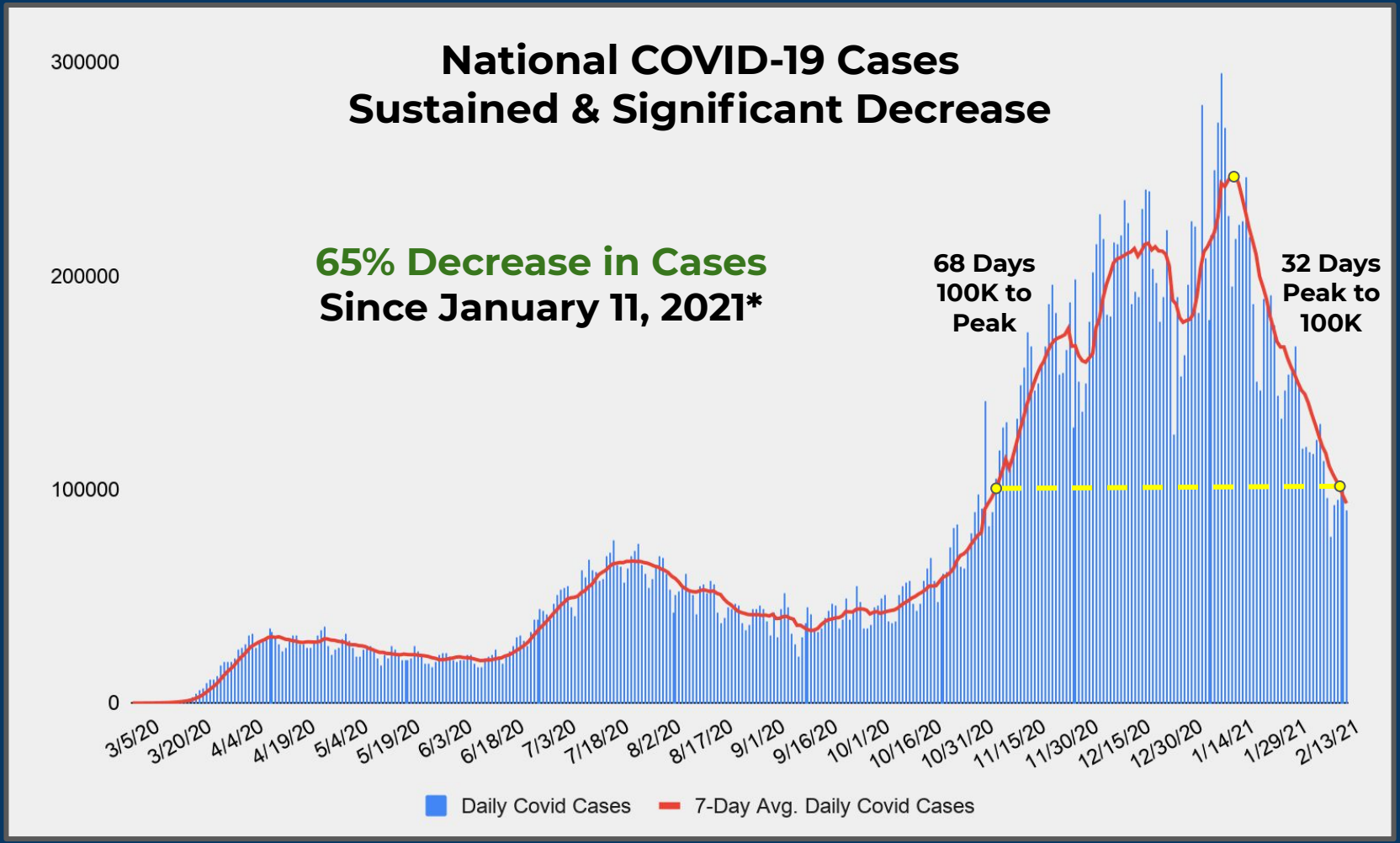
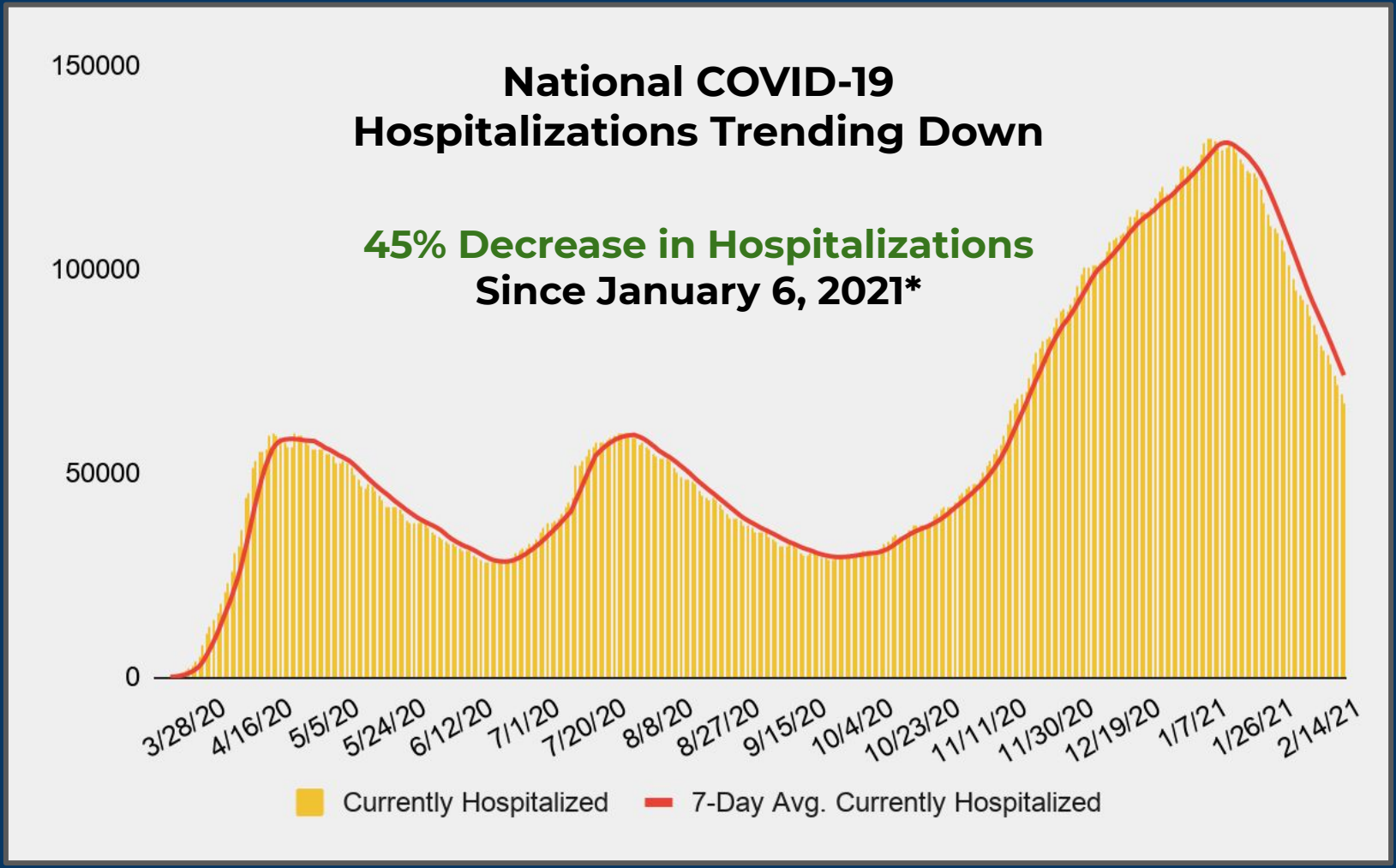
COVID-19 Modeling
February 16, 2021

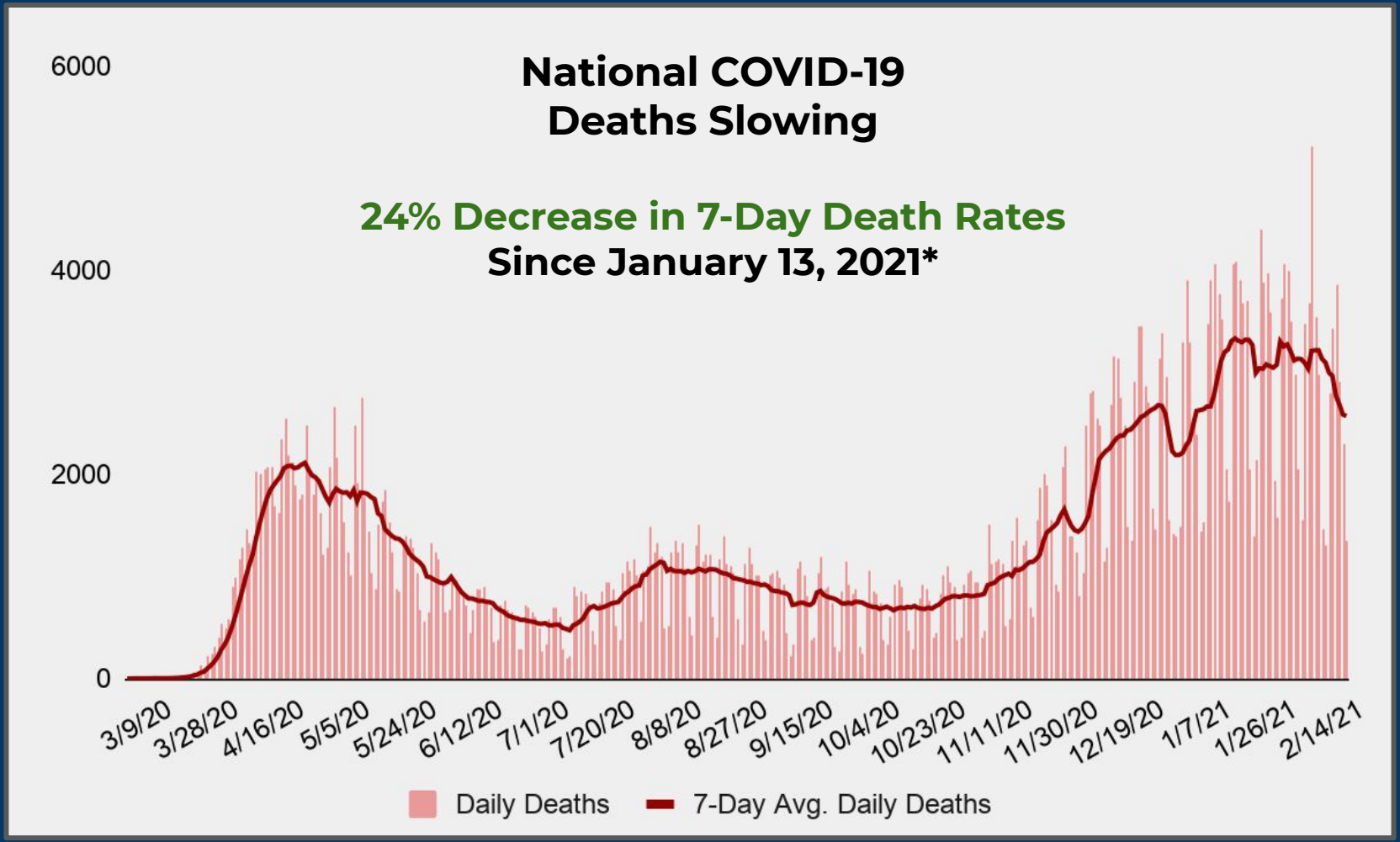
Presentation available at:
dfr.vermont.gov



Source: Covid Tracking Project — February 15, 2021; *Recent 7-Day High



Source: Covid Tracking Project — February 15, 2021; *Recent 7-Day High

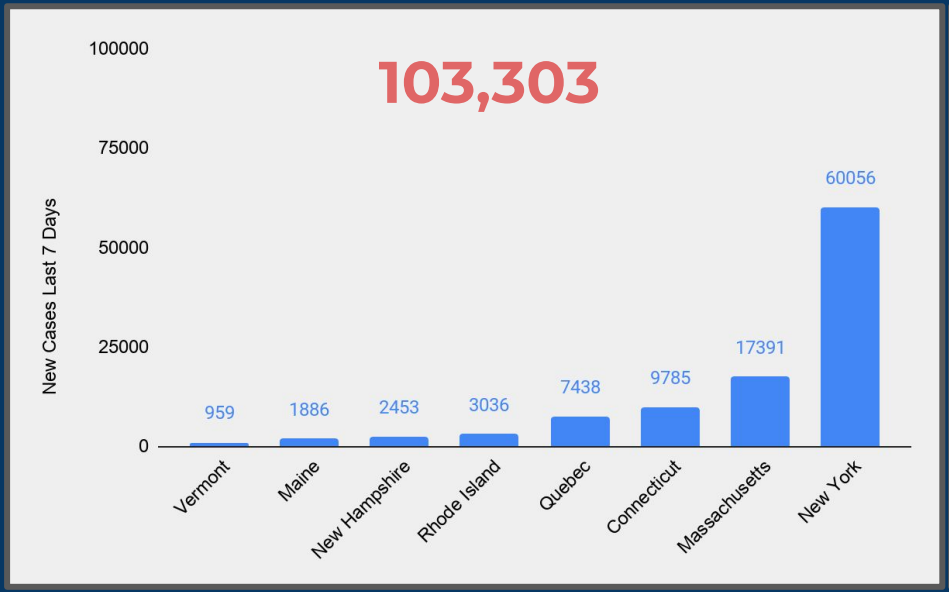


Source: Covid Tracking Project — February 15, 2021; *Recent 7-Day High

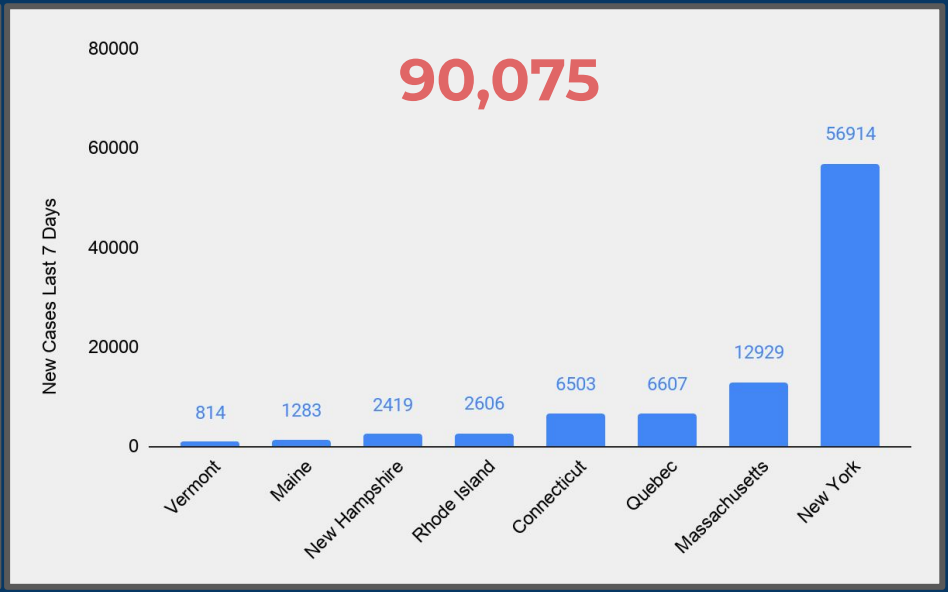
Regional Cases

14.69% Decrease in New Cases

New Cases Feb. 2nd to Feb 8th

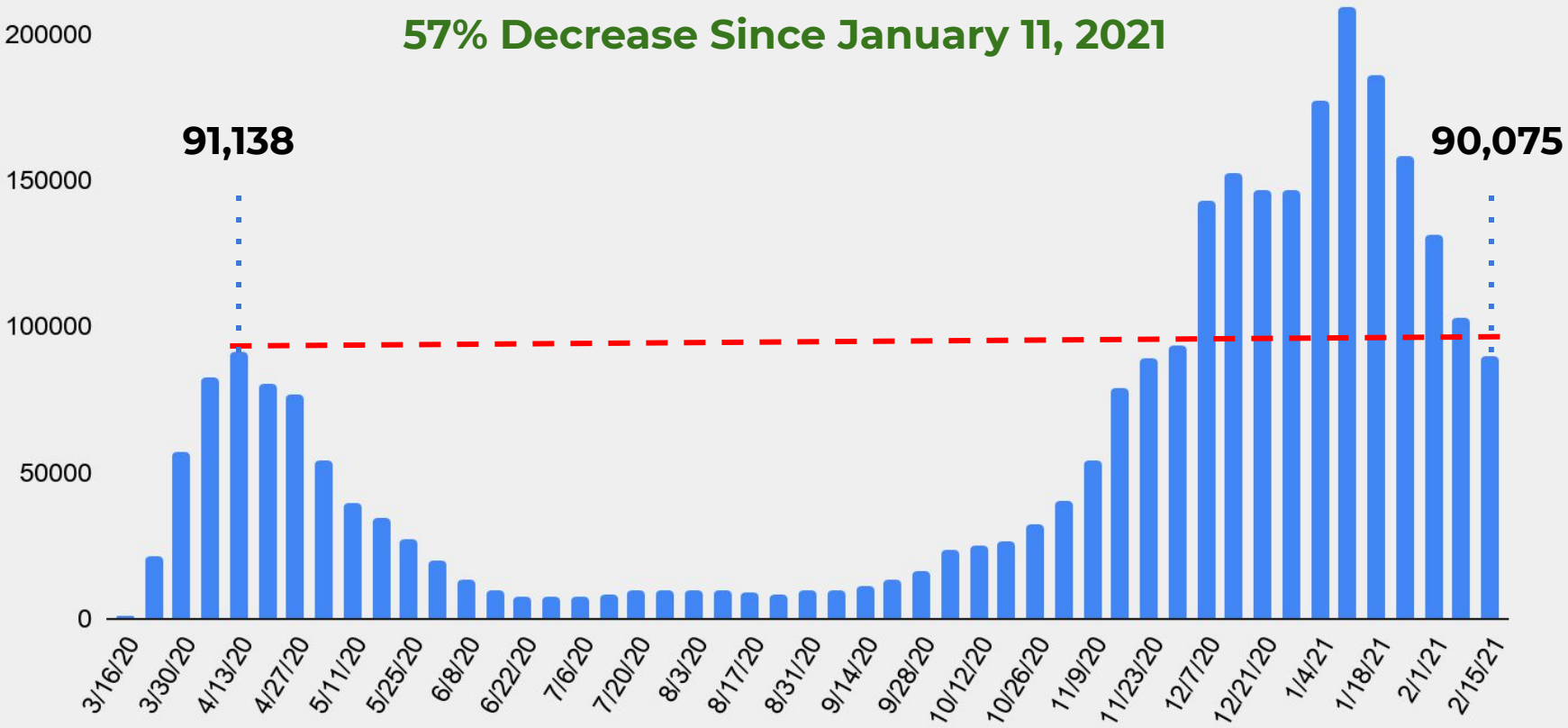


New Cases Feb. 9th to Feb 15th

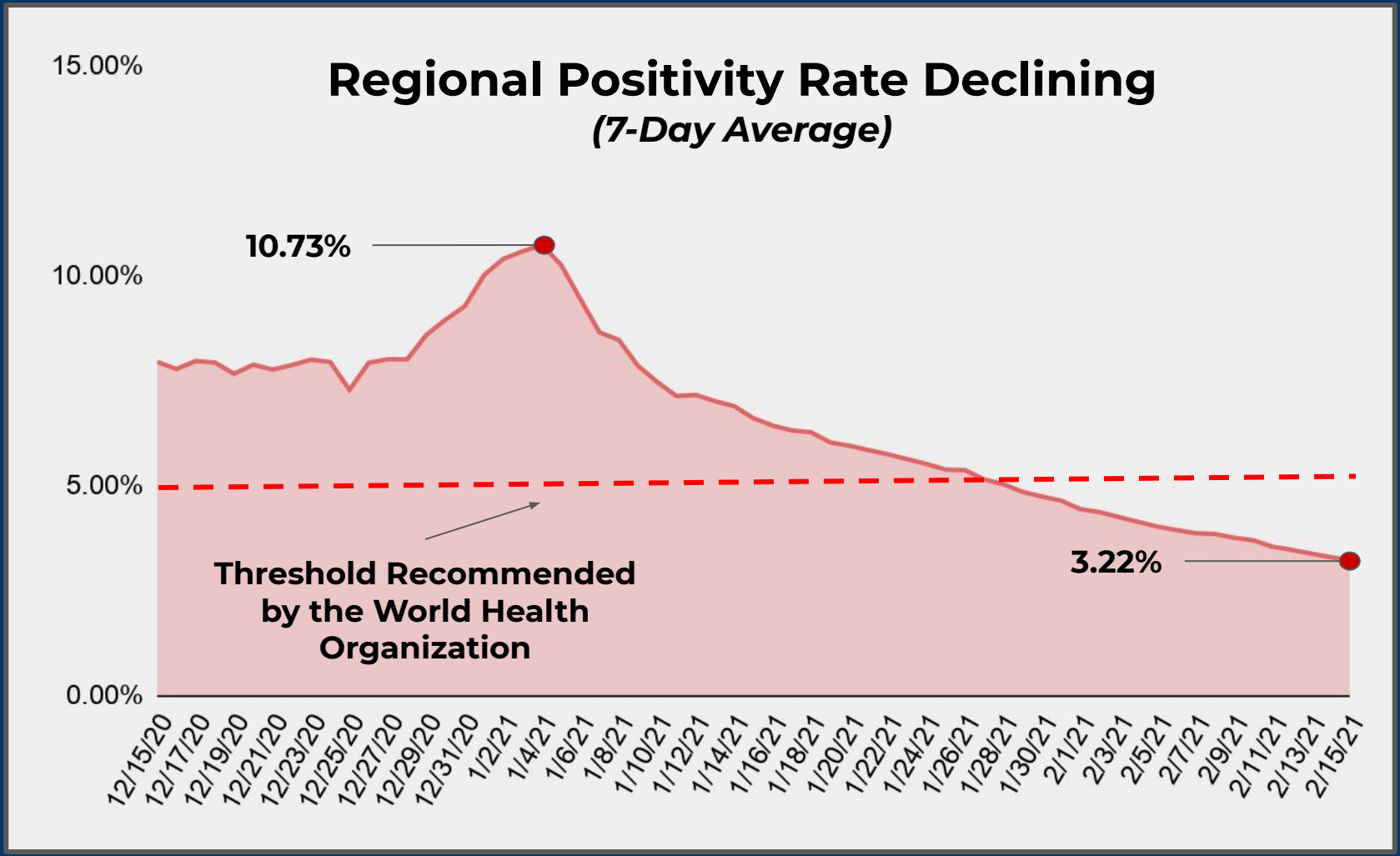


Sources: State Health Departments & CTV National News (Quebec)

Second Week of
Significant Decline in Regional Weekly Cases

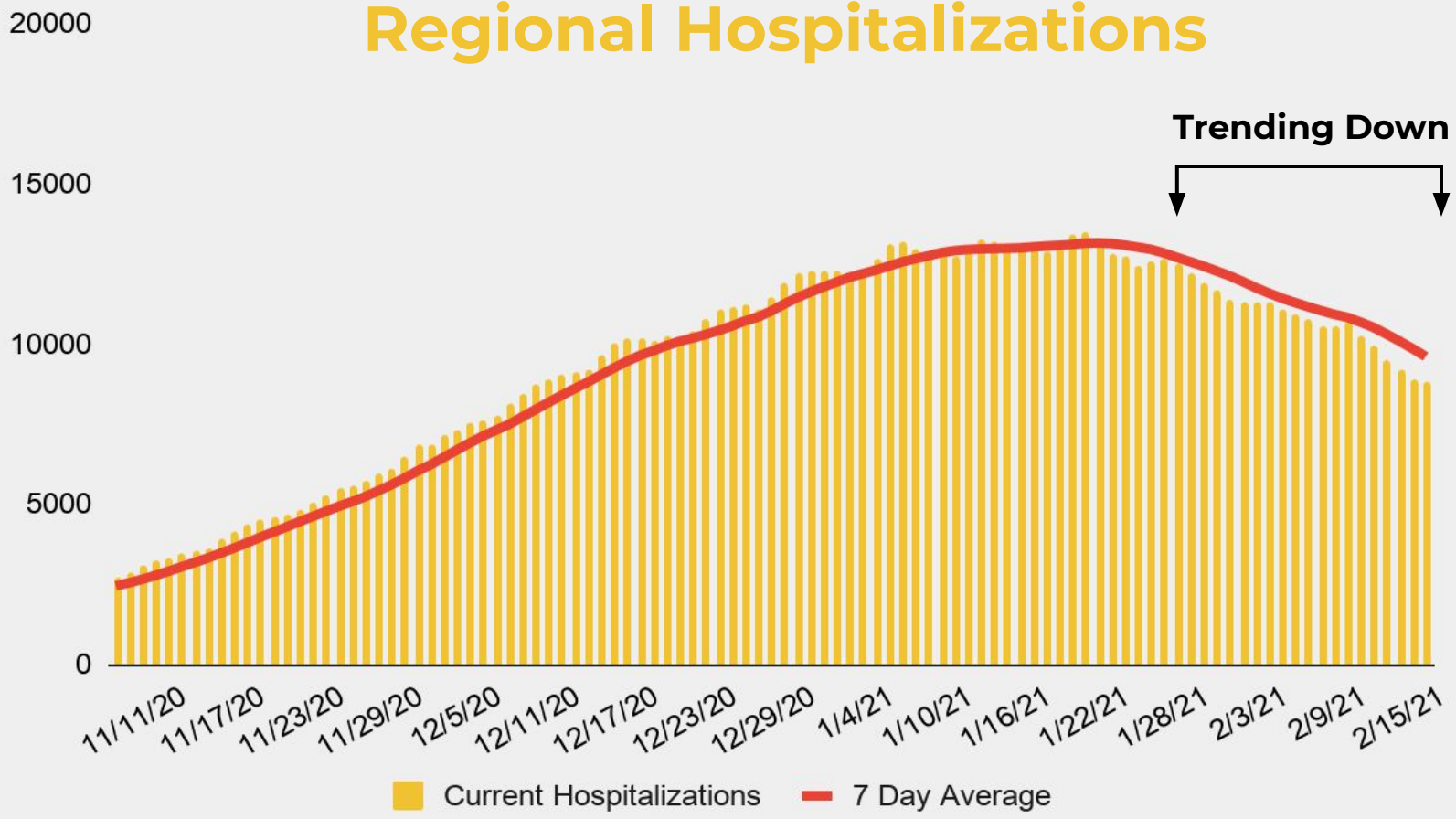


Sources: State Health Departments & CTV National News (Quebec) (includes: CT, ME, MA, NH, NY, QC, RI & VT)



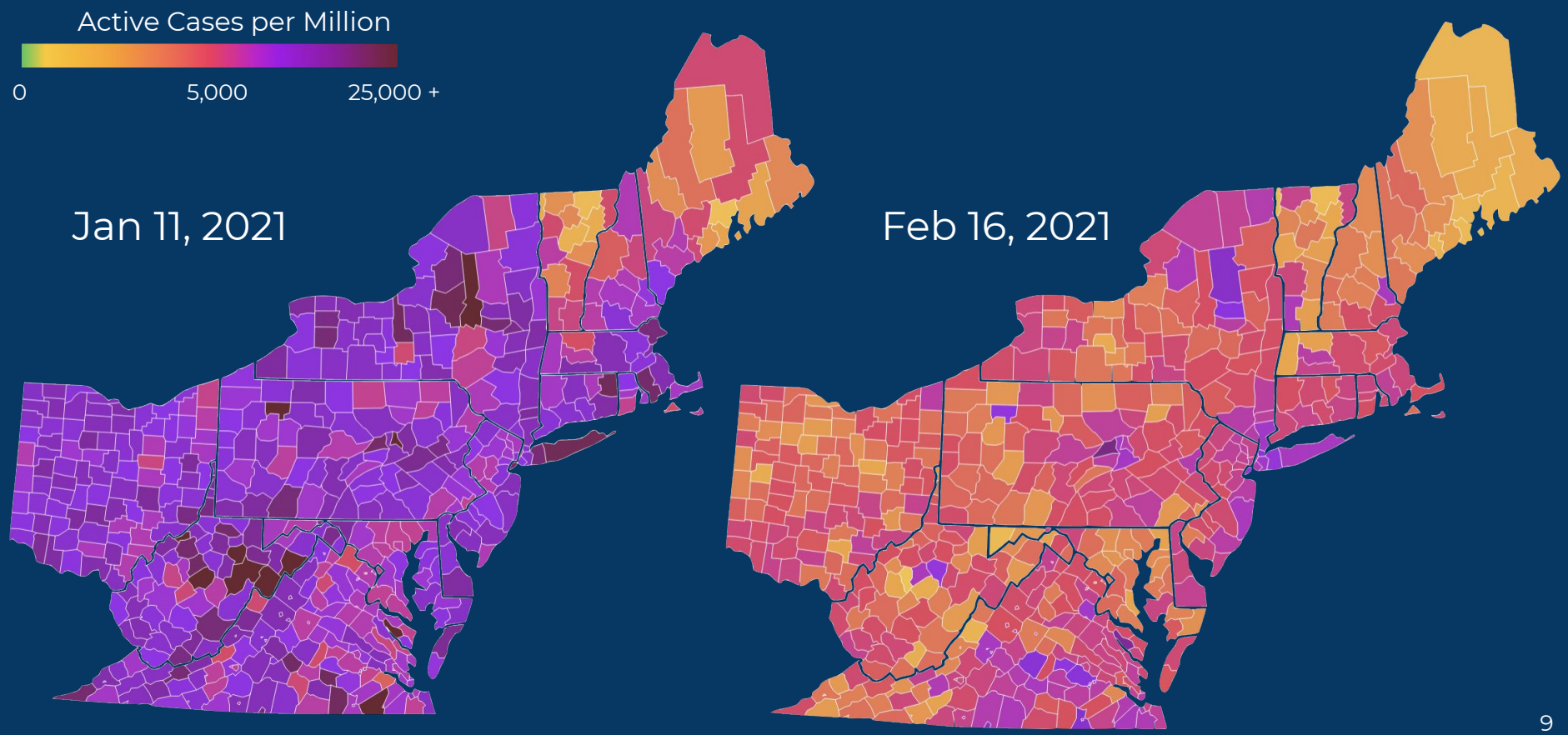
Source: Covid Tracking Project (7 Day Average in CT, ME, MA, NH, NY, RI & VT)—February 15, 2021

Regional Hospitalizations

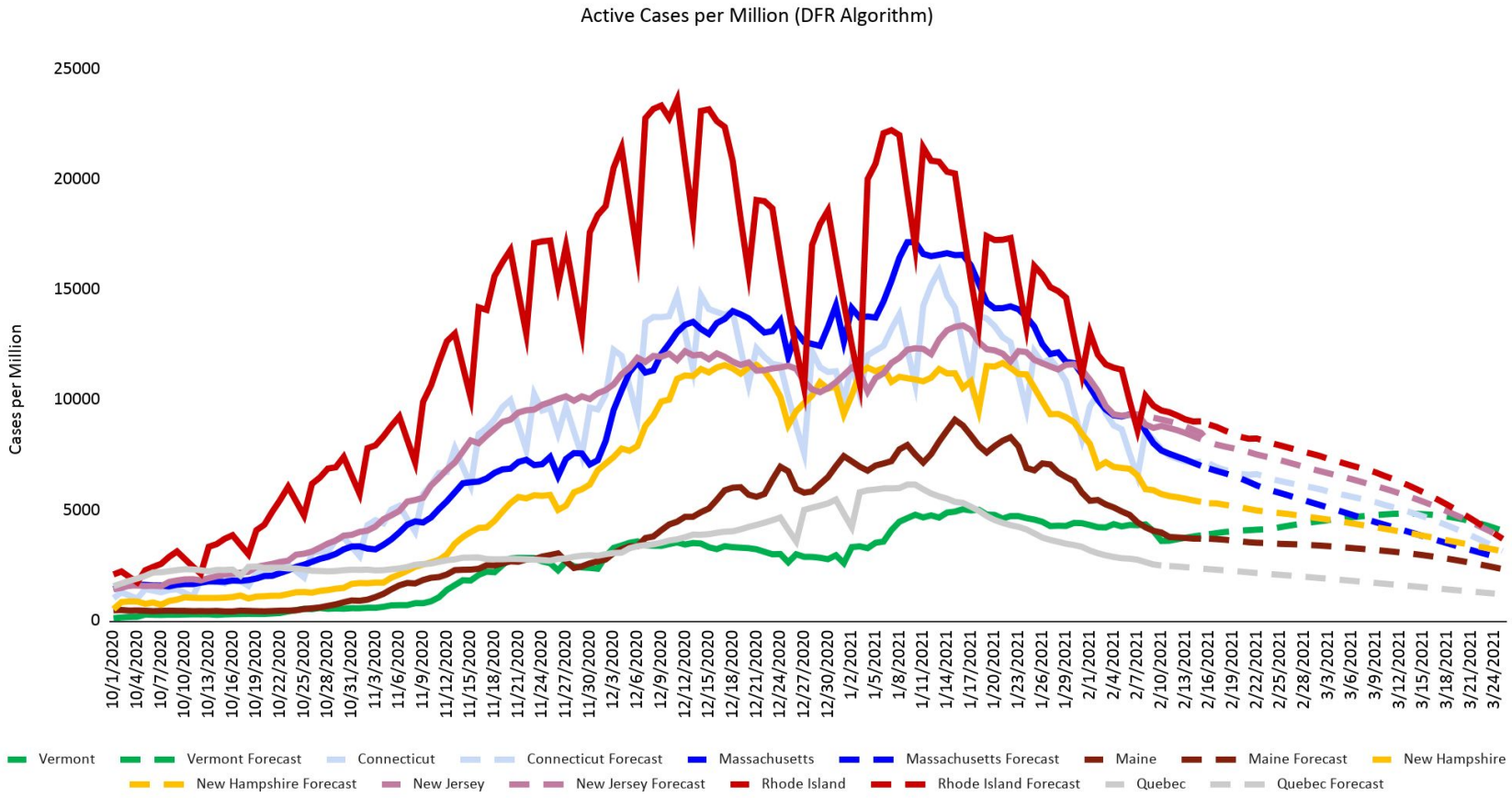


Source: Covid Tracking Project (7 Day Average in CT, ME, MA, NH, NY, RI & VT)—February 15, 2021

Regional Heat Map

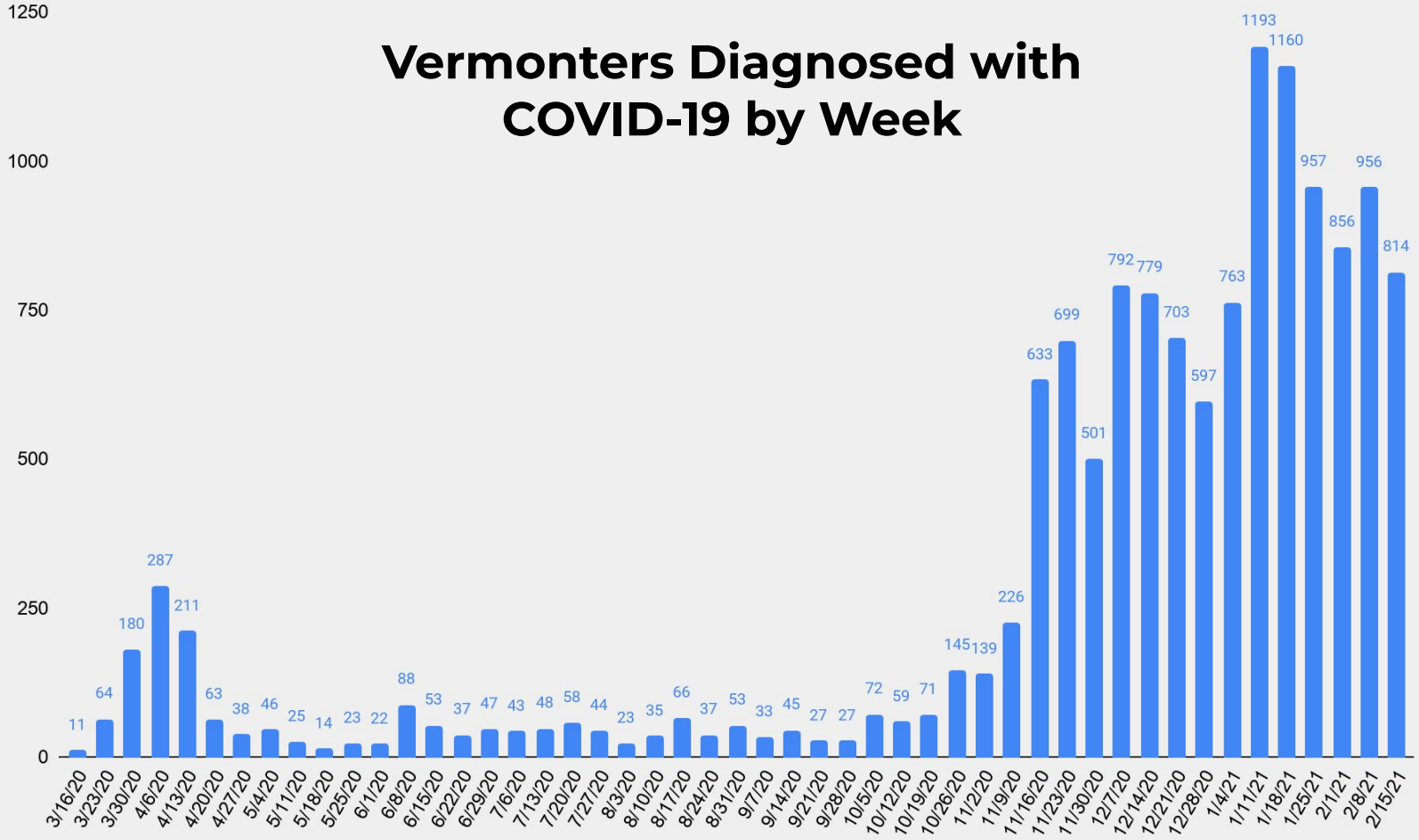


Regional Active Case Forecast

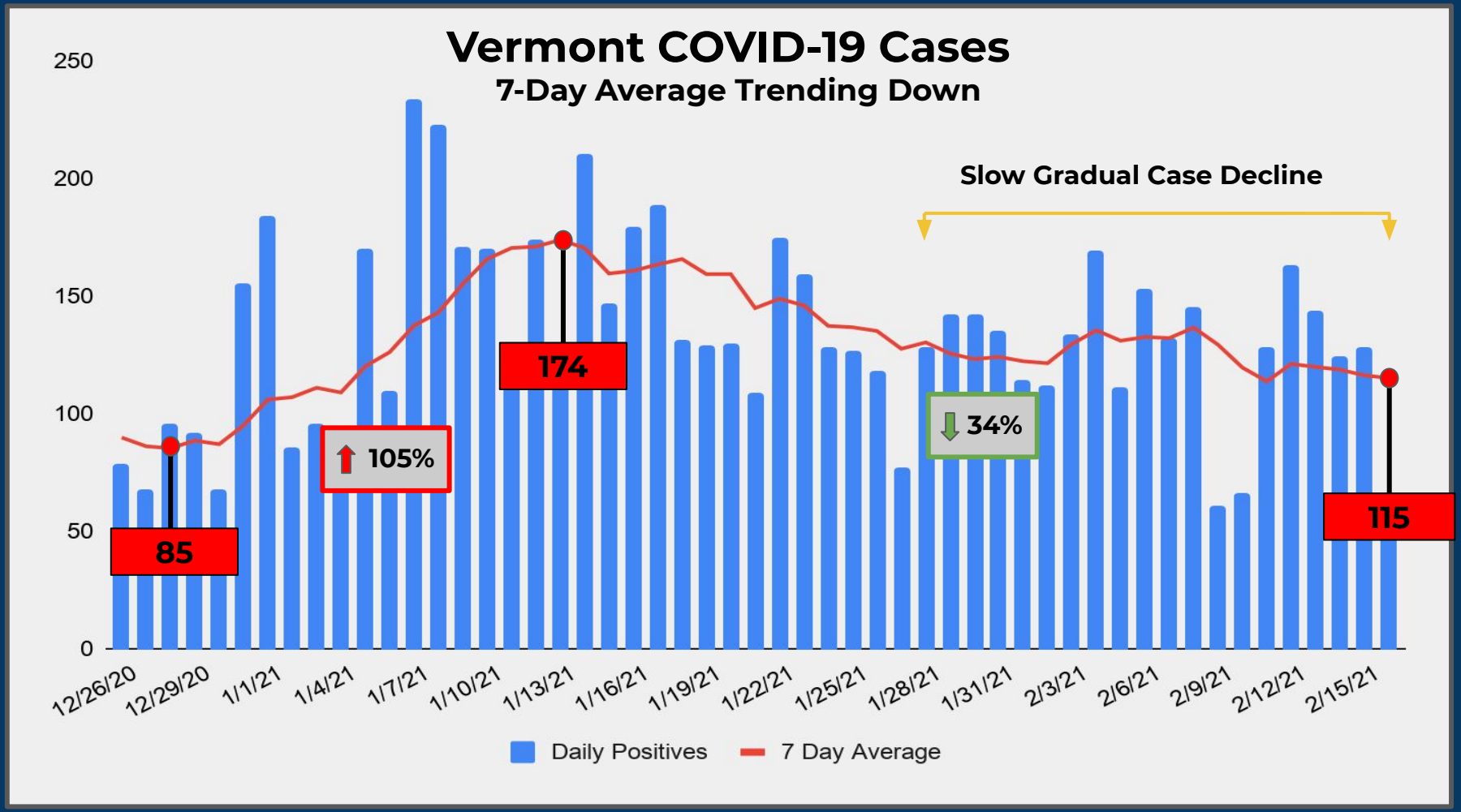


Source: Johns Hopkins University Data & Oliver Wyman Forecast Model—February 15, 2020

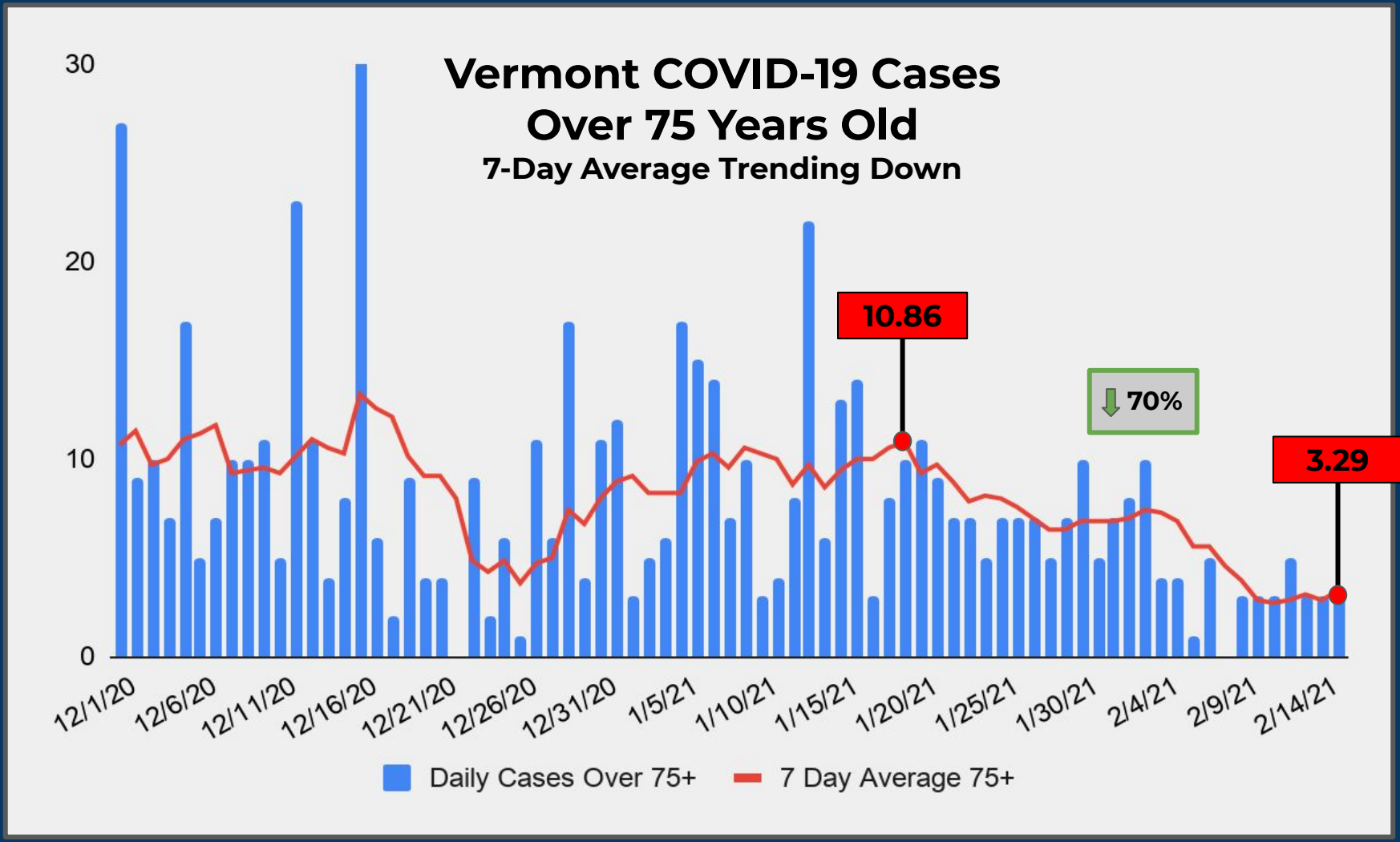
Vermonters Diagnosed with COVID-19 by Week

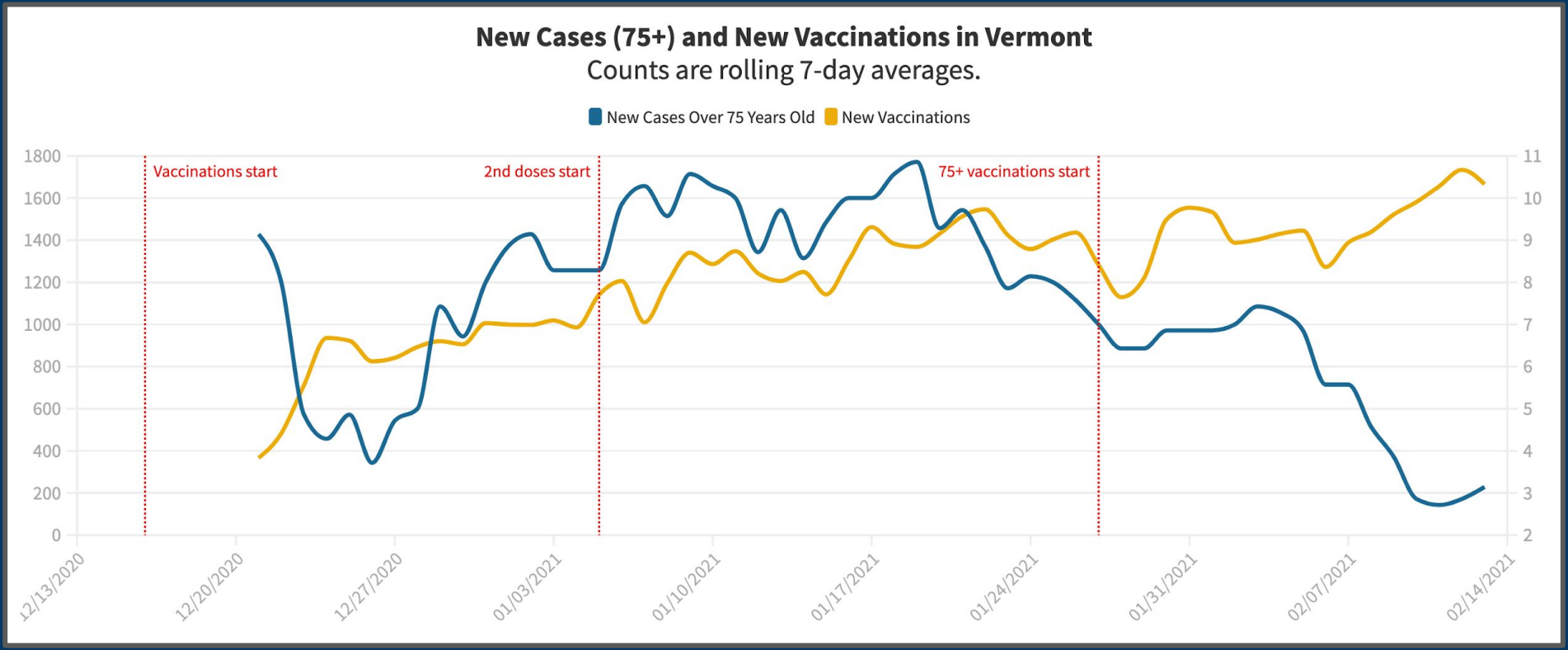


Source: Vermont Department of Health (week calculated as Tuesday to Monday)



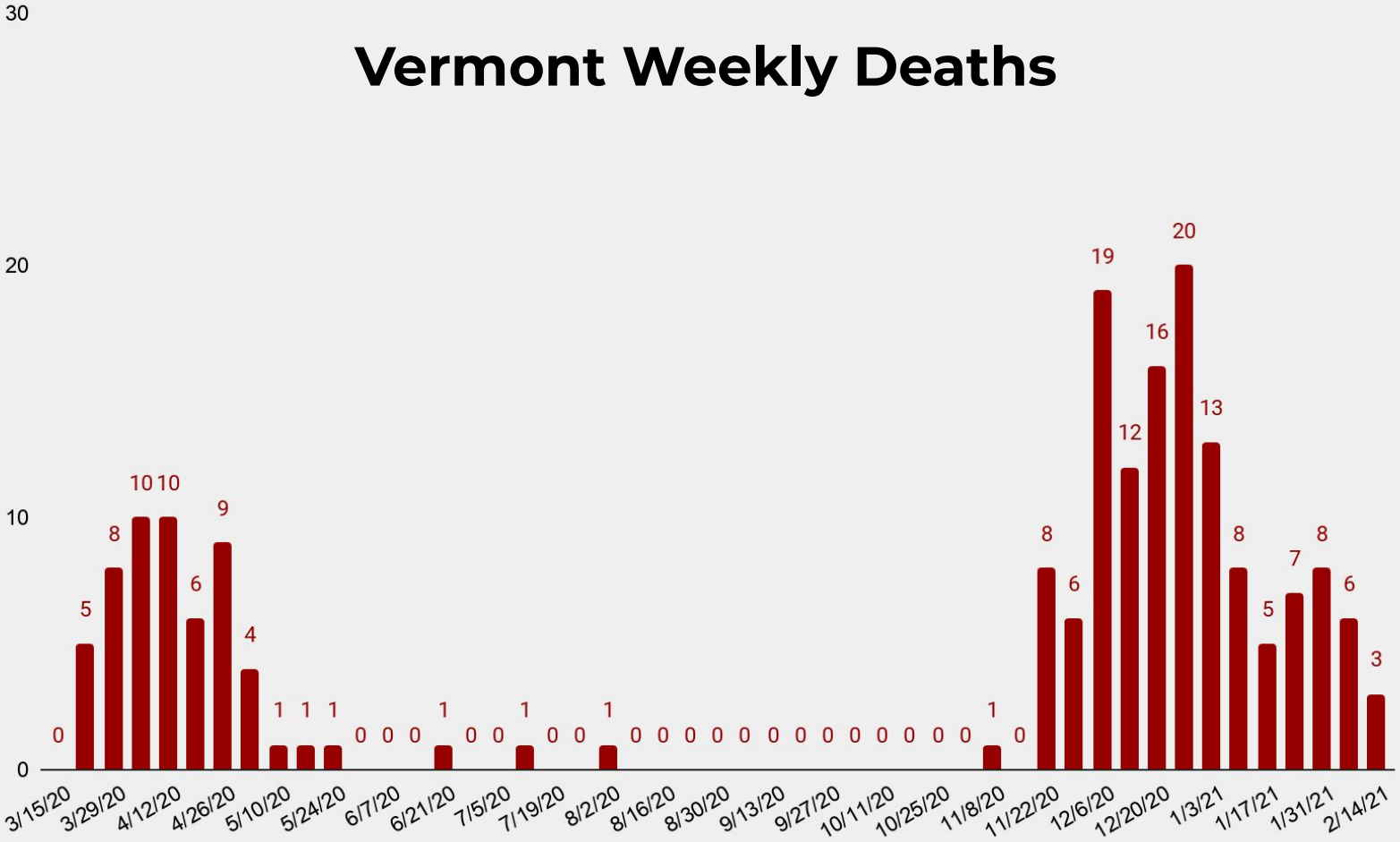
Source: Vermont Department of Health— February 14, 2021


Vermont COVID-19 Cases
Over 75 Years Old
7-Day Average Trending Down
30
20
10
0
10.86
70%
3.29
12/1/20
12/6/20
12/11/20
12/16/20
12/21/20
12/26/20
12/31/20
1/5/21
1/10/21
1/15/21
1/20/21
1/25/21
1/30/21
2/4/21
2/9/21
2/14/21
Daily Cases Over 75+
7 Day Average 75+



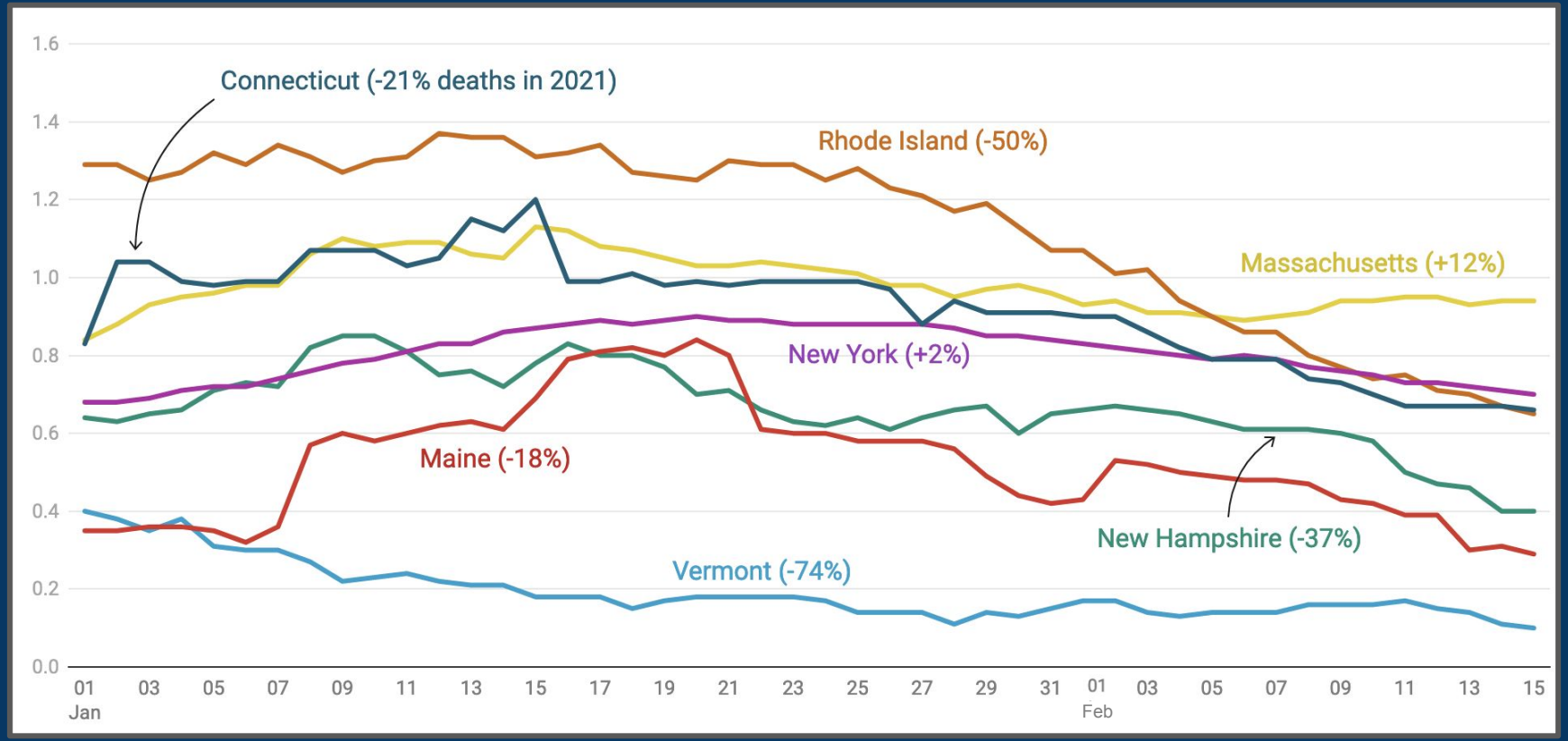
Source: VDH—February 15, 2020

Vermont Weekly Deaths



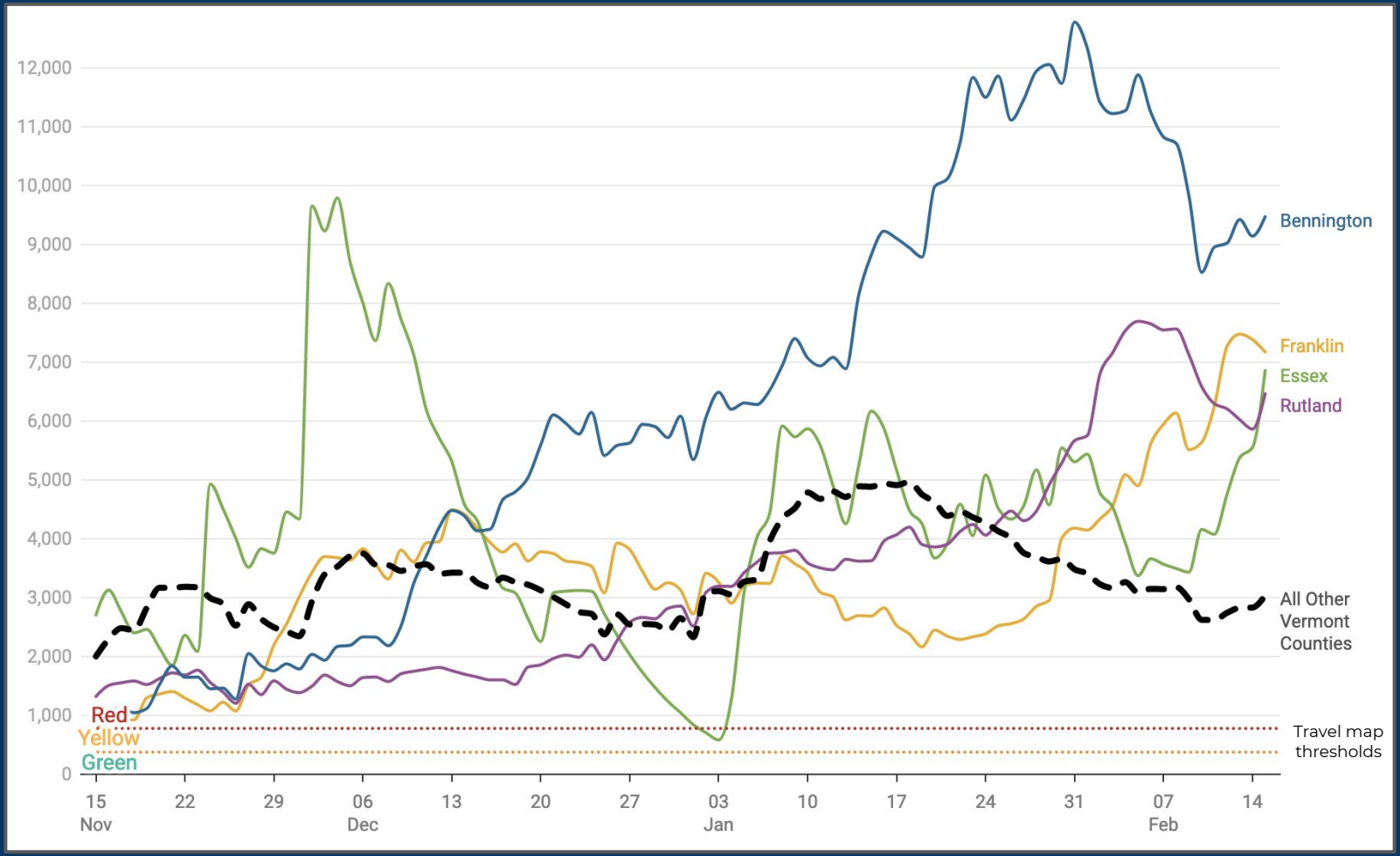
Source: Vermont Department of Health—February 14, 2021

January 1st to February 15th
New Daily Deaths Per 100,000
(14-Day Average)



Source: Covid Tracking Project and Vermont Department of Health—February 16th, 2021

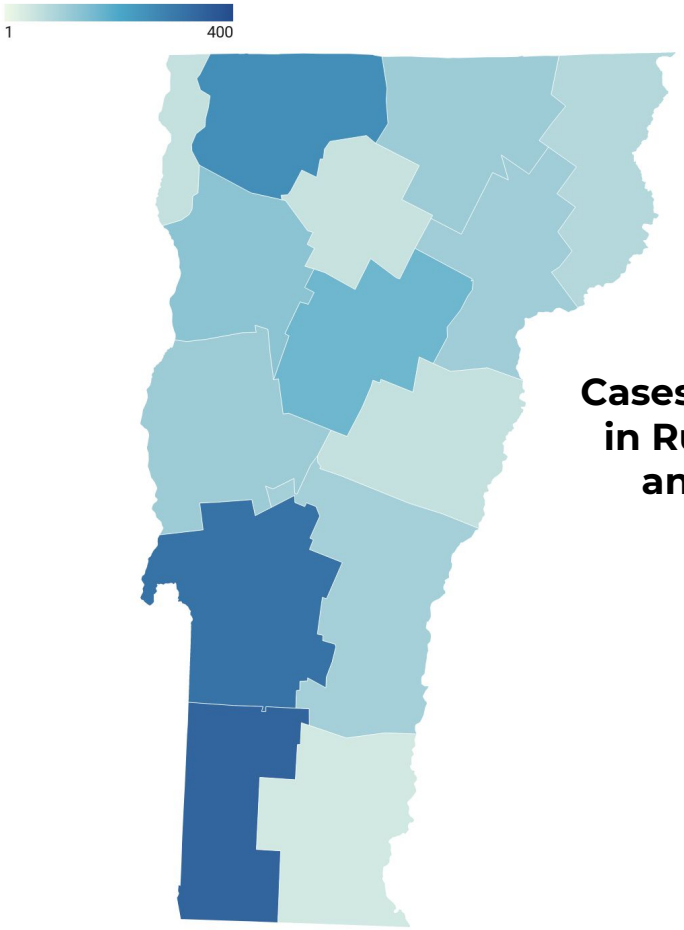
Active Cases per Million in Vermont Counties



Source: Johns Hopkins University—February 16th, 2021

Vermont Weekly Cases by County (per 100,000)

Results Reported February 2 to 8

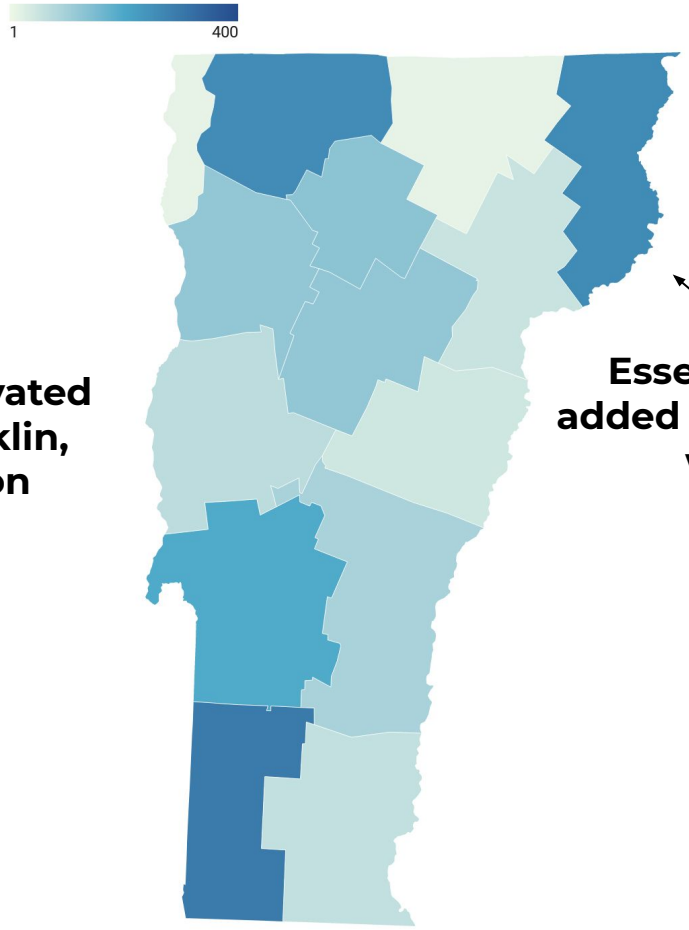


Cases remain elevated in Rutland, Franklin, and Bennington Counties

Map: Vermont DFR COVID Modeling Team • Source: Vermont Dept. of Health • Created with Datawrapper

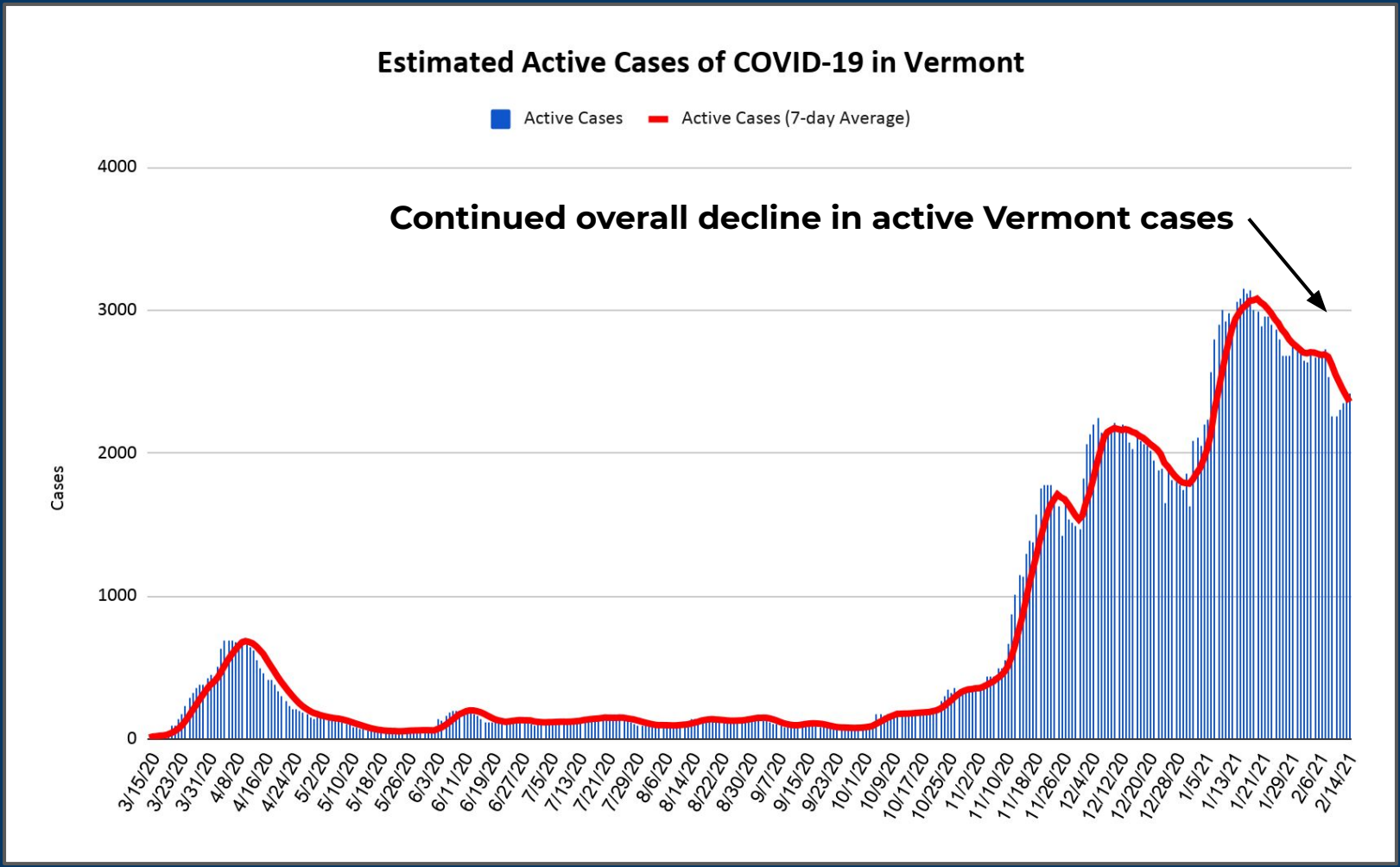
Vermont Weekly Cases by County (per 100,000)

Results Reported February 8 to 15



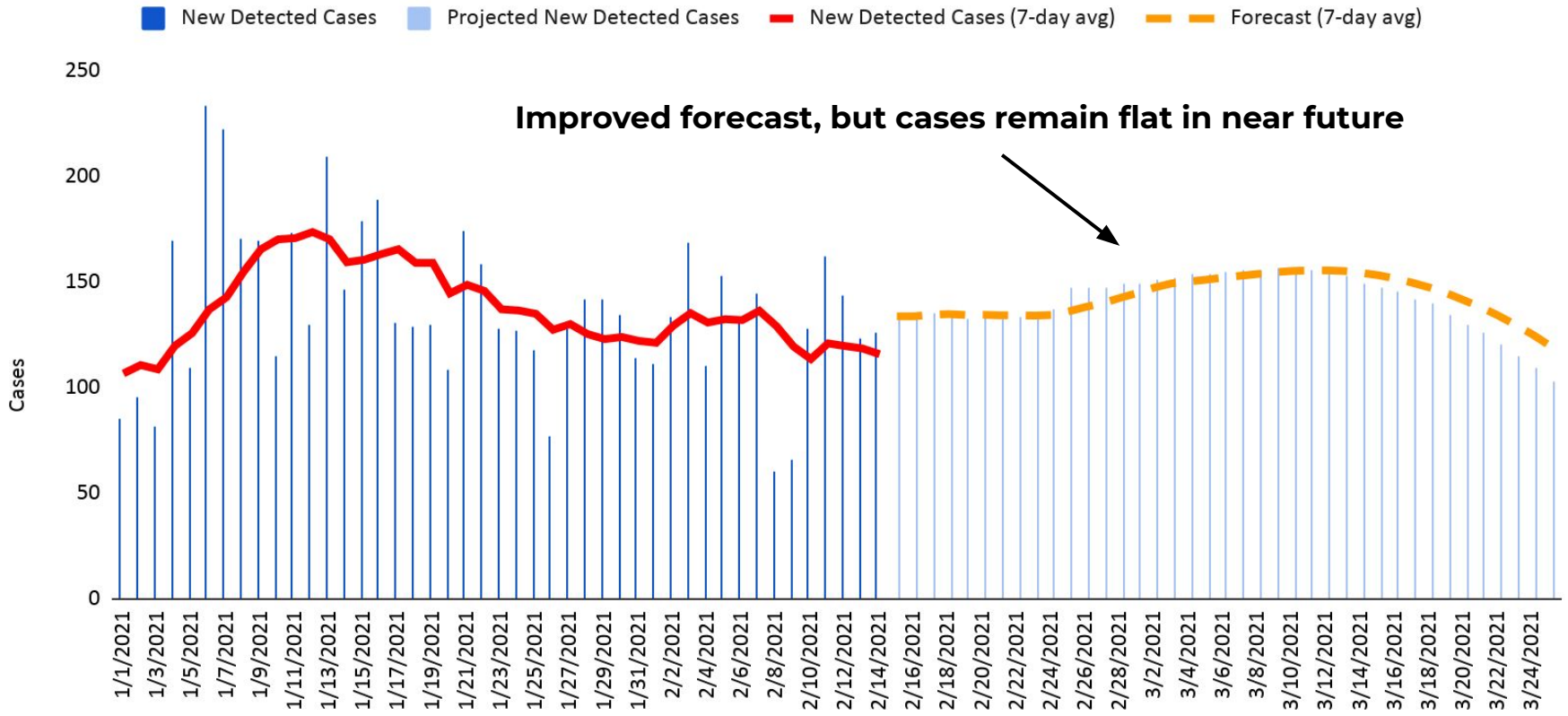
Essex County added 11 cases last week

Map: Vermont DFR COVID Modeling Team • Source: Vermont Dept. of Health • Created with Datawrapper

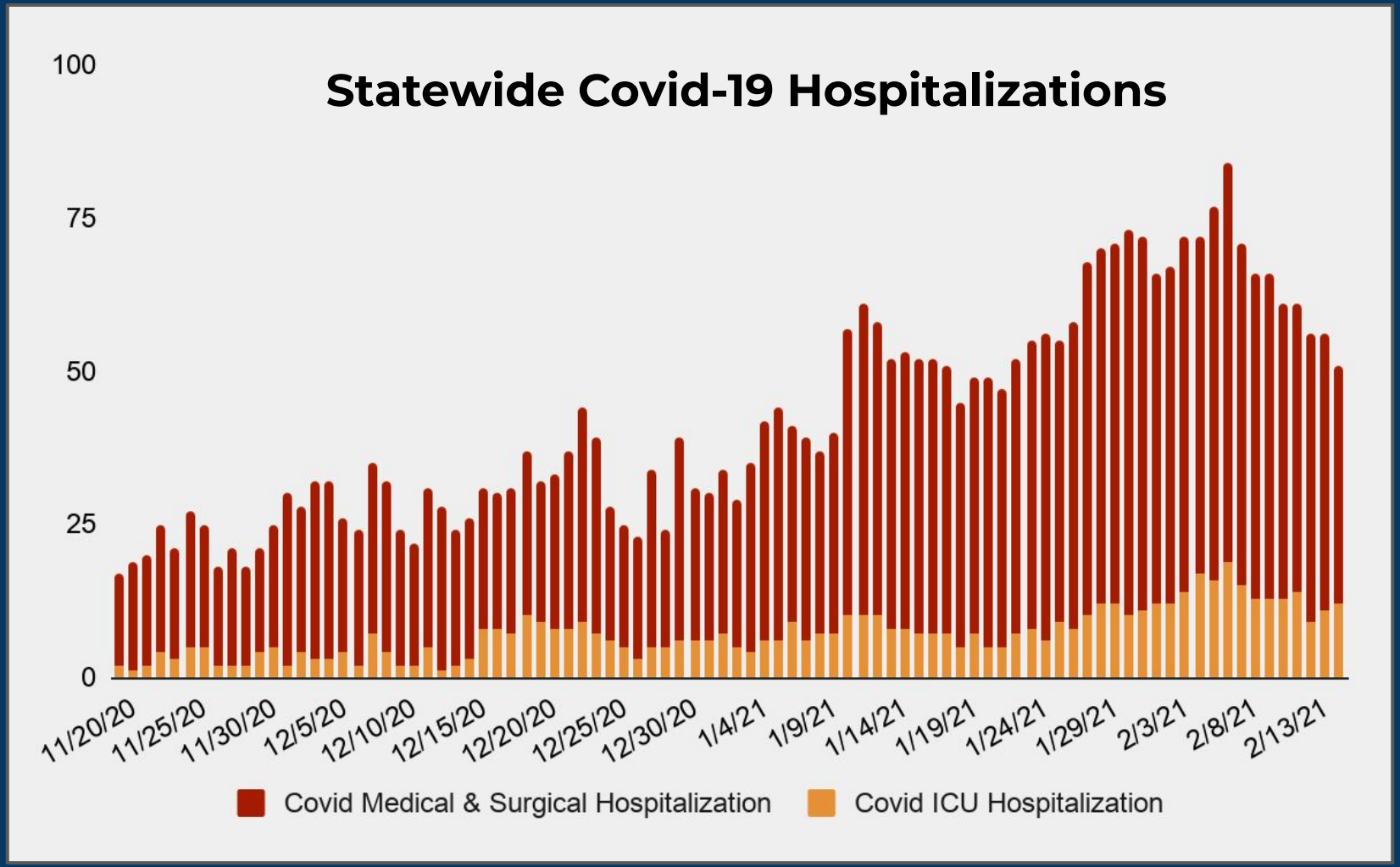


Source: Johns Hopkins University Data & Oliver Wyman Forecast Model—February 15, 2020

Vermont Forecast



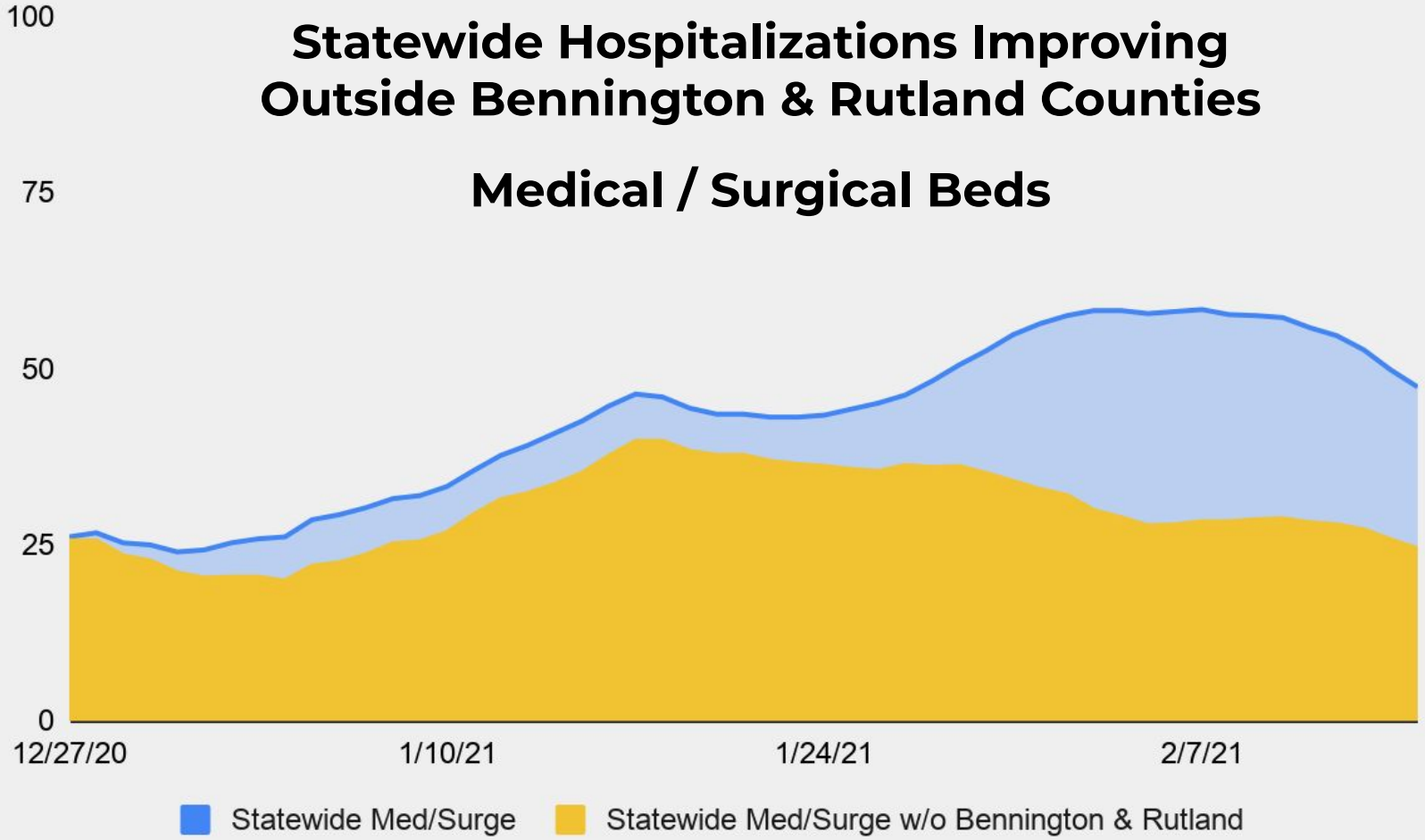
Source: Johns Hopkins University Data & Oliver Wyman Forecast Model—February 16, 2020



Source: Vermont Department of Health— February 16, 2021

Statewide Hospitalizations Improving Outside Bennington & Rutland Counties

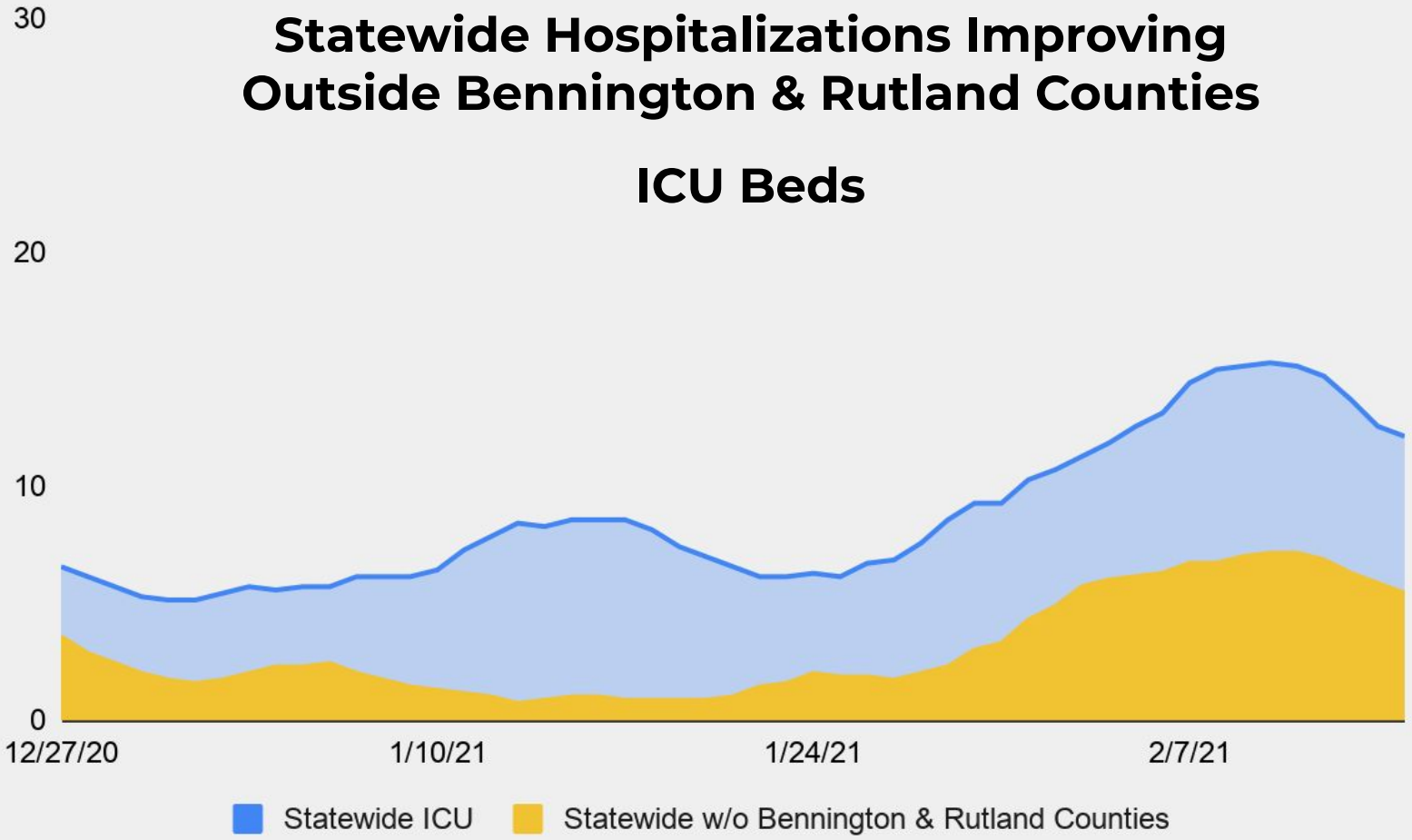
Medical / Surgical Beds



Source: VDH—February 16, 2020

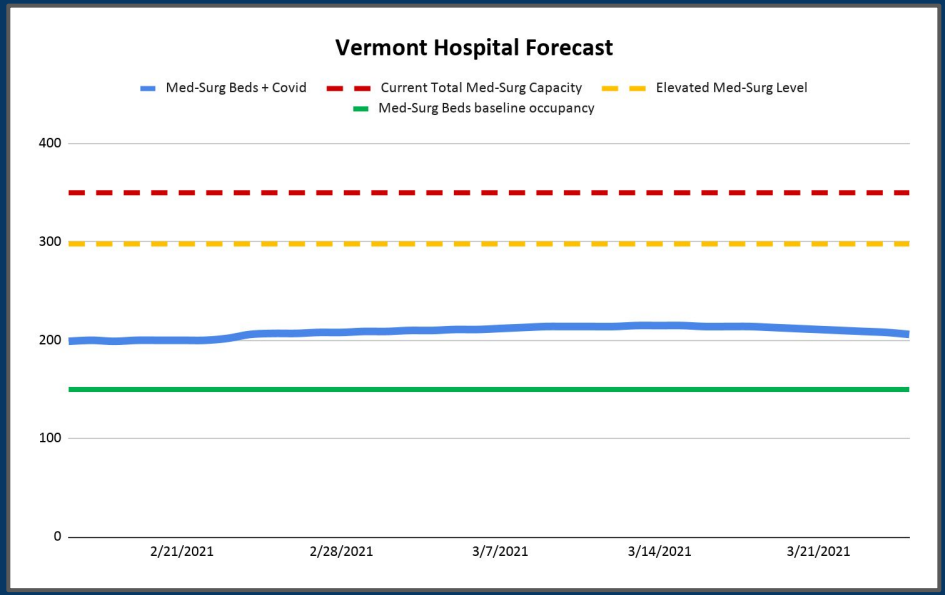
Statewide Hospitalizations Improving Outside Bennington & Rutland Counties

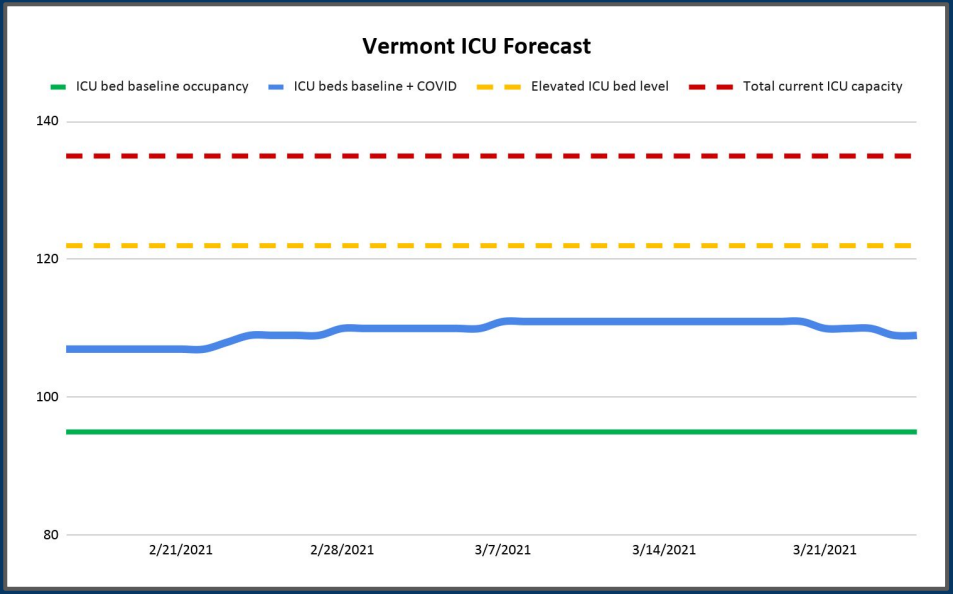
ICU Beds



Source: VDH—February 16, 2020

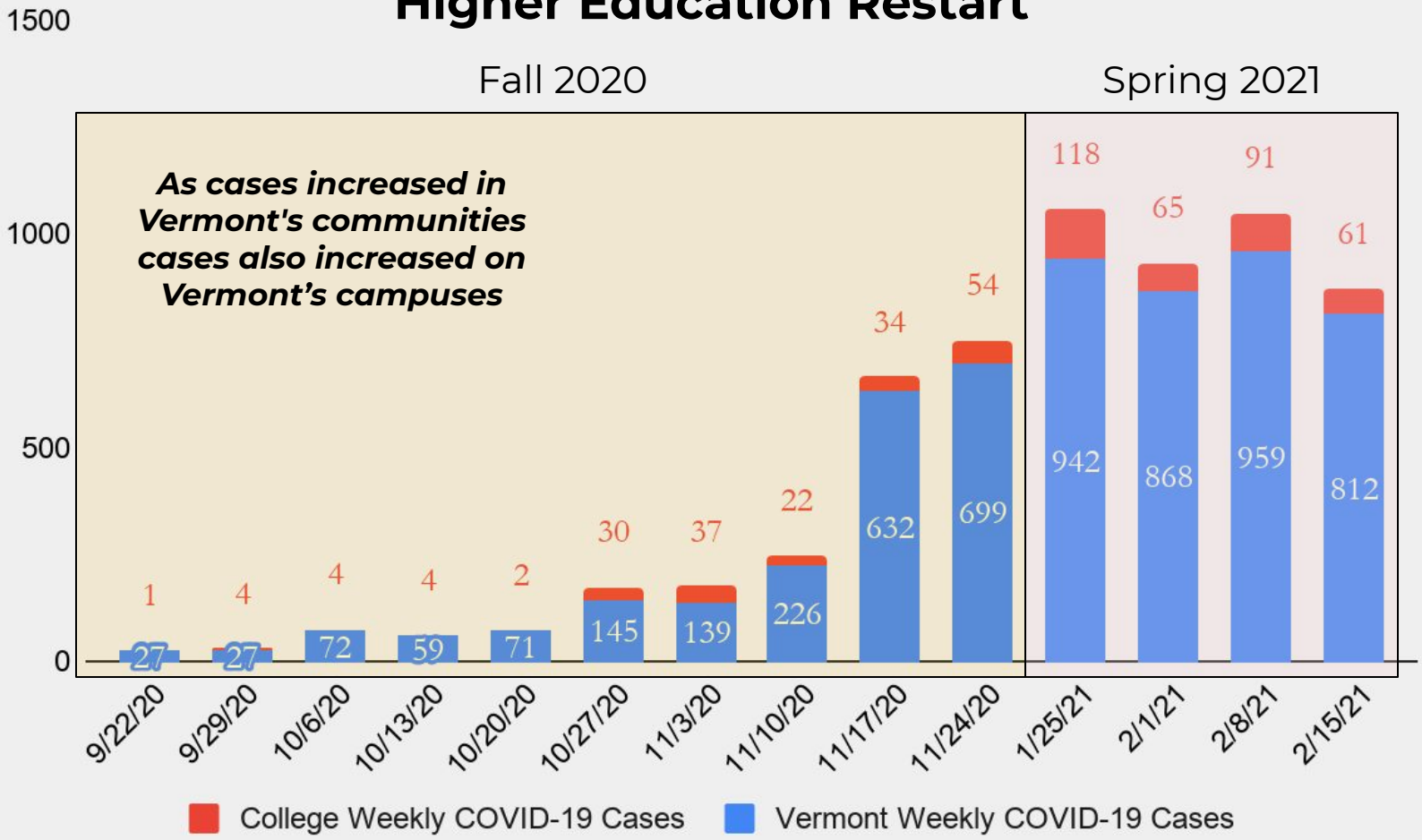
Hospital & ICU Capacity Forecasts





Source: Oliver Wyman Forecast Model—February 15, 2020; GNYHA Hospital Surge framework

Higher Education Restart



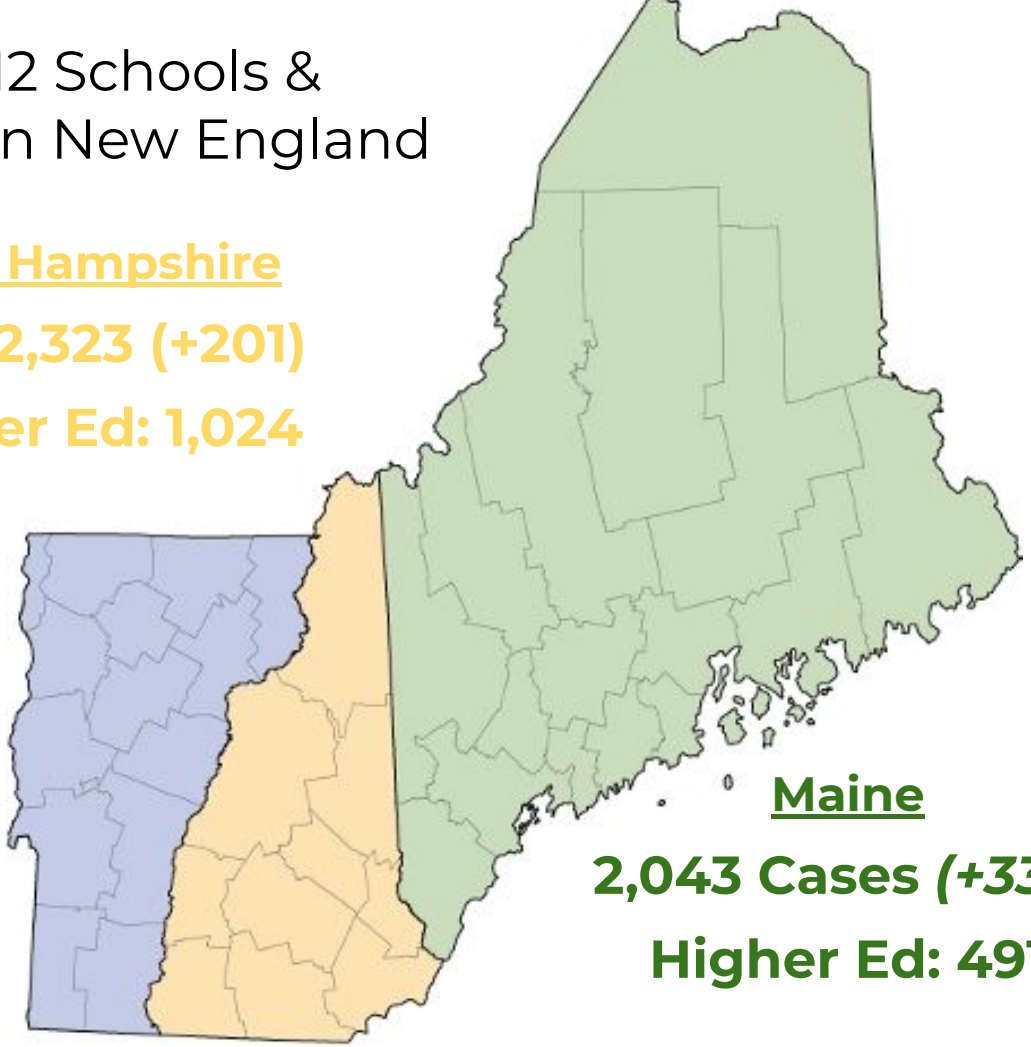
Source: Vermont Higher Education Institution reporting—February 15, 2021

Covid-19 Cases in K-12 Schools & Colleges Across Northern New England

New Hampshire

K-12: 2,323 (+201)

Higher Ed: 1,024



Vermont

K-12: 594 Cases (+71)

Higher Ed: 335 (+61)

Maine

2,043 Cases *(+334)*

Higher Ed: 491

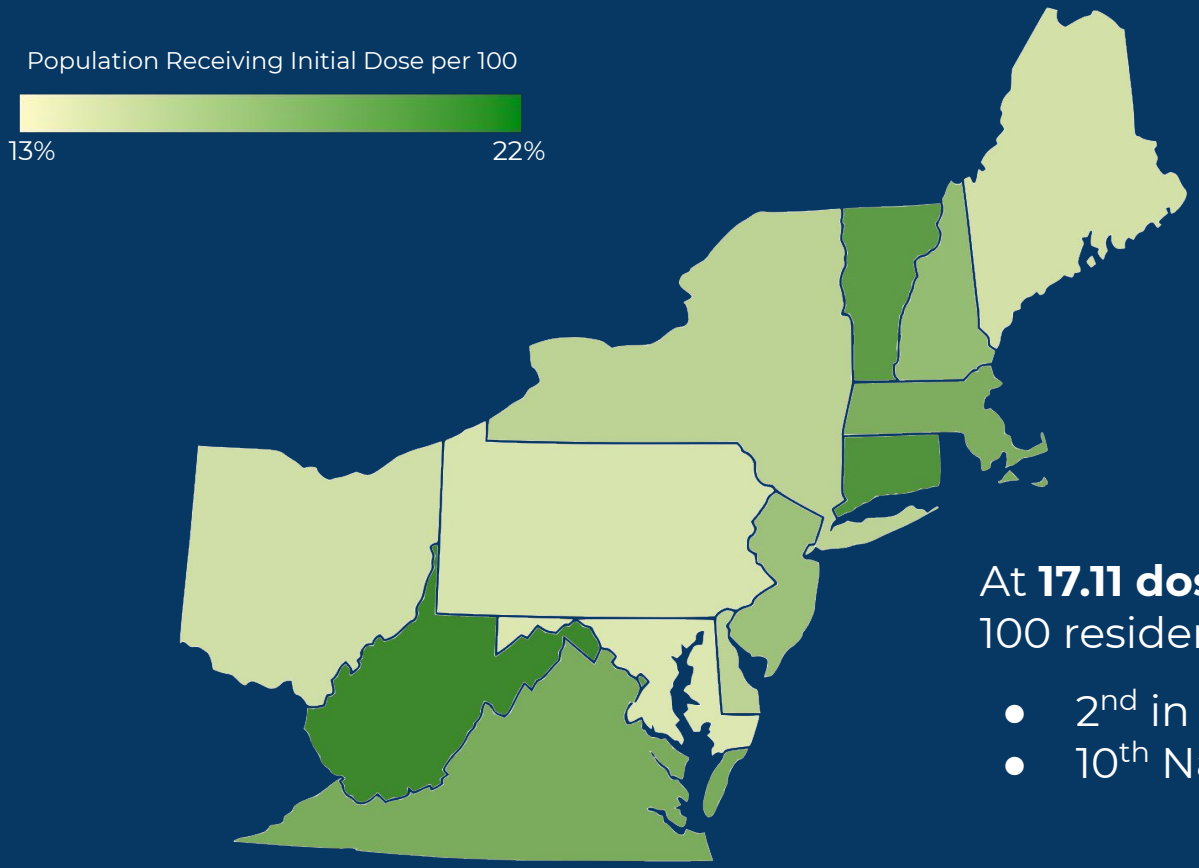
Source: ME, NH & VT K-12 Dashboards, ME media reports

Active Outbreaks in Long Term Care Facilities

Facility Name	Total COVID-19 Cases
Village at Cedar Hill, *Windsor*	23
Long Term Care Facility D	9
Mountain View Center, *Rutland*	11
Brookdale at Fillmore Pond, *Bennington*	Not Shown

Source: Vermont Department of Health—February 7, 2021 (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 or fewer than 5 active cases.*

Regional Vaccination Map: Initial Dose

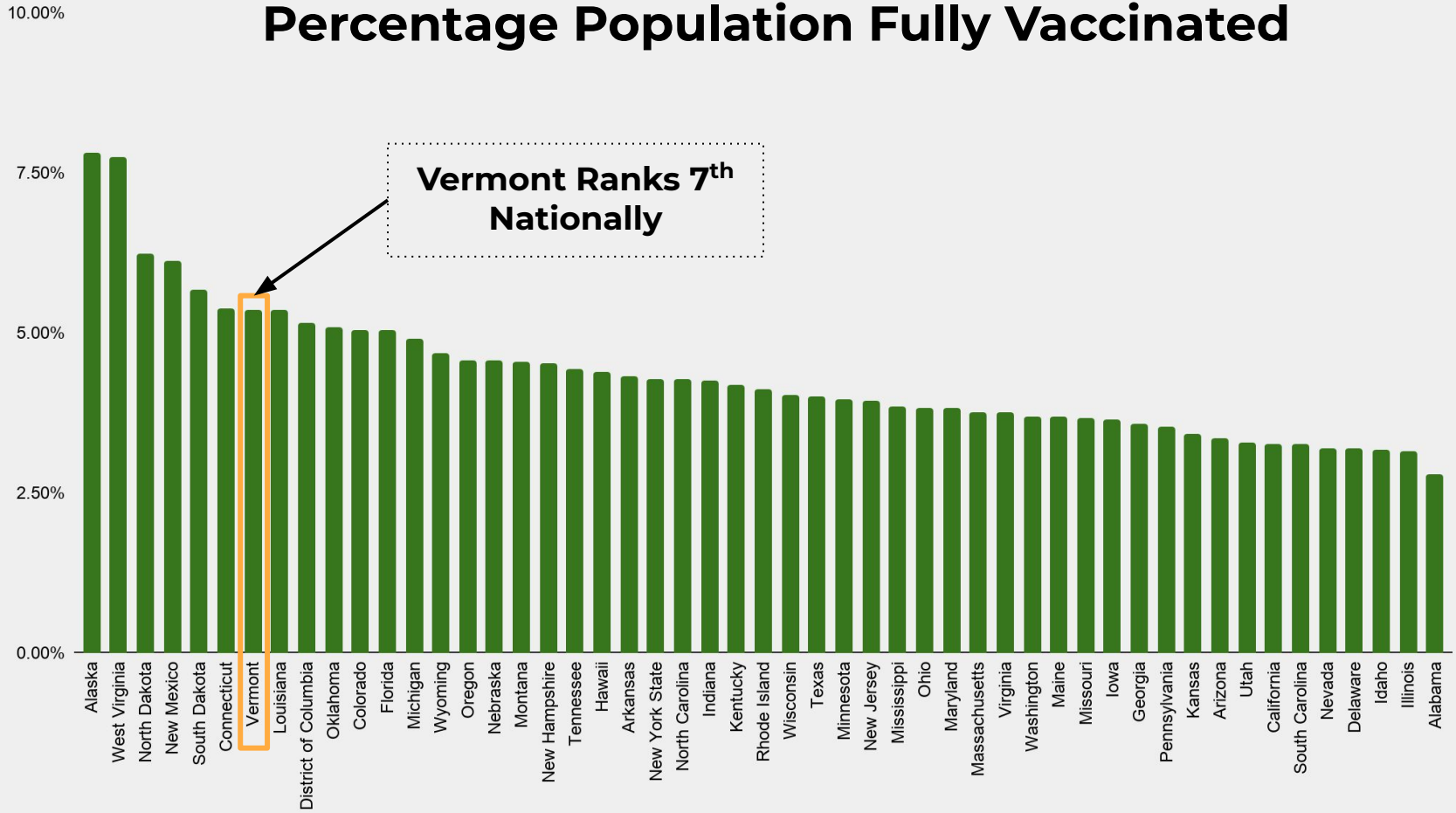


At **17.11 doses** administered per 100 residents, Vermont ranks:

- 2nd in Northeast
- 10th Nationally

Source: CDC—February 16, 2021

Percentage Population Fully Vaccinated



Source: CDC—February 14, 2021

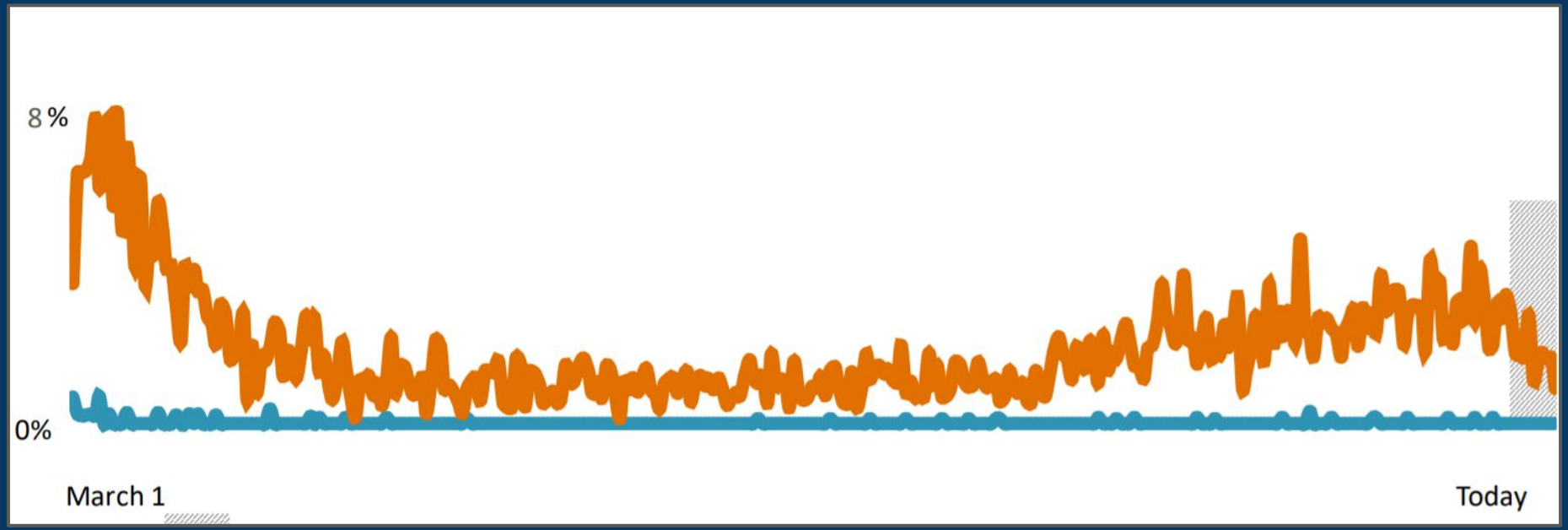
RESTART VERMONT

Reopening Metrics

1. Syndromic Surveillance
2. Viral Growth & Reproductive Rates
3. Percentage of New Positive Tests
4. Hospital & Critical Care Bed Capacity

Data Point 1: Syndromic Surveillance

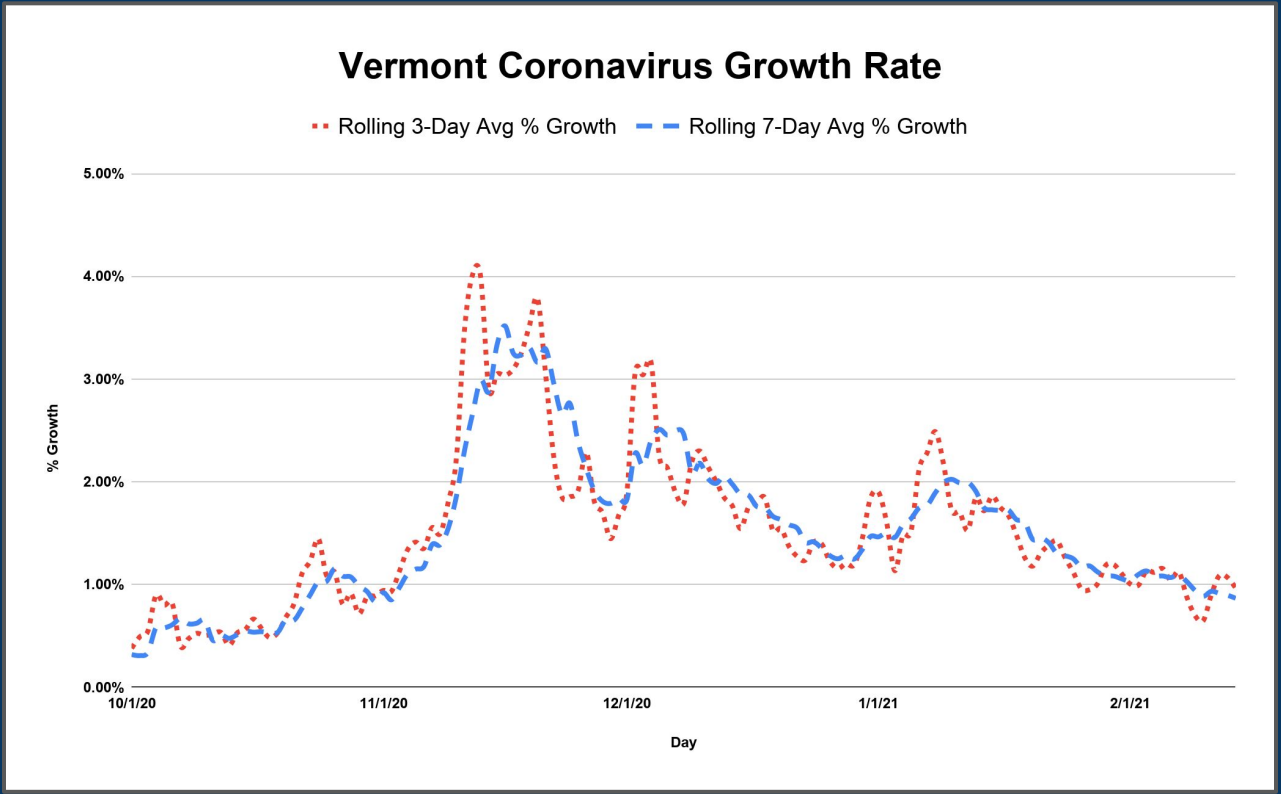
- **Summary:** Percentage of visits with COVID-19 like illness and Influenza diagnosis
- **Warning Flag:** Percentage of visits exceeding 4% for multiple consecutive days



Source: Vermont Department of Health—February 16, 2021

Data Point 2: Viral Growth and Reproductive Rates

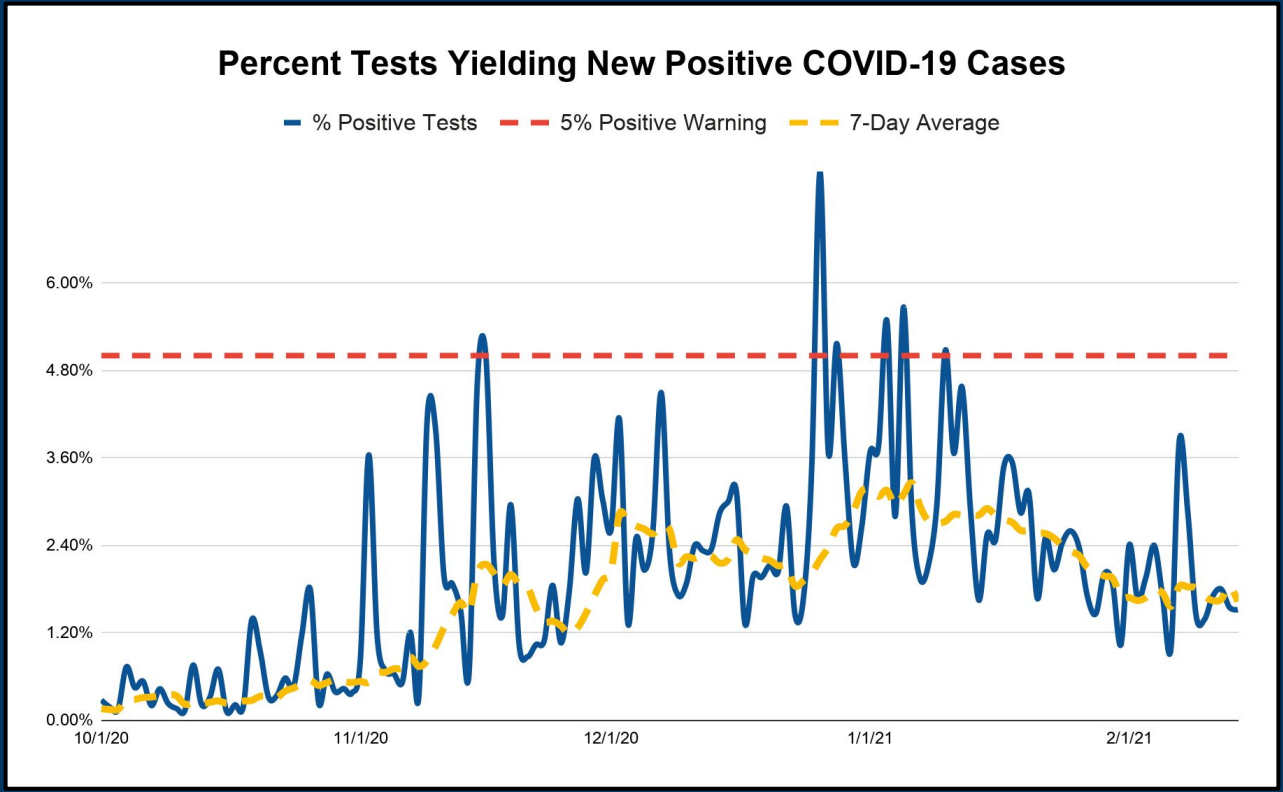
- **Summary:** Case growth measured by daily, 3-day, 7-day, and effective reproductive rate (R_t)
- **Warning Flags:** Sustained viral growth that would lead to <30% open ICU beds



Source: Vermont Department of Health—February 15, 2021

Data Point 3: Percentage of New Positive Tests

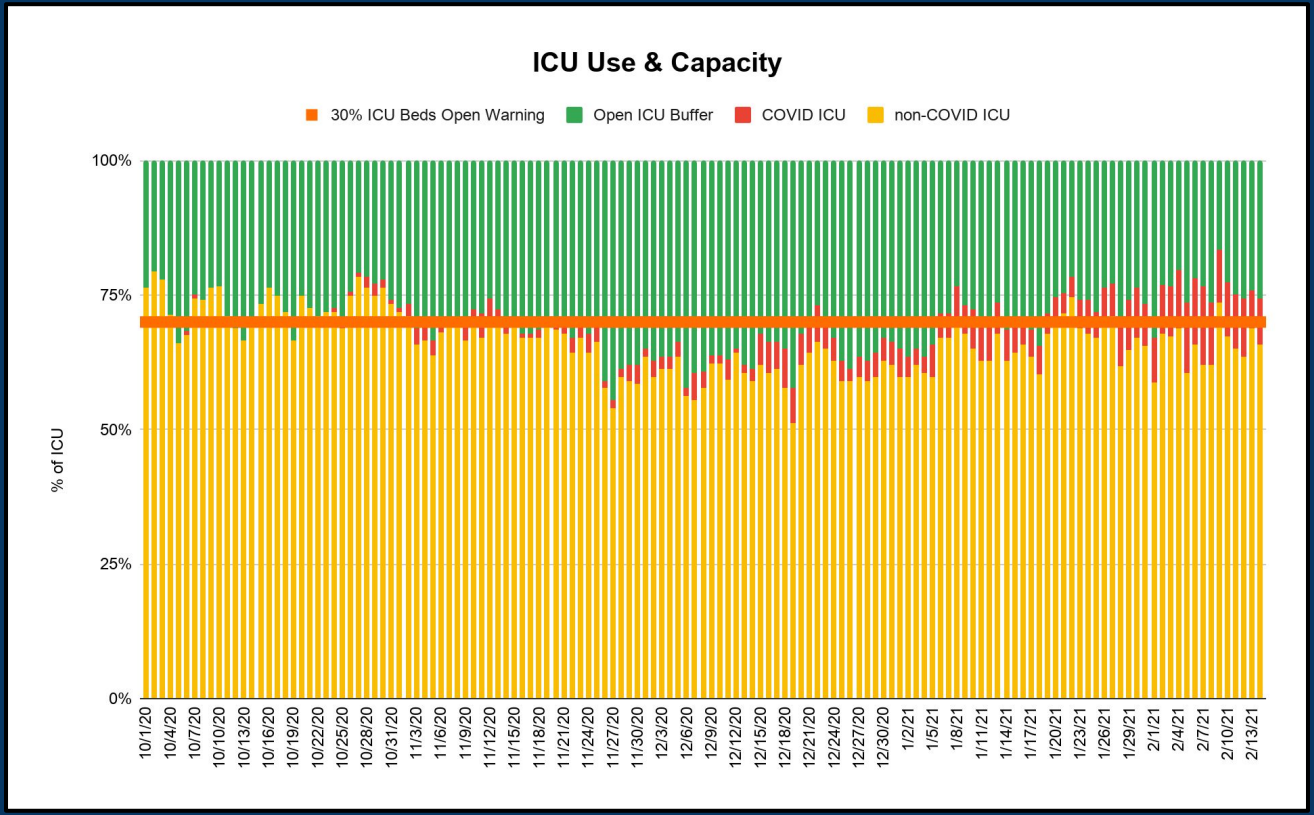
- **Summary:** Percent of tests resulting in a new positive case
- **Warning Flags:** New positives represent >5% of daily results



Source: Vermont Department of Health—February 15, 2021

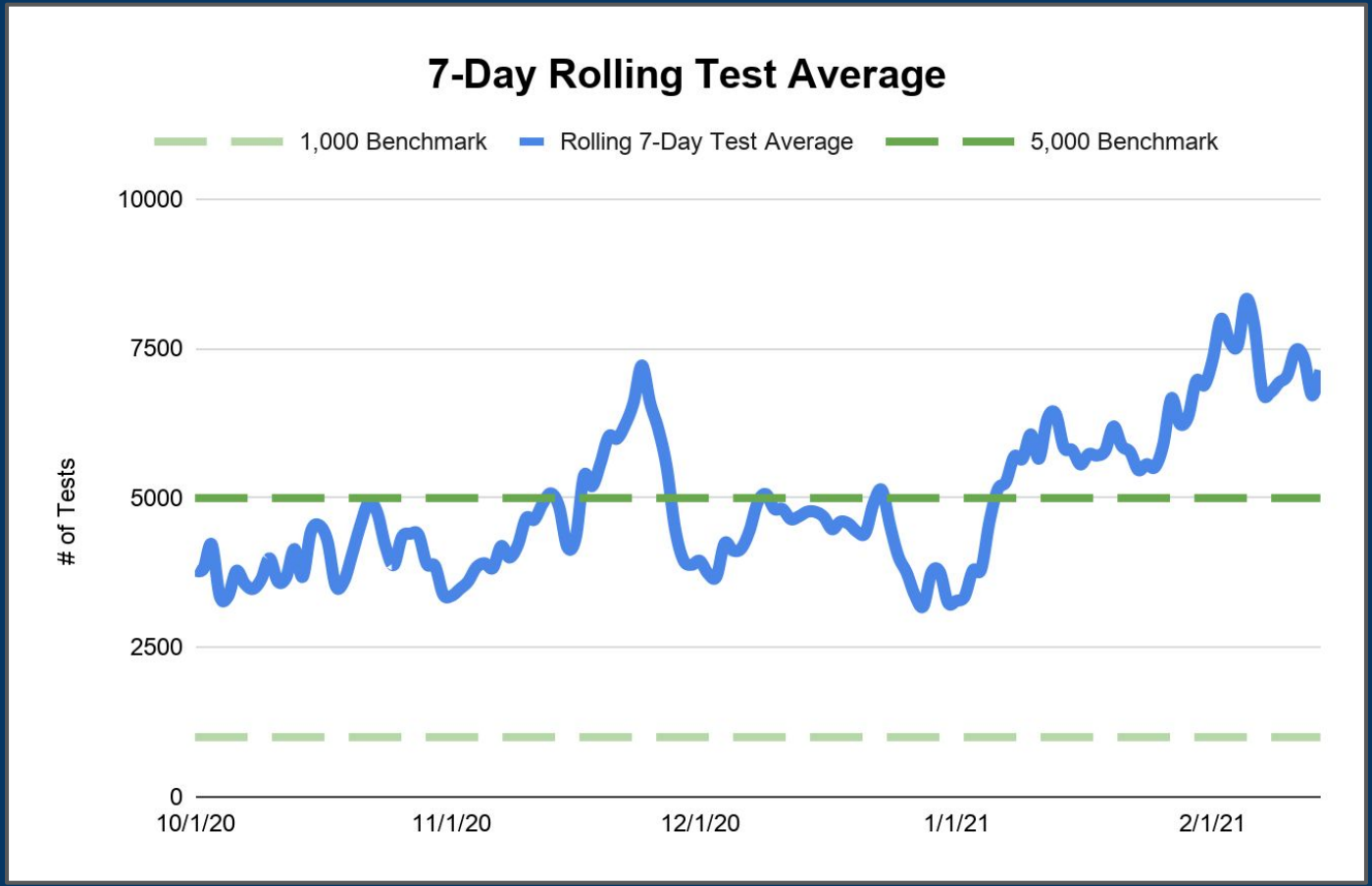
Data Point 4: Hospital & Critical Care Beds

- **Summary:** Number of occupied and unoccupied medical surgical and ICU beds
- **Warning Flags:** Reduction in ICU open beds to less than 30%



Source: Vermont Department of Health—February 15, 2021

Vermont Testing



Source: Vermont Department of Health—February 15, 2021; results reported to VDH daily