Confirmed COVID-19 Cases, Metropolitan and Nonmetropolitan Counties
Fred Ullrich, BA; and Keith Mueller, PhD

Report
Much of the COVID-19 focus has been on major metropolitan areas, but rural areas of the United States are not free of exposure. As of February 28, 2021, there were a total of 28,209,200 cases and 505,620 deaths identified in counties, with 4,088,188 cases and 80,260 deaths (about 14.5 percent of cases and 15.9 percent of deaths) reported in non-metropolitan counties (data obtained from the Johns Hopkins University COVID-19 Data Repository*).

Map 1. Counties with confirmed COVID-19 Cases

Data source: Johns Hopkins University CSSE COVID-19 Data
https://coronavirus.jhud.edu/data/

* Confirmed cases / 10,000 population based on 2010 ACS 5-year estimates.

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Rural Data Brief

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But as many experts have pointed out, the rate of growth in cases is very different depending on location. Further, the stress on the health care delivery system is proportionate – a small number of cases creates stress for low capacity systems just as a large volume of cases creates stress for larger capacity systems.

Note that this document reports on confirmed COVID-19 cases and those numbers will be affected by the availability and utilization of testing resources. Recent and updated maps, and the “progression” of cases throughout the country, can be seen on the animated map on the RUPRI Health website:
http://ruprihealth.org/publications/policybriefs/2020/COVID History/

Map 1 (above) displays the rates of confirmed COVID-19 cases in metropolitan and nonmetropolitan counties. Table 1 shows metropolitan and nonmetropolitan county confirmed case and death counts. It also depicts the rate of cases and deaths per 10,000 population (based on the 2018 American Community Survey 5-year estimates). Finally, it shows the number of metropolitan and metropolitan counties with a rate of cases exceeding 10 per 10,000 population and a rate of death exceeding 1 per 10,000 population. Map 2 displays the rates of COVID-19 deaths in metropolitan and nonmetropolitan counties.

Table 1. Metropolitan and Nonmetropolitan Counties. Confirmed cases, deaths, and rates

<table>
<thead>
<tr>
<th></th>
<th>Metropolitan</th>
<th>Nonmetropol.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Counties (total)</td>
<td>1,166</td>
<td>1,976</td>
</tr>
<tr>
<td>Population (2010 census)</td>
<td>276,820,000</td>
<td>46,082,565</td>
</tr>
<tr>
<td>Counties w/ confirmed cases</td>
<td>1,159 (99.4%)</td>
<td>1,956 (99.0%)</td>
</tr>
<tr>
<td>Counties w/ deaths</td>
<td>1,158 (99.3%)</td>
<td>1,913 (96.8%)</td>
</tr>
<tr>
<td>Confirmed cases</td>
<td>24,121,012 (8.7%)</td>
<td>4,088,188 (8.9%)</td>
</tr>
<tr>
<td>Deaths</td>
<td>425,360 (0.2%)</td>
<td>80,260 (0.2%)</td>
</tr>
<tr>
<td>Cases/10K population</td>
<td>871.4</td>
<td>887.1</td>
</tr>
<tr>
<td>Deaths/10K population</td>
<td>15.37</td>
<td>17.42</td>
</tr>
<tr>
<td>Counties w/ 10+ cases/10K</td>
<td>1,159 (99.4%)</td>
<td>1,956 (99.0%)</td>
</tr>
<tr>
<td>Counties w/ 100+ cases/10K</td>
<td>1,159 (99.4%)</td>
<td>1,953 (98.8%)</td>
</tr>
<tr>
<td>Counties w/ 500+ cases/10K</td>
<td>1,081 (92.7%)</td>
<td>1,784 (90.3%)</td>
</tr>
<tr>
<td>Counties w/ 750+ cases/10K</td>
<td>808 (69.3%)</td>
<td>1,417 (71.7%)</td>
</tr>
<tr>
<td>Counties w/ 1+ deaths/10K</td>
<td>1,156 (99.1%)</td>
<td>1,903 (96.3%)</td>
</tr>
<tr>
<td>Counties w/ 10+ deaths/10K</td>
<td>844 (72.4%)</td>
<td>1,510 (76.4%)</td>
</tr>
<tr>
<td>Counties w/ 15+ deaths/10K</td>
<td>518 (44.4%)</td>
<td>1,158 (58.6%)</td>
</tr>
</tbody>
</table>

Data sources: COVID-19 case and death data from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. Population data from the 2018 American Community Survey 5-yr estimates.

*COVID-19 case and death data for this ongoing report were previously obtained from USAFacts.org. Reports after 8/15/2020 use data from the COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. While both sources employ similar approaches and resources to produce their data, the Johns Hopkins data is released in a more timely fashion making it more suitable for use in these reports. Similarly, previous reports had used population data from the U.S. 2010 decennial Census. Current reports utilize data from the Census Bureau’s 2018 American Community Survey 5-year population estimates.*
Map 2. Counties with COVID-19 Deaths

Counties with COVID-19 Deaths
February 28, 2021
Metro deaths: 425,360  Nonmetro deaths: 80,260
*Metro rate: 15.37  Nonmetro rate: 17.42

* Deaths/10,000 population based on 2018 ACS 5-yr estimates
Rural Policy Research Institute (RUPRI)
University of Iowa, College of Public Health

Data source: Johns Hopkins University CSSE COVID-19 Data
https://github.com/CSSEGISandData/COVID-19