COVID-19 Modeling
March 22, 2022

Presentation available at: dfr.vermont.gov
Reported COVID-19 cases in Vermont increased this week but remain more than 90% below peak January levels. Forecasts predict continued low-level viral activity in Vermont, but the spread of the more-transmissible Omicron BA.2 subvariant has introduced increased uncertainty in these projections. The CDC estimates the BA.2 subvariant now makes up over 50% of new infections in the Northeast.

Hospitalizations and fatalities in Vermont remain at stable low levels, with older and unvaccinated Vermonters at the highest risk of adverse outcomes.

The New England region continues to see improvement, with cases down nearly a third in the last two weeks, but the rate at which cases are decreasing slowed to 6% week. Cases remain low nationally, with levels similar to last year’s pre-Delta summer period. Forecasts call for deaths across the US to continue to decline in the coming weeks.

International COVID-19 trends, particularly in Europe, warrant a note of caution for the US COVID-19 outlook with cases increasing due to a number of factors, including the BA.2 subvariant, varied rates of prior Omicron infection, and the lifting of mitigation measures during surging viral spread. Experts continue to debate the degree to which these factors will influence case and hospitalization growth in the US in the coming weeks.
<table>
<thead>
<tr>
<th>Table of Contents</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Vermont Case Data</td>
<td>Pg. 4</td>
</tr>
<tr>
<td>Vermont Hospitalization Data</td>
<td>Pg. 17</td>
</tr>
<tr>
<td>Vermont Fatality Data</td>
<td>Pg. 24</td>
</tr>
<tr>
<td>Vermont Vaccination Data</td>
<td>Pg. 27</td>
</tr>
<tr>
<td>Regional Data</td>
<td>Pg. 30</td>
</tr>
<tr>
<td>National Data</td>
<td>Pg. 35</td>
</tr>
<tr>
<td>Restart Vermont</td>
<td>Pg. 40</td>
</tr>
</tbody>
</table>
Vermont Case Data
Vermont is averaging **119 cases** over the last 7 days.

The 7-day average has **increased 14%** over the last 7 days & **was flat** over the last 14 days.

Cases **down 92%** since the Omicron Peak.
Vermont reported 1,022 new COVID-19 cases this week, 215 more cases compared to last week.
Week-over-week testing increased, with the 7-day average increasing 1%
Test positivity increased 7% over the last 7 days.
The not fully vaccinated case rate has increased 17% in the last 7 days.

The fully vaccinated rate has increased 12% during the same period.

Source: VDH & CDC—March 19, 2022; Created with Datawrapper
Over the last 7 days, cases have:

- **Decreased 4%** for ages 0 to 24
- **Increased 37%** for ages 25 to 49
- **Increased 14%** for ages 50 to 64
- **Increased 11%** for ages 65+

Source: VDH—March 22, 2022; created with Datawrapper
VT COVID-19 Infections per 100K by Age Group

Source: VDH—March 22, 2022; created with Datawrapper
Age of Infected Vermonters

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

Source: VDH—March 22, 2022; created with Datawrapper
Vermont COVID-19 cases are expected to remain relatively low over the coming weeks, however, there is some uncertainty with the spread of the Omicron BA.2 subvariant.
VT COVID-19 Death Confidence Intervals

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

COVID-19 fatalities are expected to remain low over the next 4 weeks

Source: Johns Hopkins University & CDC—March 22, 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>Springfield Rivers Nursing &amp; Rehab</td>
<td>52</td>
</tr>
<tr>
<td>St. Johnsbury Health &amp; Rehab Center</td>
<td>25</td>
</tr>
<tr>
<td>The Willows of Windsor</td>
<td>24</td>
</tr>
<tr>
<td>Greensboro Nursing Home</td>
<td>22</td>
</tr>
<tr>
<td>Loretto Home</td>
<td>13</td>
</tr>
<tr>
<td>The Residence at Quarry Hill</td>
<td>12</td>
</tr>
<tr>
<td>Thompson House</td>
<td>12</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>160</strong></td>
</tr>
</tbody>
</table>

Source: Vermont Department of Health—March 22, 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
College COVID-19 cases may be low due to spring break

Weekly COVID-19 College Cases

Source: Vermont College Reporting—March 22, 2022; created with Datawrapper
Vermont Hospitalization Data
Average hospital admissions increased this week.
84% decrease from Omicron peak
The number of COVID-19 patients in the ICU was stable this week.
Vermont Hospital Metrics
(7-Day Averages)

Vermont Hospital Beds Available Since July 1, 2021

- 220 beds available on July 1, 2021
- 180 beds available on August 1, 2021
- 150 beds available on September 1, 2021
- 120 beds available on October 1, 2021
- 90 beds available on November 1, 2021
- 60 beds available on December 1, 2021
- 30 beds available on January 1, 2022
- 10 beds available on February 1, 2022
- 5 beds available on March 1, 2022

Vermont ICU Beds Available Since July 1, 2021

- 40 ICU beds available on July 1, 2021
- 35 ICU beds available on August 1, 2021
- 30 ICU beds available on September 1, 2021
- 25 ICU beds available on October 1, 2021
- 20 ICU beds available on November 1, 2021
- 15 ICU beds available on December 1, 2021
- 10 ICU beds available on January 1, 2022
- 5 ICU beds available on February 1, 2022
- 2 ICU beds available on March 1, 2022

Source: VDH—March 22, 2022; created with Datawrapper
Hospitalizations continue to be more common among older Vermonters.

COVID-19 Hospitalization Rate Per 100K By Age Over The Last 6 Weeks

- 0 to 24: 3 Hospitalizations per 100K
- 24 to 49: 8 Hospitalizations per 100K
- 50 to 64: 17 Hospitalizations per 100K
- 65+: 53 Hospitalizations per 100K

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

Measured Over the Last 6 Weeks

Those 18+ & not fully vaccinated were nearly 3.5x more likely to be hospitalized from COVID-19 over the last 6 weeks compared to those fully vaccinated & boosted.

Source: VDH—March 19, 2022; created with Datawrapper
Vermont Fatality Data
Vermont COVID-19 Fatalities

Source: VDH—March 22, 2022; created with Datawrapper
Monthly Covid-19 Deaths In Vermont

613 COVID-19 deaths since the start of the pandemic

Source: VDH—March 22, 2022; created with Datawrapper; deaths attributed to month in which death occurred rather than reported
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>
Vermont: Booster Shots Administered By Week

Source: CDC—March 21, 2022; created with Datawrapper
Regional Data
New England COVID-19 Cases

New England cases decreased 6% over last 7 days & decreased 31% over last 14 days

Sources: State Health Depts.—March 21, 2022 (includes: CT, ME, MA, NH, RI & VT)
COVID-19 cases stable across New England

Sources: State Health Depts.—March 21, 2022 (includes: CT, ME, MA, NH, RI & VT)
New England COVID-19 Hospitalizations

New England hospitalizations **decreased 14%** over last 7 days & **decreased 30%** 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 21, 2022 (includes: CT, ME, MA, NH, RI & VT)
National Data
Infections, Hospitalizations, & Deaths by Percentage of State Population Vaccinated

Source: Covid Act Now—March 22, 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.

Source: JHU—March 22, 2022; 7-day averages; created with Datawrapper
US COVID-19 Infection Confidence Intervals

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

Source: CDC—March 22, 2022; created with Datawrapper
US COVID-19 Death Confidence Intervals

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

Source: CDC—March 22, 2022; created with Datawrapper
RESTART VERMONT

Reopening Metrics

1. Syndromic Surveillance (*retired*)
2. Viral Growth & Reproductive Rates
3. Percentage of New Positive Tests
4. Hospital & Critical Care Bed Capacity
5. Testing Volume
Viral Growth & Reproductive Rates

Source: Vermont Department of Health
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