COVID-19 in New Mexico: Epidemiologic Update
A NMDOH, Presbyterian, LANL, and SNL Partnership
May 19, 2020
Prevalence: COVID-19 cases per 100,000 by U.S. states

COVID-19 Prevalence
per 100,000 population

- 43.4 - 182.5
- 182.6 - 375.5
- 375.6 - 697.0
- 697.1 - 1149.4
- 1149.5 - 1732.1
Prevalence: COVID-19 cases per 100,000 by U.S. states

Source: Cases, Johns Hopkins University Coronavirus Resource Center. Population estimates, National Center for Health Statistics, CDC.
Prevalence Rate: Number of COVID-19 cases per 100,000 population

May 11, 2020

- Northwest: 1167.0
- Northeast: 65.9
- Metro: 175.3
- Southeast: 34.8
- Southwest: 86.1
- New Mexico: 231.4

May 18, 2020

- Northwest: 1473.6
- Northeast: 74.7
- Metro: 195.4
- Southeast: 47.1
- Southwest: 122.4
- New Mexico: 282.5

COVID-19 cases by race/ethnicity and age
Projected doubling time

Projected Doubling Time Based on Date of Test Specimen Collection and Cumulative Average Rate of Increase.

Source: Infectious Disease Epidemiology Bureau, Epidemiology and Response Division 5.18.2020, New Mexico Department of Health.
Hospitalization Rate: Number of COVID-19 cases per 100,000 population

Source: Infectious Disease Epidemiology Bureau, Epidemiology and Response Division 5.18.2020 at 8:08 AM, New Mexico Department of Health. Population estimates, UNM Geospatial and Population Studies Program.
COVID-19 hospitalizations and ventilator use
COVID-19 hospitalizations by age group

<table>
<thead>
<tr>
<th>Age group (years)</th>
<th># Hospitalized cases (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt;1</td>
<td>1 (0.14)</td>
</tr>
<tr>
<td>1-4</td>
<td>2 (0.28)</td>
</tr>
<tr>
<td>5-14</td>
<td>0 (0)</td>
</tr>
<tr>
<td>15-24</td>
<td>14 (2)</td>
</tr>
<tr>
<td>25-34</td>
<td>55 (7.8)</td>
</tr>
<tr>
<td>35-44</td>
<td>91 (12.9)</td>
</tr>
<tr>
<td>45-54</td>
<td>112 (15.8)</td>
</tr>
<tr>
<td>55-64</td>
<td>175 (24.8)</td>
</tr>
<tr>
<td>65-74</td>
<td>127 (18)</td>
</tr>
<tr>
<td>75-84</td>
<td>76 (10.7)</td>
</tr>
<tr>
<td>85+</td>
<td>54 (7.6)</td>
</tr>
<tr>
<td>All ages</td>
<td>707</td>
</tr>
</tbody>
</table>
COVID-19 age-specific hospitalization rates per 100,000 population

Source: NM Indicator-Based Information System (IBIS) was used for 2018 population estimates for each age group
COVID-19 hospitalizations by race/ethnicity

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th># Hospitalized cases (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td>472 (67.1)</td>
</tr>
<tr>
<td>Asian</td>
<td>5 (0.71)</td>
</tr>
<tr>
<td>Black or African American</td>
<td>10 (1.4)</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>116 (16.5)</td>
</tr>
<tr>
<td>White</td>
<td>99 (14.1)</td>
</tr>
<tr>
<td>Other Race</td>
<td>1 (0.14)</td>
</tr>
<tr>
<td>Total</td>
<td>703</td>
</tr>
</tbody>
</table>

Note: 4 hospitalized cases excluded due to missing race information
## COVID-19 age-adjusted hospitalization rate by race/ethnicity per 100,000 population

<table>
<thead>
<tr>
<th>Race/ethnicity</th>
<th>Age-adjusted rate per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Indian or Alaska Native</td>
<td>261.3</td>
</tr>
<tr>
<td>Asian</td>
<td>12.2</td>
</tr>
<tr>
<td>Black or African American</td>
<td>27.4</td>
</tr>
<tr>
<td>Hispanic or Latino</td>
<td>11.7</td>
</tr>
<tr>
<td>White</td>
<td>7.9</td>
</tr>
</tbody>
</table>

**Note:**
4 hospitalized cases excluded due to missing race information
1 hospitalized case was excluded because it was “Other Race” and there is no population estimate for “Other Race” in NM-IBIS
Summary statistics of COVID-19 hospitalizations by race/ethnicity and age

Note: 4 hospitalized cases excluded due to missing race information
Mortality Rate: Number of COVID-19 deaths per 100,000 population

Rates have been age-adjusted to the U.S. 2000 standard population.
Crude death rate: COVID-19 deaths per 100,000 by U.S. states

Source: Deaths, Johns Hopkins University Coronavirus Resource Center. Population estimates, National Center for Health Statistics, CDC.
Number of COVID-19 crude mortality rate by age group

Rate per 100,000 population

- <65: 3.9
- 65-74: 20.6
- 75-84: 54.9
- 85+: 196.1
Number of COVID-19 age-adjusted mortality rate by race/ethnicity

<table>
<thead>
<tr>
<th>Race/Ethnicity</th>
<th>Rate per 100,000 population</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIAN</td>
<td>79.6</td>
</tr>
<tr>
<td>Asian/NHOPI</td>
<td>3.3</td>
</tr>
<tr>
<td>Black/AfAm</td>
<td>8.6</td>
</tr>
<tr>
<td>Hispanic</td>
<td>4.2</td>
</tr>
<tr>
<td>White</td>
<td>5.3</td>
</tr>
<tr>
<td>Other/Unk</td>
<td>-</td>
</tr>
</tbody>
</table>
COVID-19 death by age and race/ethnicity

Age at Death by Race/Ethnicity

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Case Fatality Rate: Percentage of COVID-19 cases resulting in death

New Mexico Health Region

- Northwest: 6.3%
- Northeast: 1.6%
- Metro: 5.9%
- Southeast: 3.6%
- Southwest: 3.3%
- New Mexico: 5.7%
- U.S.: 6.0%

Rates have been age-adjusted to the U.S. COVID-19 cases.
Source: Bureau of Vital Records and Health Statistics and Infectious Disease Epidemiology Bureau, Epidemiology and Response Division, reporting through 5.17.2020, New Mexico Department of Health.

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Case fatality rate: Percentage of COVID-19 cases resulting in death by U.S. states

Source: Cases and Deaths, Johns Hopkins University Coronavirus Resource Center.
Key points

- COVID-19 prevalence continues to increase in New Mexico
  - #30 in the U.S.
  - Socorro, Sandoval, Cibola, Guadalupe, San Juan, and McKinley counties have prevalence rates higher than NM overall
  - AI/AN have highest burden of disease across all health regions
  - Median age of cases is similar across all race/ethnicity groups except White, which is higher (older population)
  - Southwest region’s doubling time has increased since last week (9.7 days)

- Hospitalization rates continue to increase in the NW and Metro Regions
  - Ventilator use remains at ~25% of hospitalized cases
  - County-specific rates are similar to the 6 counties with the highest prevalence rates
  - The elderly and AI/AN groups continue to have the highest rates of hospitalizations
  - Hospitalized cases who self-identify as White tend to be older than other race/ethnicity groups

- Mortality rates and case-fatality rates (CFRs) are highest in the NW region followed by Metro Region
  - #29 in the U.S.
  - Highest in 85+ age group and AI/AN population
  - Deaths by race/ethnicity and age indicate that the White population tends to be older
  - NM CFR is similar to U.S. CFR after age-adjustment
COVID-19 in New Mexico: modeling update

As of May 19, 2020
Epidemiology & Response Division
The effective rate of transmission for the state has remained static for the last two weeks.

The Southeast region now has the highest rate of transmission at 1.22.
As of May 11, 2020

**Northeast**
- **R_effective 1.09 ↑**

**Central**
- **R_effective 1.07 ↓**

**Southeast**
- **R_effective 1.22 ↑**

**Southwest**
- **R_effective 1.17 ↓**

**Northwest**
- **R_effective 1.15 ↓**

**Key**

- **Low Level Endemic**
  - 1-1.1

- **Approaching Low Level Endemic**
  - 1.11-1.15

- **Requiring further mitigation**
  - >1.15

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Case counts in the Metro region have been slowly declining for the month of May.
Case counts in the Northwest region seem to have plateaued.

Northwest Region Case Count by Collection Date with 7 Day Moving Average – May 18, 2020

Positive samples collected during this time may not yet be reported.
The spike in R-effective for the Southeast region may be in response to an increase of cases in one county in this region with relatively few cases.

Southeast Region Case Count by Collection Date with 7 Day Moving Average – May 18, 2020

Positive samples collected during this time may not yet be reported.
While daily case counts for the Southwest region may be stabilizing, the down-stream impact of 2 local outbreaks may not yet be revealed.
Hospital resource use, to date, statewide has not risen exponentially.

For comparison against state-reported data, this chart **includes** ICUs in the count of beds.

**log(beds, ICUs, vents) over time**

**key**
- Beds, inc ICU
- ICUs
- Ventilators

Relaxation of social distancing measures and practices may sharply increase bed use over the summer.

Assumptions:
- Relaxation begins on 5/18.
- Absent restrictions for 60 days, followed by reintroduction of restrictions for 30 days.
- R-effective becomes 50% worse compared to April 1.
Supplementary Slide
# Modeling Assumptions

<table>
<thead>
<tr>
<th>Variable</th>
<th>Measured Value</th>
<th>Value as of 5.18.20</th>
</tr>
</thead>
<tbody>
<tr>
<td>R_Effective</td>
<td>Actual Measured Daily Value by key county</td>
<td>R_eff=1.13</td>
</tr>
<tr>
<td>Positive Test Multiplier</td>
<td>Calculated by LANL</td>
<td>2</td>
</tr>
<tr>
<td>Hospitalization and Mortality</td>
<td>Actual rolling value / estimated number of total infected</td>
<td>Medical 1.1% &lt;br&gt; ICU 0.7% &lt;br&gt; Vent Rate 64.5% of ICU &lt;br&gt; Crude Case Fatality Rate 4.1%</td>
</tr>
<tr>
<td>Length of Stay</td>
<td>Actual rolling value / estimated number of total infected</td>
<td>Medical 5 days &lt;br&gt; ICU 14 days &lt;br&gt; ICU on Vent 14 days</td>
</tr>
</tbody>
</table>