COVID-19 Modeling
September 11, 2020

Presentation available at: dfr.vermont.gov
National: New Cases in Last 14 Days

Source: Raw data from Johns Hopkins University—September 10, 2020
Vermont Weekly Totals

Week


Number of Confirmed Cases

0 100 200 300 400

Sources: Vermont Department of Health (week ending Thursday)
Vermont Forecast September 11th to October 20th

Source: Oliver Wyman Forecast Model - September 10, 2020
New Cases by County

Vermont Weekly Cases by County (per 100,000)
Results Reported August 28 to September 3

Vermont Weekly Cases by County (per 100,000)
Results Reported September 4 to 10

Map: Vermont DFR COVID Modeling Team • Source: Vermont Dept. of Health • Created with Datamapper
Source: Vermont Department of Health - September 10, 2020; tests measured as results reported to VDH by day
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 10, 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 10, 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 10, 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 10, 2020
Vermont Colleges & Universities
Testing Volume by Week

<table>
<thead>
<tr>
<th>Week</th>
<th>Total COVID-19 Tests</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week of 8/28/2020</td>
<td>8,679</td>
</tr>
<tr>
<td>Week of 9/4/2020</td>
<td>18,401</td>
</tr>
<tr>
<td>Week of 9/10/2020</td>
<td>15,029</td>
</tr>
</tbody>
</table>
Cumulative Test Results for Vermont Colleges & Universities as of September 10, 2020

- 38 Positive Tests
- 42,109 Tests Administered
- 0.09% Positivity Rate
<table>
<thead>
<tr>
<th>State</th>
<th>Total Tests</th>
<th>Positives</th>
<th>Positivity Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Hampshire*</td>
<td>70,671</td>
<td>110</td>
<td>0.16%</td>
</tr>
<tr>
<td>Maine*</td>
<td>39,739</td>
<td>42</td>
<td>0.11%</td>
</tr>
<tr>
<td>Vermont</td>
<td>42,109</td>
<td>38</td>
<td>0.09%</td>
</tr>
</tbody>
</table>

*Includes colleges & universities that publicly provide COVID-19 testing data.
Regional Data
Regional Monitoring: New Cases Week Over Week

2.39% Decrease in New Confirmed Cases

Positive Cases August 28th to Sept. 3rd

Positive Cases Sept. 4th to Sept. 10th

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

Cases have **decreased** for the first time in three weeks.

Weekly Cases in the Northeast

Travel Map Update
Updated Travel Map

Source: Raw data from Johns Hopkins University—September 11, 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