COVID-19 Modeling
March 15, 2022

Presentation available at: dfr.vermont.gov
Overview

Case and hospitalization metrics across the region and nationally improved this week. National forecasts anticipate these trends will continue in the coming weeks. CDC modeling predicts US COVID-19 fatalities will keep falling as these favorable trajectories persist.

Global cases are up 11% this week, primarily driven by confirmed infections in Europe and Asia. These case increases are possibly due to a combination of factors, including low rates of immunity (Hong Kong, China), the Omicron BA.2 subvariant, and the lifting of COVID-19 mitigation measures.

Vermont cases are down 94% from the peak of the Omicron wave, leading to the continued decline in new hospital admissions, which are down 80% from the peak. Today, Vermont is reporting 12 individuals in the hospital for the virus, with four requiring ICU care. Per capita, Vermont is tied with New Hampshire and Massachusetts in reporting the lowest COVID-19 hospitalization rates in the nation.

The trend of declining COVID-19 fatalities seen in the latter part of February has carried into March, with four reported COVID-19 deaths so far in Vermont this month. The state has not reported a COVID-19 death in 10 days.
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Vermont Case Data
Vermont is averaging **119 cases** over the last 7 days. The 7-day average has **decreased 16%** over the last 7 days & **decreased 27%** over the last 14 days. Cases **down 94%** since the Omicron Peak.

Source: VDH—March 15, 2022; created with Datawrapper
Vermont reported 798 new COVID-19 cases this week, 188 fewer cases compared to last week.

Lowest weekly COVID-19 case total since August 2021.
Week-over-week testing fell, with the 7-day average decreasing 20%
Vermont PCR Test Positivity

Test positivity **increased 1%** over the last 7 days

Source: VDH—March 15, 2022; created with Datawrapper
The not fully vaccinated case rate has decreased 23% in the last 7 days.

The fully vaccinated rate has decreased 14% during the same period.

Source: VDH & CDC—March 12, 2022; Created with Datawrapper
Over the last 7 days, cases have:

- **Decreased 41%** for ages 0 to 24
- **Decreased 15%** for ages 25 to 49
- **Increased 13%** for ages 50 to 64
- **Decreased 3%** for ages 65+
VT COVID-19 Infections per 100K by Age Group

Source: VDH—March 15, 2022; created with Datawrapper
Vermont Covid-19 Case Rates by Age (7-Day Average)

Source: VDH—March 15, 2022; created with Datawrapper
Age of Infected Vermonters

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

Source: VDH—March 15, 2022; created with Datawrapper
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.
Declines in COVID-19 fatalities are expected over the next 4 weeks.
### 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>Mountain View Center</td>
<td>123</td>
</tr>
<tr>
<td>Bel-Aire Center</td>
<td>64</td>
</tr>
<tr>
<td>The Arbors at Shelburne</td>
<td>25</td>
</tr>
<tr>
<td>The Willows of Windsor</td>
<td>20</td>
</tr>
<tr>
<td>St. Johnsbury Health &amp; Rehab Center</td>
<td>18</td>
</tr>
<tr>
<td>Vergennes Residential Care</td>
<td>17</td>
</tr>
<tr>
<td>The Residence at Quarry Hill</td>
<td>12</td>
</tr>
<tr>
<td>Loretto Home</td>
<td>9</td>
</tr>
<tr>
<td>Thompson House</td>
<td>8</td>
</tr>
<tr>
<td>Mayo Residential Care</td>
<td>7</td>
</tr>
<tr>
<td><strong>Total</strong> (shown)</td>
<td><strong>303</strong></td>
</tr>
</tbody>
</table>

Source: Vermont Department of Health—March 15, 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*
Many Vermont colleges were on spring break last week.
Vermont Hospitalization Data
Vermont New COVID-19 Hospital Admissions

80% decrease from Omicron peak

Source: HHS—March 14, 2022; created with Datawrapper
Vermont COVID-19 Patients Currently Hospitalized

82% decrease from Omicron peak

Source: VDH—March 15, 2022; created with Datawrapper
Vermont COVID-19 Patients Currently in the ICU

82% decrease from Omicron peak

Source: VDH—March 15, 2022; created with Datawrapper
Vermont Hospital Metrics
(7-Day Averages)

Vermont Hospital Beds Available Since July 1, 2021

Vermont ICU Beds Available Since July 1, 2021

Source: VDH—March 15, 2022; created with Datawrapper
Hospitalizations continue to be more common among older Vermonters.
COVID-19 Hospitalizations By Vaccination Status Per 100K

Measured Over the Last 6 Weeks

Those 18+ & **not fully vaccinated** were nearly **2.5x more** likely to be hospitalized from COVID-19 over the last 6 weeks compared to those **fully vaccinated & boosted**.
Vermont Fatality Data
608 COVID-19 deaths since the start of the pandemic
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 15, 2022
Regional Data
New England COVID-19 Cases

- New England 7-Day Case Average

New England cases decreased **27%** over last 7 days & decreased **34%** over last 14 days

Sources: State Health Depts.—March 14, 2022 (includes: CT, ME, MA, NH, RI & VT)

Maine data processing issues
New England COVID-19 Case Trends

7-Day Average Cases Per 100K

Cases continuing to decline across New England

Maine data processing issues

Sources: State Health Depts.—March 14, 2022 (includes: CT, ME, MA, NH, RI & VT)
New England hospitalizations decreased 17% over last 7 days & decreased 37% over last 14 days.
New England COVID-19 Hospitalizations Trends

7-Day Average Hospitalizations Per 100K

Hospitalizations decreasing across New England

Sources: HHS—March 14, 2022 (includes: CT, ME, MA, NH, RI & VT)
National Data
Infections, Hospitalizations, & Deaths by Percentage of State Population Vaccinated

Source: Covid Act Now—March 15 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 15, 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 15, 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.
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

7-Day Rolling Average

# of Tests

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