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Where Deaths Are Increasing the Fastest in the U.S.

Richey Piiparinen
Cleveland State University, r.piiparinen@csuohio.edu

Where Deaths are Happening in the U.S.

By Richey Piiparinen[1]

Executive Summary

The findings show that Ohio and Cuyahoga County perform poorly when it comes to mortality rate. Ohio had the 9th highest mortality rate in the nation in 2021. Ohio also had the 8th highest increase in mortality rate from 2019 to 2021. For large counties, Cuyahoga County had the 3rd highest mortality rate in 2021. A few avenues are explored as to why.

Background

"This article argues that the human body should be considered as a geographical object," so reads the first line of the essay by French geographer, Guy Di Meo, in the journal *Annales de Geographie*. Though unmade of rocks and rivers, the human body nonetheless impacts (and is impacted by) what's going on in the geographies around them. Think a neighborhood, a county, a state, and—in the case of a global pandemic—the world stage. Not infrequently, the measure of this impact is a matter of life and death.

"The annual increase in deaths in 2020 was the largest in 100 years," explains the Census in their recent report "Pandemic Disrupted Historical Mortality Patterns, Caused Largest Jump in Deaths in 100 Years" [2]. Deaths went up from 2.85 million in 2019 to 3.34 million in 2020, a gain of nearly 19%. "Deaths in 2021 [3.42 million] were still up 19.7% from 2019," the Census explains, "an indication that despite widespread availability of vaccines, COVID-19 continues to have a significant impact on mortality."

Amid this backdrop, this analysis looks at mortality below the level of the nation-state. It uses newly-released data[3] from the Census' Population Estimates file to examine the mortality rate for all states and counties in the United States.

Mortality Rankings

Every year, the Census utilizes birth and death records to estimate what demographers call "natural increase" and "natural decrease". More births than deaths equal a natural increase, while more deaths than births mean a natural decrease. Never before in our nation's history has there been a higher percentage of American counties that've had more deaths than births. More than 73% of U.S. counties experienced natural decrease in 2021, up from 45.5% in 2019 and 55.5% in 2020[4].

The death counts can also be used to calculate the mortality rate, or the number of deaths as a proportion of a population. The census calculates mortality rate as the number of deaths per 1,000 people in a given population. In 2021[5], Ohio's mortality rate was 12.25, ranking 9th worst in the nation (See Figure 1). West Virginia was last, followed by Mississippi, Maine, Alabama, and Arkansas.

Ohio's mortality rate increased from 10.08 deaths in 2019 to 12.25 in 2021. To put that in perspective, Ohio's gain of 2.17 deaths per 1,000 ranked it as having the 8th largest increase in mortality in the nation. (See Figure 2). The largest gains were in West Virginia, Mississippi, and Kentucky.

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[1] Richey Piiparinen is Founding Director of Center for Population Dynamics and Director, Urban Theory & Analytics at the Maxine Goodman Levin College of Urban Affairs

[2] https://www.census.gov/library/stories/2022/03/united-states-deaths-spiked-as-covid-19-continued.html

[3] https://www2.census.gov/programs-surveys/popest/technical-documentation/file-layouts/2020-2021/CO-EST2021-ALLDATA.pdf

[4] https://www.census.gov/newsroom/press-releases/2022/population-estimates-counties-decrease.html

[5] Note: 2021 mortality rate was calculated for the period 7/1/2020 to 6/30/2021. It thus picks up the "post-covid" reality.

Figure 1: Mortality Rate Rankings for States (deaths per 1,000). Source: Census 2021

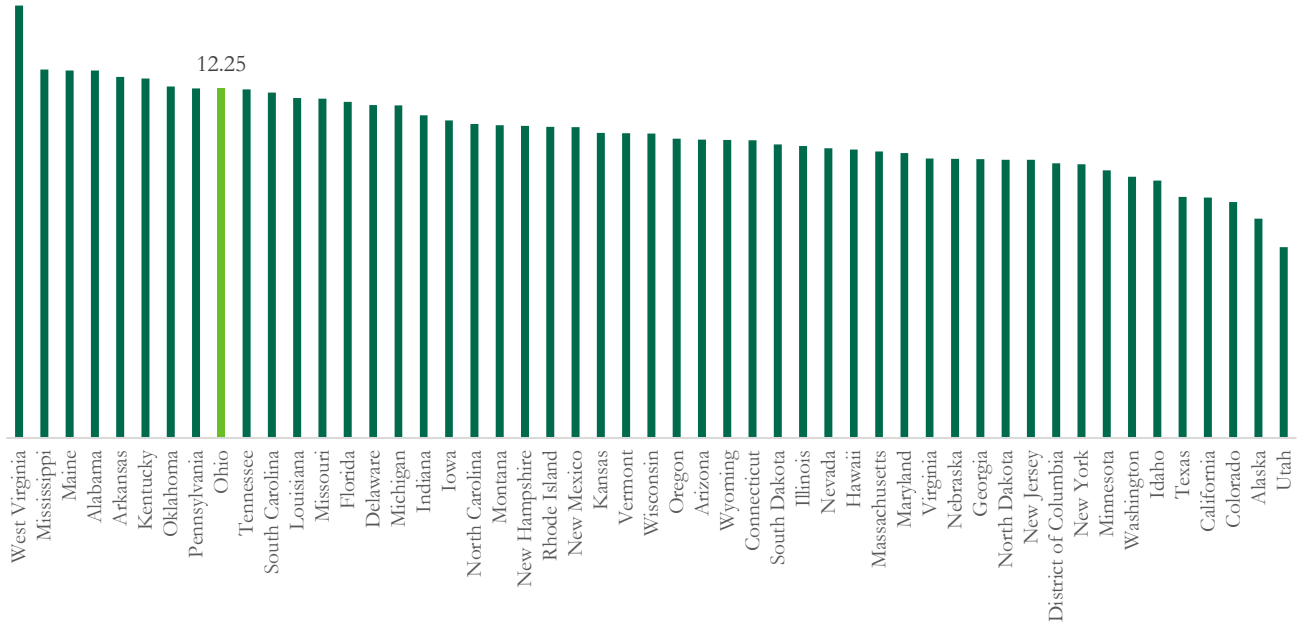
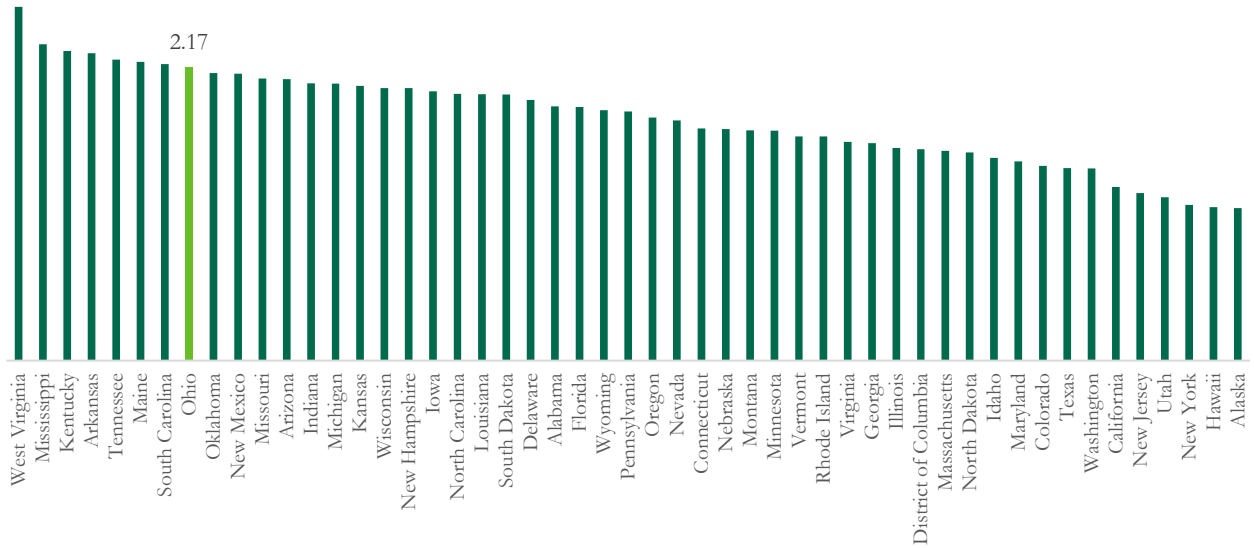
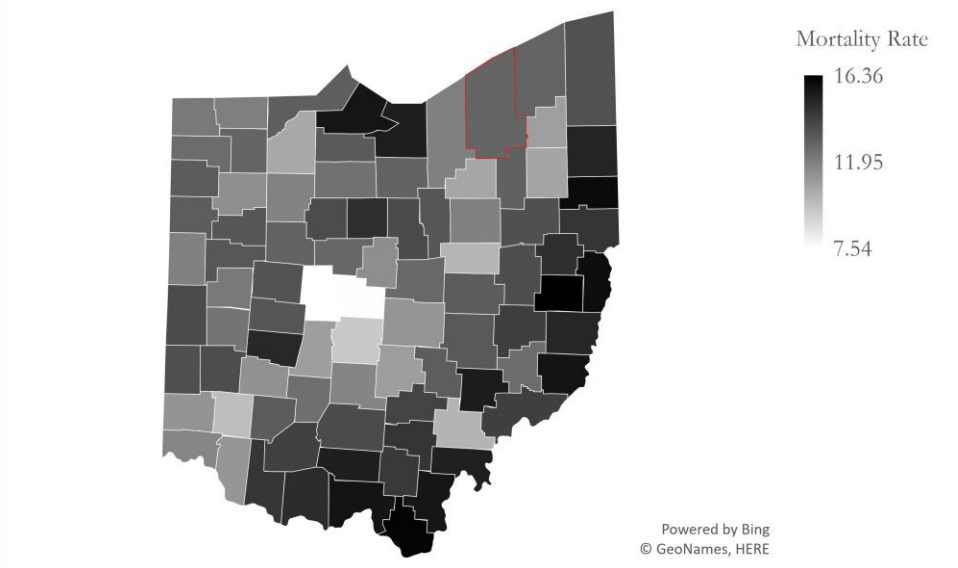


Figure 2 Mortality Rate Change for States 2019-2021 (deaths per 1,000). Source: Census 2019,2021



How did Ohio's counties fair? As shown in Figure 3, Ohio's mortality rate after the onset of COVID is worse in some parts of the state. Counties in and around the Columbus metropolitan statistical area are less affected. Columbus' Delaware, Union, and Franklin counties have the three lowest mortality rates in Ohio. Meanwhile, a contiguous stretch from Youngstown's Mahoning down through Ohio's Appalachian counties were most affected. Cuyahoga County's mortality rate in 2021, 12.85, was 36th best out of 88 counties.

Figure 3: Mortality Rate for Ohio Counties (deaths per 1,000). Source: Census 2021



A better contextualization of Cuyahoga County's mortality can be had by analyzing it against the nation's largest 100 counties. Table 1 shows that Cuyahoga County had the 3rd highest mortality rate in 2021, behind Tampa's Pinellas and Pittsburgh's Allegheny. The list is mostly a tale of two regions: The Sun Belt and the Rust Belt.

Both regions trend older. And with age the biggest predictor of a poor outcome of a COVID infection, the counties comprising the list in Table 1 aren't a surprise. But the Rust Belt counties are also afflicted by legacy costs related to deindustrialization (e.g., concentrated poverty, segregation) that have also proven to be predictive of increased mortality, not just from COVID but from a variety of conditions. Both acute and chronic.

Table 1: Top 15 Mortality Rates (deaths per 1,000) in Largest 100 Counties. Source: Census, 2021

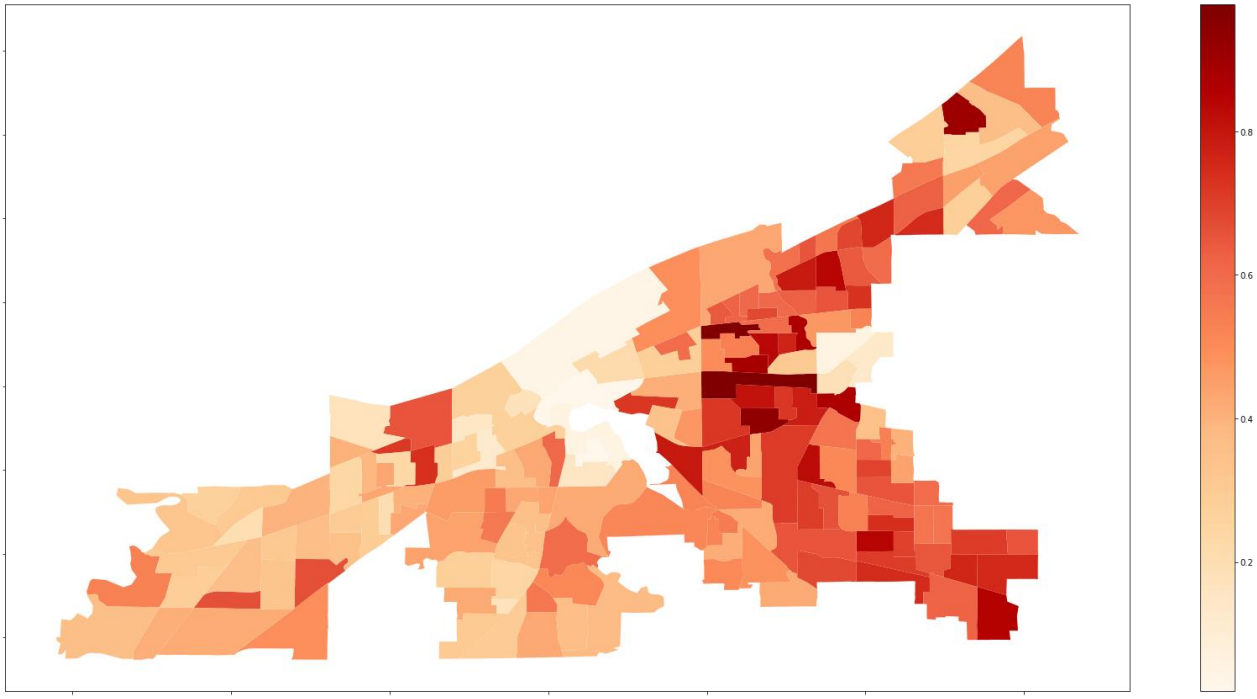
State	County	Mortality Rate
Florida	Pinellas County	15.26
Pennsylvania	Allegheny County	12.98
Ohio	Cuyahoga County	12.85
Florida	Lee County	12.70
Florida	Palm Beach County	12.45
Kentucky	Jefferson County	12.42
Michigan	Wayne County	12.26
Missouri	St. Louis County	12.24
New York	Erie County	12.13
Florida	Polk County	12.09
Michigan	Macomb County	11.98
Arizona	Pima County	11.87
Maryland	Baltimore County	11.84
Ohio	Hamilton County	11.70
Tennessee	Shelby County	11.51

Nonetheless, the age profile of a county can't be ignored in helping explain increased mortality. About 70% of all US COVID deaths are to those aged 70 or above[6] Yet while an aging population can help explain most of the big city Sun Belt counties with the highest mortality increases in Table 1—i.e., Florida's Pinellas, Lee, and Palm Beach counties have some the highest median ages in the nation—it doesn't explain many of the Rust Belt counties. Detroit's Wayne, Cleveland's Cuyahoga, and Pittsburgh's Allegheny do not rank in the top half of the oldest counties nationally. Meaning, there is something else at play.

[6] https://www.pnas.org/doi/10.1073/pnas.2006392117

What is that something else? It's multi-factored. There's ample evidence, for instance, that deindustrialization created "downstream" effects in Rust Belt communities that ultimately influence mortality[7]. Chiefly, a bifurcation, or "barbelling", of the labor market that came with excessive automation and off-shoring of middle-wage jobs[8] coincided with a residential pattern of segregation by race and class that split counties between areas of amenity and disamenity which, in turn, ultimately lands in the "geography" of the individuals living there[9], aka the structural determinants of health. An analysis by this author showed the concentration of residents most vulnerable to COVID-19 complications in Cuyahoga County were concentrated in Cleveland's majority-Black Near East Side. (See Figure 4.)

Figure 4 Neighborhoods by Density of Vulnerable Populations to COVID. Source: 2018 5-Year ACS, CDC 500 Cities Project, 2019.



Relatedly, COVID deaths have hit minority populations particularly hard. "COVID cuts US life expectancy, with minorities hit hardest," reads the title of an analysis from the University of Minnesota's Center for Infectious Disease Research and Policy[10], which cited research from the BMJ[11].

The *BMJ* study concludes: "In the US, decreases in life expectancy in Hispanic and non-Hispanic Black people were about two to three times greater than in the non-Hispanic White population, reversing years of progress in reducing racial and ethnic disparities, and lowering the life expectancy of Black men to 67.73 years, a level not seen since 1998."

[7] https://consilienceproject.org/deindustrialization-and-the-american-city/
[8] https://www.nytimes.com/2022/01/11/technology/income-inequality-technology.html
[9] https://engagedscholarship.csuohio.edu/urban_facpub/1748/
[10] https://www.cidrap.umn.edu/news-perspective/2021/06/covid-cuts-us-life-expectancy-minorities-hit-hardest
[11] https://www.bmj.com/content/373/bmj.n1343

Policy Implications

It has long been noted in economic development that a place's stock of human capital—measured not only by education, but also by the physical and mental well-being of the individuals living there—is key to economic and societal progress. Invariably, this has turned into strategies meant to "attract" and "retain" talent so as to keep a region at pace with the economic times[12]. But unless Cleveland builds a societal infrastructure that fosters well-being and longevity for both tenured and incoming residents, what's the attraction, really? What's the lure to stay?

[12] https://www.thisiscleveland.com/talentalliance