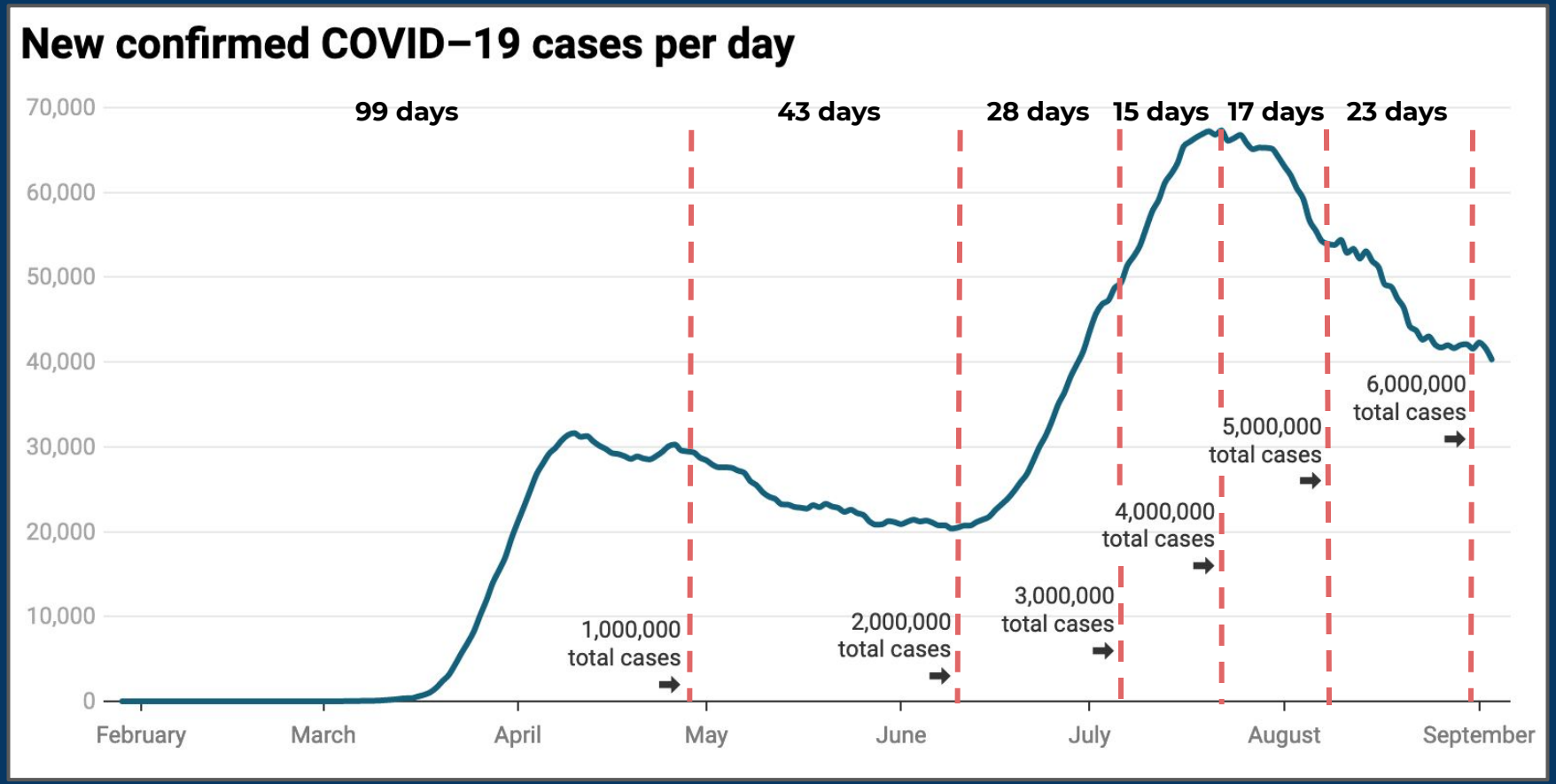
COVID-19 Modeling
September 4, 2020

Presentation available at:
dfr.vermont.gov

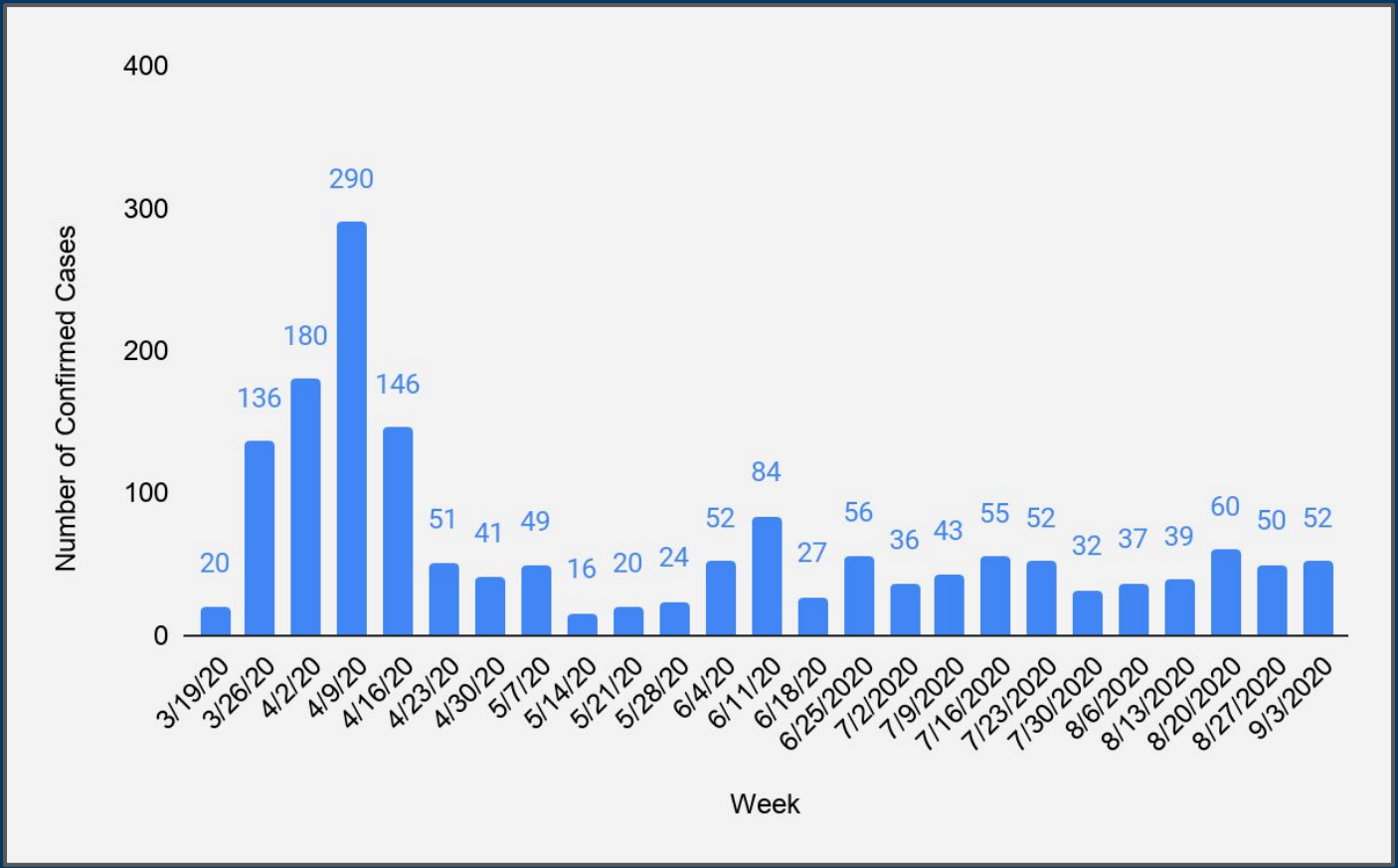
National Data



Source: Johns Hopkins University - September 2, 2020

Vermont Data

Vermont Weekly Totals



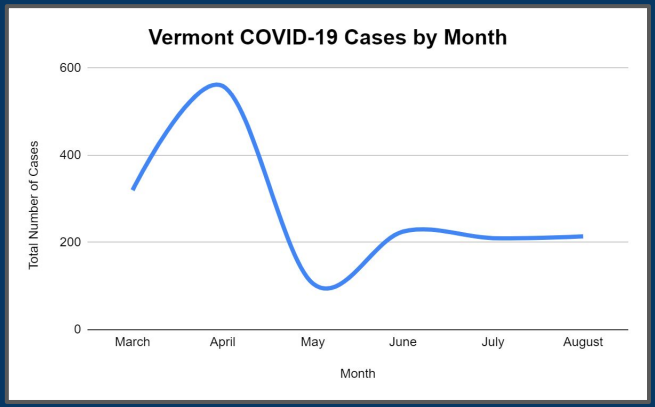
Sources: Vermont Department of Health (week ending Thursday)

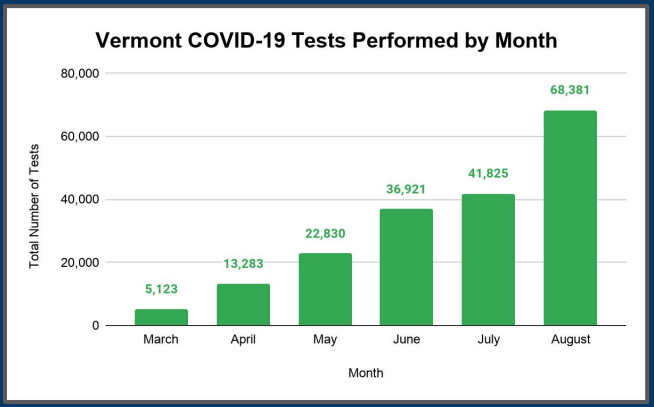
August: By the Numbers

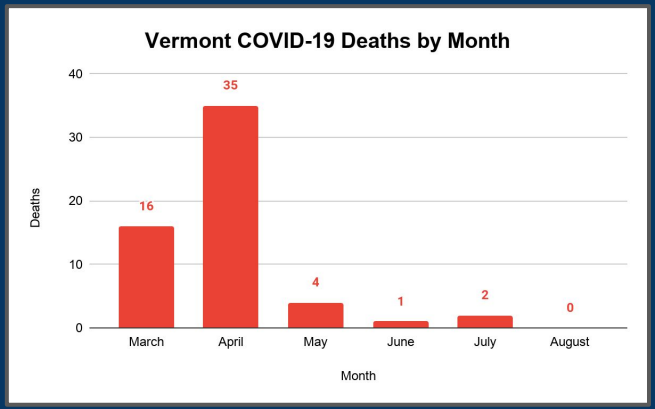
- Tests: **68,381***
- Cases: **214**
- Test Positivity: **0.32%**
- Averaged **2** Individuals Requiring Hospitalization
- Averaged **Less Than 1** Individual Requiring ICU
- Deaths: **0**

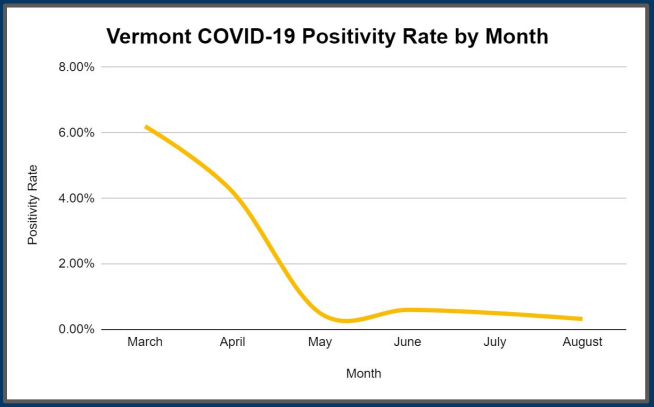
Source: Vermont Department of Health; *unique results reported to VDH (*note:* not a measure of individuals as individuals may be tested more than once over time)

Vermont Monthly COVID-19 Totals



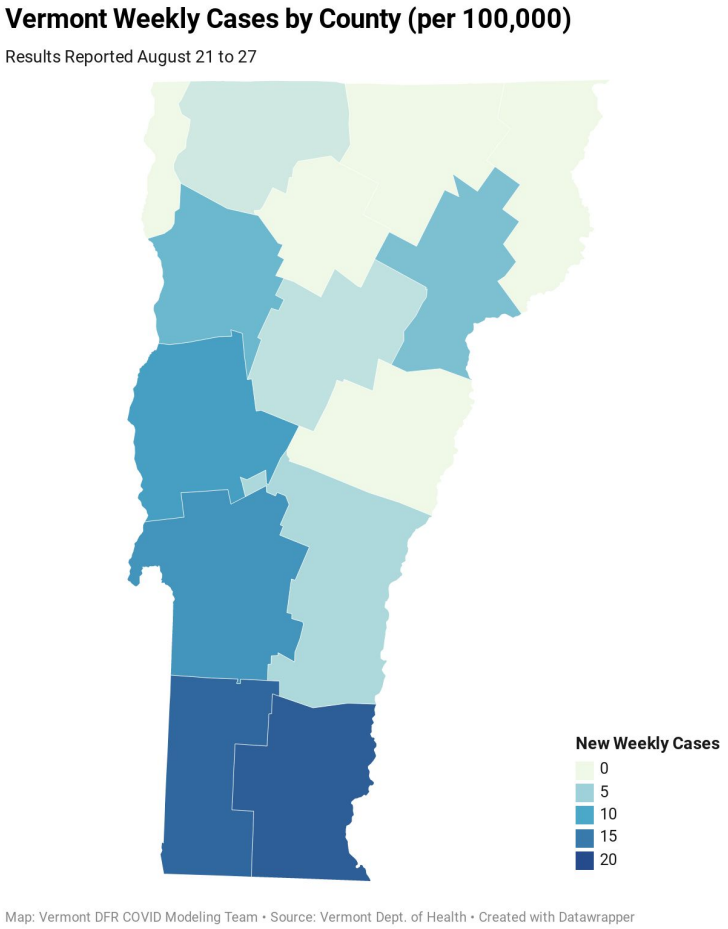


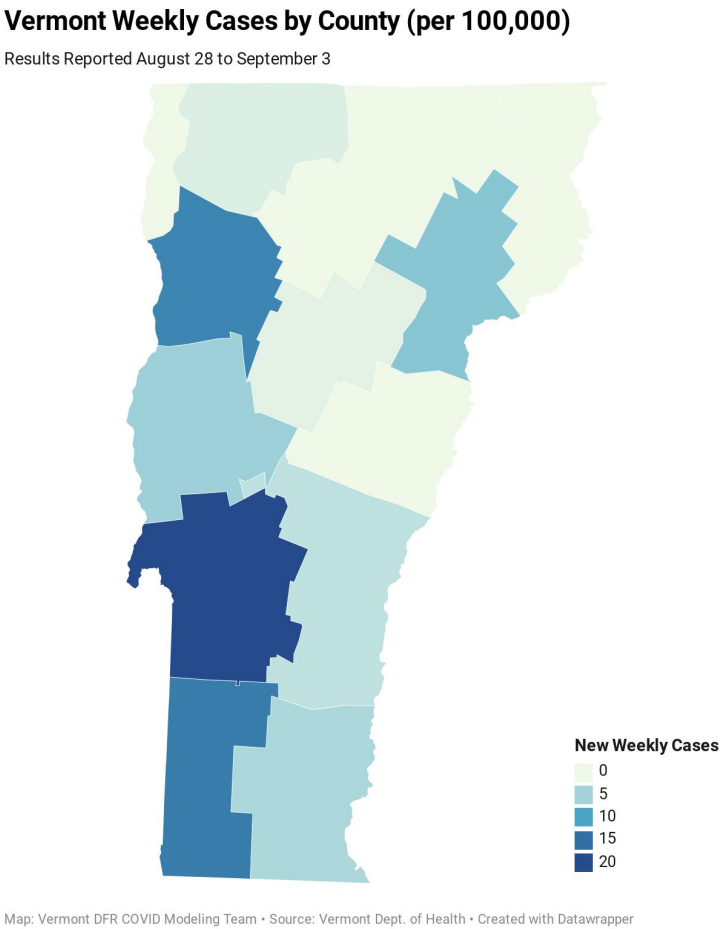




Source: Vermont Department of Health

New Cases by County





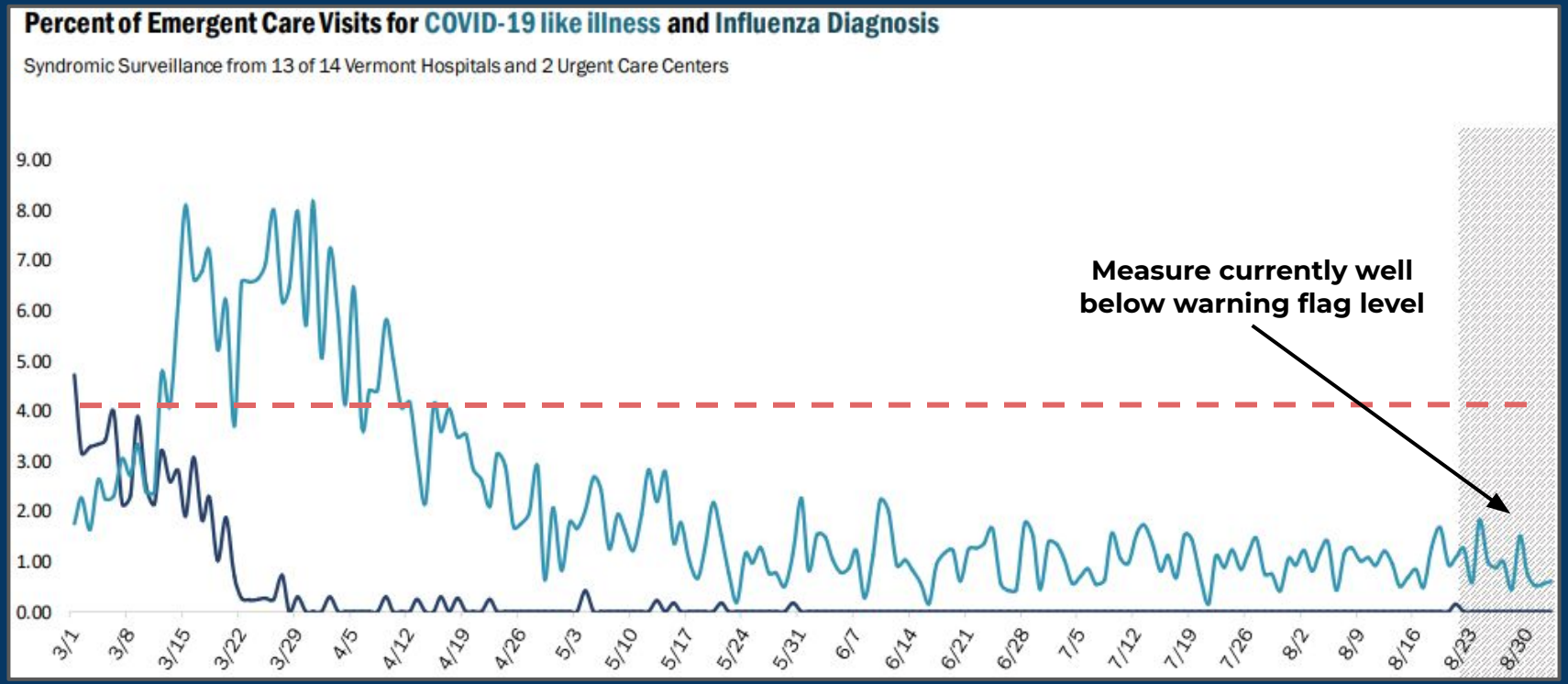
RESTART VERMONT

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

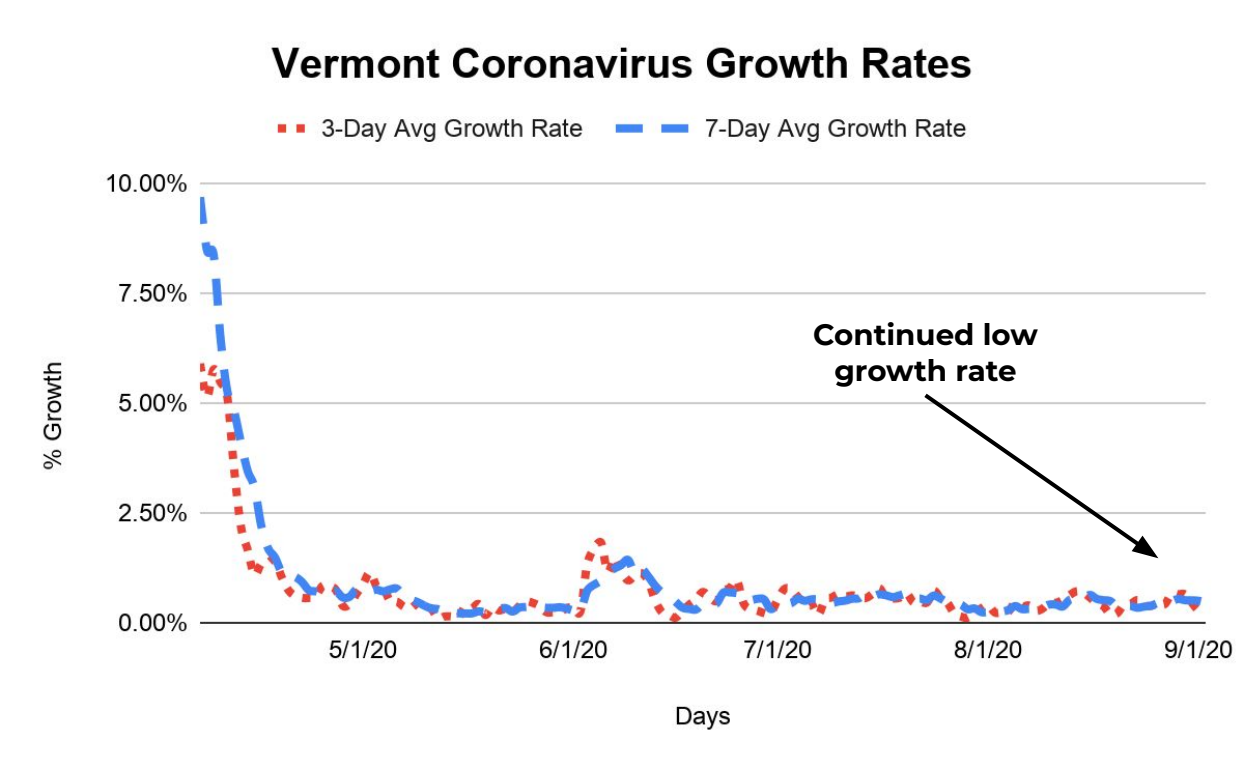
- **Summary:** Percentage of visits with COVID-19 like illness and Influenza diagnosis
- **Warning Flag:** Percentage of visits exceeding 4% for multiple consecutive days



Source: Vermont Department of Health - September 3, 2020

Data Point 2: Viral Growth and Reproductive Rates

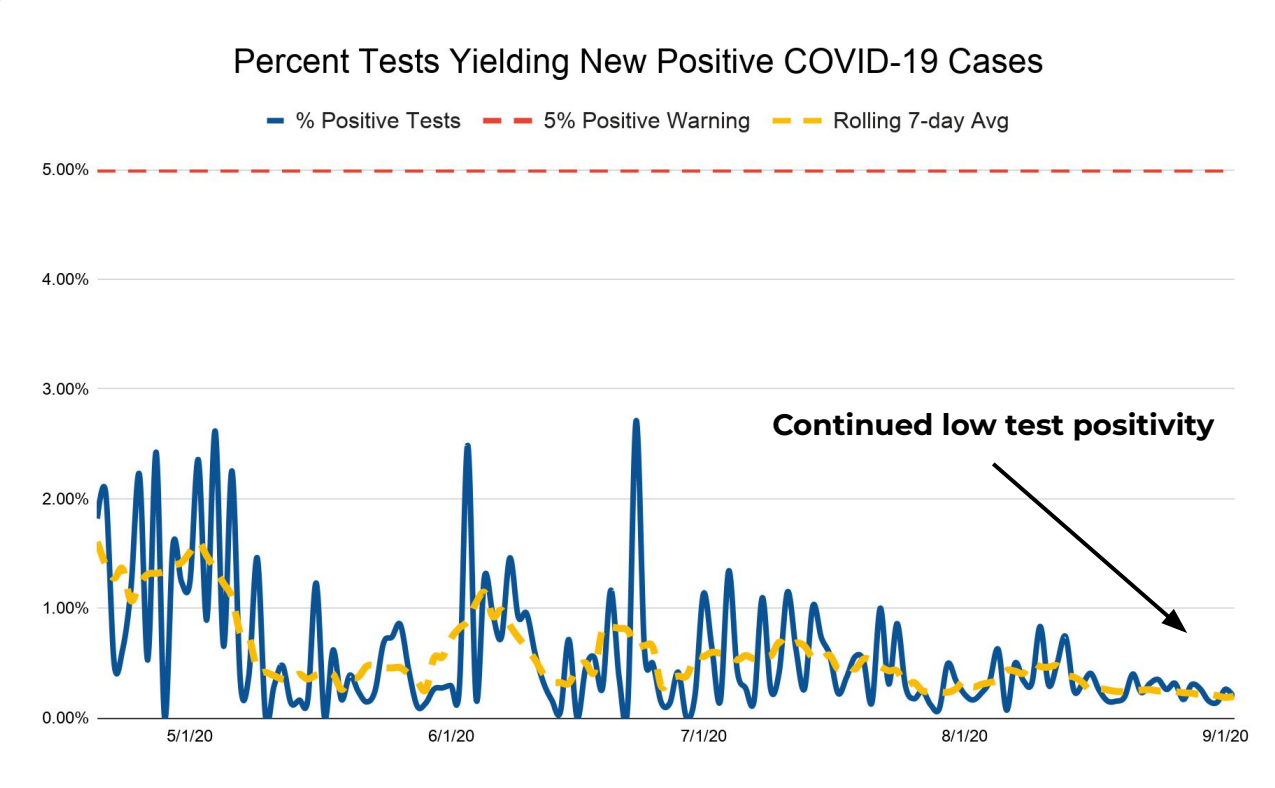
- **Summary:** Case growth measured by daily, 3-day, 7-day, and effective reproductive rate (R_t)
- **Warning Flags:** Sustained viral growth that would lead to <30% of open ICU beds



Source: Vermont Department of Health - September 3, 2020

Data Point 3: Percentage of New Positive Tests

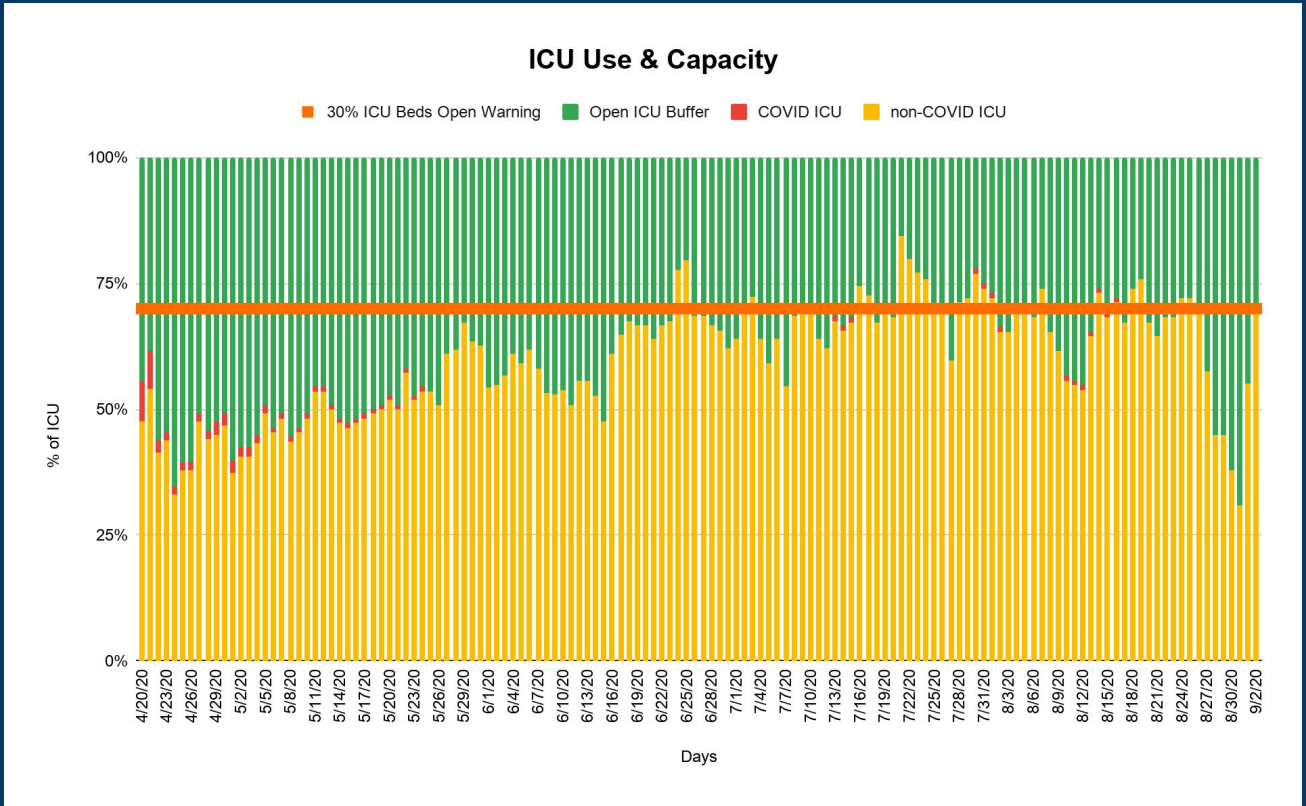
- **Summary:** Percent of tests resulting in a new positive case
- **Warning Flags:** New positives represent >5% of daily results



Source: Vermont Department of Health - September 3, 2020

Data Point 4: Hospital & Critical Care Beds

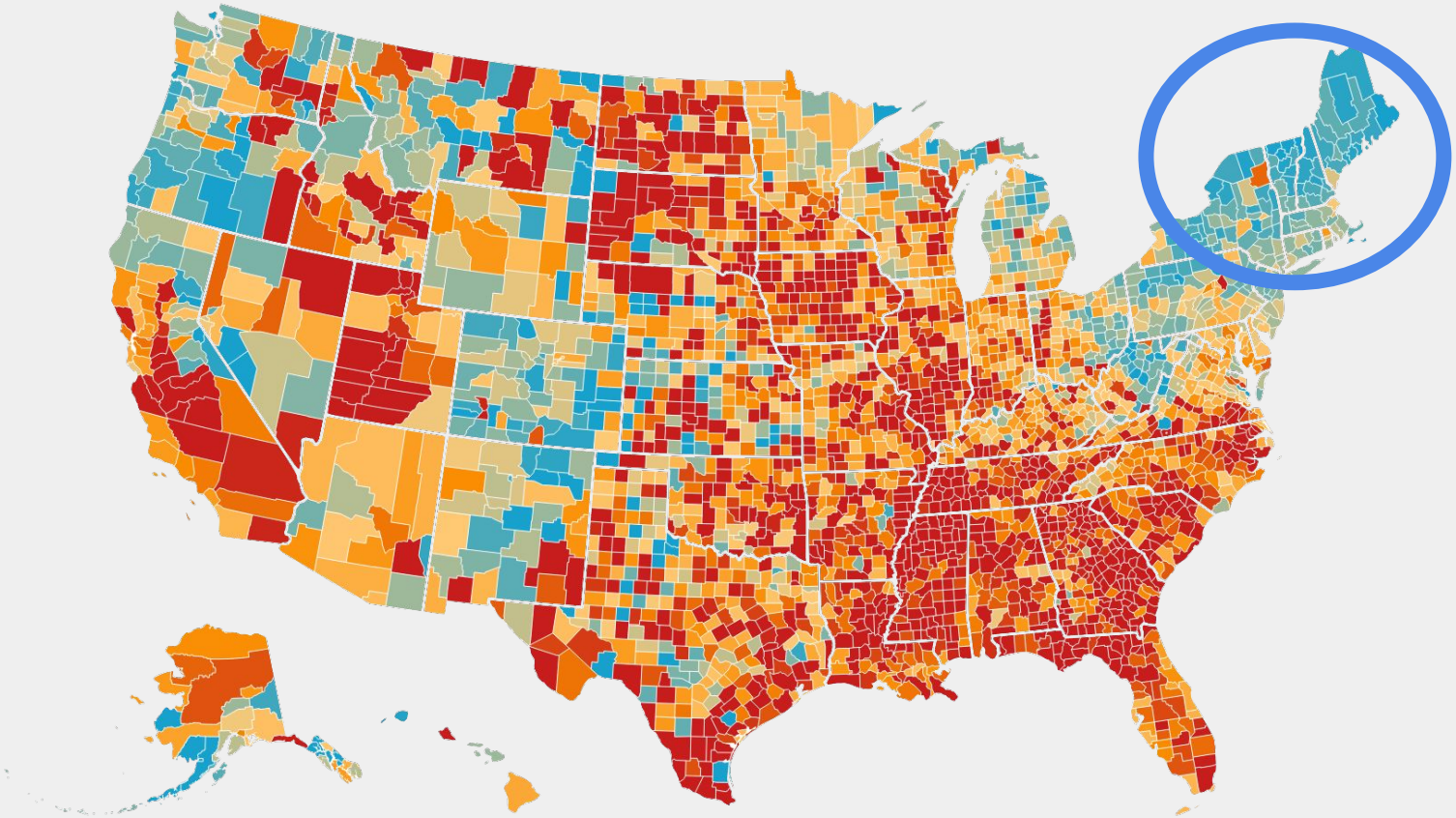
- **Summary:** Number of occupied and unoccupied medical surgical and ICU beds
- **Warning Flags:** Reduction in ICU open beds to less than 30%



Source: Vermont Department of Health - September 3, 2020

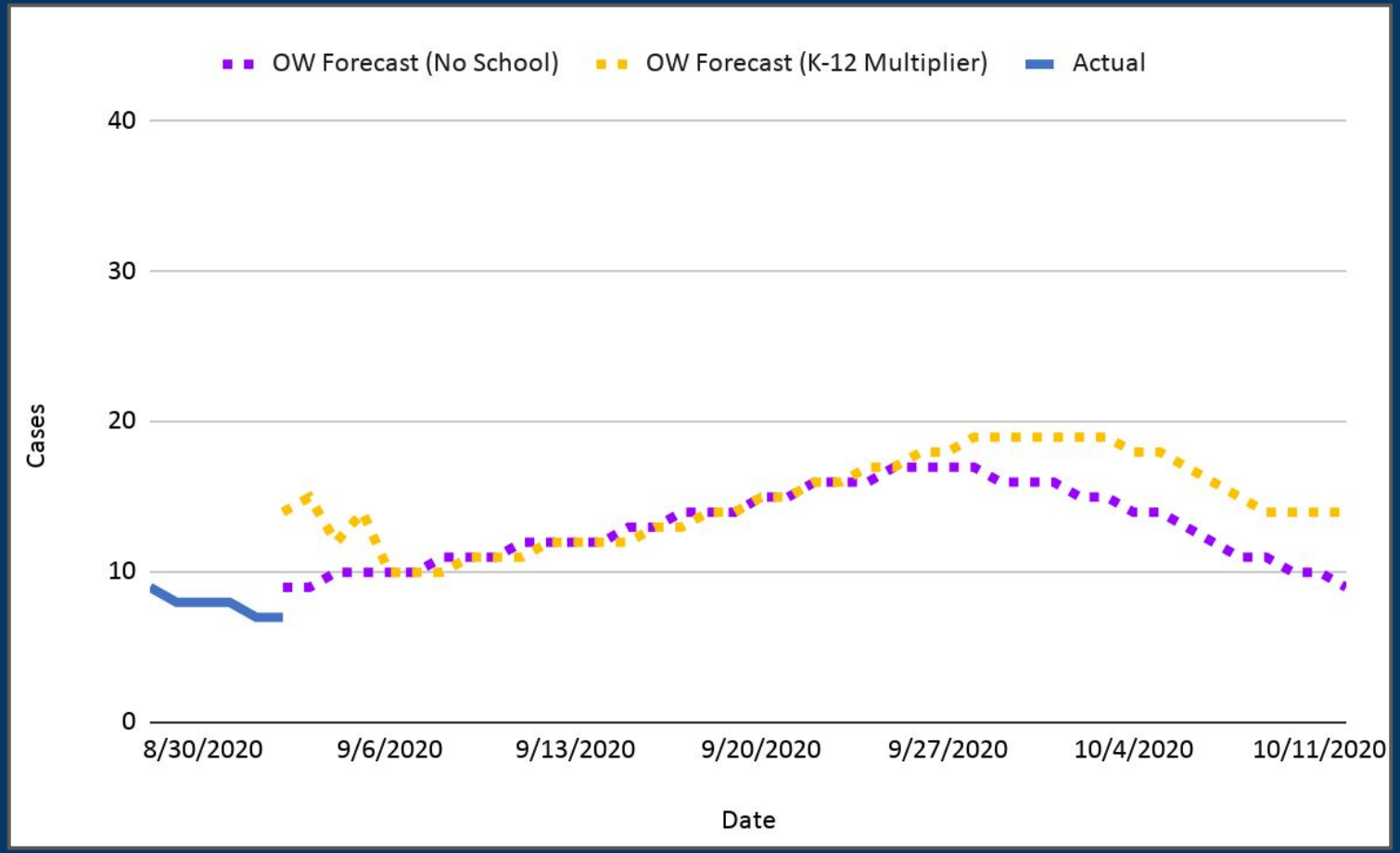
Higher Education & K-12 Reopening

National: New Cases in Last 14 Days



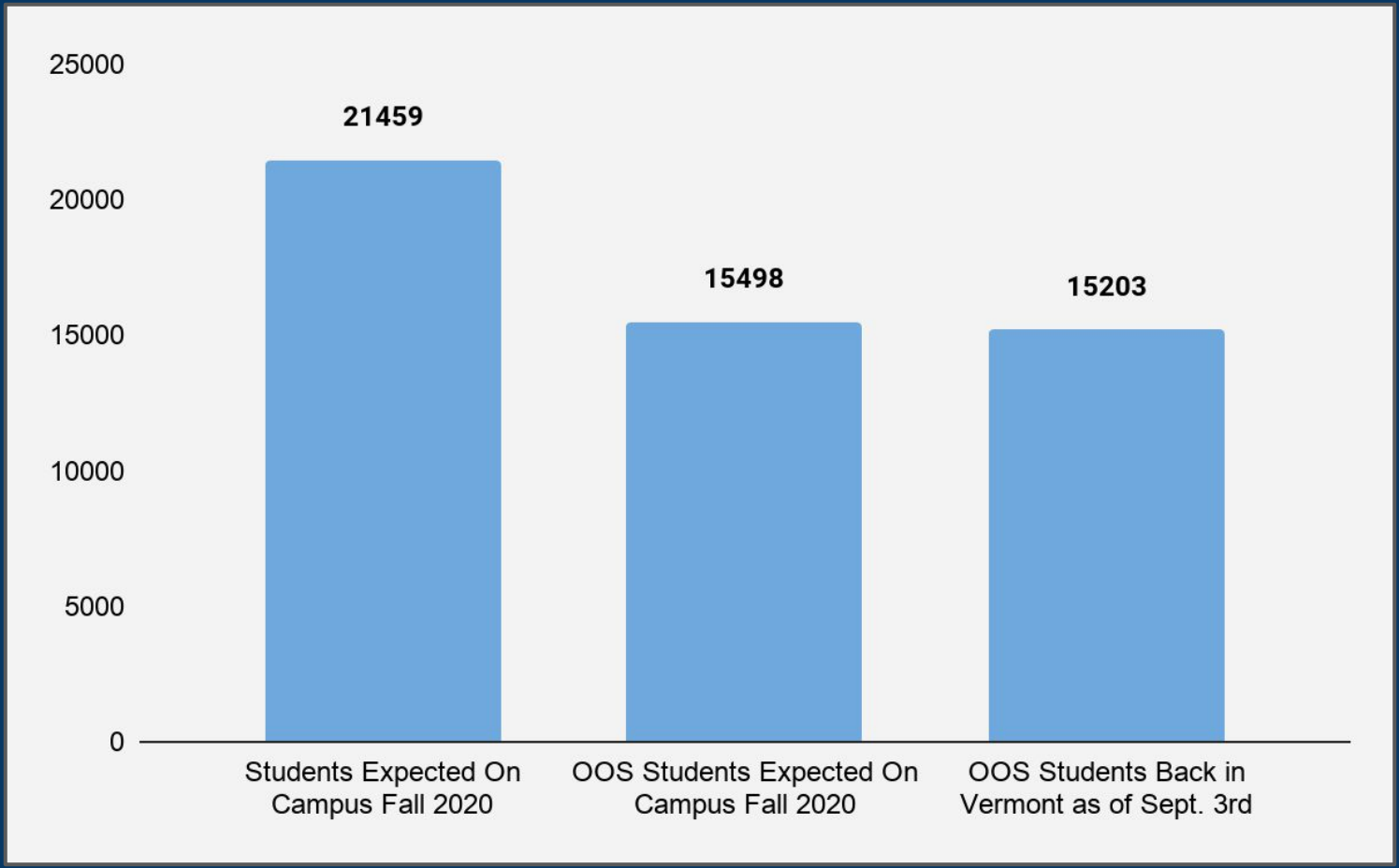
Source: Raw data from Johns Hopkins University—September 4, 2020

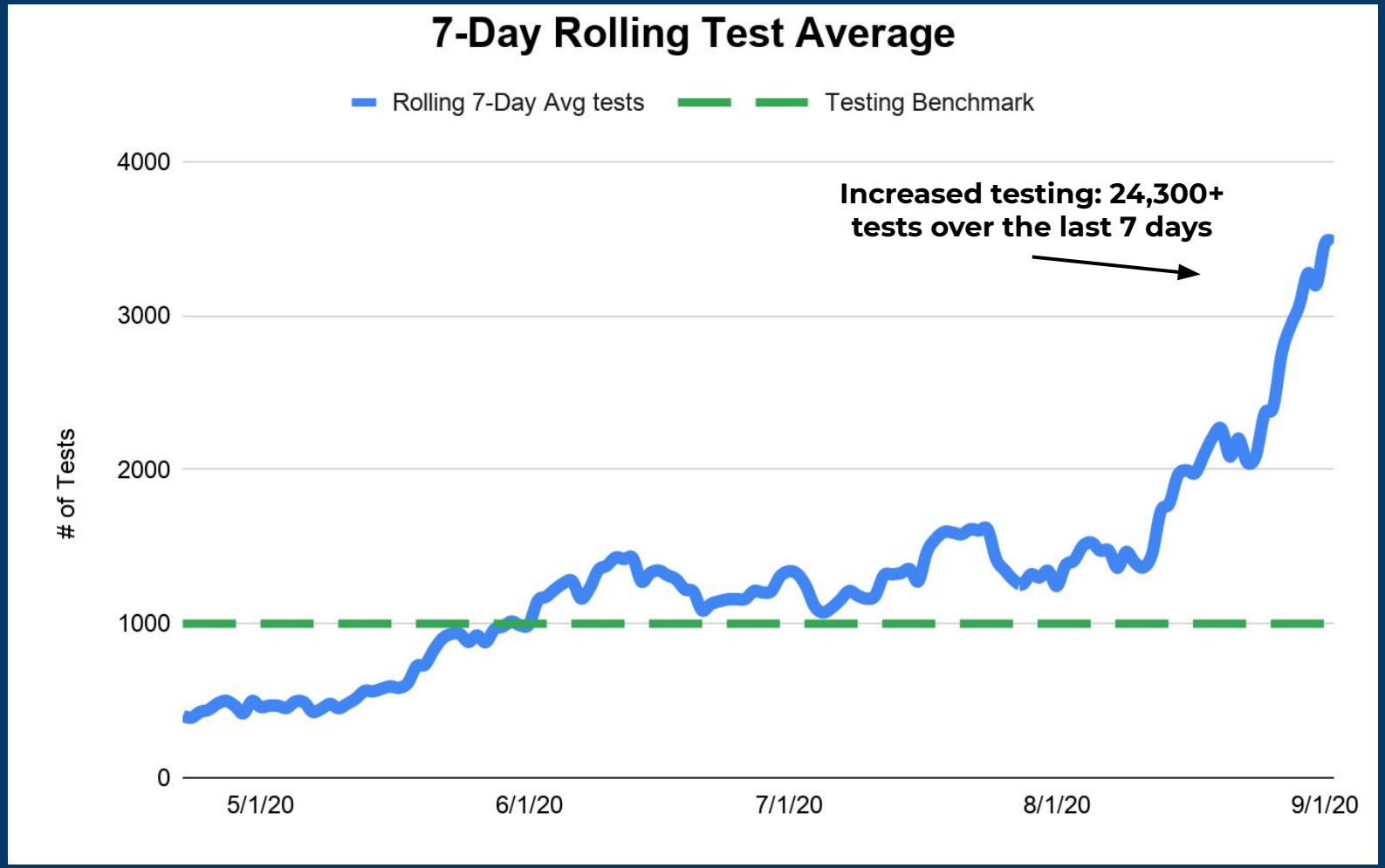
Vermont Model



Source: Oliver Wyman Forecast Model - September 2, 2020

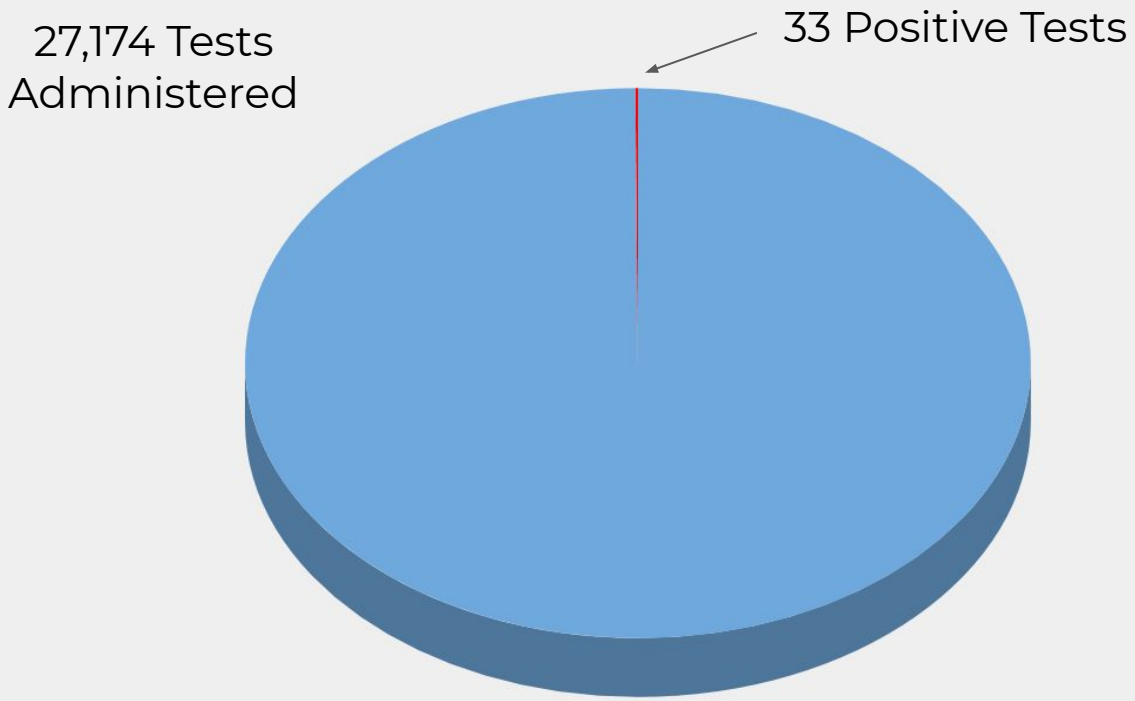
Vermont College / University Fall 2020 Data





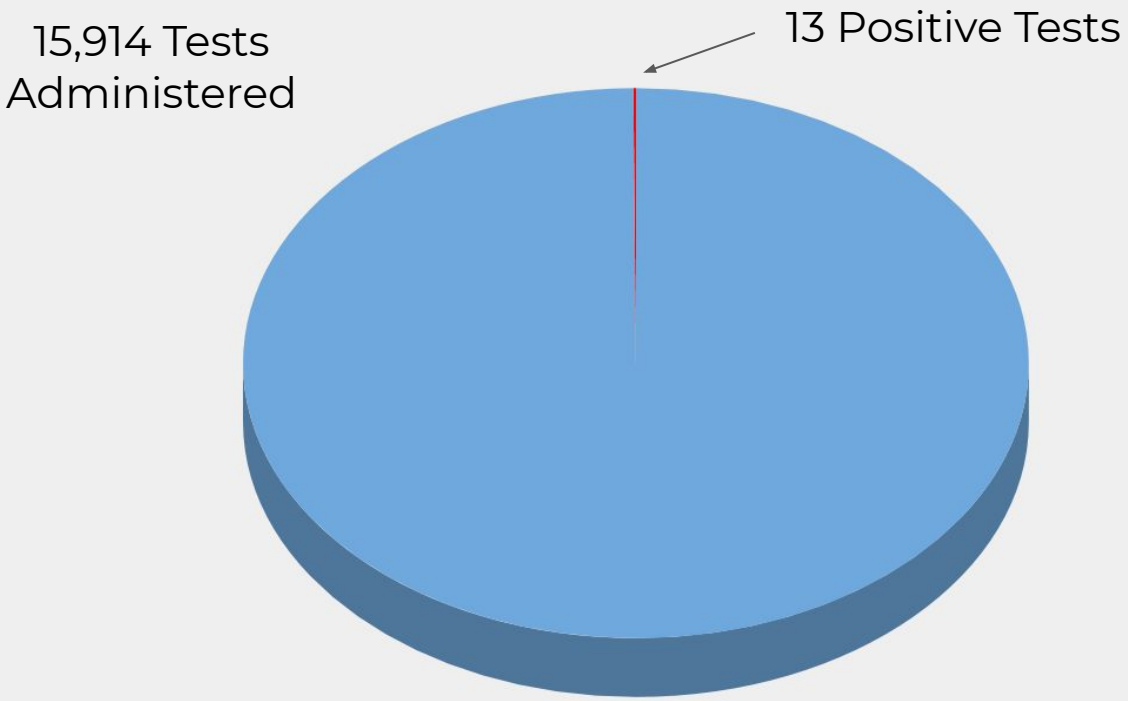
Source: Vermont Department of Health - September 3, 2020; tests measured as results reported to VDH by day

Vermont Colleges & Universities Testing as of September 3, 2020



0.12% Positivity Rate

Burlington Area Colleges & Universities Testing as of September 3, 2020



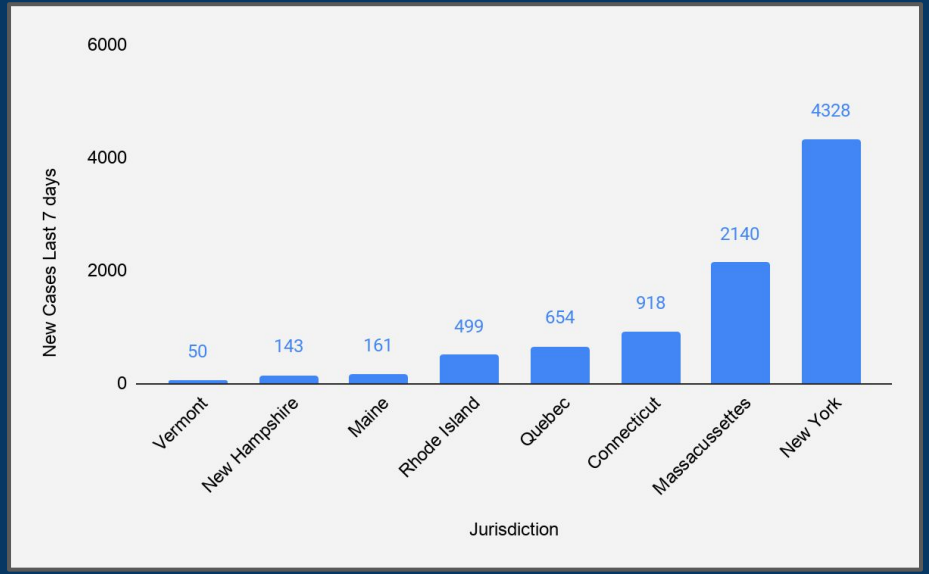
0.11% Positivity Rate

Regional Data

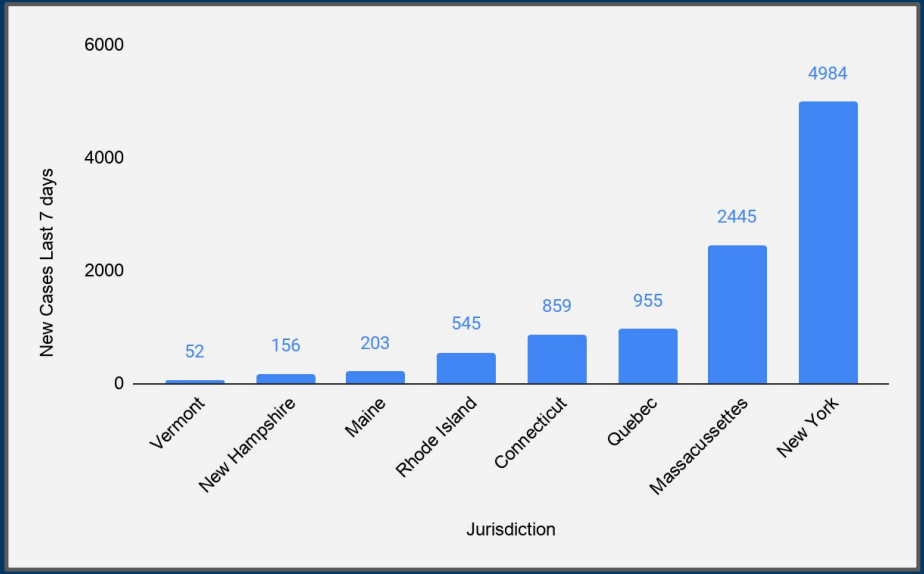
Regional Monitoring: New Cases Week Over Week

14.69% Increase in New Confirmed Cases

Positive Cases August 21st to August 27th

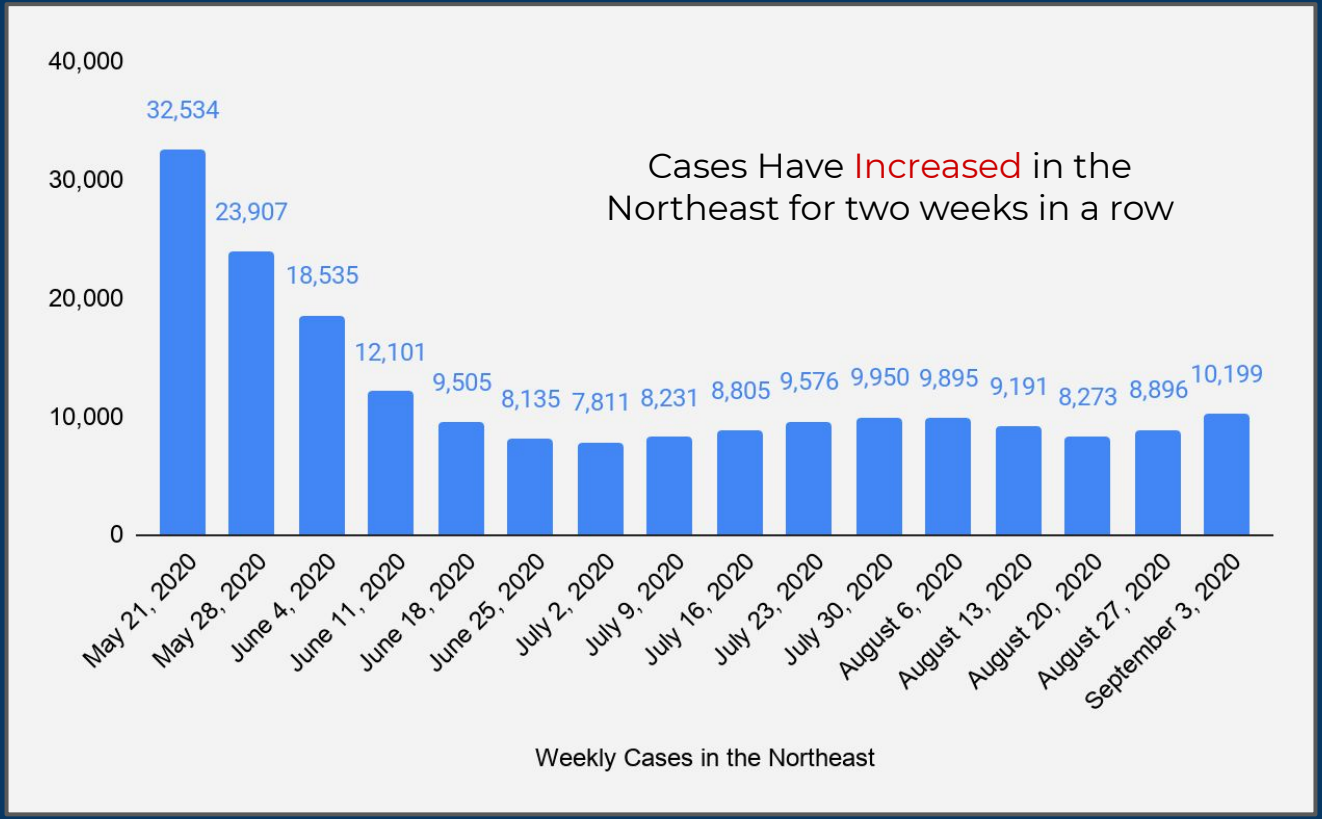


Positive Cases August 28th to September 3rd



Sources: COVID-19 Tracking Project, New York Time Covid-19 Database & Government of Quebec

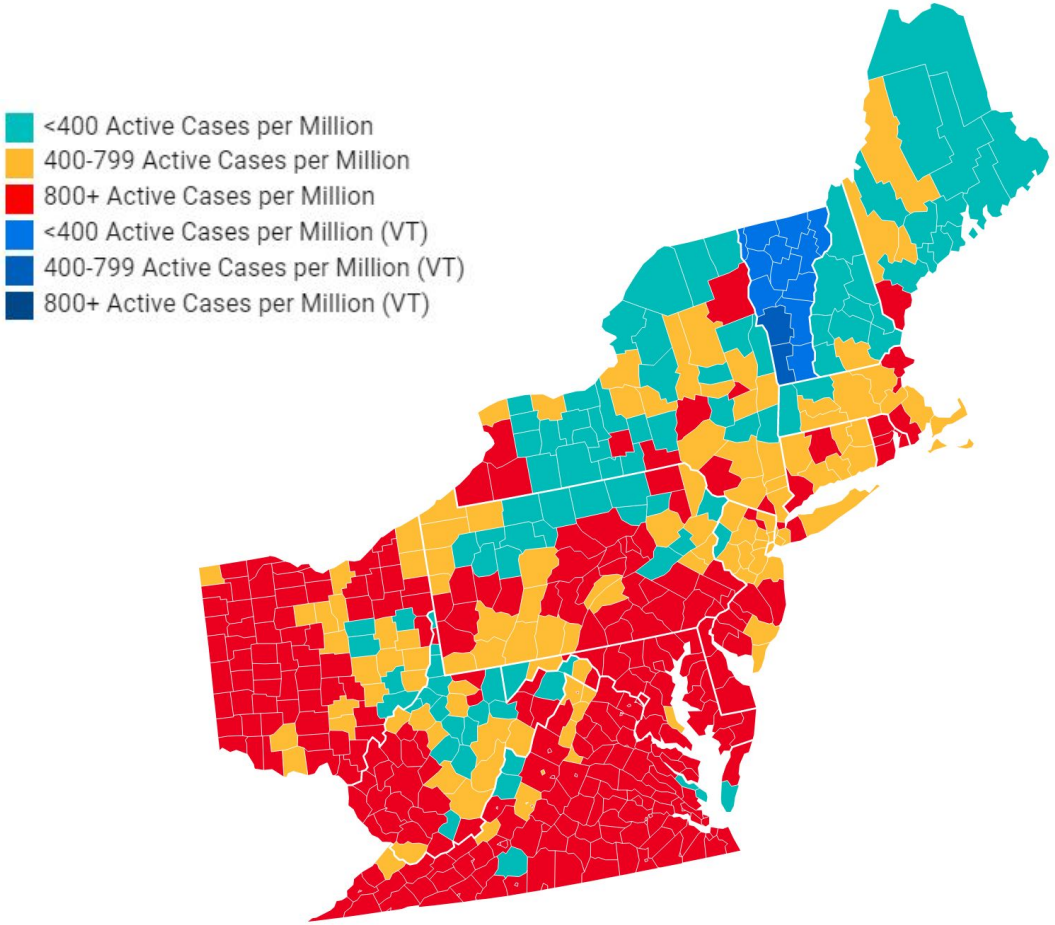
Regional Monitoring:
Week Over Week Case Growth Since May 21, 2020



Sources: COVID-19 Tracking Project, New York Time Covid-19 Database & Government of Quebec

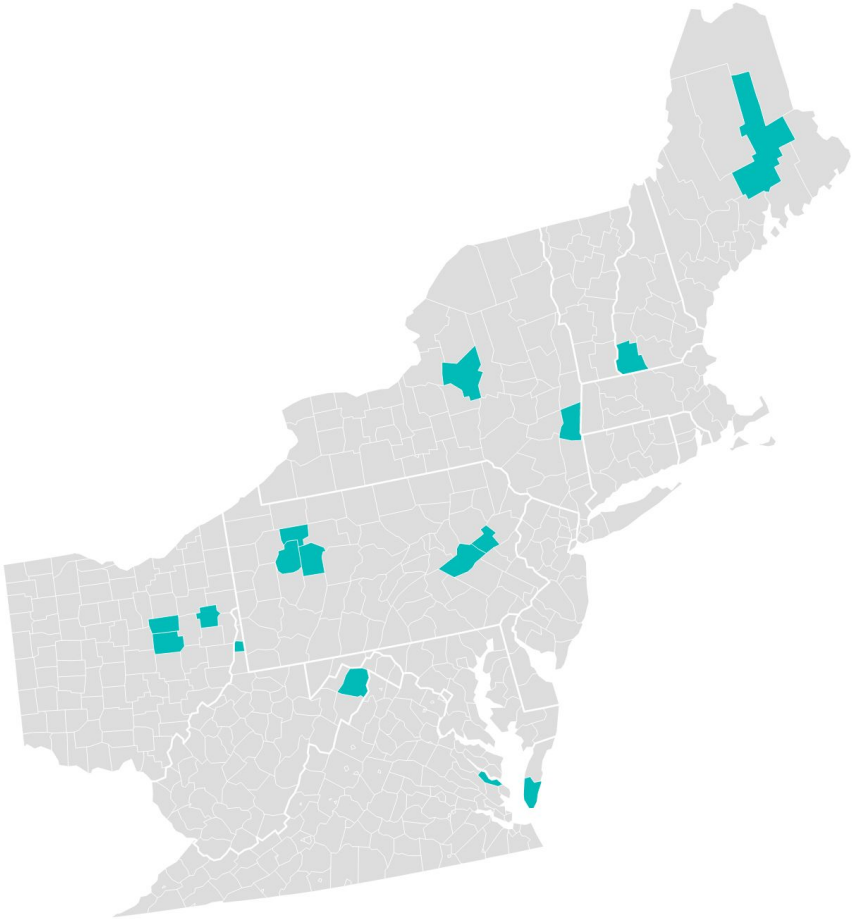
Travel Map Update

Updated Travel Map

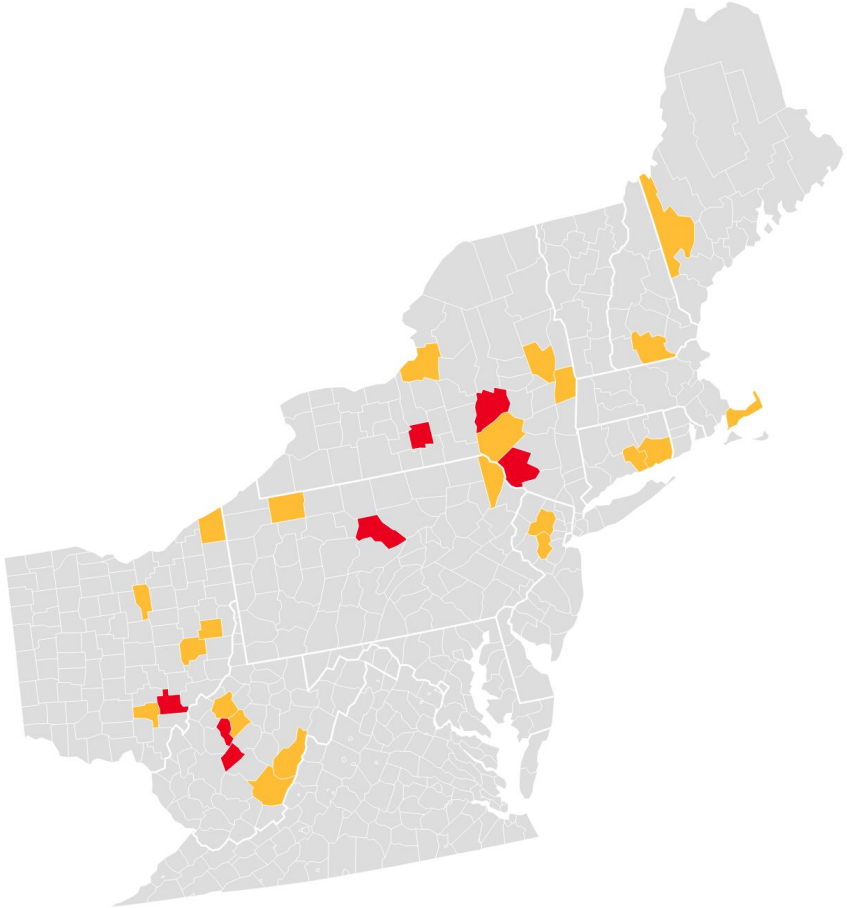
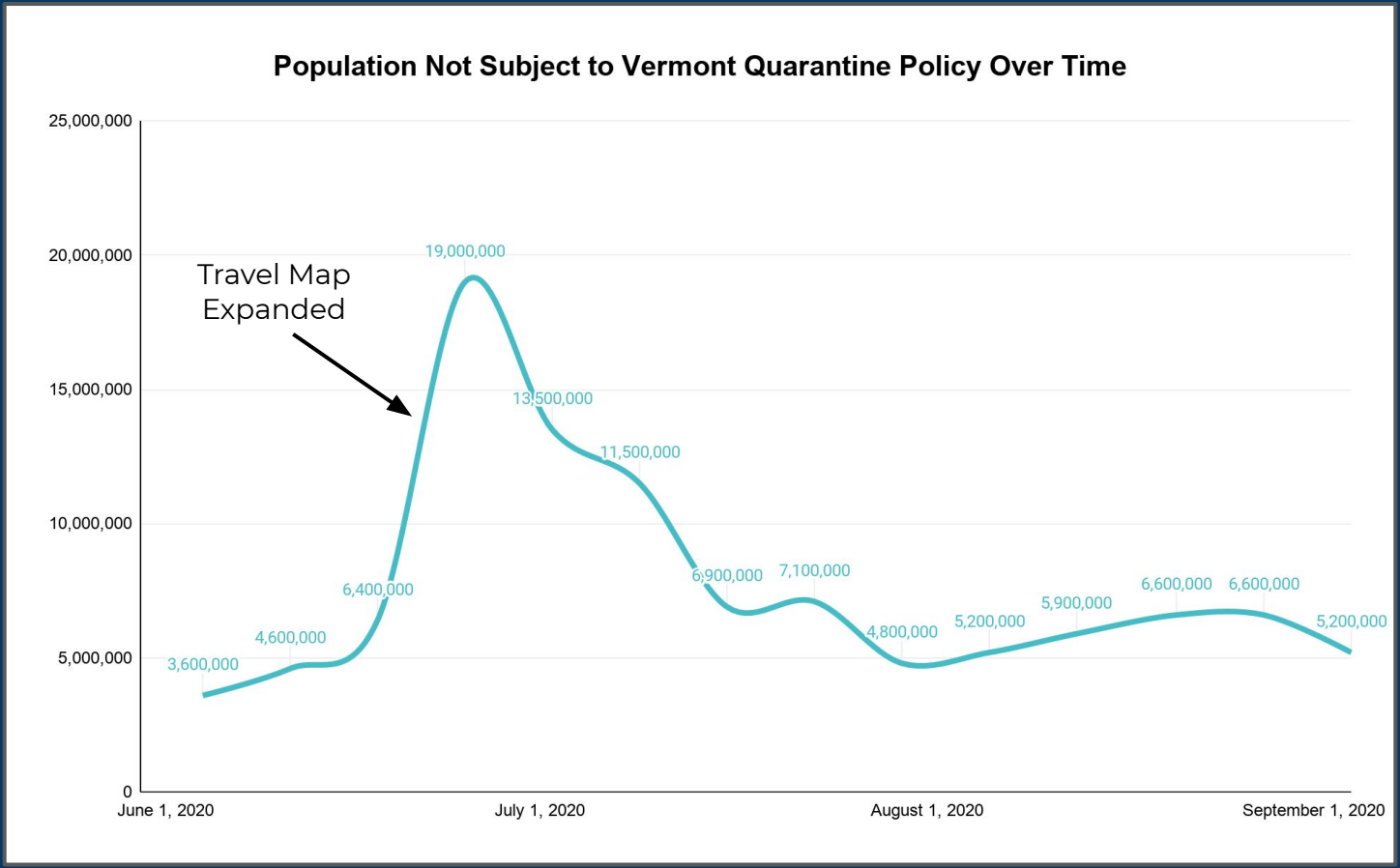


Source: Raw data from Johns Hopkins University—September 4, 2020 (dynamic map available at Vermont ACCD site)

Improving: Moving from Yellow or Red to Green



Worsening: Moving to Yellow or Red



Updated Travel Map