COVID-19 Modeling
March 8, 2022

Presentation available at: dfr.vermont.gov
Overview

As Vermont passes the two-year anniversary of its first reported COVID-19 case, the situation in the state continues to improve from the height of the Omicron wave. Over half a million Vermonters have also now been fully vaccinated against COVID-19.

Vermont is averaging 140 cases per day on a seven-day average—a 93% decrease since the Omicron peak. The pace of case decline has slowed both in Vermont and New England as infections reach more stable low levels. CDC modeling indicates cases are expected to remain low in Vermont, the Northeast, and across the United States throughout the month of March.

Hospitalizations continue to see significant decreases: new hospital admissions are down 36% this week (down 78% from the Omicron peak); those currently hospitalized are down 21% this week (down 78% from the Omicron peak); and those currently in the ICU are down 42% this week (down 88% from the Omicron peak). The state has recorded 16 consecutive days of fewer than 10 Vermonters in the ICU for COVID-19.

Hospitalizations continue to be more common among older Vermonters: those over 65 are more than 19 times more likely to be hospitalized for COVID than those under 24. Unvaccinated adults are also at increased risk with quadruple the rate of hospitalization compared to their boosted peers.

Most fortunately, the seven-day fatality rate is below one for the first time in two months as fewer COVID-19 deaths are occurring. Our thoughts continue to be with the families and friends of those who have lost loved ones to COVID-19. Modeling forecasts COVID-19 deaths will decline steadily in the coming weeks.
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Vermont Case Data
Vermont is averaging **140 cases** over the last 7 days.

The 7-day average has **decreased 14%** over the last 7 days & **decreased 36%** over the last 14 days.

Cases **down 93%** since the Omicron Peak.
Vermont reported 983 new COVID-19 cases this week, **164 fewer cases** compared to last week.

First week since August 2021 with fewer than 1,000 new COVID-19 cases.
Week-over-week testing fell, with the 7-day average increasing 2.6%
Test positivity **decreased 15%** over the last 7 days

Vermont PCR Test Positivity

Source: VDH—March 8, 2022; created with Datawrapper
The not fully vaccinated case rate has increased 15% in the last 7 days.

The fully vaccinated rate has decreased 17% during the same period.

Source: VDH & CDC—March 2, 2022; Created with Datawrapper
Over the last 7 days, cases have:

- **Increased 18%** for ages **0 to 24**
- **Decreased 26%** for ages **25 to 49**
- **Decreased 34%** for ages **50 to 64**
- **Decreased 41%** for ages **65+**
VT COVID-19 Infections per 100K by Age Group

Source: VDH—March 8, 2022; created with Datawrapper
Vermont Covid-19 Case Rates by Age (7-Day Average)

Source: VDH—March 2, 2022; created with Datawrapper
Age of Infected Vermonters

Median age of COVID positive individuals in VT over the last 14 days.

Source: VDH—March 8, 2022; created with Datawrapper
Vermont had the 2nd highest rate of COVID-19 testing over the last week.
Vermont ranked 43rd for the rate of new COVID-19 cases over the last week.
Vermont COVID-19 cases are expected to continue to decline in the coming weeks, consistent with improving case trends in Vermont, the Northeast and the U.S.
VT COVID-19 Death Confidence Intervals

Calculated as a 7-day mean. Inner and outer bands represent 50% and 95% confidence intervals, respectively.

Declines in COVID-19 fatalities are expected over the next 4 weeks

Source: Johns Hopkins University & CDC—March 8, 2022; created with Datawrapper
## Active Outbreaks in Long Term Care Facilities

<table>
<thead>
<tr>
<th>Facility Name</th>
<th>Total COVID-19 Cases</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mayo Residential Care</td>
<td>6</td>
</tr>
<tr>
<td>Riverbend Residential Care Home</td>
<td>7</td>
</tr>
<tr>
<td>The Residence at Quarry Hill</td>
<td>12</td>
</tr>
<tr>
<td>Heaton Woods</td>
<td>12</td>
</tr>
<tr>
<td>Vergennes Residential Care</td>
<td>16</td>
</tr>
<tr>
<td>Kirby House</td>
<td>26</td>
</tr>
<tr>
<td>Brownway Residence</td>
<td>32</td>
</tr>
<tr>
<td>Bel-Aire Center</td>
<td>52</td>
</tr>
<tr>
<td>Greensboro Nursing Home</td>
<td>Not Shown</td>
</tr>
<tr>
<td>Thompson House</td>
<td>Not Shown</td>
</tr>
<tr>
<td><strong>Total (shown)</strong></td>
<td><strong>163</strong></td>
</tr>
</tbody>
</table>

Source: Vermont Department of Health—March 8, 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

36% decrease in the new hospital admission 7-day average over the past week

78% decrease from peak
21% Decrease in the 7-day hospitalization average over the past week

78% decrease from Omicron peak
Vermont COVID-19 Patients Currently in the ICU

42% decrease in the 7-day ICU average over the past week

88% decrease from Omicron peak

Source: VDH—March 8, 2022; created with Datawrapper
Reported influenza hospitalizations in Vermont remain low.
Vermont Hospital Metrics
(7-Day Averages)

Vermont Hospital Beds Available Since July 1, 2021
- 67 beds available on March 8, 2022

Vermont ICU Beds Available Since July 1, 2021
- 20 ICU beds available on March 8, 2022

Source: VDH—March 8, 2022; created with Datawrapper
Hospitalizations continue to be more common among older Vermonters.

Source: VDH—March 5, 2022; created with Datawrapper
COVID-19 Hospitalizations By Vaccination Status Per 100K

Measured Among Vermont's 18 & Over Population Over the Last 6 Weeks

Those 18+ & **not fully vaccinated** were nearly **4x more** likely to be hospitalized from COVID-19 over the last 6 weeks compared to those **fully vaccinated & boosted**
Vermont Fatality Data
Vermont COVID-19 Fatalities
Monthly Covid-19 Deaths In Vermont

608 COVID-19 deaths since the start of the pandemic

Source: VDH—March 8, 2022; created with Datawrapper; deaths attributed to month in which death occurred rather than reported
Vermont had the 11th-fewest COVID-19 deaths per capita over the last week

Source: CDC—March 8, 2022; Created with Datawrapper
Vermont Vaccination Data
## Vermont CDC Vaccine Scorecard

<table>
<thead>
<tr>
<th>Vaccine Metric</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doses Administered per 100K</td>
<td>1</td>
</tr>
<tr>
<td>% At Least 1 Dose (5+ Population)</td>
<td>1 (tied)</td>
</tr>
<tr>
<td>% Fully Vaccinated (5+ Population)</td>
<td>2</td>
</tr>
<tr>
<td>% At Least 1 Dose (Full Population)</td>
<td>3</td>
</tr>
<tr>
<td>% Fully Vaccinated (Full Population)</td>
<td>2</td>
</tr>
<tr>
<td>% Fully Vaccinated (65 &amp; Over)</td>
<td>1 (tied)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Booster Metric</th>
<th>Ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>% of Fully Vaccinated w/ booster dose</td>
<td>1</td>
</tr>
<tr>
<td>% of Fully vaccinated 12+ w/ booster doses</td>
<td>1</td>
</tr>
<tr>
<td>% of Fully vaccinated 18+ w/ booster doses</td>
<td>1</td>
</tr>
<tr>
<td>% of Fully vaccinated 65+ w/ booster doses</td>
<td>3</td>
</tr>
</tbody>
</table>

Source: CDC—March 8, 2022—New Hampshire excluded due to data anomalies
Vermont: Booster Shots Administered By Week

Source: CDC—March 8, 2022; created with Datawrapper
Regional Data
14% Decrease in New Cases

New Cases February 22th to February 28th

45,647

New Cases March 1st to March 7th

39,150

Sources: State Health Dept. & CTV National News (Quebec)
Weekly Northeast Regional Cases

6,497 fewer cases this week compared to last week

Sources: State Health Depts.—March 2, 2022 (includes: CT, ME, MA, NH, NY, QC, RI & VT)
New England COVID-19 Cases

New England cases decreased 10% over last 7 days & decreased 59% over last 14 days

Sources: State Health Depts.—March 7, 2022 (includes: CT, ME, MA, NH, RI & VT)
New England COVID-19 Case Trends

7-Day Average Cases Per 100K

Cases continuing to decline across New England

Sources: State Health Depts.—March 7, 2022 (includes: CT, ME, MA, NH, RI & VT)
New England COVID-19 Hospitalizations

New England hospitalizations decreased 25% over last 7 days & decreased 47% over last 14 days.
New England COVID-19 Hospitalizations Trends

7-Day Average Hospitalizations Per 100K

- Massachusetts
- Connecticut
- Rhode Island
- Maine
- New Hampshire
- Vermont

Hospitalizations decreasing across New England

Sources: HHS—March 7, 2022 (includes: CT, ME, MA, NH, RI & VT)
National Data
Source: JHU—March 8, 2022; Maine cases elevated due to processing of significant case backlog
US COVID-19 Death Confidence Intervals

Calculated as a 7-day mean. Inner and outer bands represent 50% and 95% confidence intervals, respectively.
National COVID-19 cases are expected to see improvement in the coming weeks.
Infections, Hospitalizations, & Deaths by Percentage of State Population Vaccinated

Bottom Third Vaccinated States
Middle Third Vaccinated States
Top Third Vaccinated States
Vermont

Infections per 100K
Hospitalizations per 100K (Current)
Deaths per 100K

Source: Covid Act Now—March 8 2022; 7-day averages; created with Datawrapper
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

Source: JHU—March 8, 2022; 7-day averages; created with Datawrapper
1. Syndromic Surveillance *(retired)*
2. Viral Growth & Reproductive Rates
3. Percentage of New Positive Tests
4. Hospital & Critical Care Bed Capacity
5. Testing Volume
Test Positivity

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

Source: Vermont Department of Health
Vermont Testing

Source: Vermont Department of Health; results reported to VDH daily

7-Day Rolling Average

# of Tests

12/1/21 1/1/22 2/1/22 3/1/22

0 5,000 10,000 15,000 20,000