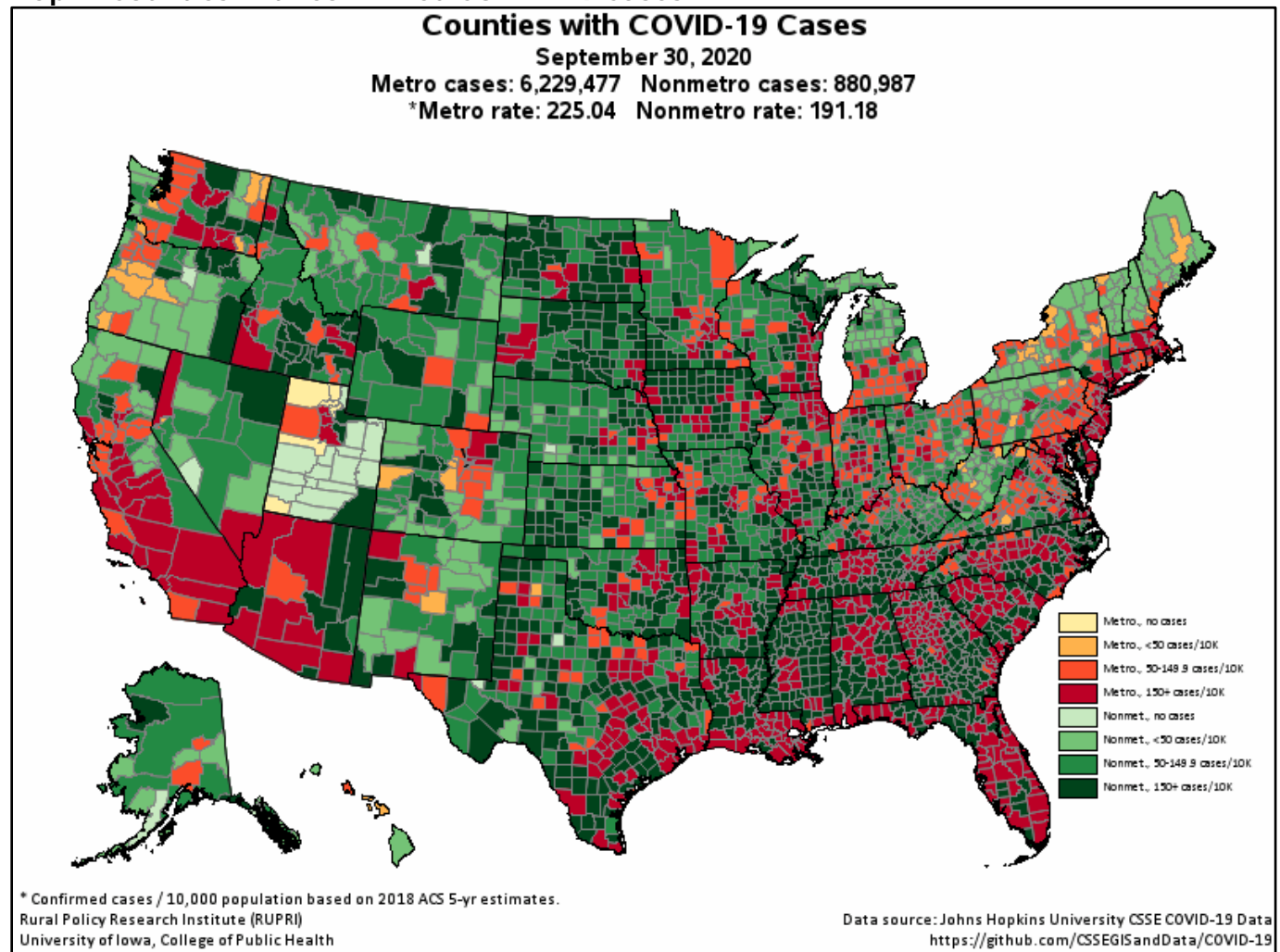## Confirmed COVID-19 Cases, Metropolitan and Nonmetropolitan Counties

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 September 30, 2020, there were a total of 7,110,464 cases and 203,838 deaths identified in counties, with 880,987 cases and 19,643 deaths (about 12.4 percent of cases and 9.6 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

Counties with COVID-19 Cases
September 30, 2020
Metro cases: 6,229,477   Nonmetro cases: 880,987
*Metro rate: 225.04   Nonmetro rate: 191.18

Legend:
- Metro., no cases
- Metro., <50 cases/10K
- Metro., 50-149.9 cases/10K
- Metro., 150+ cases/10K
- Nonmet., no cases
- Nonmet., <50 cases/10K
- Nonmet., 50-149.9 cases/10K
- Nonmet., 150+ cases/10K

* Confirmed cases / 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

Rural Health Research & Policy Centers
Funded by the Federal Office of Rural Health Policy
www.ruralhealthresearch.org

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 web site:
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 esitmates). 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

	Metropolitan	Nonmetropol.
Counties (total)	1,166	1,976
Population (2010 census)	276,820,000	46,082,565
Counties w/ confirmed cases	1,159 (99.4%)	1,949 (98.6%)
Counties w/ deaths	1,103 (94.6%)	1,517 (76.8%)
Confirmed cases	6,229,477 (2.3%)	880,987 (1.9%)
Deaths	184,195 (0.1%)	19,643 (0.0%)
Cases/10K population	225.0	191.2
Deaths/10K population	6.65	4.26
Counties w/ 10+ cases/10K	1,159 (99.4%)	1,934 (97.9%)
Counties w/ 100+ cases/10K	927 (79.5%)	1,343 (68.0%)
Counties w/ 1+ deaths/10K	993 (85.2%)	1,273 (64.4%)
Counties w/ 10+ deaths/10K	123 (10.5%)	237 (12.0%)

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
September 30, 2020
Metro deaths: 184,195   Nonmetro deaths: 19,643
*Metro rate: 6.65   Nonmetro rate: 4.26

Legend:
- Metro., no deaths
- Metro., <1 death/10K
- Metro., 1-2.9 deaths/10K
- Metro., 3+ deaths/10K
- Nonmet., no deaths
- Nonmet., <1 death/10K
- Nonmet., 1-2.9 deaths/10K
- Nonmet., 3+ deaths/10K

* 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