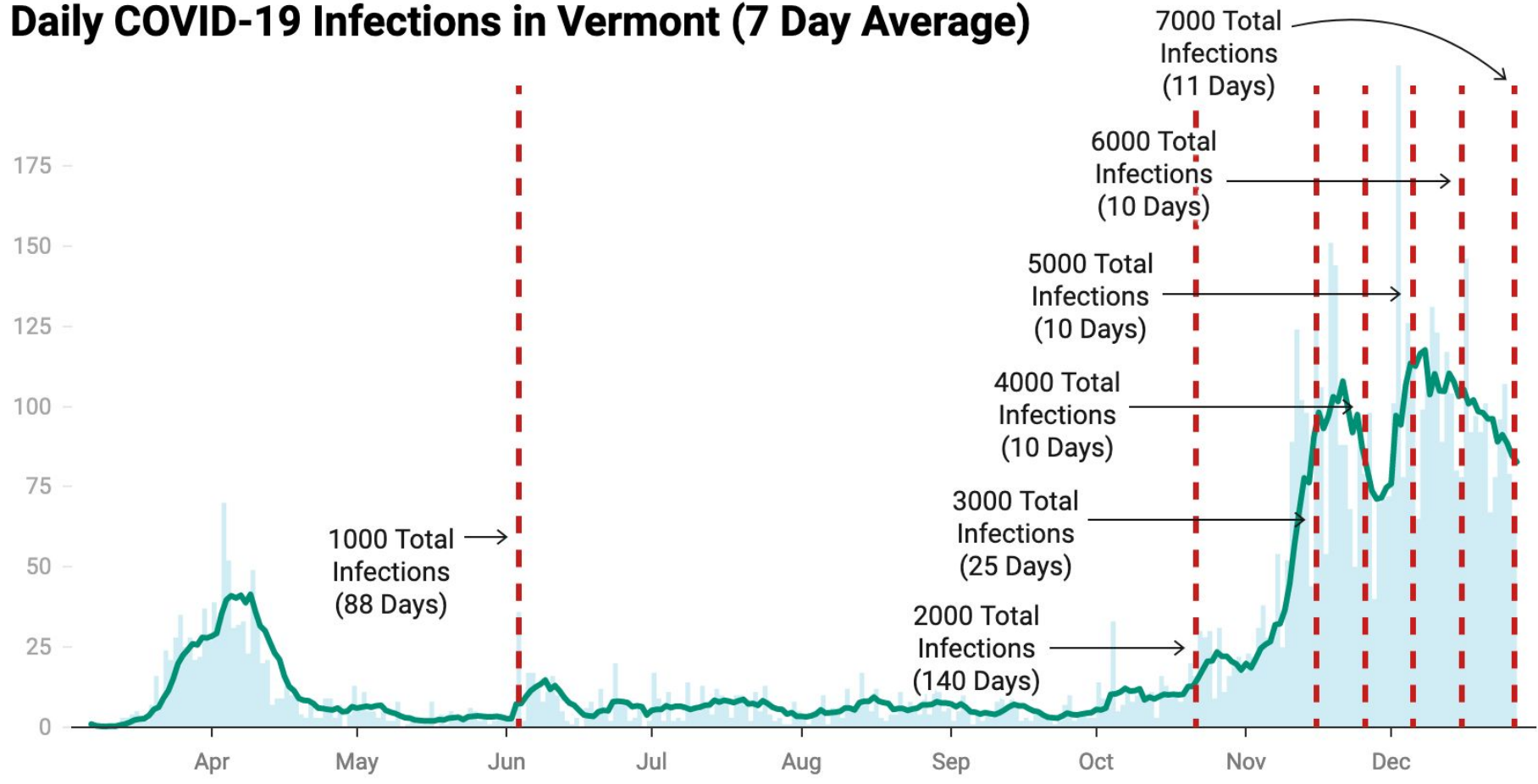


COVID-19 Modeling

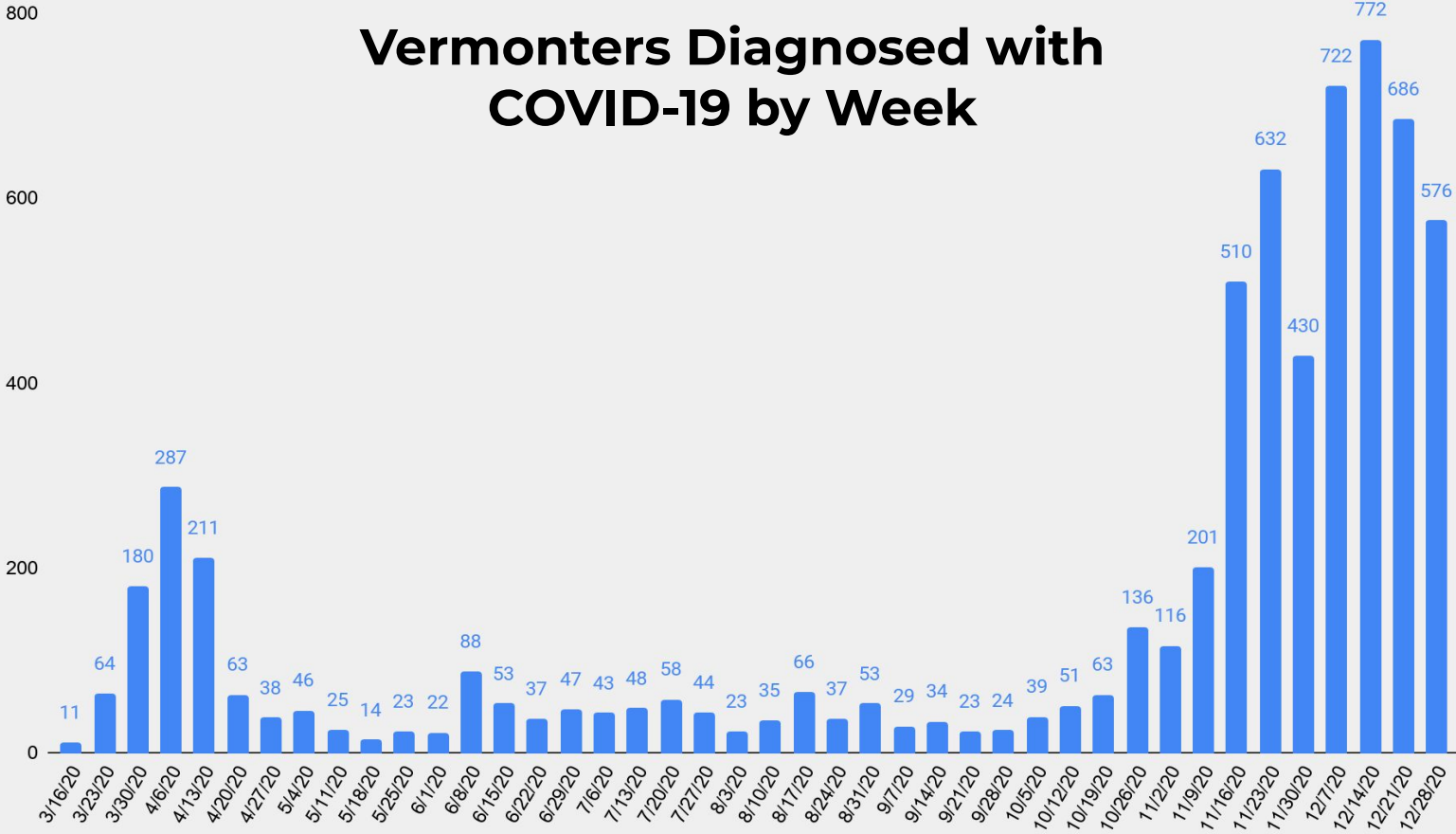
December 29, 2020

Presentation available at:
dfr.vermont.gov

Daily COVID-19 Infections in Vermont (7 Day Average)



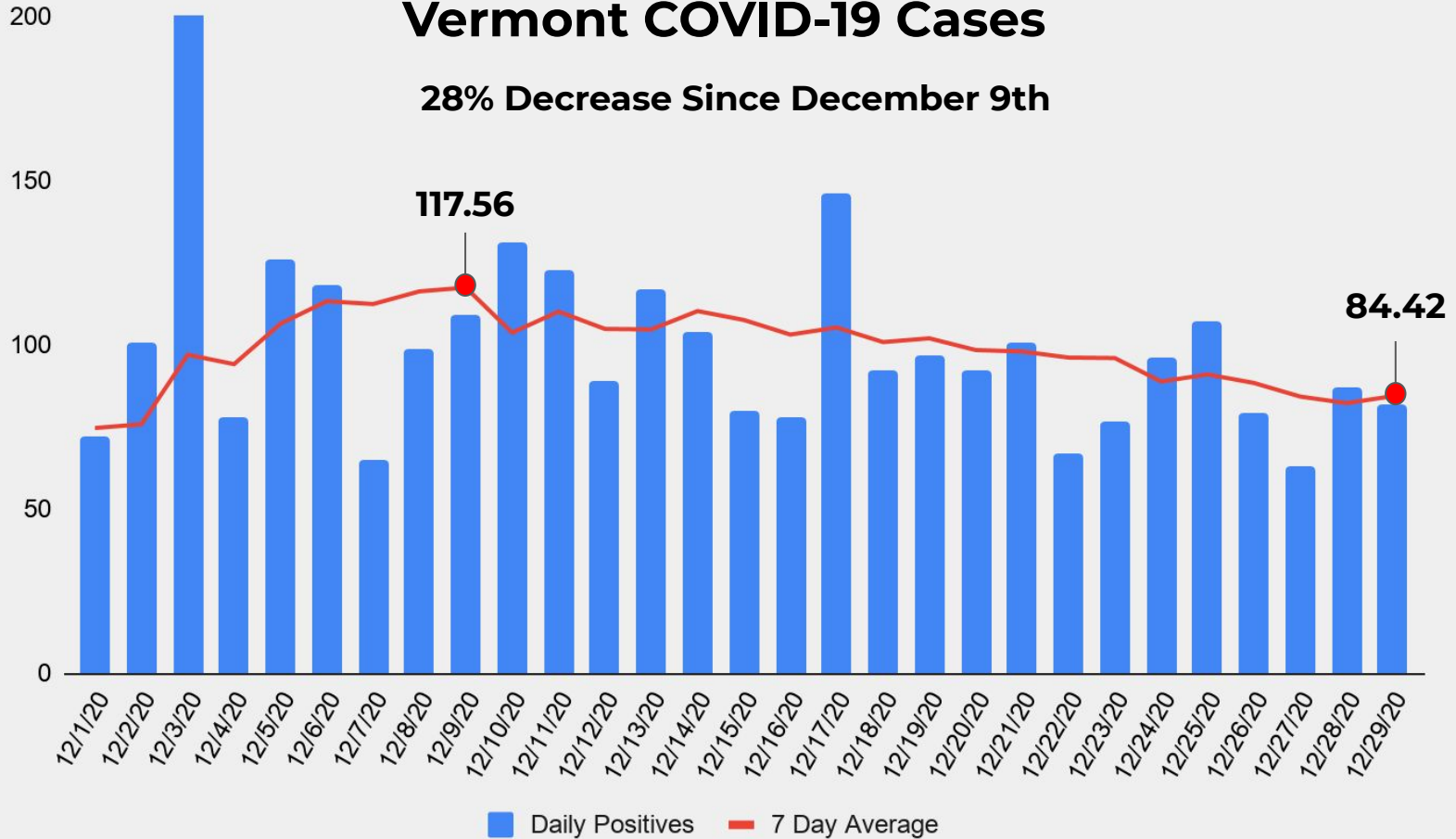
Vermonters Diagnosed with COVID-19 by Week



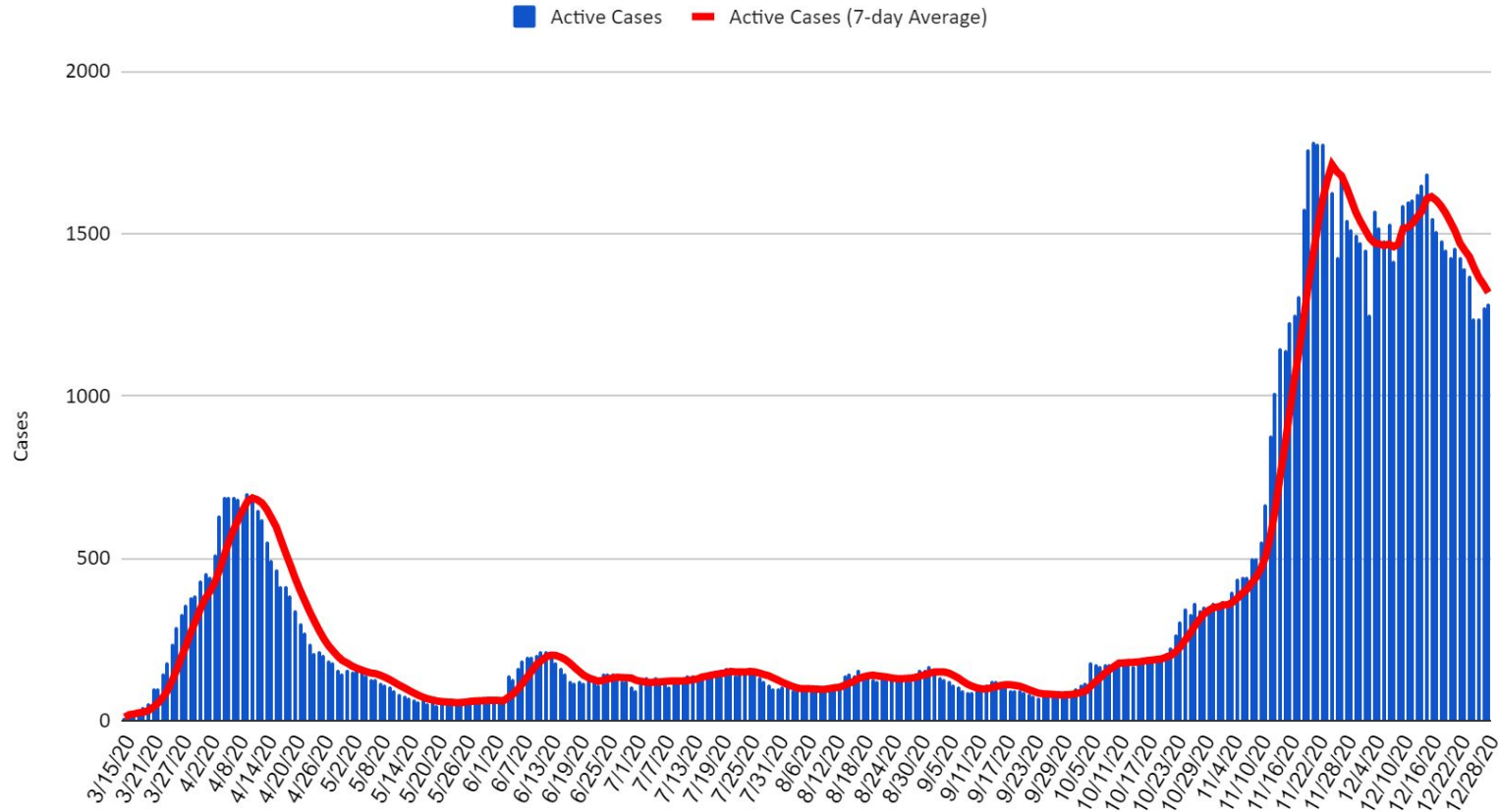
Source: Vermont Department of Health (week calculated as Tuesday to Monday)

Vermont COVID-19 Cases

28% Decrease Since December 9th

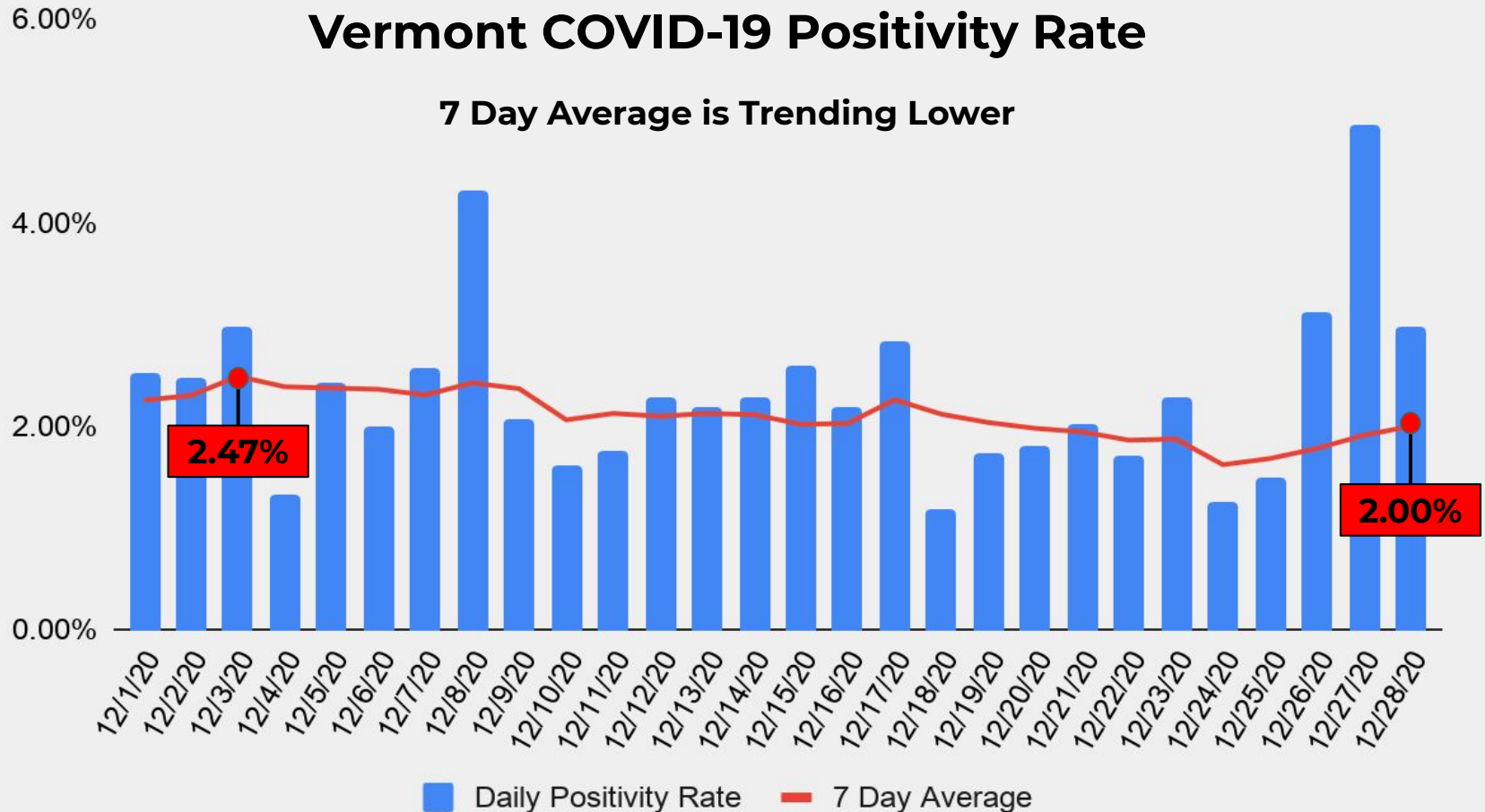


Estimated Active Cases of COVID-19 in Vermont

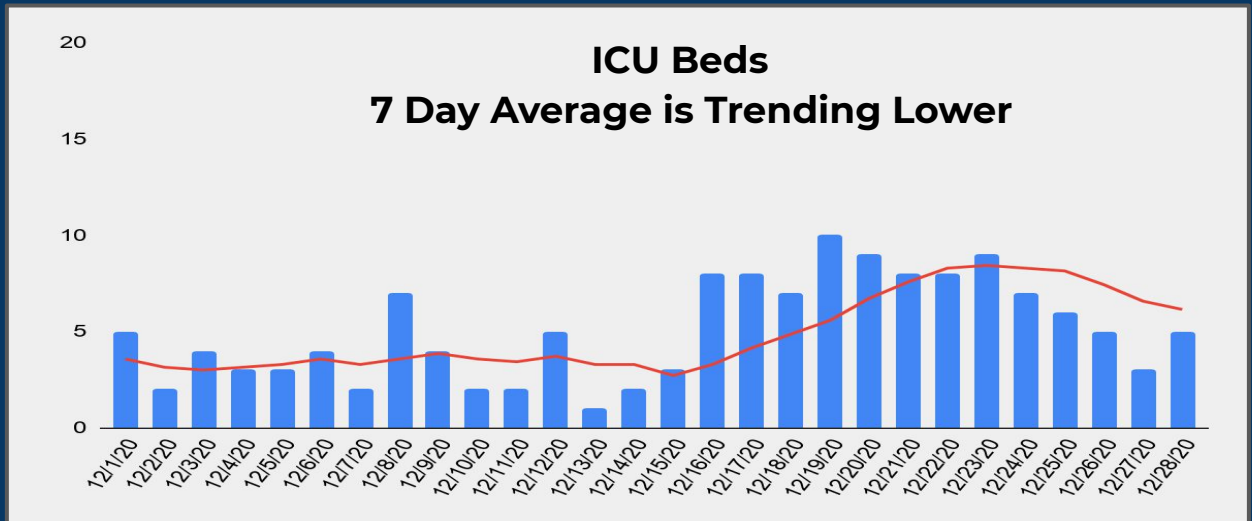
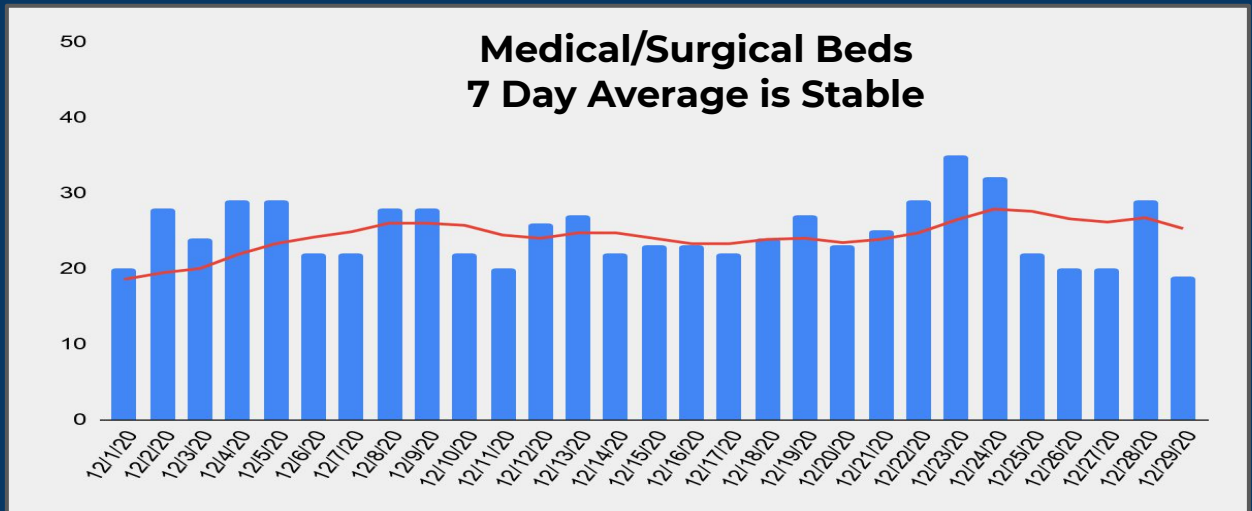


Vermont COVID-19 Positivity Rate

7 Day Average is Trending Lower

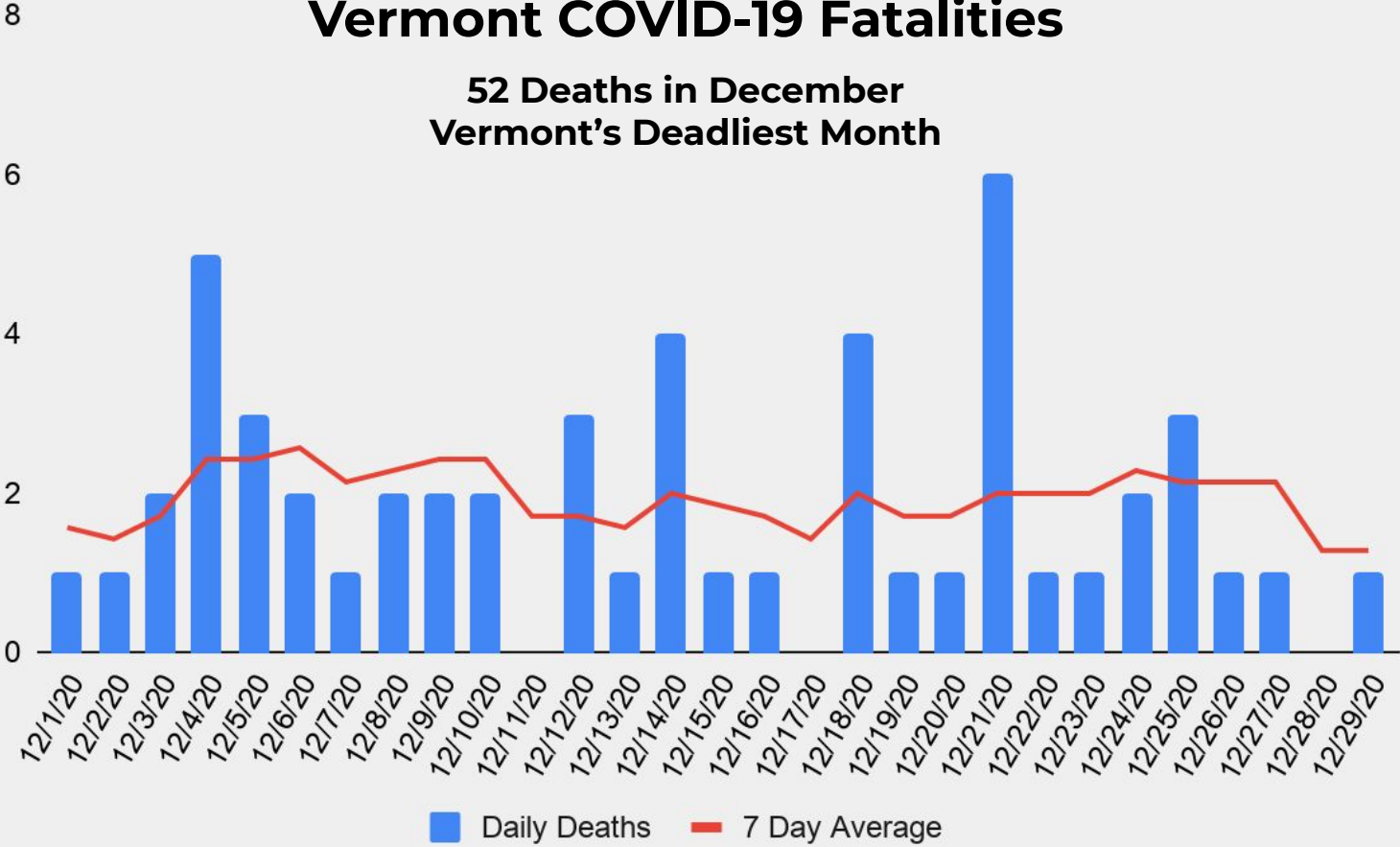


Vermont COVID-19 Hospitalizations



Vermont COVID-19 Fatalities

52 Deaths in December
Vermont's Deadliest Month

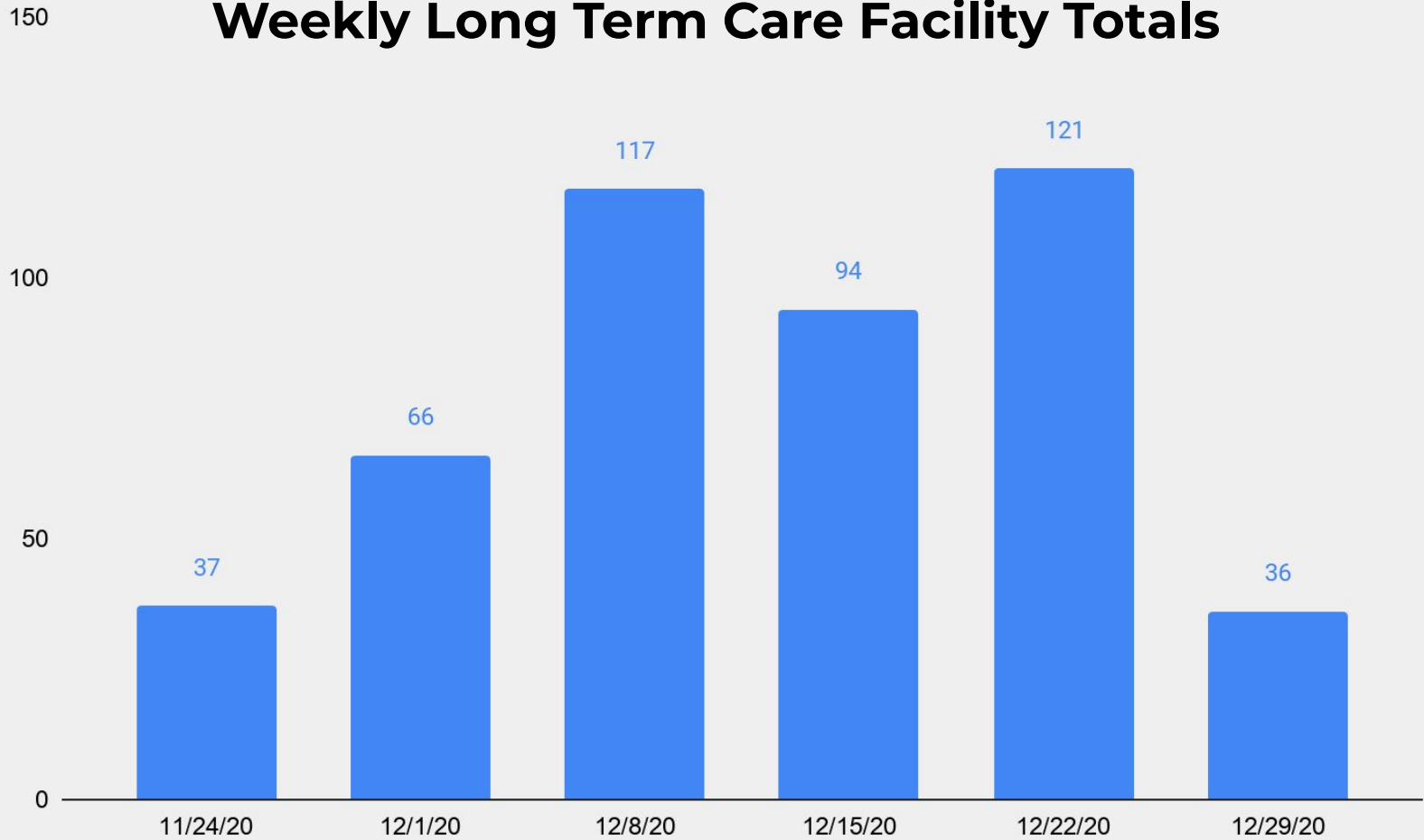


Active Outbreaks in Long Term Care Facilities

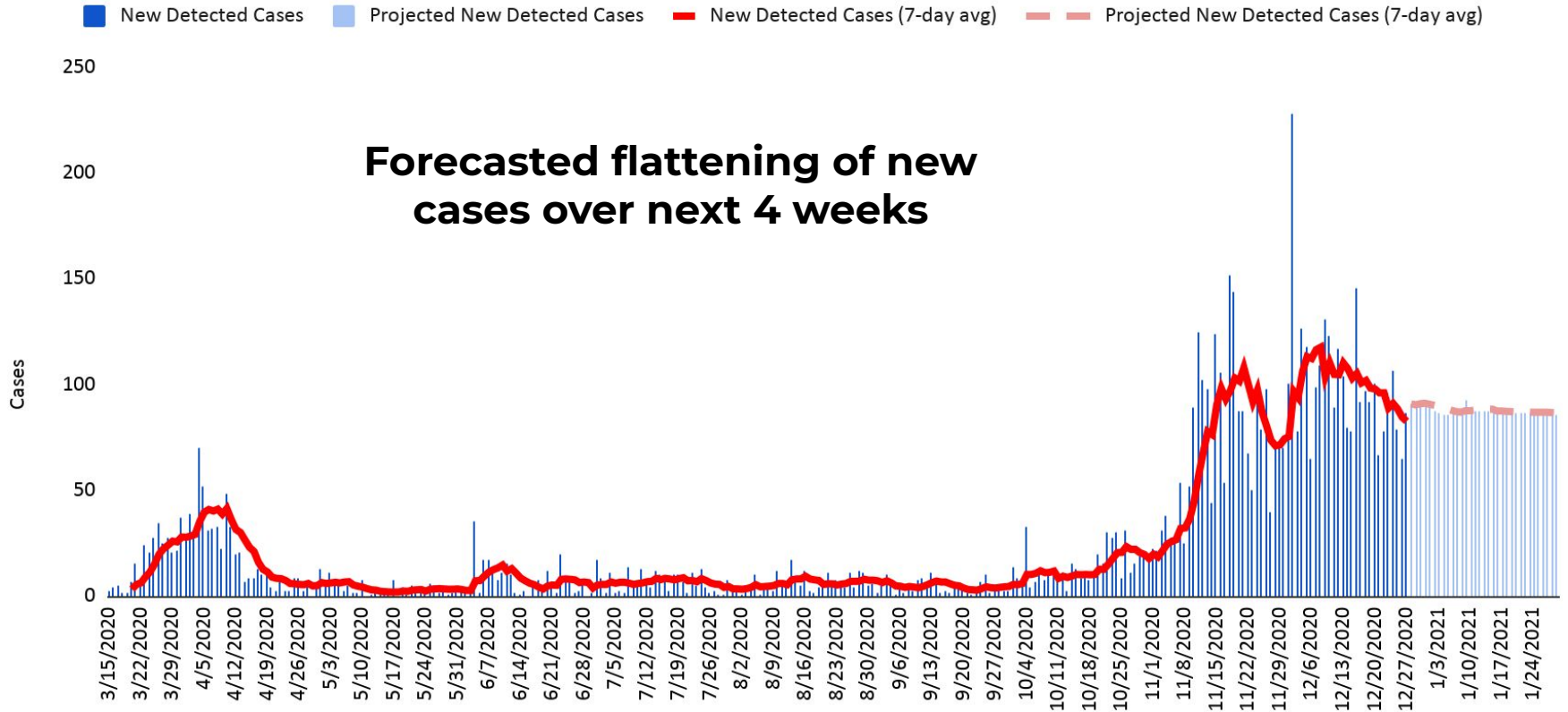
Facility Name	Total COVID-19 Cases	Change from Prior Week
Elderwood at Burlington, <i>Burlington</i>	125	+2
Saint Albans Healthcare & Rehab Center, <i>Saint Albans</i>	87	+2
Rutland Health & Rehab, <i>Rutland</i>	67	0
Our Lady of Providence, <i>Winooski</i>	47	+4
Berlin Health & Rehab, <i>Berlin</i>	34	0
Craftsbury Community Care Center, <i>Craftsbury</i>	28	+11
Converse Home Assisted Living, <i>Burlington</i>	15	+1
The Residence at Shelburne Bay, <i>Shelburne</i>	14	+14 (new)
Residence at Quarry Hill, <i>South Burlington</i>	12	0
Holton Home, <i>Brattleboro</i>	8	+2
Cathedral Square, <i>Burlington</i>	7	0
Total	513*	+36

Source: Vermont Department of Health - December 29, 2020 (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 -- count included in total cases

Weekly Long Term Care Facility Totals

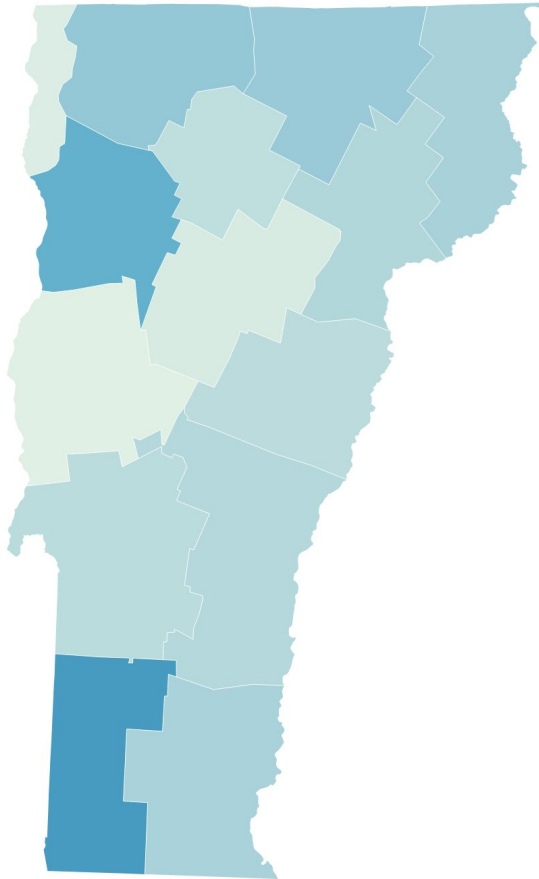


Vermont Forecast



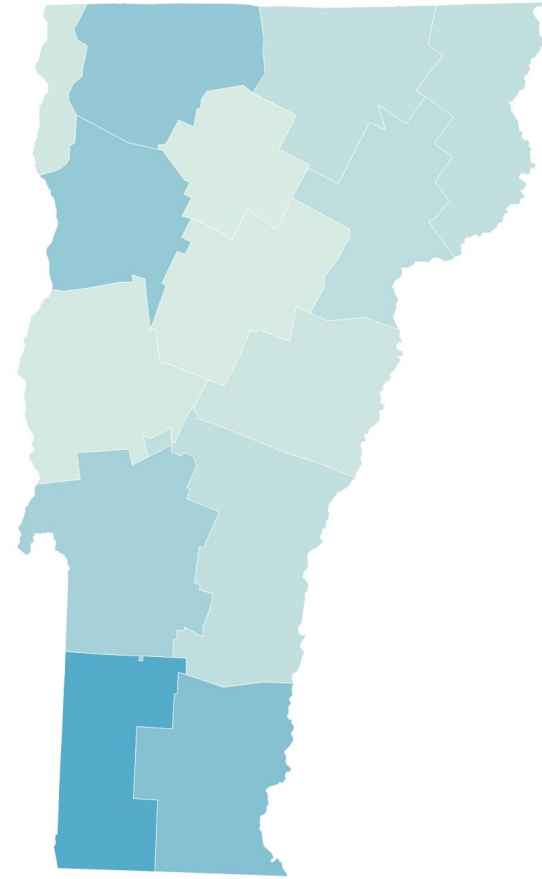
Vermont Weekly Cases by County (per 100,000)

Results Reported December 15 to 21



Vermont Weekly Cases by County (per 100,000)

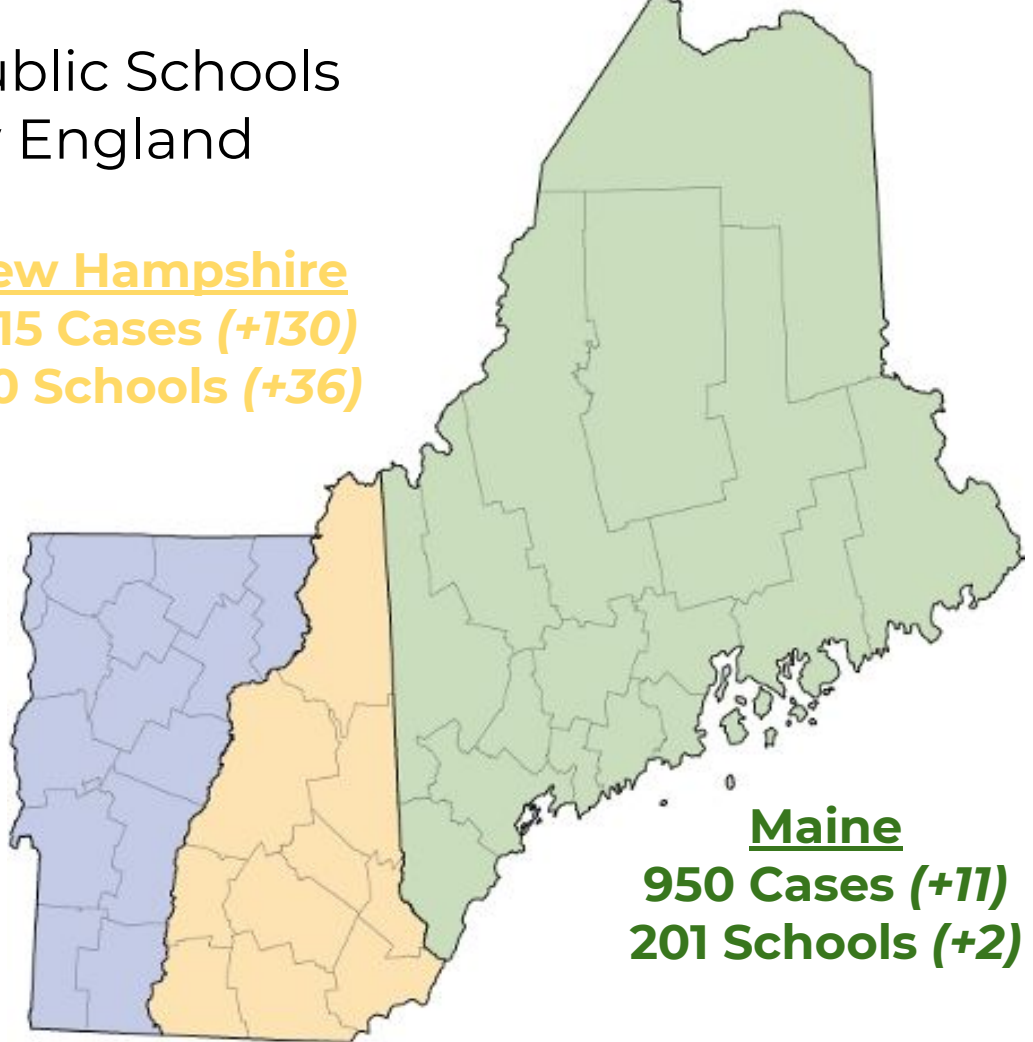
Results Reported December 22 to 28



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

New Hampshire
1,315 Cases (+130)
370 Schools (+36)

Vermont
265 Cases (+33)
147 Schools (+14)



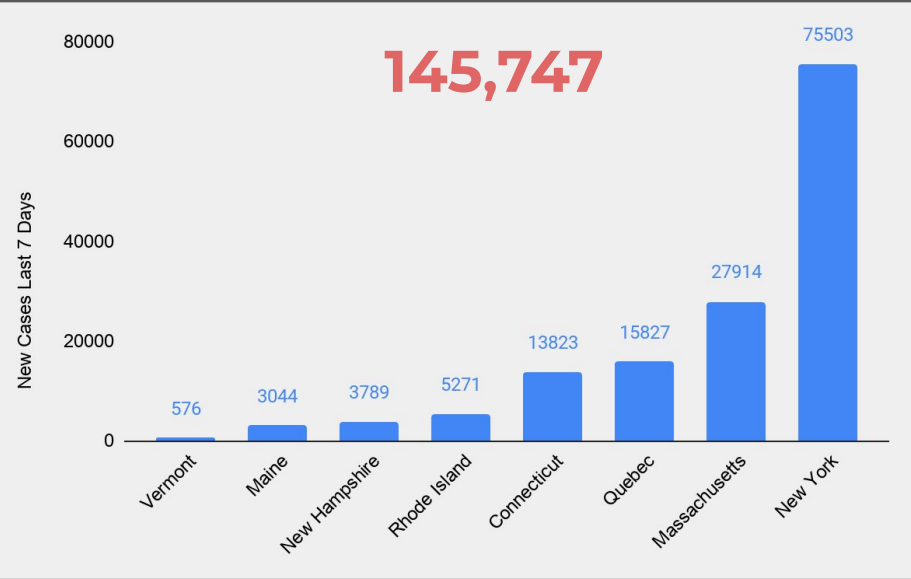
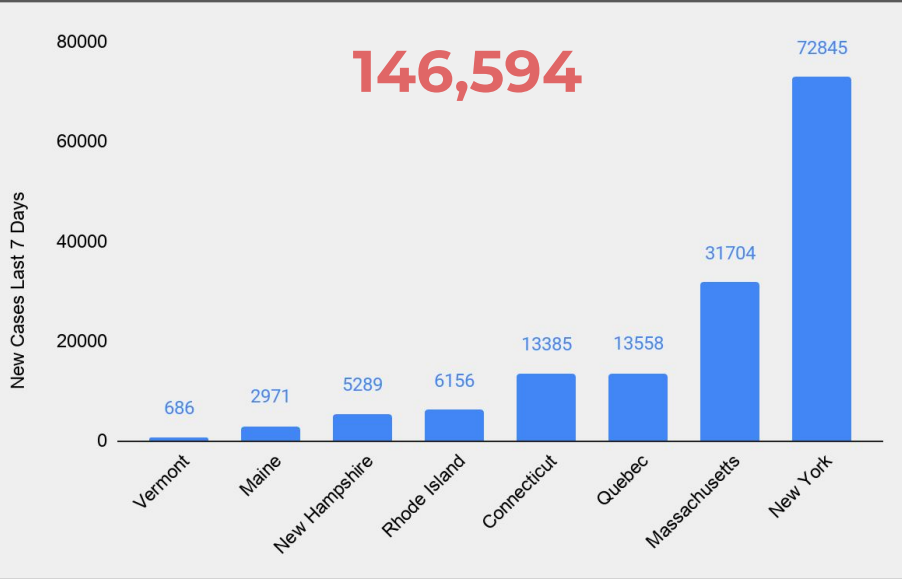
Maine
950 Cases (+11)
201 Schools (+2)

Regional Case Growth

0.58% Decrease in New Confirmed Cases

Positive Cases Dec. 15th to Dec. 21st

Positive Cases Dec. 22nd to Dec. 28th



Northeast Case Growth By Week Since March 16, 2020

200000

150000

100000

50000

0

91,132

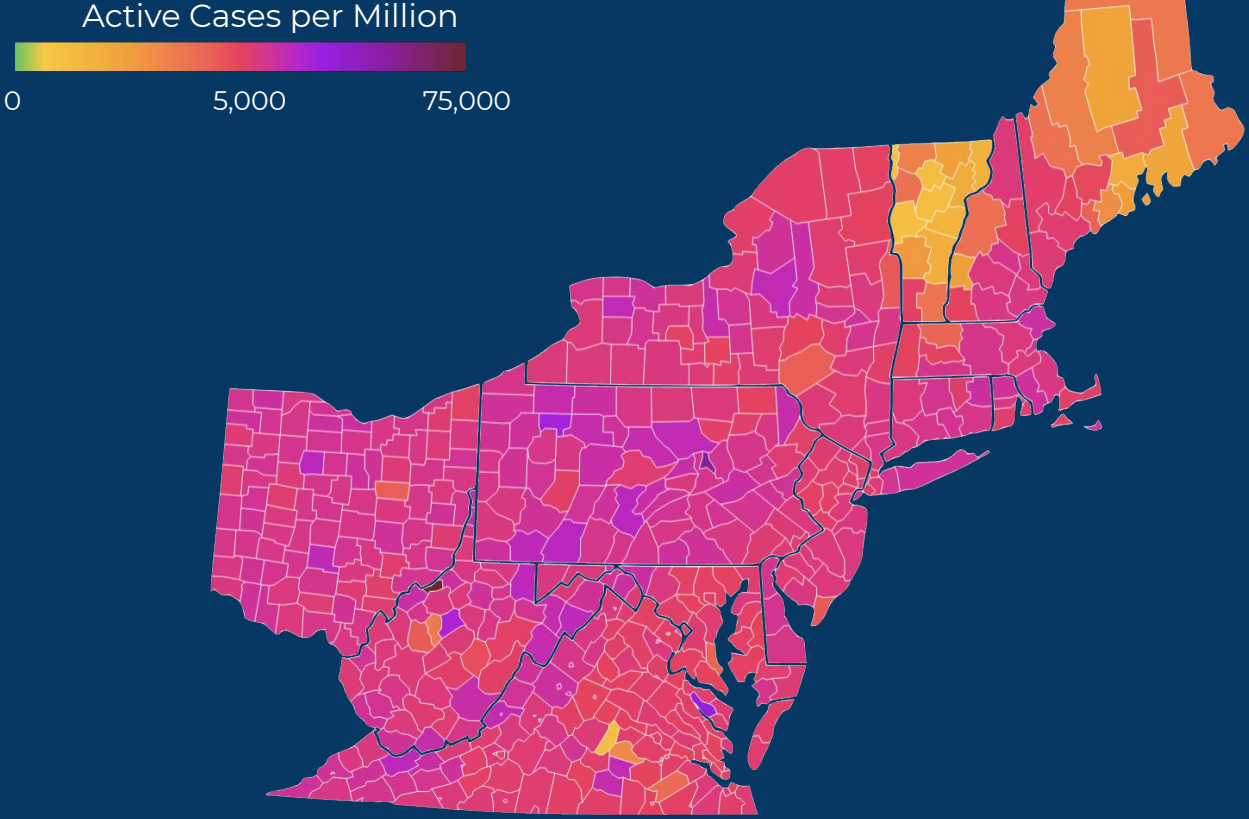
**2 Weeks of Slightly Decreasing
Regional Case Growth**

145,747



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

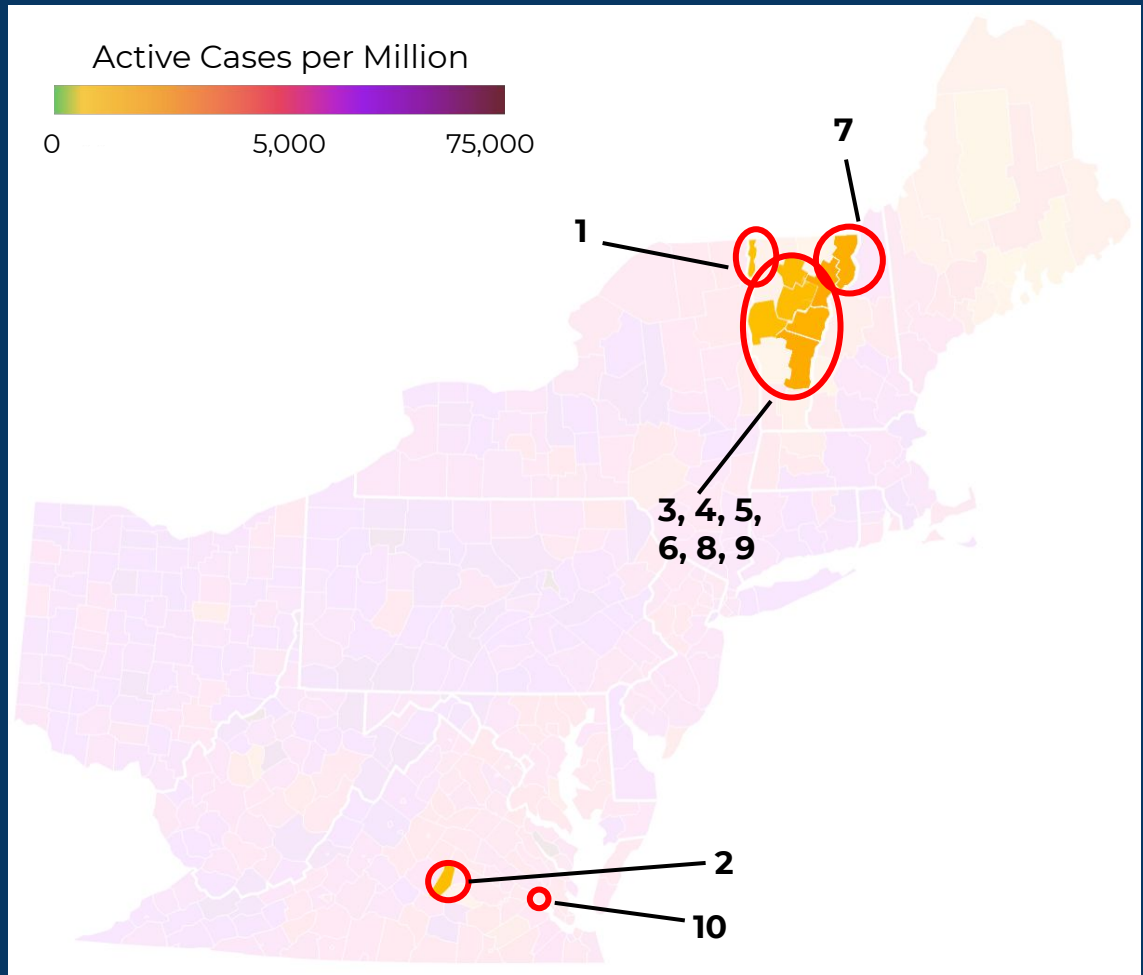
Regional Heat Map



Regional Map as of December 29th

10 **Lowest** Counties in Region
by Active Cases Per Million

- 1) **Grand Isle (VT): 990**
- 2) **Cumberland (VA): 1,069**
- 3) **Addison (VT): 1,087**
- 4) **Washington (VT): 1,178**
- 5) **Lamoille (VT): 1,186**
- 6) **Orange (VT): 1,567**
- 7) **Essex (VT): 1,732**
- 8) **Windsor (VT): 1,877**
- 9) **Williamsburg (VA): 1,968**
- 10) **Caledonia (VT): 1,978**



U.S. and Vermont Air Travel Holiday Travel 2020 & 2019



TSA Screening
Nationwide

**~58%
Reduction**

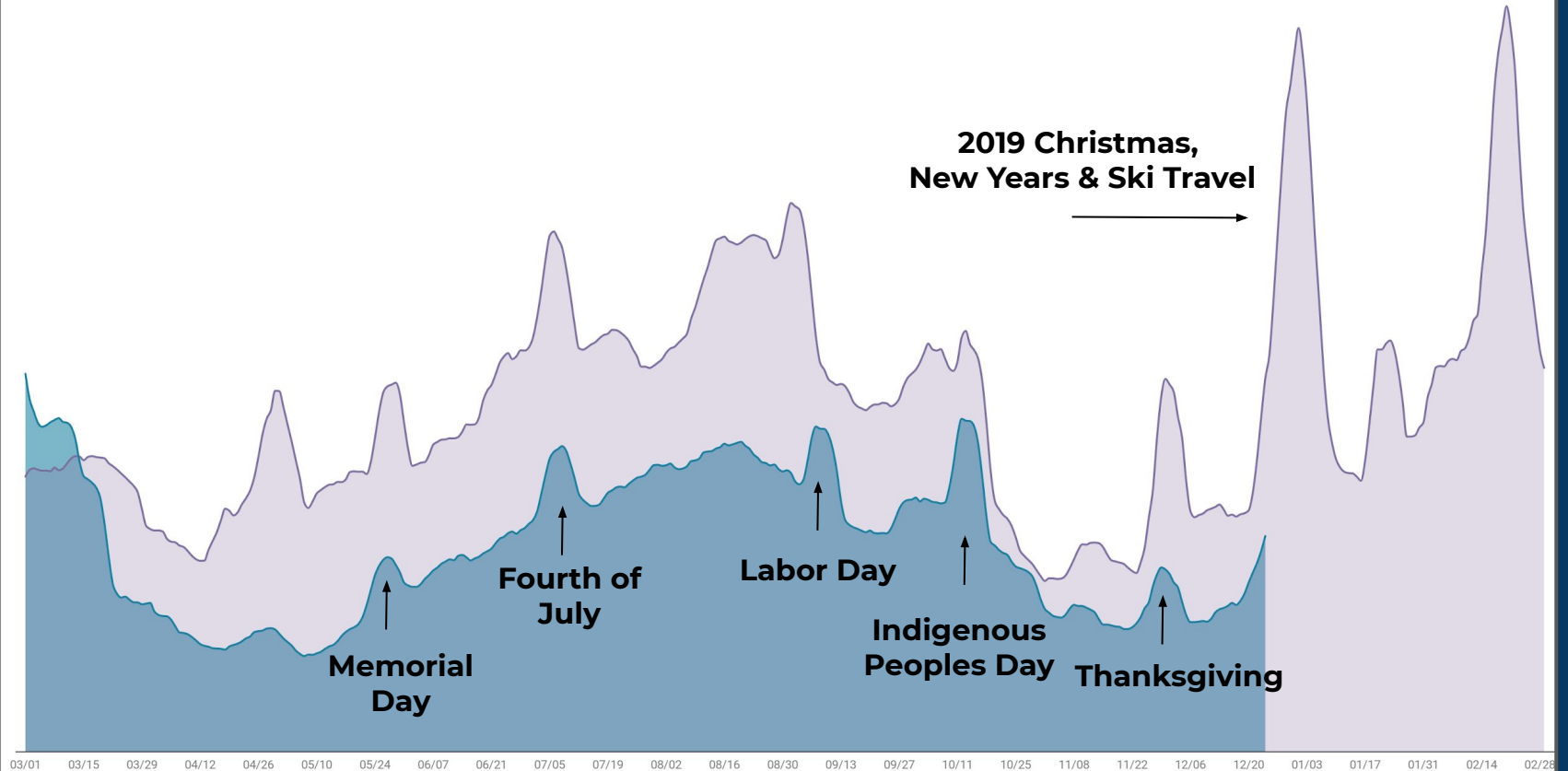


BTV International
Airport Passengers

**~80%
Reduction**

Out-of-State Visitors to Vermont

Estimate of visitors uses 7-day average # mobile devices from out of state (3/1/2019 - 12/24/2020)



12/28/2020

Chart: State of Vermont • Source: Safegraph • Created with Datawrapper

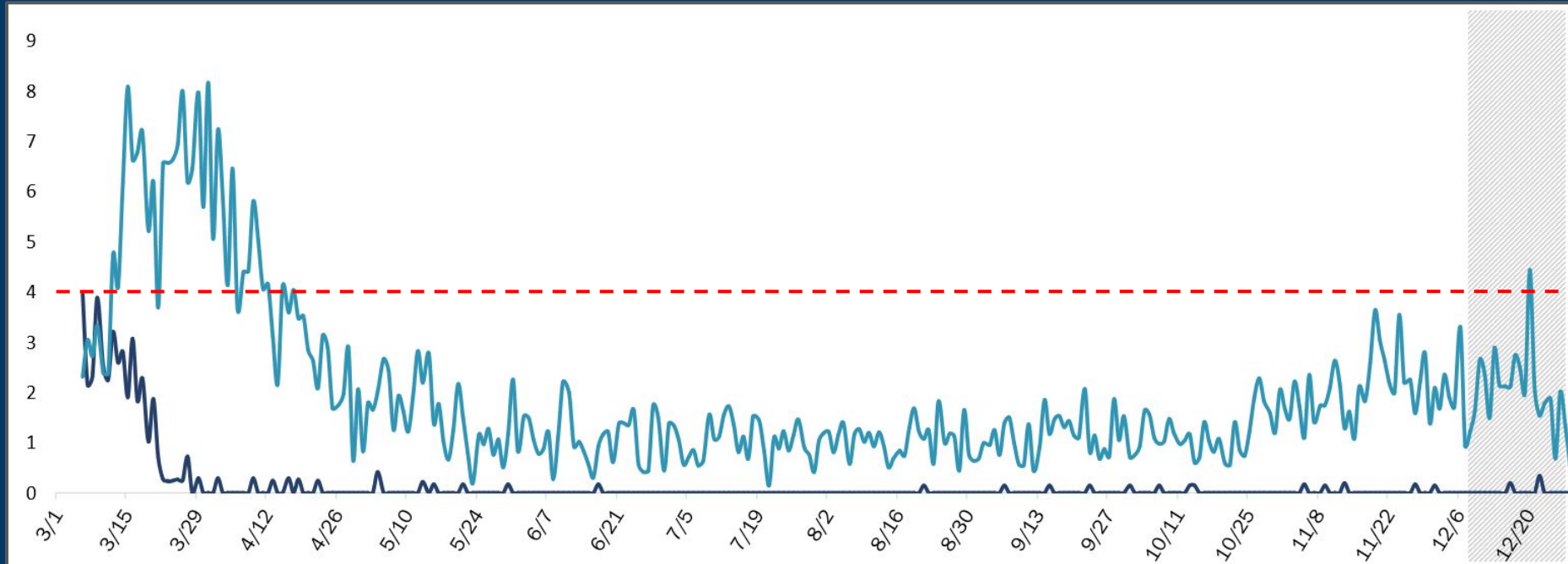
RESTART VERMONT

Reopening Metrics

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

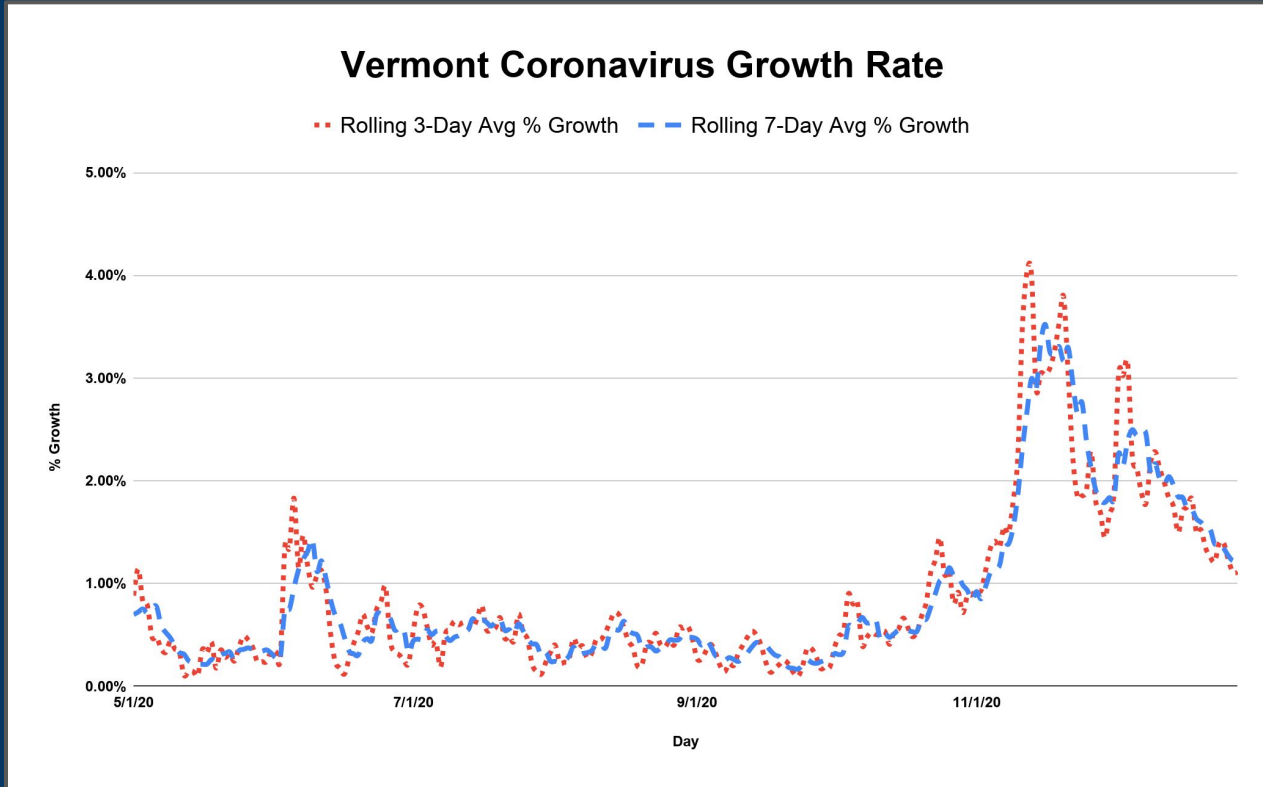
Data Point 1: Syndromic Surveillance

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



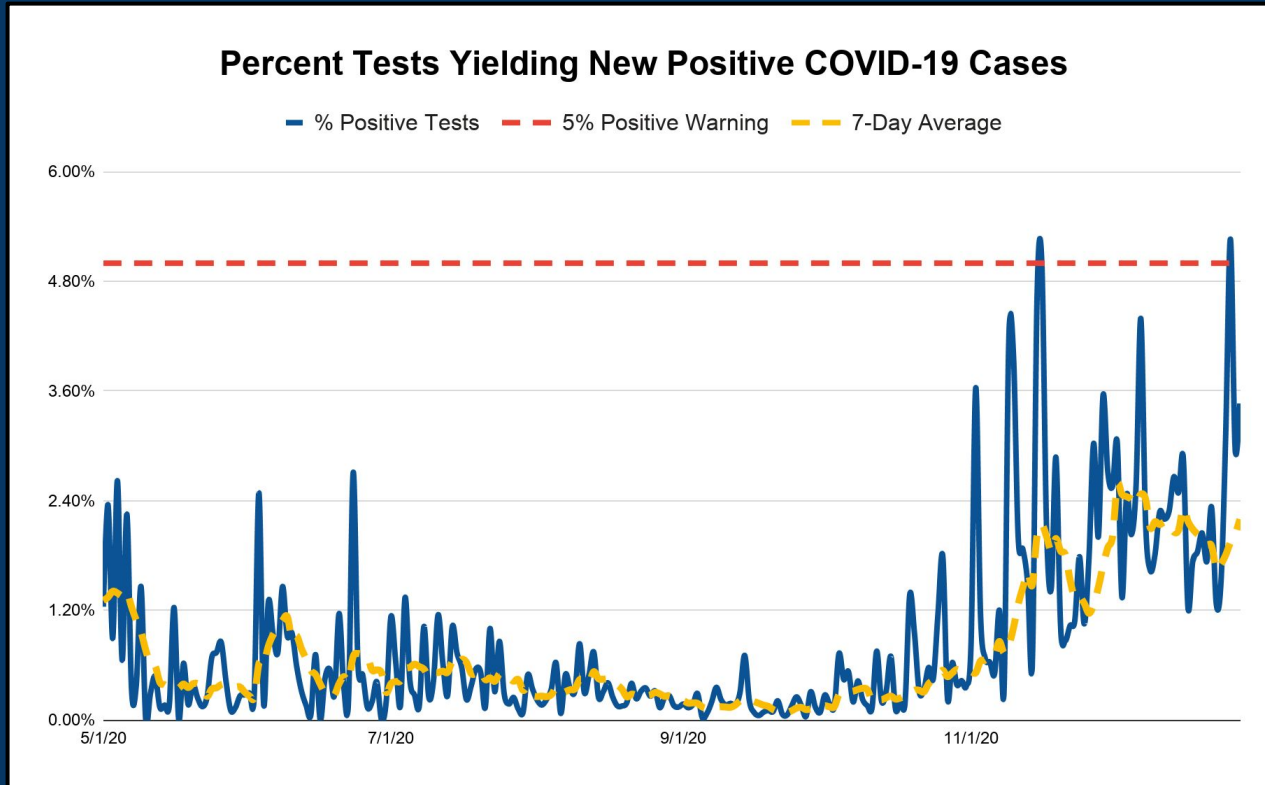
Data Point 2: Viral Growth and Reproductive Rates

- **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



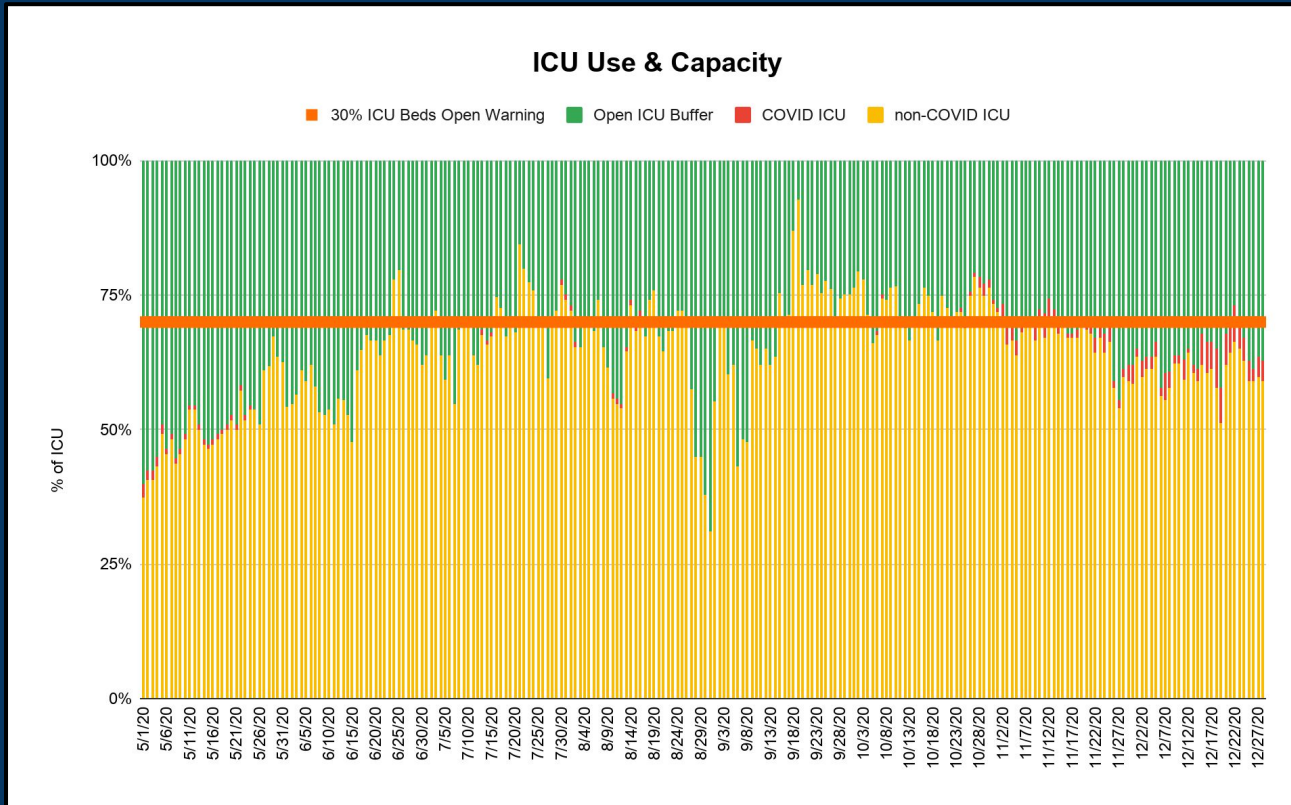
Data Point 3: Percentage of New Positive Tests

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

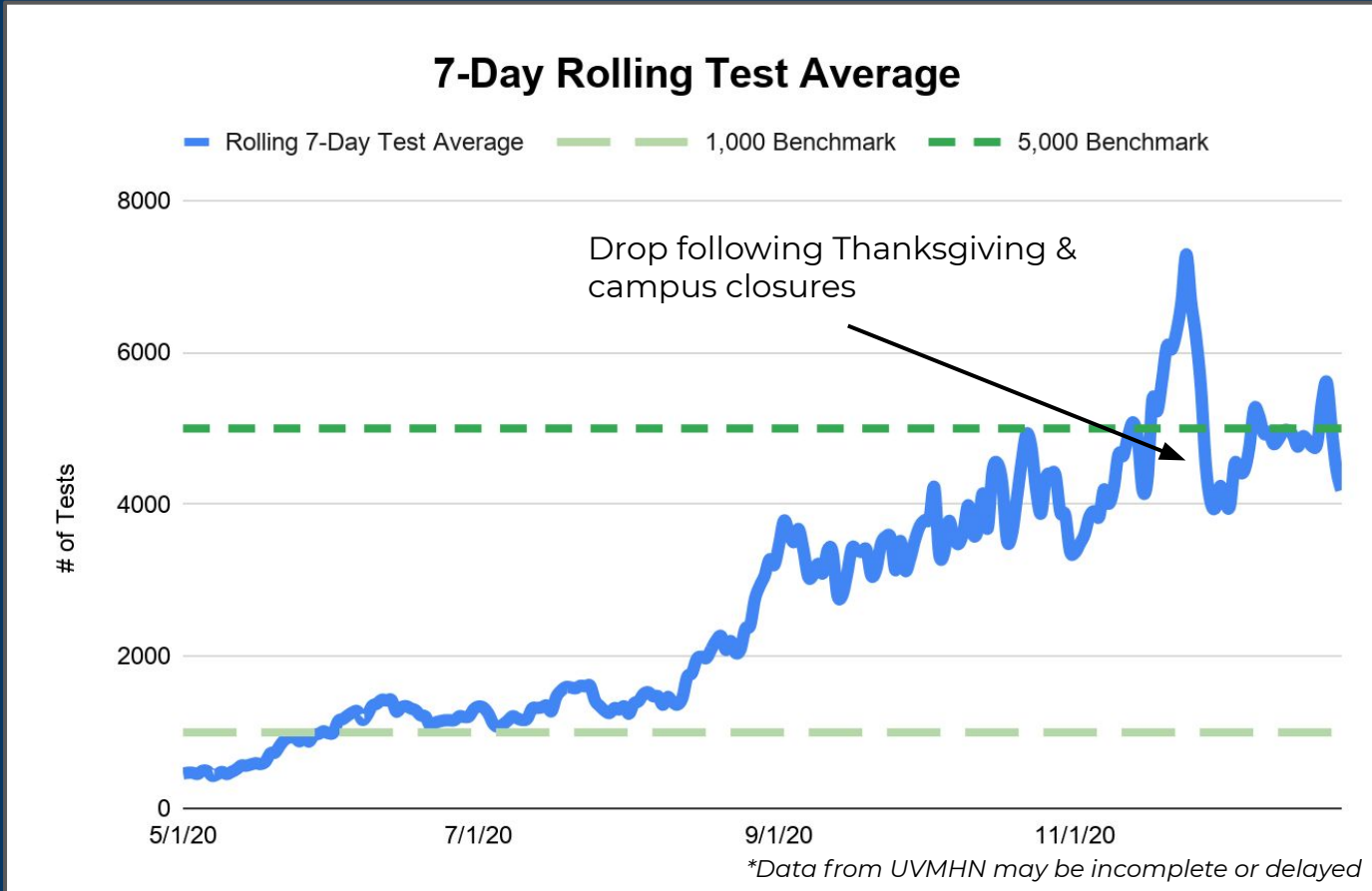


Data Point 4: Hospital & Critical Care Beds

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

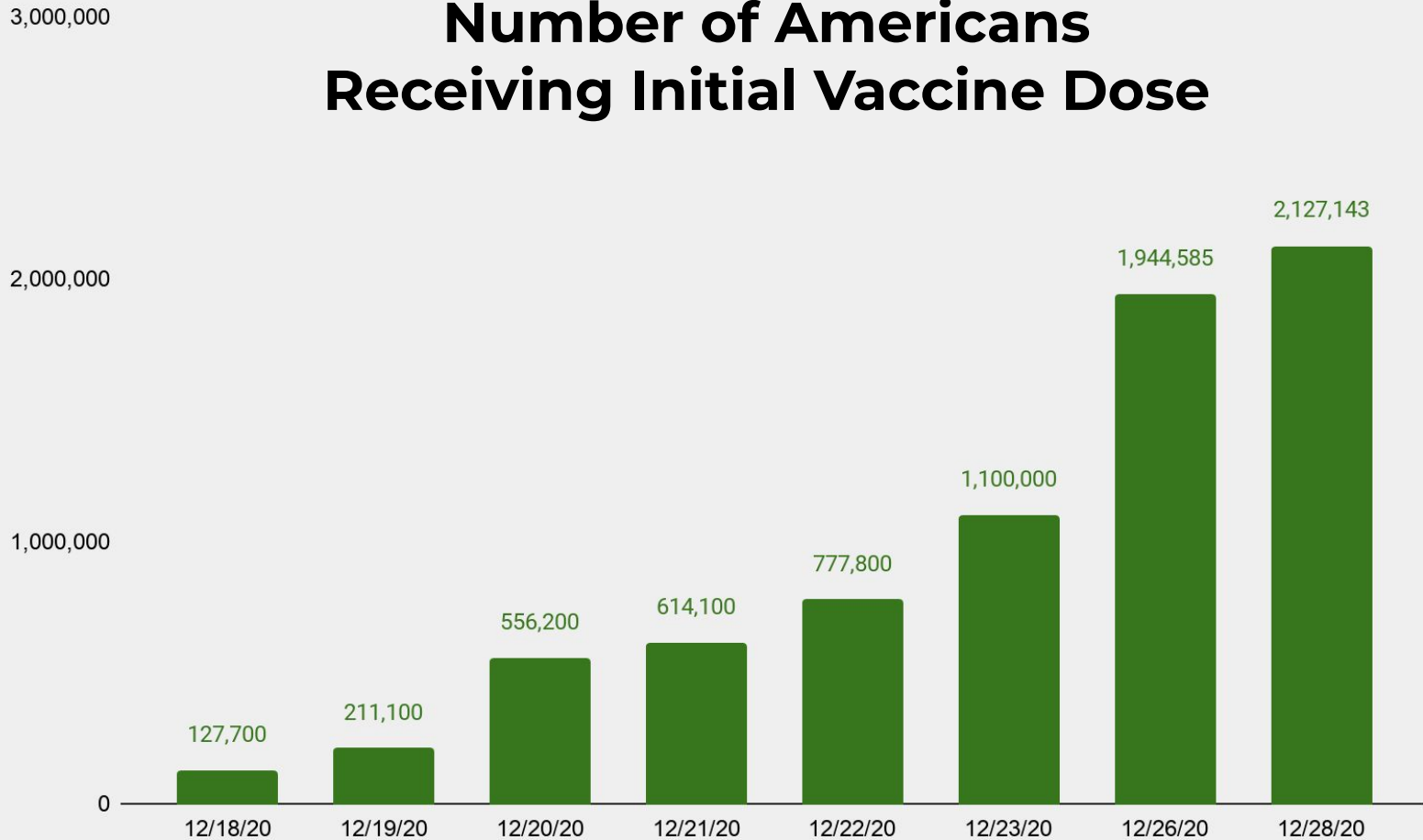


Vermont Testing

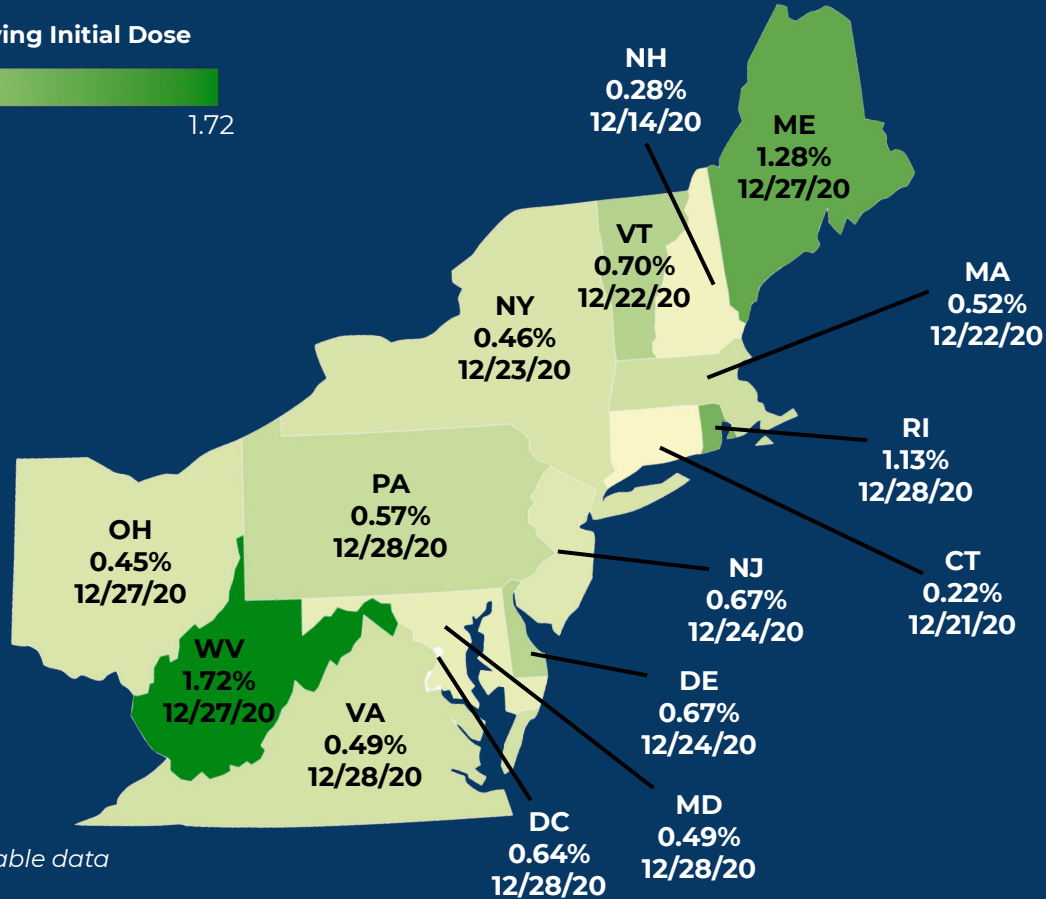


Vaccine Updates

Number of Americans Receiving Initial Vaccine Dose

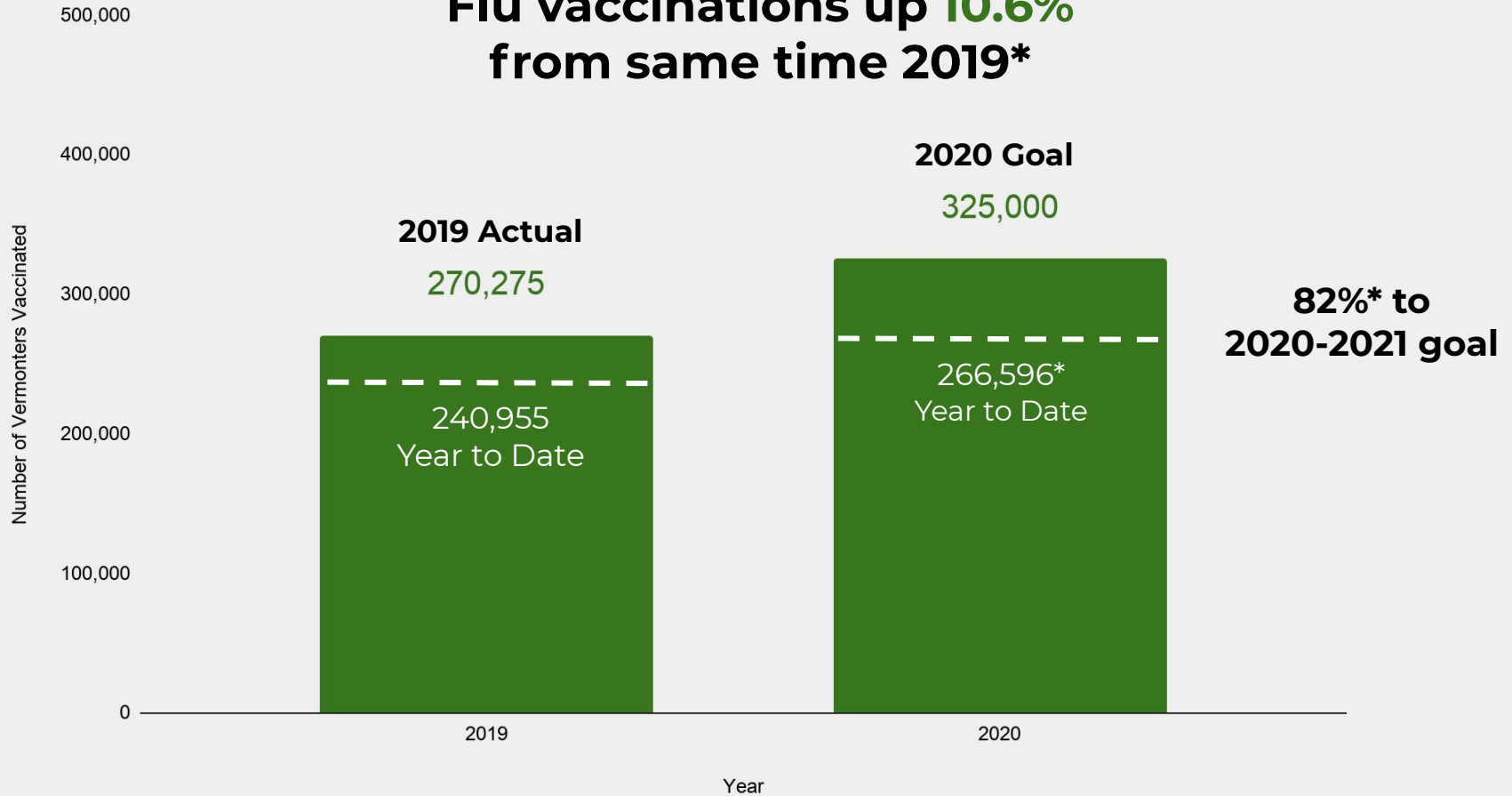


Regional Vaccination Map



Preliminary and based on publicly available data
Source: Johns Hopkins Vaccine Tracker

Flu vaccinations up 10.6% from same time 2019*



*Data from UVMHN may be incomplete or delayed

Source: Vermont Department of Health & ADS; Immunization Registry; Measured from July 1 to December 20, 2019 & 2020