

RUPRI Center for Rural Health Policy Analysis

Rural Data Brief

Brief No. 2020-9

JANUARY 2021

<http://www.public-health.uiowa.edu/rupri/>

COVID-19 Cases and Deaths, Metropolitan and Nonmetropolitan Counties Over Time (*update*)

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Report

Fall 2020 has seen a dramatic increase in COVID-19 case and mortality rates in the United States. This data brief compares 7-day moving average COVID-19 incidence and mortality rates between metropolitan, micropolitan, and noncore counties in the United States.

Analysis of incidence and mortality data shows that rural areas are being disproportionately impacted by the virus. There was a very modest decline in incidence and mortality rates following the summer peak (in both metropolitan and nonmetropolitan areas), but in early August the nonmetropolitan incidence and mortality rates surpassed those of metropolitan areas. While the incidence rates in micropolitan and noncore areas have been very similar, noncore mortality rates have been the highest of the three geographies since late September (figure 4).

Figure 1. COVID-19 Metropolitan and Nonmetropolitan Incidence Rates

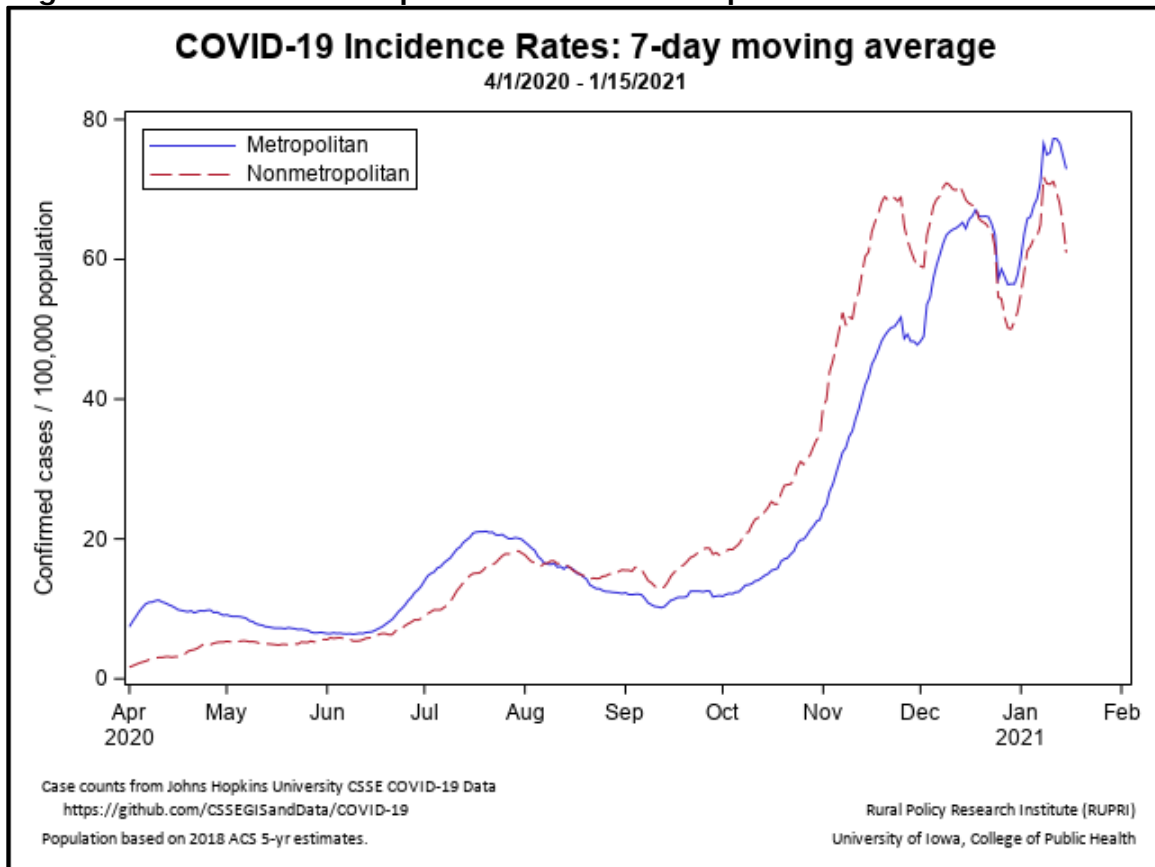


Figure 1b. COVID-19 Metropolitan and Nonmetropolitan Incidence Rates, Last Three Months

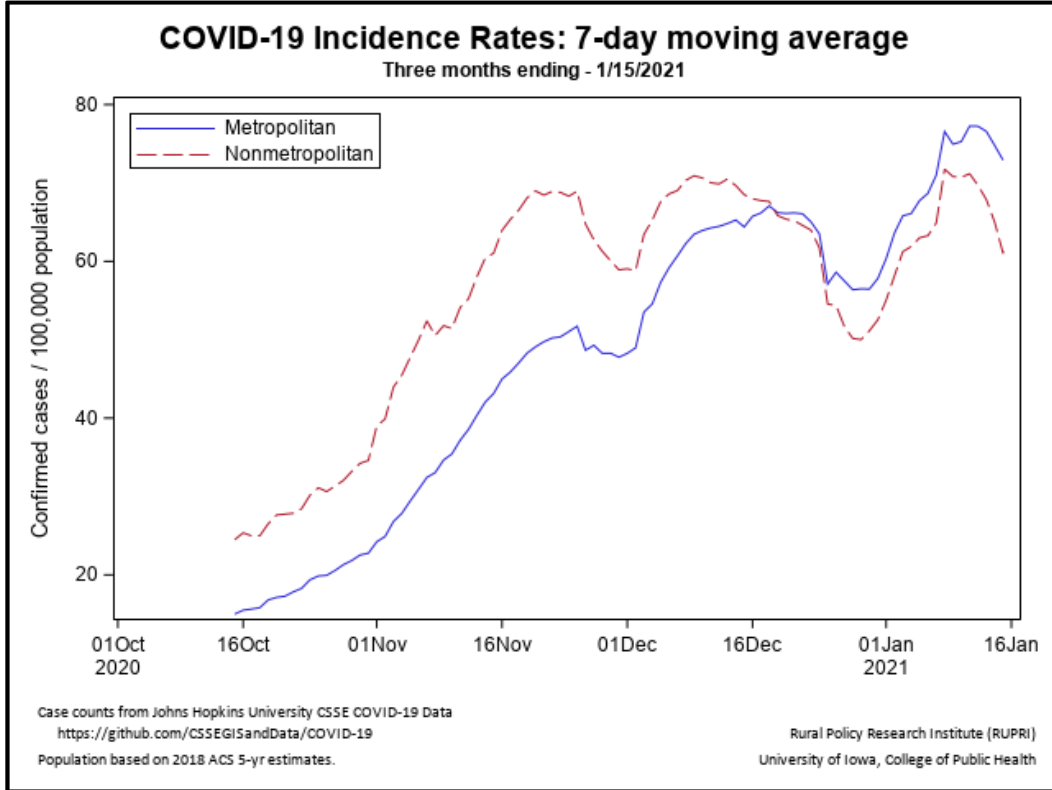


Figure 2. COVID-19 Metropolitan, Nonmetropolitan, and Noncore Incidence Rates

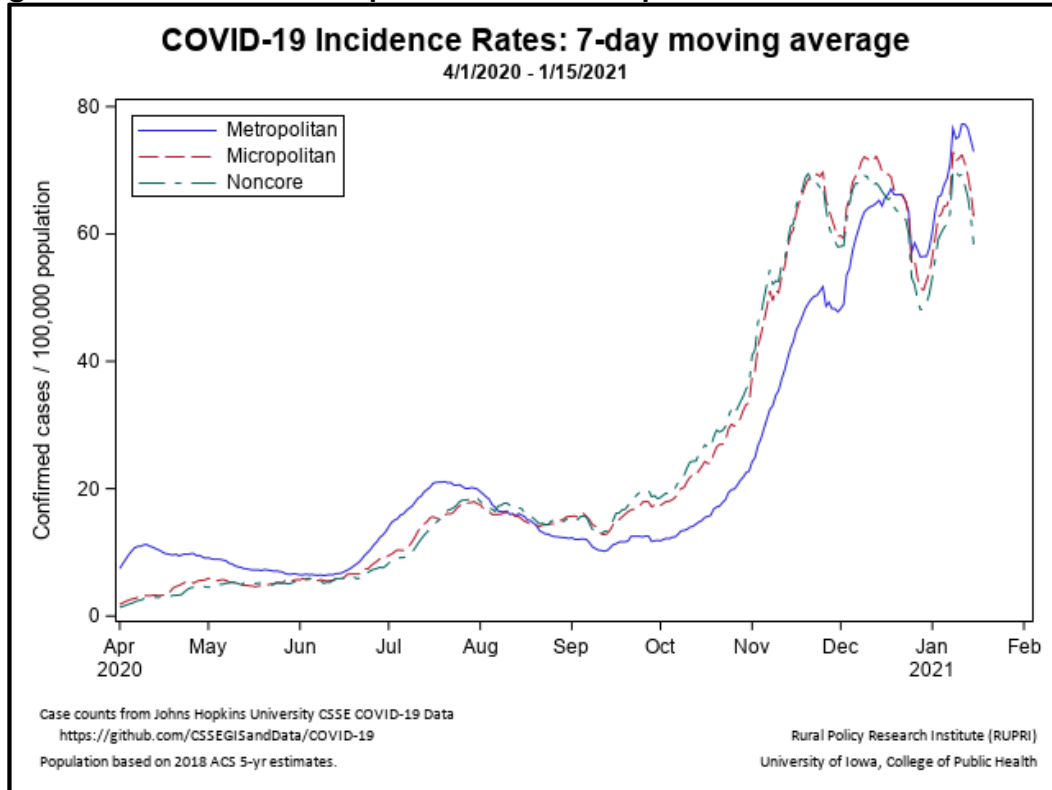


Figure 3. COVID-19 Metropolitan and Nonmetropolitan Mortality Rates

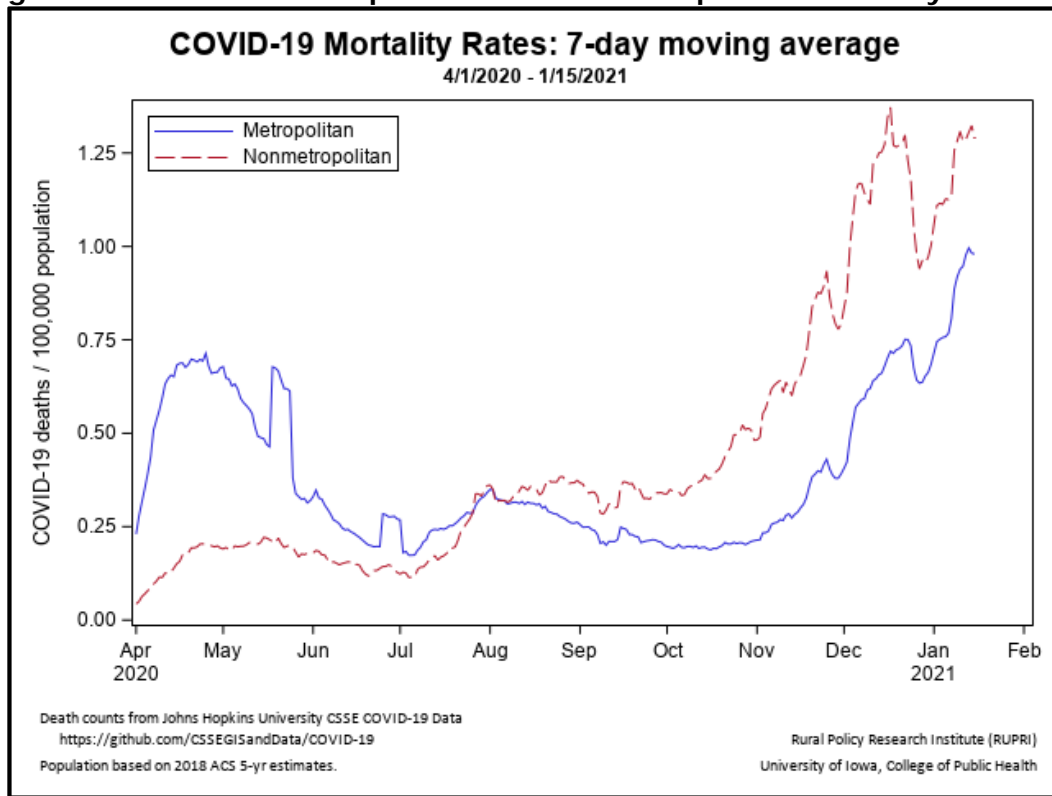


Figure 3b. COVID-19 Metropolitan and Nonmetropolitan Mortality Rates, Last Three Months

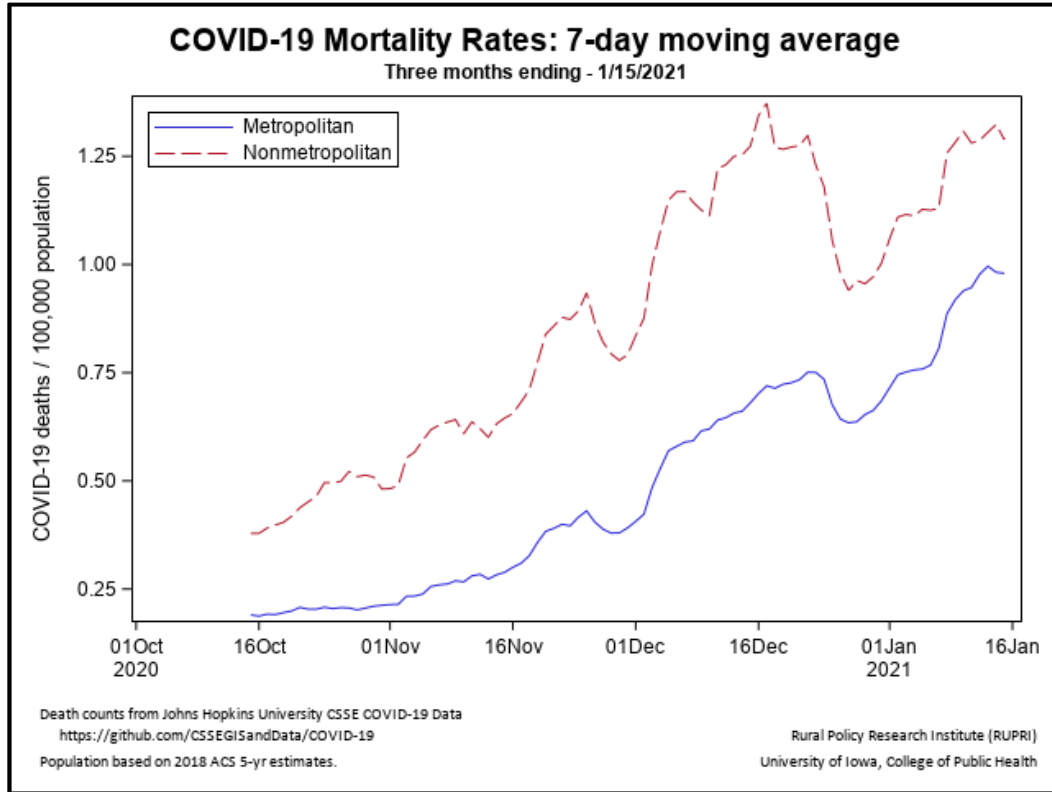
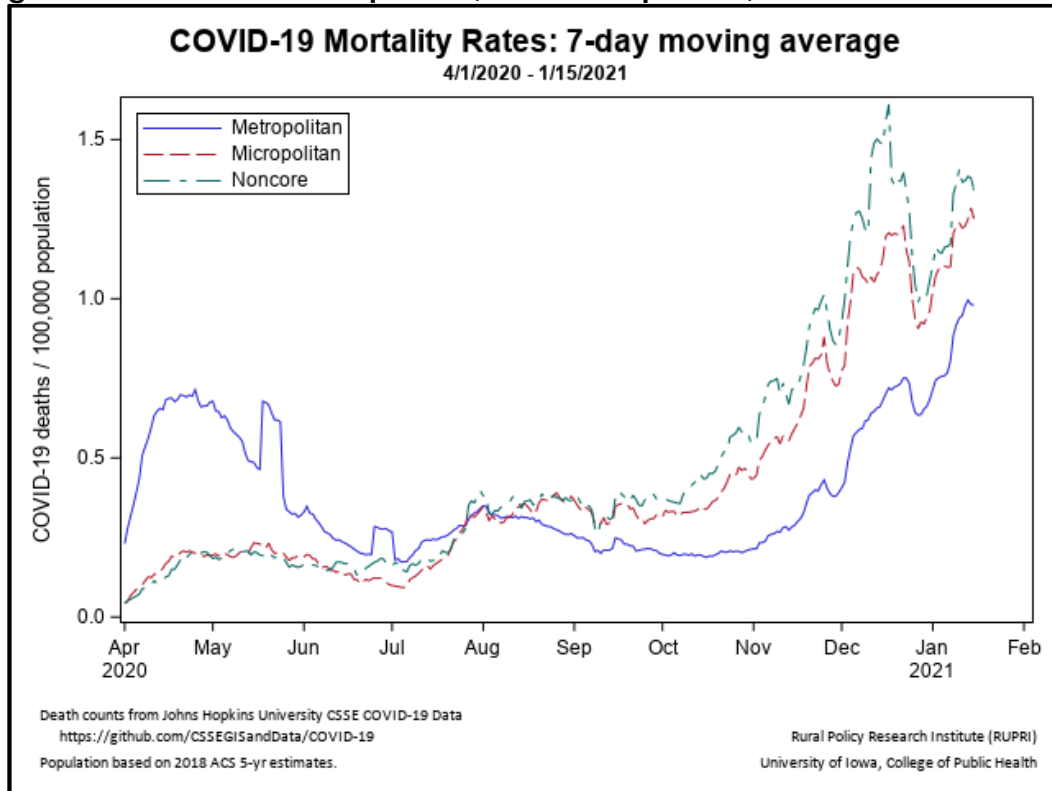


Figure 4. COVID-19 Metropolitan, Nonmetropolitan, and Noncore Mortality Rates



Data

Data on confirmed COVID-19 cases and deaths were obtained from the Johns Hopkins University COVID-19 Data Repository¹. Daily case and death counts in counties were calculated using a 7-day rolling average and total population data, obtained from the 2018 American Community Survey 5-year estimates², were used to calculate rates. Counties (or equivalents) in the 50 states and the District of Columbia were classified as metropolitan, nonmetropolitan, or noncore based on Urban Influence Codes³. Metropolitan counties are those with one or more urban areas with 50,000 or more people; or outlying counties economically tied to core counties as measured by labor-force commuting. All other counties are considered nonmetropolitan which may further be divided into “micropolitan” counties (those nonmetropolitan counties with an urban area with 10,000-49,999 people and economically-tied outlying counties) and “noncore” counties (those with no urban area of 10,000 or more people and not economically tied to metropolitan or micropolitan counties).⁴

References

1. COVID-19 Data Repository by the Center for Systems Science and Engineering (CSSE) at Johns Hopkins University. <https://github.com/CSSEGISandData/COVID-19>.
2. United States Census Bureau. American Community Survey (ACS). <https://www.census.gov/programs-surveys/acs>.
3. U.S. Department of Agriculture, Economic Research Service (2019). “Urban Influence Codes.” Retrieved May 20, 2020 from <https://www.ers.usda.gov/data-products/urban-influence-codes/>.
4. U.S. Department of Agriculture, Economic Research Service (2019). “What is Rural?”. Retrieved May 20, 2020 from <https://www.ers.usda.gov/topics/rural-economy-population/rural-classifications/what-is-rural/>.