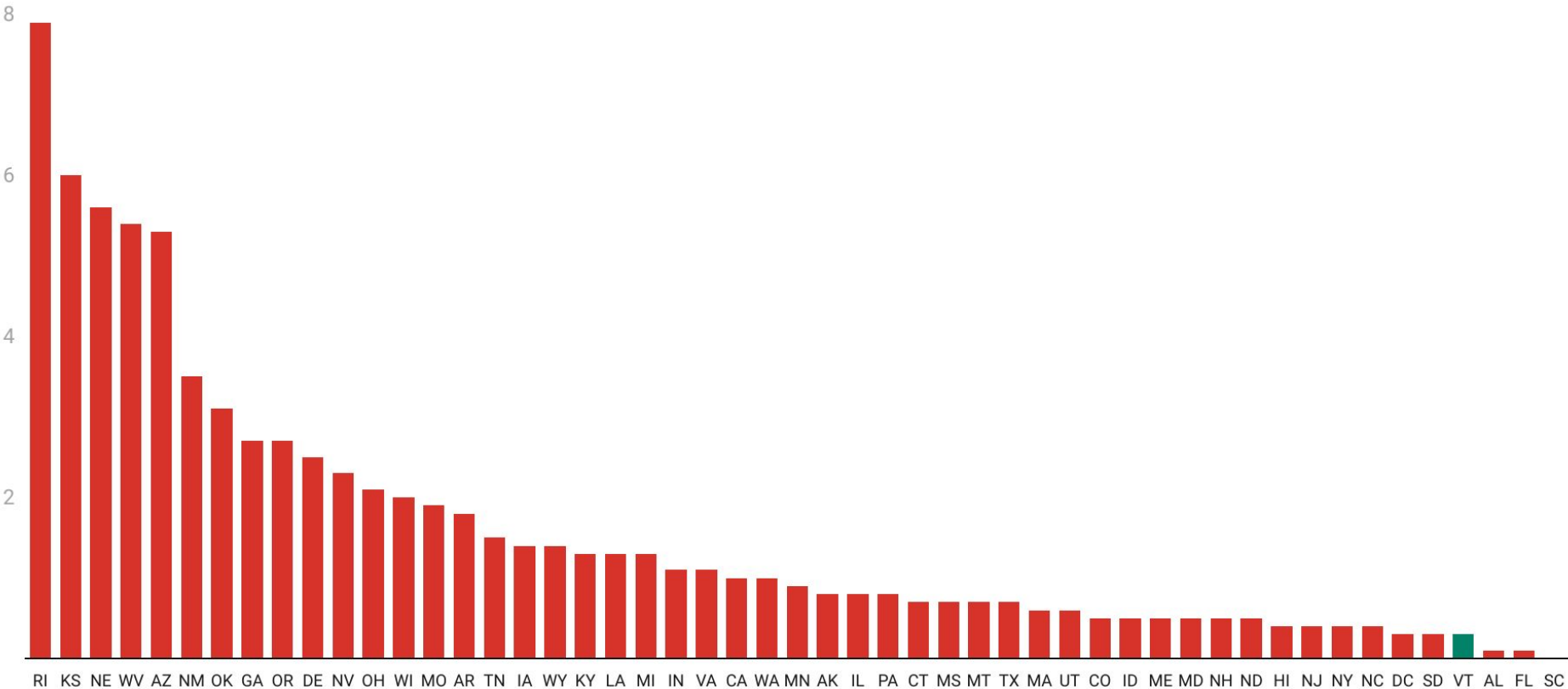
Source: CDC—April 4, 2022; created with Datawrapper

COVID-19 Testing Per 100K Last 7 Days



Source: CDC—April 4, 2022; created with Datawrapper

COVID-19 Deaths Per 100K Last 7 Days

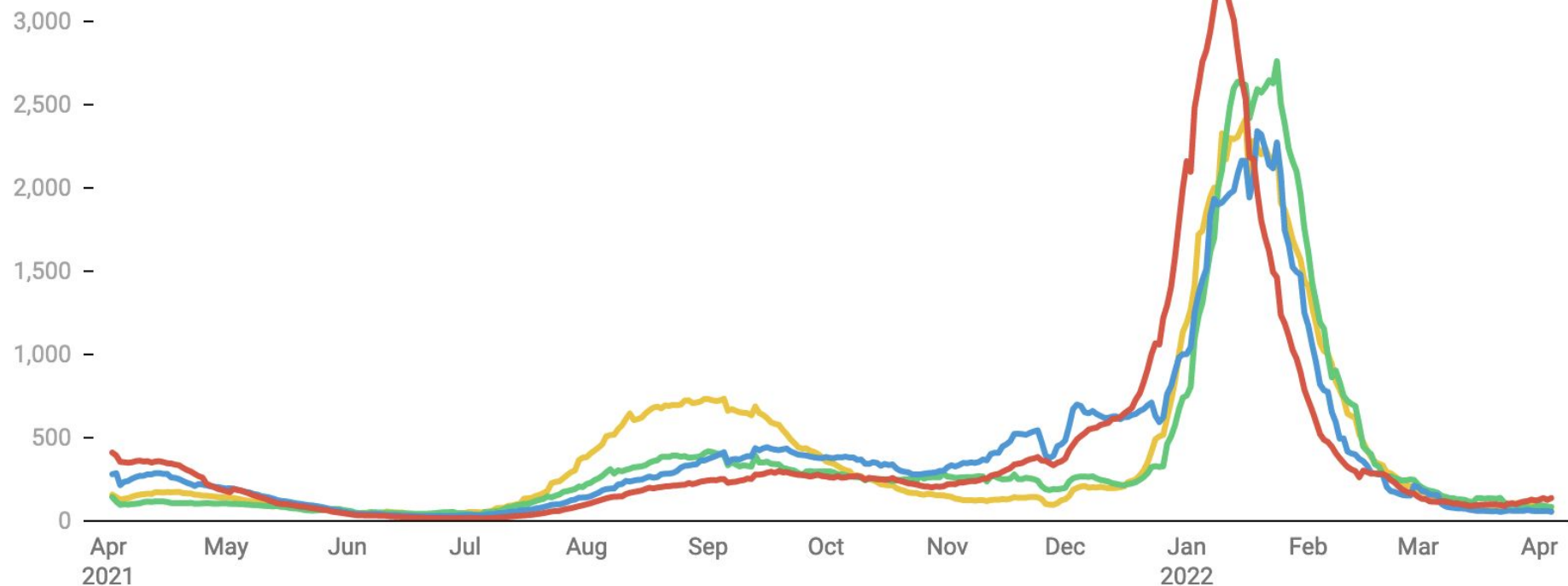


Source: CDC—April 4, 2022; created with Datawrapper; variances in state reporting may influence ranking

Daily COVID-19 Cases per Million in US Regions

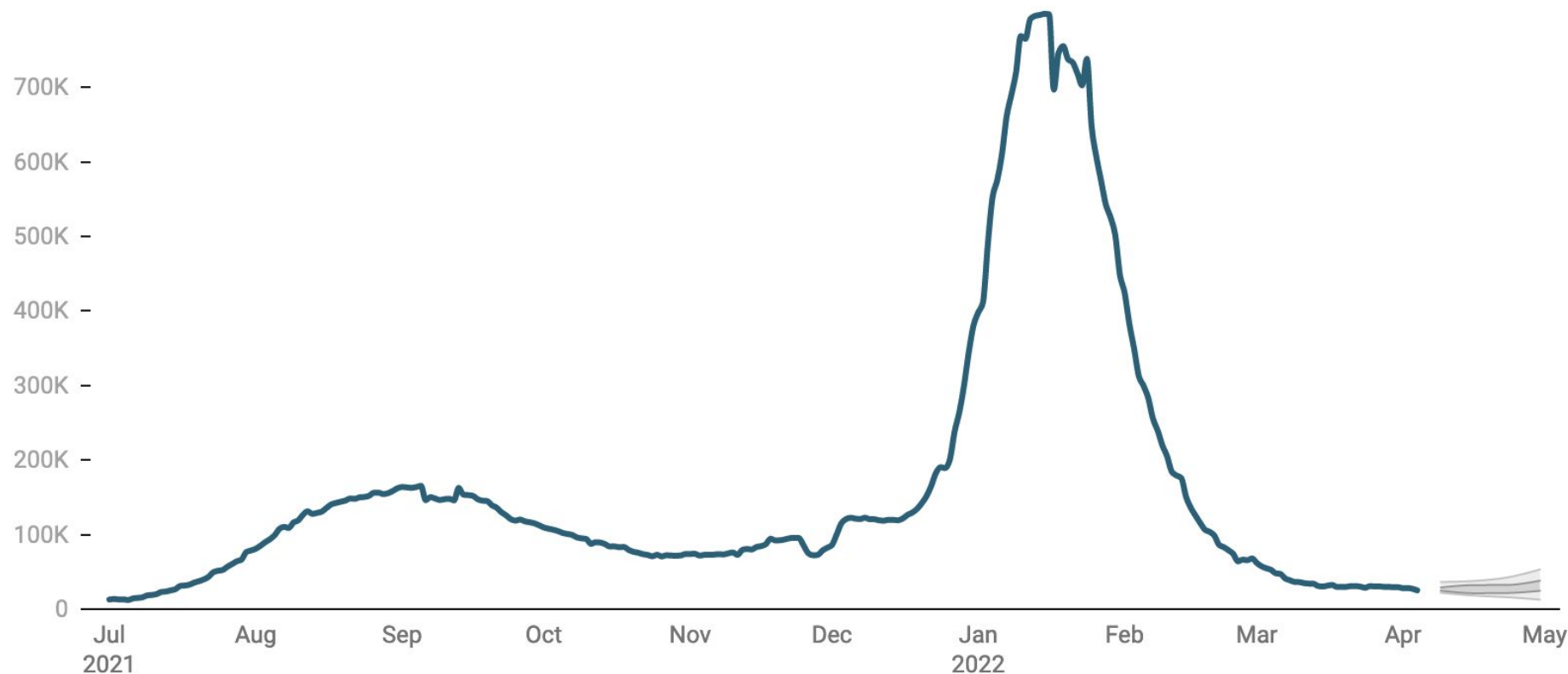
Calculated as a 7-day moving average. Definitions of North, Midwest, South, and West taken from the U.S. Census bureau.

— Northeast — Midwest — South — West



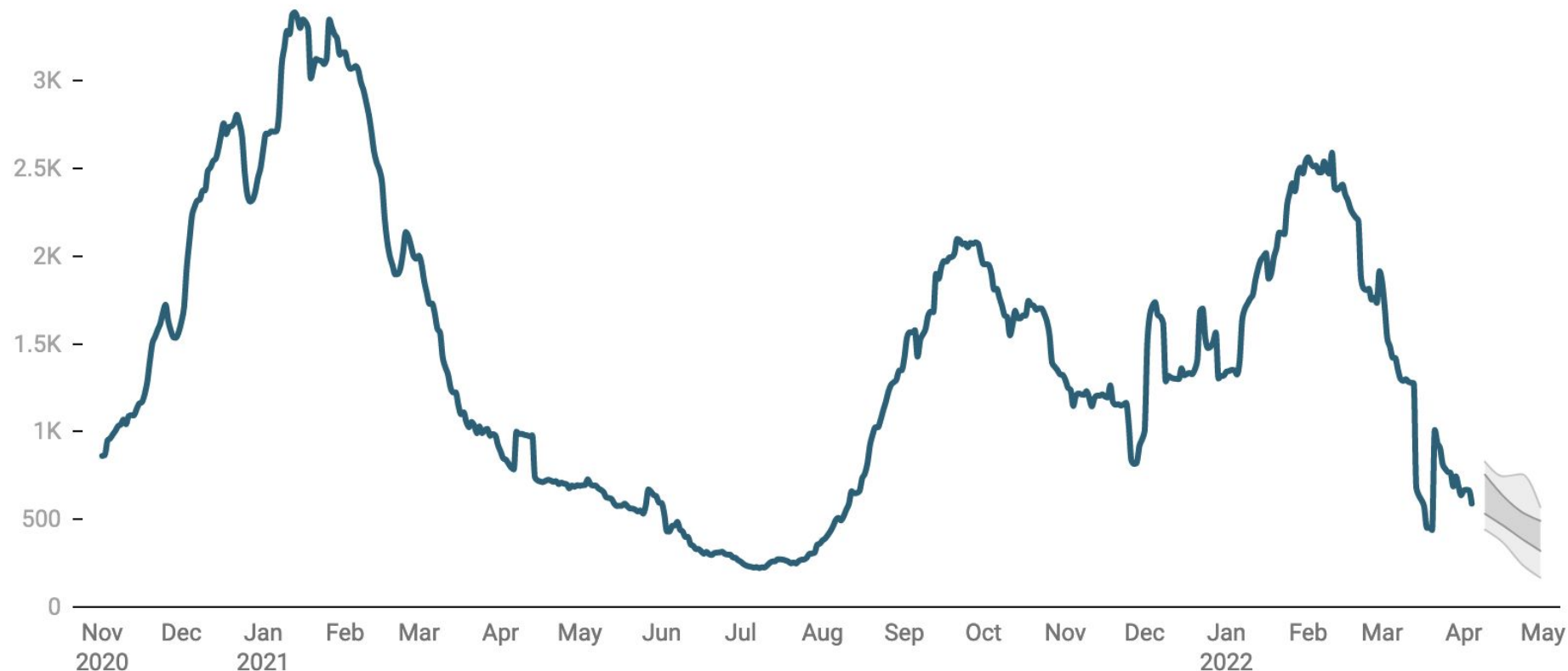
US COVID-19 Infection Confidence Intervals

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.

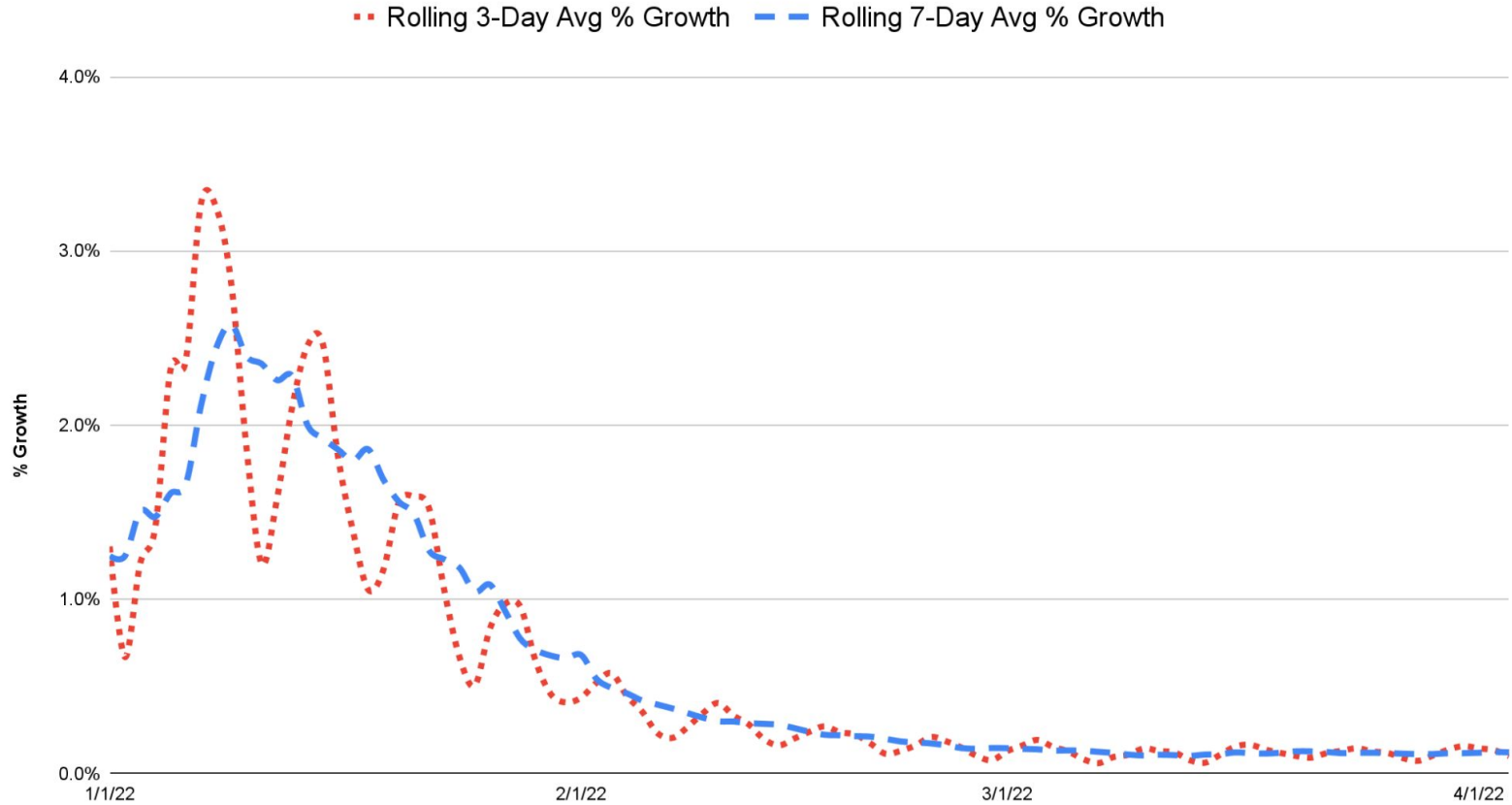


RESTART VERMONT

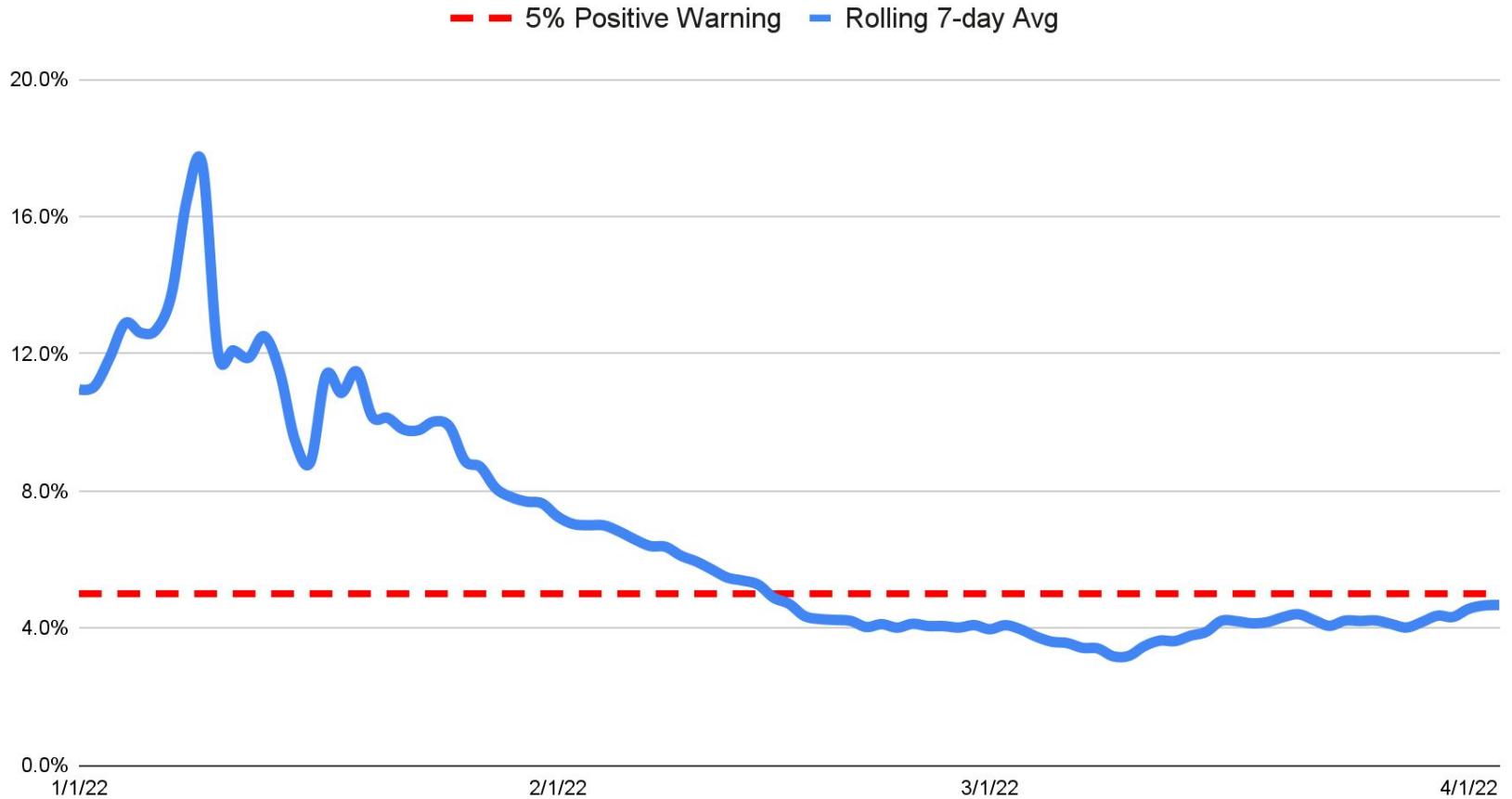
Reopening Metrics

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

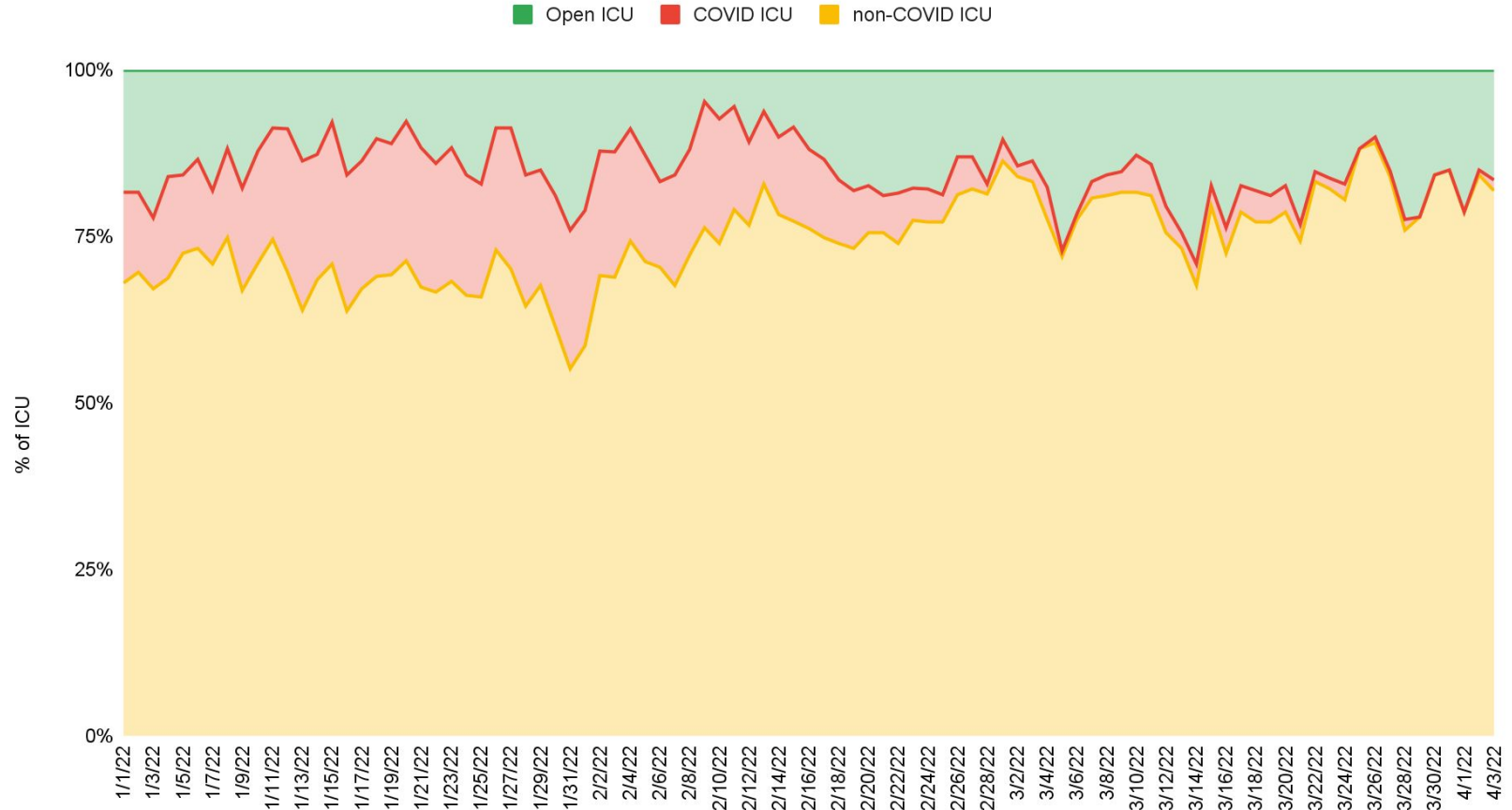


Test Positivity



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

Critical Care Beds



Vermont Testing

