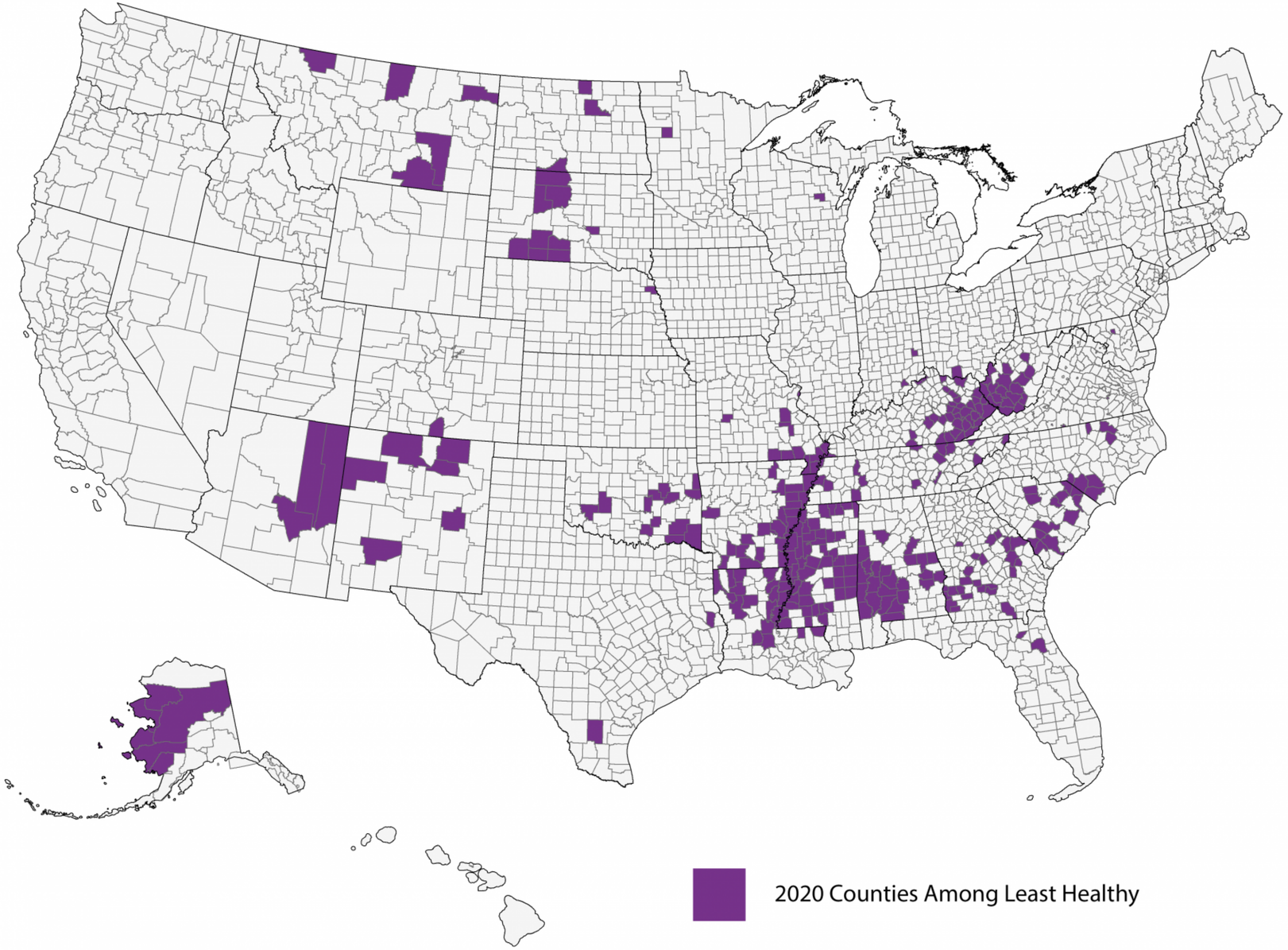
Democracy is the Recovery

Center for
Health Security

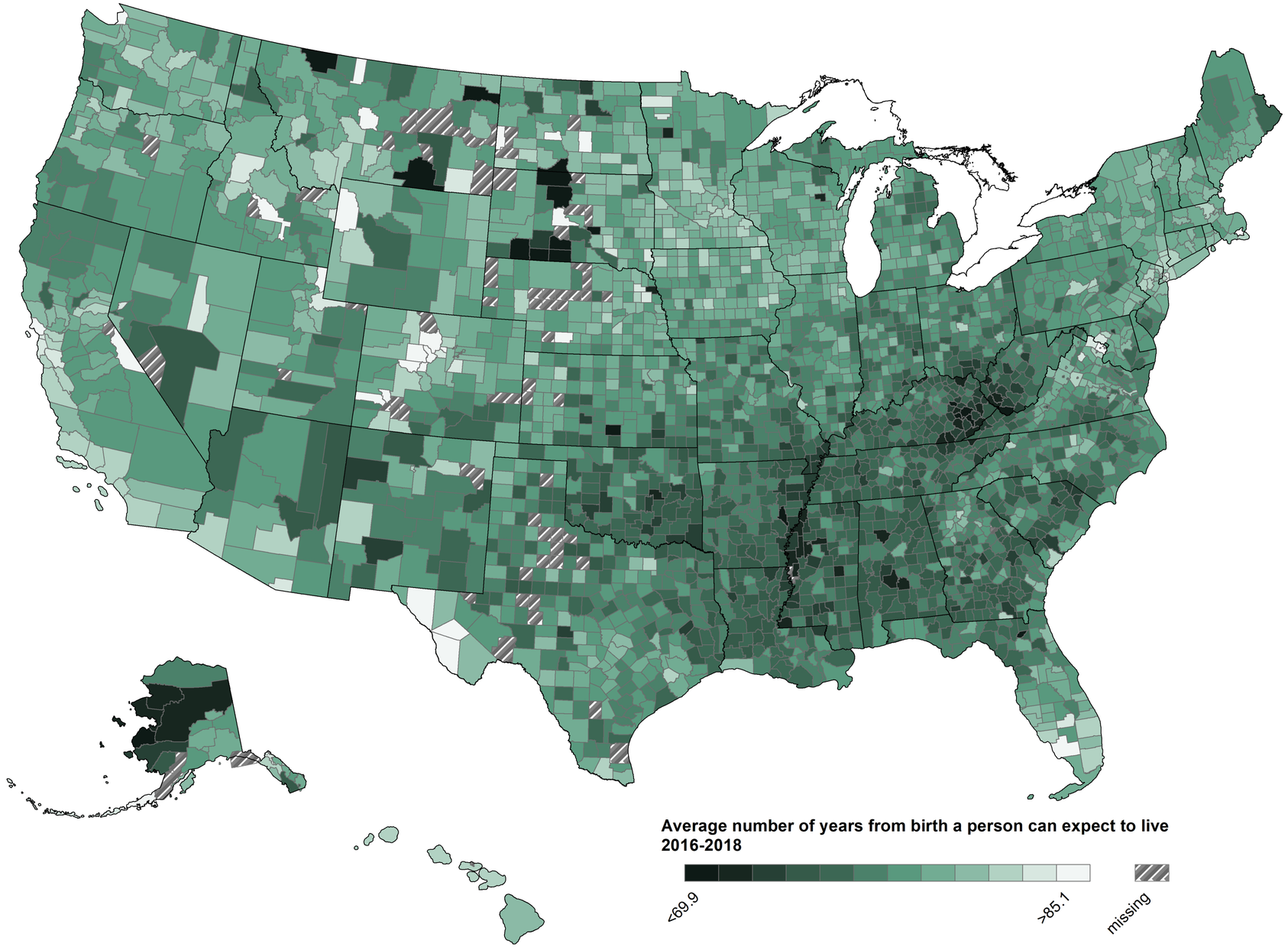
Lawrence T. Brown, PhD, MPA

October 4, 2022

Counties Among the Least Healthy for Outcome Measures

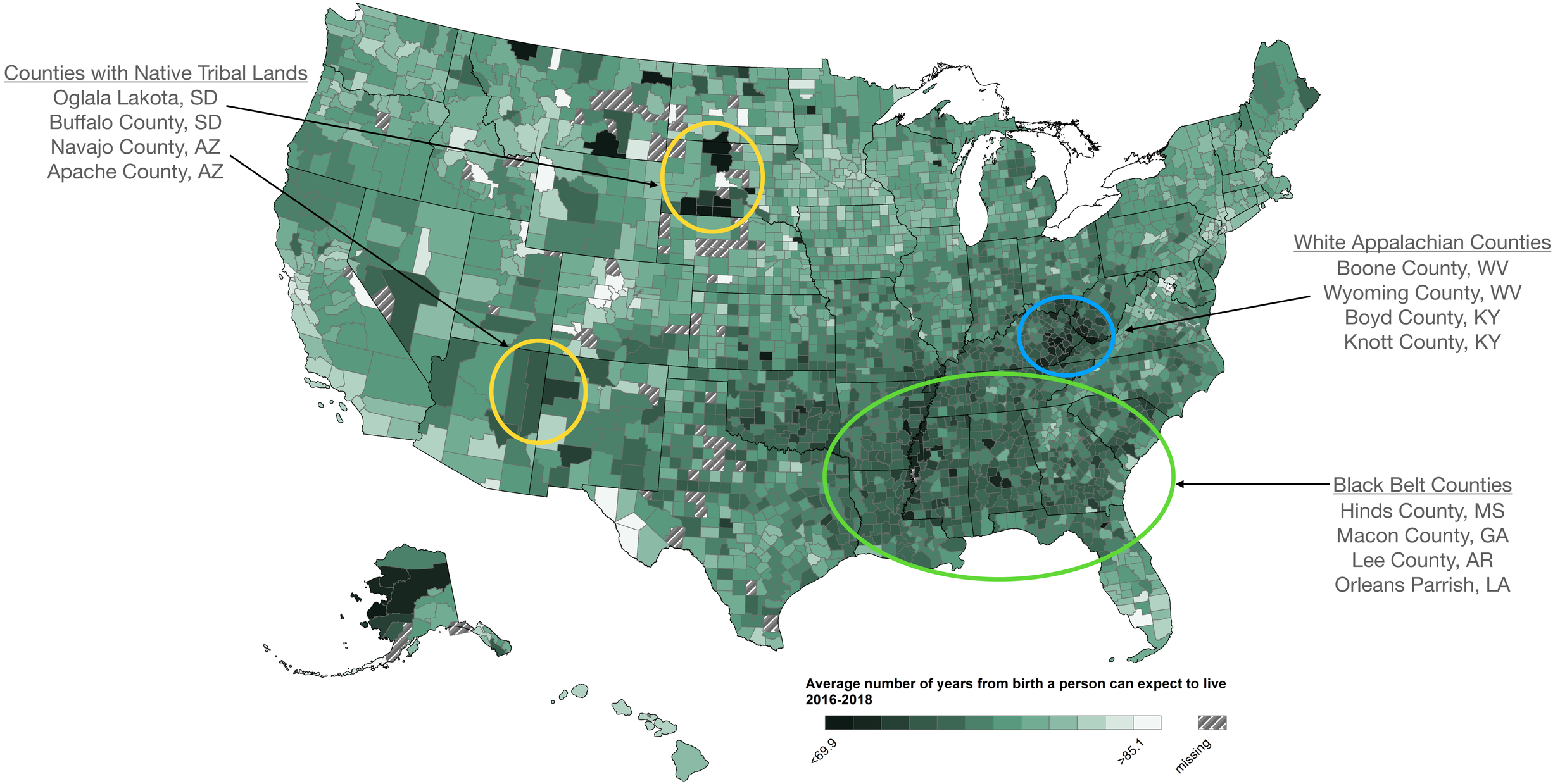


Life Expectancy Among U.S. Counties



countyhealthrankings.org

Life Expectancy Among U.S. Counties



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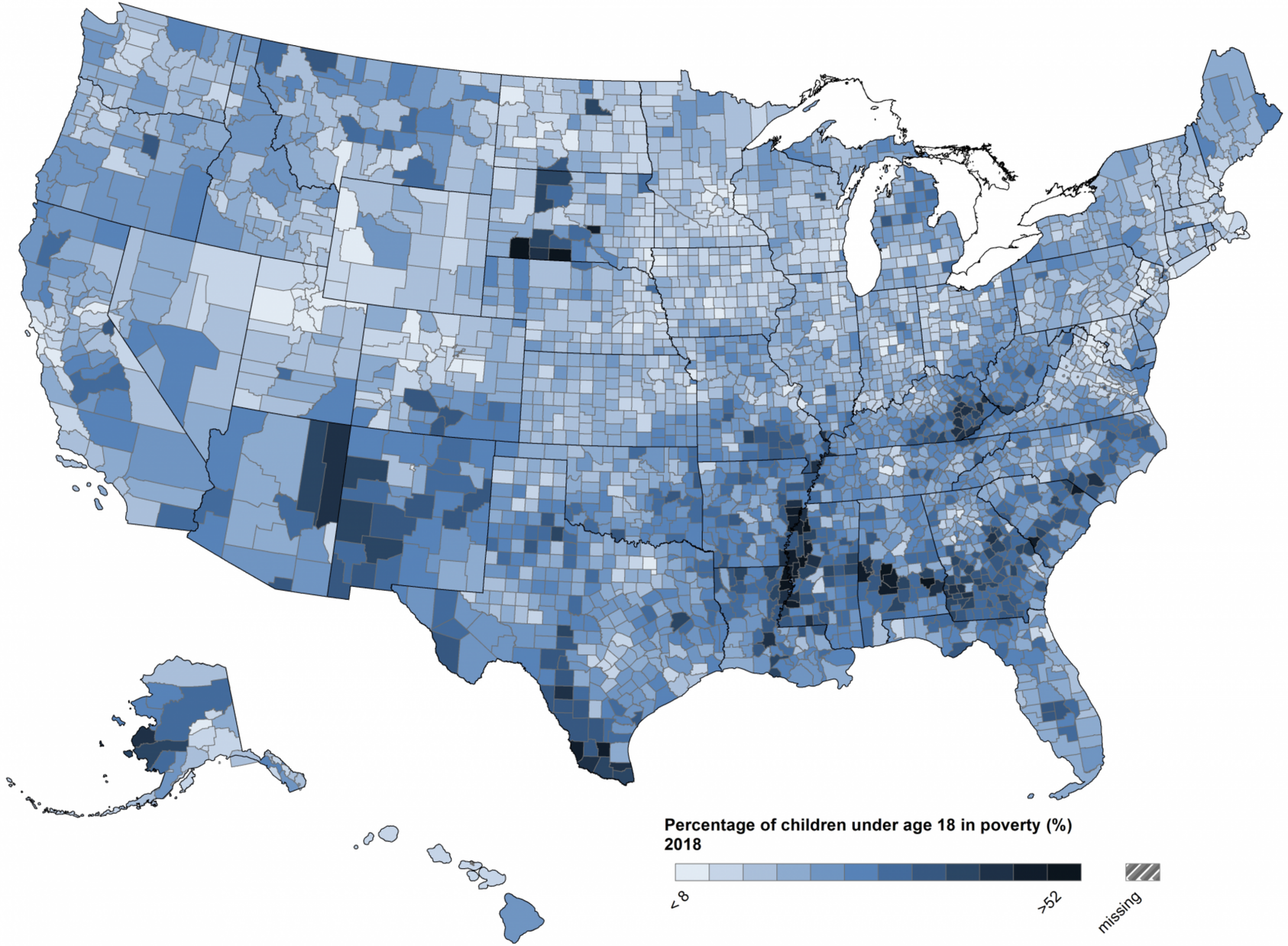
Children in Poverty among U.S. Counties, 2018



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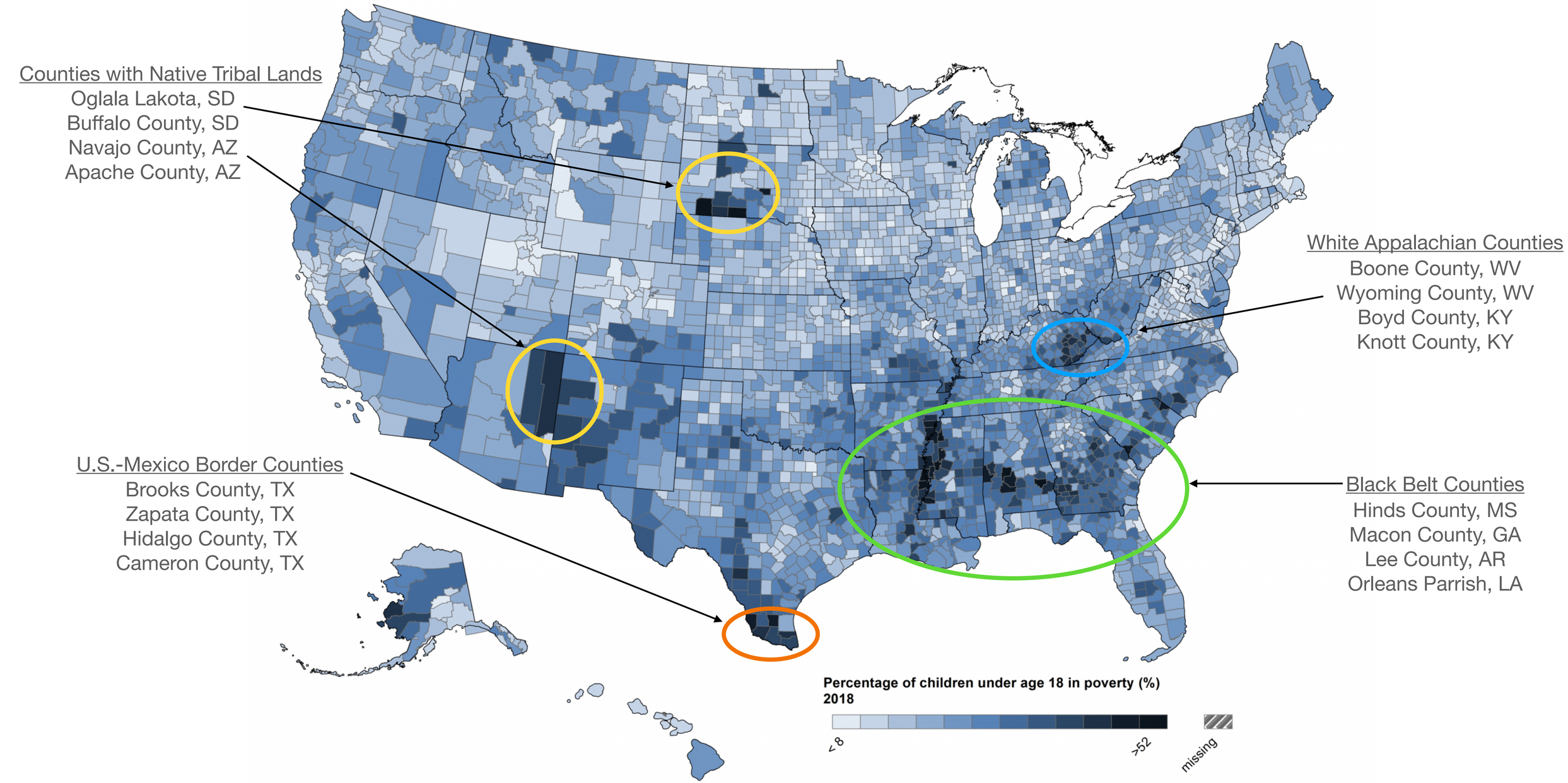
Four Geographic Clusters: Mapping the Future



First Three Waves of COVID in 2020

- Wave 1 (January)
  - Seattle
  - California
  - nursing homes
  - cruise ships
- Wave 2 (March-April)
  - Large urban areas (especially New York City)
  - New Orleans
- Wave 3 (April-June)
  - Rural areas
  - Tribal Lands
  - Deep South

COVID County Clusters as of March 23, 2020

CORONOVIRUS HOT SPOTS 1. CONFIRMED CASE REGIONAL CLUSTERS AS OF 3/23/2020

COUNTY CLUSTER	CONFIRMED CASES	POPULATION	DEATH COUNT	FATALITY (%)	CONFIRMED CASES PER 1M	DEATH COUNT PER 1M
NY-NJ (1)	25,563	20,700,000	179	0.7	1,237	9
NEW ORLEANS (1)	927	1,317,119	25	2.7	704	19
SEATTLE (1)	1972	4,527,060	101	5.12	436	22
DETROIT (1)	1207	4,656,251	17	1.41	259	4
CHICAGO	1,218	8,078,617	10	0.82	151	1
DENVER	334	2,726,244	0	0	123	0
SAN FRANCISCO (1)	928	8,039,928	18	1.94	115	2
BOSTON	659	6,170,638	3	0.46	107	0
MIAMI	671	6,434,866	6	0.89	104	1
ATLANTA (1)	196	2,008,820	2	1.02	98	1
WASHINGTON, DC	359	4,006,165	5	1.39	90	1
LA - SAN DIEGO	1,003	21,900,000	16	1.6	46	1

CORONOVIRUS HOT SPOTS 2. POPULATION-ADJUSTED REGIONAL CLUSTERS *

COUNTY CLUSTER	CONFIRMED CASES	POPULATION	DEATH COUNT	FATALITY (%)	CONFIRMED CASES PER 1M	DEATH COUNT PER 1M
NJ-NY (2)	25,420	17,600,000	178	0.7	1,444	10
ALBANY, GA	95	180,264	6	6.32	527	33
NEW ORLEANS (2)	1,015	1,996,290	30	2.96	508	15
SEATTLE (2)	2,035	4,938,941	103	5.06	412	21
DETROIT (2)	1,191	4,396,589	17	1.43	271	4
COLORADO	222	834,950	1	0.45	266	1
PINE BLUFF, AR	29	110,431	0	0	263	0
NASHVILLE, TN	168	723,946	2	1.19	232	3
GREENVILLE, MS	13	79,236	0	0	164	0
SAN FRANCISCO (2)	295	1,909,744	1	0.34	154	1
SALT LAKE CITY	120	1,151,328	0	0	104	0
ATLANTA (2)	126	1,213,034	3	2.38	104	2
S. CAROLINA	61	605,380	0	0	101	0
LITTLE ROCK, AR	17	188,810	0	0	90	0
RHODE ISLAND	93	1,440,374	0	0	65	0

* Hot spots were calculated using different methods (raw and population-adjusted). Each regional cluster contains multiple counties. While regions may be similar, total counties within each cluster may not be the same, and thus may show different case and population counts.

Category 5 hypersegregated city

Category 4 hypersegregated city

Formerly a hypersegregated city

Source: U.S. COVID Atlas, University of Chicago

COVID in Hypersegregated Cities in Months 2 and 3

Cities	Segregation Intensity	Hypersegregation Status	April 24 Cases per 100,000	May 14 Cases per 100,000
New York City	Category 4	Currently hypersegregated	1,873.4	2,193.9
New Orleans	Category 3	Once hypersegregated	1,613.3	1,737.0
Albany, GA	Category 2	Once hypersegregated	1,609	1,805.6
Detroit	Category 5	Currently hypersegregated	874.7	1,065.6
Philadelphia	Category 4	Currently hypersegregated	666.9	991.7
Chicago	Category 5	Currently hypersegregated	528.7	1,119.1
Washington DC	Category 3	Once hypersegregated	515.4	984.1
Indianapolis	Category 3	Once hypersegregated	480.3	825.1
Flint	Category 5	Currently hypersegregated	350.3	442.9
Denver	Category 2	Once hypersegregated	343.9	628.6

COVID-19 DATA FROM APRIL 24 AND MAY 14, 2020. OBTAINED FROM THE U.S. COVID-19 ATLAS. UNIVERSITY OF CHICAGO CENTER FOR SPATIAL DATA SCIENCE

Hypersegregated Metro Areas in the United States

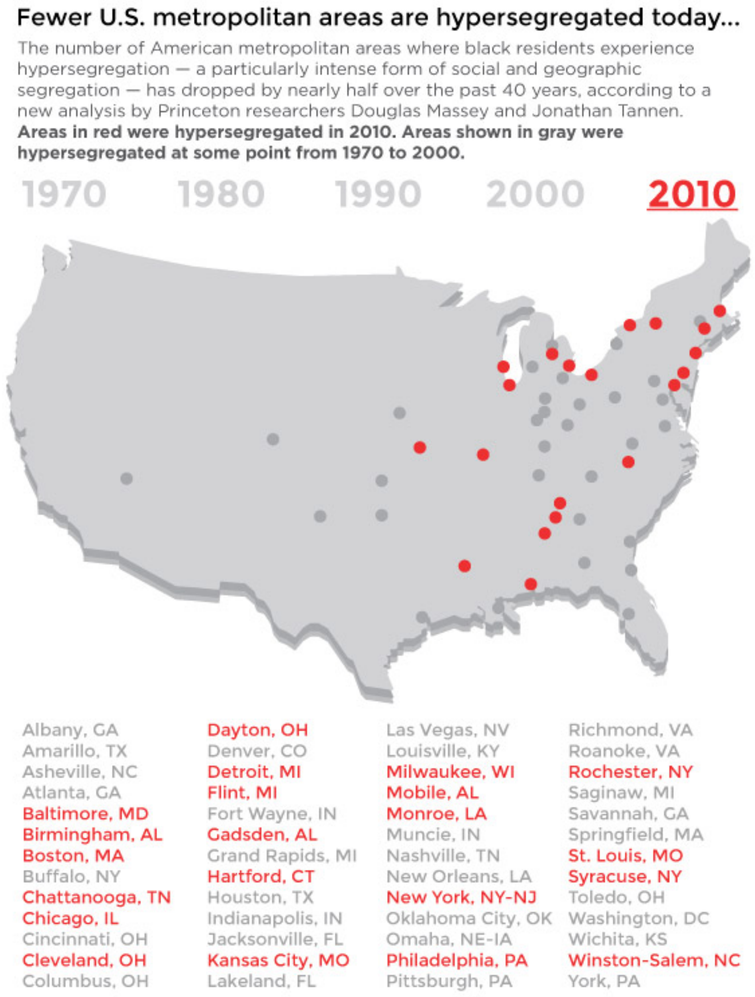


Table 2 Hypersegregated metropolitan areas in 2010

	Unevenness	Isolation	Clustering	Concentration	Centralization	Average
High Score on All Five Dimensions						
Baltimore	64.3	62.4	62.6	79.1	79.1	69.5
Birmingham	65.2	62.6	78.3	68.3	79.3	70.7
Chicago	75.2	64.8	86.3	79.1	79.6	77.0
Cleveland	72.6	64.7	80.6	85.4	81.9	77.0
Detroit	74.0	70.0	82.6	86.2	74.6	77.5
Flint	67.3	61.7	84.2	80.1	84.1	75.5
Milwaukee	79.6	65.5	100.0	87.1	91.2	84.7
St. Louis	70.6	62.0	75.9	87.3	91.2	77.4
Average	71.1	64.2	81.3	81.6	82.6	76.2
High Score on Four Dimensions						
Boston	61.5	31.1	64.8	75.2	79.2	62.4
Chattanooga	63.0	48.6	66.8	78.8	62.6	64.0
Dayton	63.3	55.1	63.4	70.4	76.7	65.8
Gadsden	66.4	47.0	67.2	81.7	81.4	68.7
Hartford	62.3	35.4	80.5	71.1	70.7	64.0
Kansas City	58.6	43.3	52.1	86.5	88.1	65.7
Mobile	59.0	62.2	42.0	68.4	72.6	60.8
Monroe	63.4	66.7	62.6	51.7	71.6	63.2
New York	76.9	51.3	78.6	80.6	83.6	74.2
Philadelphia	67.0	55.8	85.0	69.7	70.0	69.5
Rochester	63.0	40.3	98.9	75.7	78.6	71.3
Syracuse	64.6	37.5	69.0	83.7	87.5	68.5
Winston-Salem	56.1	43.4	55.4	74.8	81.2	62.2
Average	63.5	47.5	68.2	74.5	77.2	66.2

DOUGLASS MASSEY AND JONATHAN TANNEN. 2015. A RESEARCH NOTE ON TRENDS IN BLACK HYPERSEGREGATION. DEMOGRAPHY. VOL. 52(3): 1025-1034.

Spatial Inequity in COVID Testing Rates & Sites

Received: 8 May 2020 | Revised: 22 July 2020 | Accepted: 27 July 2020

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ORIGINAL ARTICLE

Neighbourhood inequity: Exploring the factors underlying racial and ethnic disparities in COVID-19 testing and infection rates using ZIP code data in Chicago and New York

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Abstract

This paper compares ZIP code-level data on observed COVID-19 testing and case rates for the City of Chicago and New York City to better understand both: (i) the extent to which racial and ethnic disparities in COVID-19 testing and case rates exist at the neighbourhood level; and (ii) the most important neighbourhood-level drivers of these observed disparities. Through exploratory spatial mapping and econometric approaches, the paper finds that, across both cities, Hispanic-majority neighbourhoods have significantly lower testing rates than other racial/ethnic neighbourhood types, even when controlling for observed infection rates—which are also significantly higher for Hispanic-majority neighbourhoods. At the same time, White-majority neighbourhoods have significantly higher testing rates and lower observed infection rates. Given this observed disparity, the paper also examines a range of underlying factors that are potentially driving observed neighbourhood-level COVID-19 case rates. The findings suggest that higher socio-economic status and the provision of healthy, active built environments are significantly negatively associated with COVID-19 infection rates, while several aspects of social vulnerability are significant positive predictors of COVID-19 infection rates. These findings suggest that the health benefits from higher density,

Annals of Internal Medicine ORIGINAL RESEARCH

Spatial Inequities in COVID-19 Testing, Positivity, Confirmed Cases, and Mortality in 3 U.S. Cities

An Ecological Study

Usama Bilal, PhD; Loni P. Tabb, PhD; Sharrelle Barber, ScD; and Ana V. Diez Roux, PhD

Background: Preliminary evidence has shown inequities in coronavirus disease 2019 (COVID-19)-related cases and deaths in the United States.

Objective: To explore the emergence of spatial inequities in COVID-19 testing, positivity, confirmed cases, and mortality in New York, Philadelphia, and Chicago during the first 6 months of the pandemic.

Design: Ecological, observational study at the ZIP code tabulation area (ZCTA) level from March to September 2020.

Setting: Chicago, New York, and Philadelphia.

Participants: All populated ZCTAs in the 3 cities.

Measures: Outcomes were ZCTA-level COVID-19 testing, positivity, confirmed cases, and mortality cumulatively through the end of September 2020. Predictors were the Centers for Disease Control and Prevention Social Vulnerability Index and its 4 domains, obtained from the 2014-2018 American Community Survey. The spatial autocorrelation of COVID-19 outcomes was examined by using global and local Moran *I* statistics, and estimated associations were examined by using spatial conditional autoregressive negative binomial models.

Results: Spatial clusters of high and low positivity, confirmed cases, and mortality were found, co-located with clusters of low and high social vulnerability in the 3 cities. Evidence was also found for spatial inequities in testing, positivity, confirmed cases, and mortality. Specifically, neighborhoods with higher social vulnerability had lower testing rates and higher positivity ratios, confirmed case rates, and mortality rates.

Limitations: The ZCTAs are imperfect and heterogeneous geographic units of analysis. Surveillance data were used, which may be incomplete.

Conclusion: Spatial inequities exist in COVID-19 testing, positivity, confirmed cases, and mortality in 3 large U.S. cities.

Primary Funding Source: National Institutes of Health.

Ann Intern Med. doi:10.7326/M20-3936 **Annals.org**
For author, article, and disclosure information, see end of text.
This article was published at Annals.org on 30 March 2021.

As of the end of 2020, the coronavirus disease 2019 (COVID-19) pandemic had taken the lives of more than 1.5 million people worldwide and more than 350 000 in the United States (1). Cities worldwide have emerged as especially vulnerable to COVID-19. Cities are characterized by diverse populations and are home to pronounced differences in health by race and socioeconomic position; these differences are often called "health inequities" because they are avoidable and unjust (2). The presence of large racial and ethnic differences in COVID-19 within U.S. cities has been documented. For example, in New York, both Black persons and Hispanic persons have double the age-adjusted mortality rate of non-Hispanic White persons (3); in Chicago, 50% of deaths have occurred in Black persons, who make up only 30% of the population (4); and in Philadelphia, age-specific incidence, hospitalization, and mortality rates are 2 to 3 times higher for Black persons and Hispanic persons than for non-Hispanic White persons (5). These stark differences by race are consistent with racial health inequities in many health outcomes and probably reflect multiple interrelated processes linked to structural inequity, historical racist policies, and residential segregation (6–8).

Cities in the United States are characterized by strong residential segregation by both race/ethnicity and income, one of the most visible manifestations of structural racism (9). Residential segregation results in stark differences across neighborhoods in multiple factors that could be related to both the incidence and severity of COVID-19, including factors related to transmission (such as overcrowding and jobs that do not allow social distancing) and to severity of disease (such as a higher prevalence of chronic health conditions related to neighborhood environments, greater air pollution exposure, and limited access to quality health care) (6–8, 10, 11). Few studies have systematically characterized spatial inequities in COVID-19–related outcomes in cities over the course of the pandemic.

Characterizing social and spatial inequities in cities is critical to developing appropriate interventions and policies to prevent COVID-19 deaths in the future and mitigate economic and racial inequities. We used data from 3 large U.S. cities–Chicago, New York, and Philadelphia–to characterize spatial and social inequities in testing, positivity, confirmed cases, and mortality.

Methods

Setting

We used data on the total numbers of tests, confirmed cases, and deaths by ZIP code tabulation area

See also:

Editorial comment
Web-Only
Supplement

AJPH RESEARCH & ANALYSIS

Racial/Ethnic Segregation and Access to COVID-19 Testing: Spatial Distribution of COVID-19 Testing Sites in the Four Largest Highly Segregated Cities in the United States

Emmanuella Ngozi Asabor, MPhil, Joshua L. Warren, PhD, and Ted Cohen, MD, DPH

See also Yang, p. 369.

Objectives. To quantify the relationship between the segregation of Black, Indigenous, and Latinx communities and COVID-19 testing sites in populous US cities.

Methods. We mapped testing sites as of June 2020 in New York City; Chicago, Illinois; Los Angeles, California; and Houston, Texas; we applied Bayesian methods to estimate the association between testing site location and the proportion of the population that is Black, Latinx, or Indigenous per block group, the smallest unit for which the US Census collects sociodemographic data.

Results. In New York City, Chicago, and Houston, the expected number of testing sites decreased by 1.29%, 3.05%, and 1.06%, respectively, for each percentage point increase in the Black population. In Chicago, Houston, and Los Angeles, testing sites decreased by 5.64%, 1.95%, and 1.69%, respectively, for each percentage point increase in the Latinx population.

Conclusions. In the largest highly segregated US cities, neighborhoods with more Black and Latinx residents had fewer COVID-19 testing sites, likely limiting these communities' participation in the early response to COVID-19.

Public Health Implications. In light of conversations on the ethics of racial vaccine prioritization, authorities should consider structural barriers to COVID-19 control efforts. (*Am J Public Health.* 2022;112(3):518–526. https://doi.org/10.2105/AJPH.2021.306558)

Black, Indigenous, and Latinx communities in the United States have experienced disproportionate rates of COVID-19 infection, hospitalization, and mortality.[1] They will likely also take longer to recover as individuals and communities from the social and economic ramifications of the pandemic.[2] Observers outside public health predicted this epidemiological landscape in the absence of coordinated federal data collection. Lay Black people, Indigenous people, and other people of color (BIPOC) have identified structural racism—the historical, economic, political, and interpersonal factors resulting in poor outcomes for racial minorities—as the underlying mechanism for racial inequity during the pandemic.[3] Structural racism precedes the health inequity observed during the pandemic through myriad pathways.[4] Racial inequity in employment, housing, and wealth impede BIPOC communities' practice of social and physical distancing.[5,6] Racial and ethnic discrimination in clinical settings and inequity in access to healthy food and clean air contribute to disproportionate rates of comorbidities that complicate COVID-19 among BIPOC.[1] We quantified the contribution of segregation, a geographic manifestation of structural racism, to health inequity among Black, Indigenous, and Latinx communities during the COVID-19 pandemic.

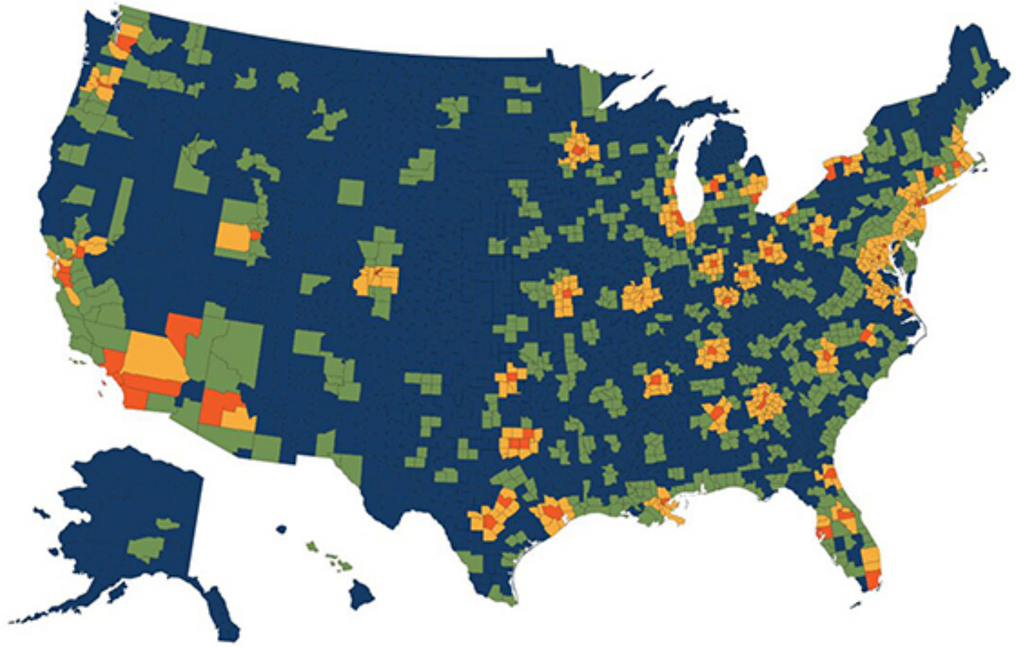
CITIES EXAMINED IN THESE PAPERS INCLUDED CHICAGO, NEW YORK, PHILADELPHIA, LOS ANGELES, HOUSTON

COVID-19 in Tribal Lands

Counties	Native American Tribal Groups	Percentage Native American in County	April 24 Cases per 100,000	May 14 Cases per 100,000
McKinley County, New Mexico	Navajo, Hopi, and Zuni	73.3	877.2	2,374.8
Navajo County, Arizona	Navajo, Hopi	43.2	563.3	1,057.9
Apache County, Arizona	White Mountain Apache, Navajo, et al.	72.8	413.9	1,201.0

COVID-19 DATA FROM APRIL 24, 2020. OBTAINED FROM THE U.S. COVID-19 ATLAS. UNIVERSITY OF CHICAGO CENTER FOR SPATIAL DATA SCIENCE

Rural Counties in America



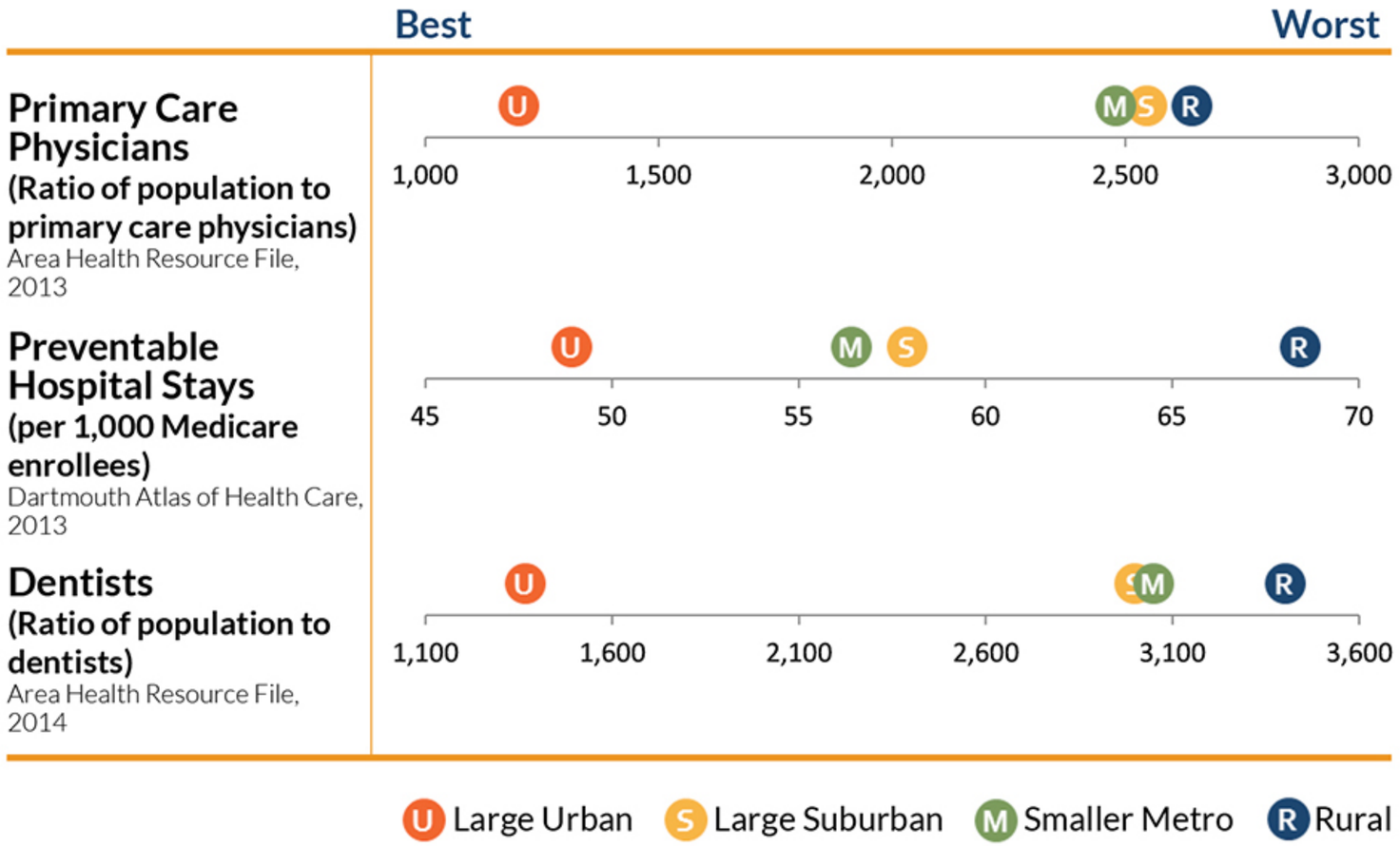
Counties Categorized by Level of Urbanization

Category	*Definition*	*Total Population*	*Number of Counties*
Large Urban Metro	Central urban core counties within an MSA with more than 1 million people	96 m	68
Large Suburban Metro	Non-central fringe counties within an MSA with more than 1 million people	77 m	368
Smaller Metro	Counties within an MSA with between 50,000 and 1 million people	94 m	731
Rural	Non-metropolitan rural counties with less than 50,000 people	46 m	1,974

Adapted from the 2013 National Center for Health Statistics' urban-rural classification based on Metropolitan Statistical Area (MSA) designations.

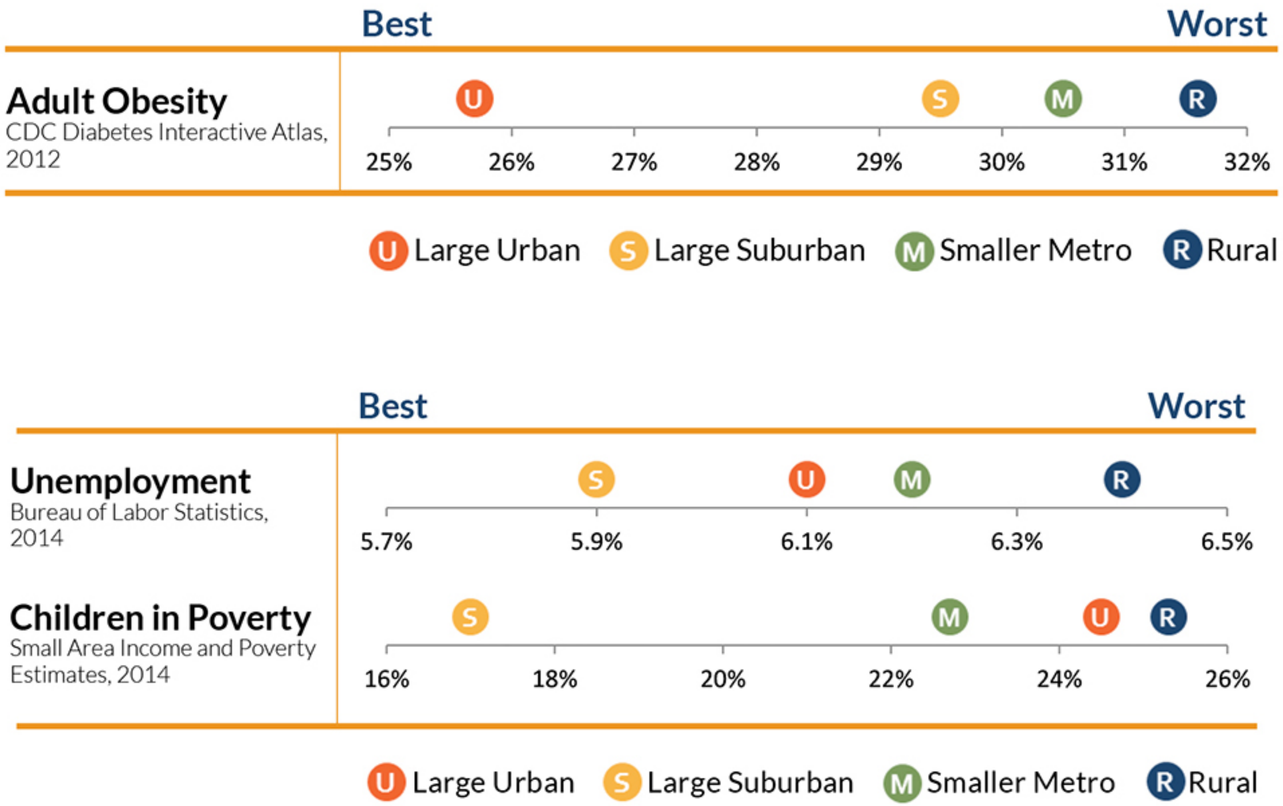
Source: What Works for Health, County Health Rankings & Roadmaps

Rural health infrastructure and utilization



Source: What Works for Health, County Health Rankings & Roadmaps

Rural health and economic outcomes



Source: What Works for Health, County Health Rankings & Roadmaps

Challenges faced by rural public health departments

- Health outcomes for rural residents are also influenced by LHDs that lack the capacity for high performance of the 10 Essential Public Health Services.
- Rural LHDs have fewer staff and lack specialty staff, with the exception of nursing staff (e.g., no epidemiologists).
- Rural LHDs rely on partnerships to provide services but are limited in the number and types of local organizations available to partner.
- Rural LHDs have limited access to technology, which limits access to information available electronically, including the latest public health evidence, training opportunities, and quality improvement materials.

Source: The Double Disparity Facing Health Rural Local Health Departments (2016)

Rural hospital closures are on the rise

The number of rural hospital closures are trending higher

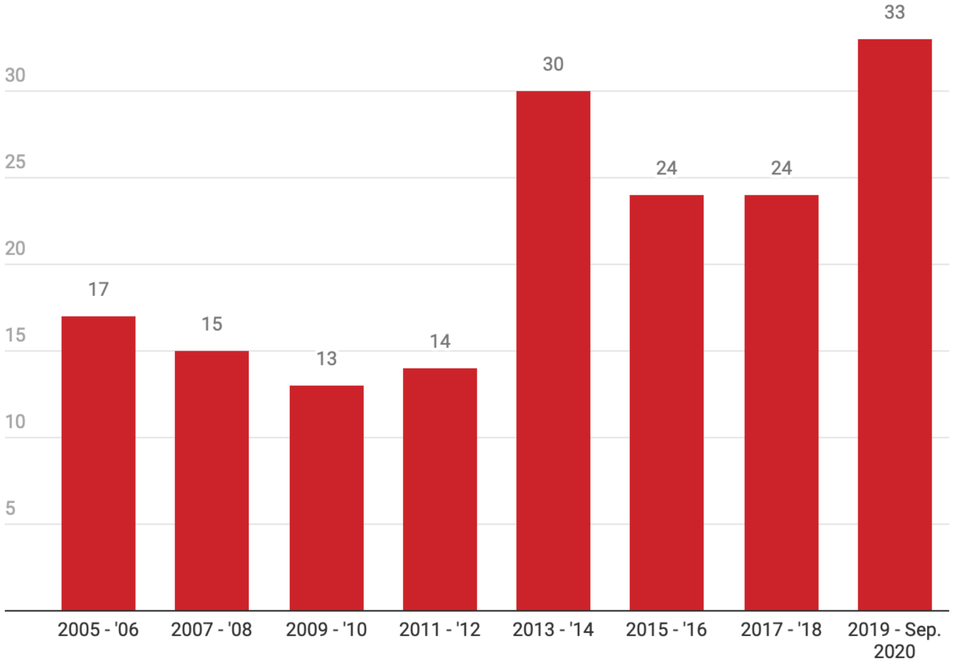


Chart: Emily Barone for TIME • Source: Cecil G. Sheps Center at UNC Chapel Hill • Get the data • Created with Datawrapper

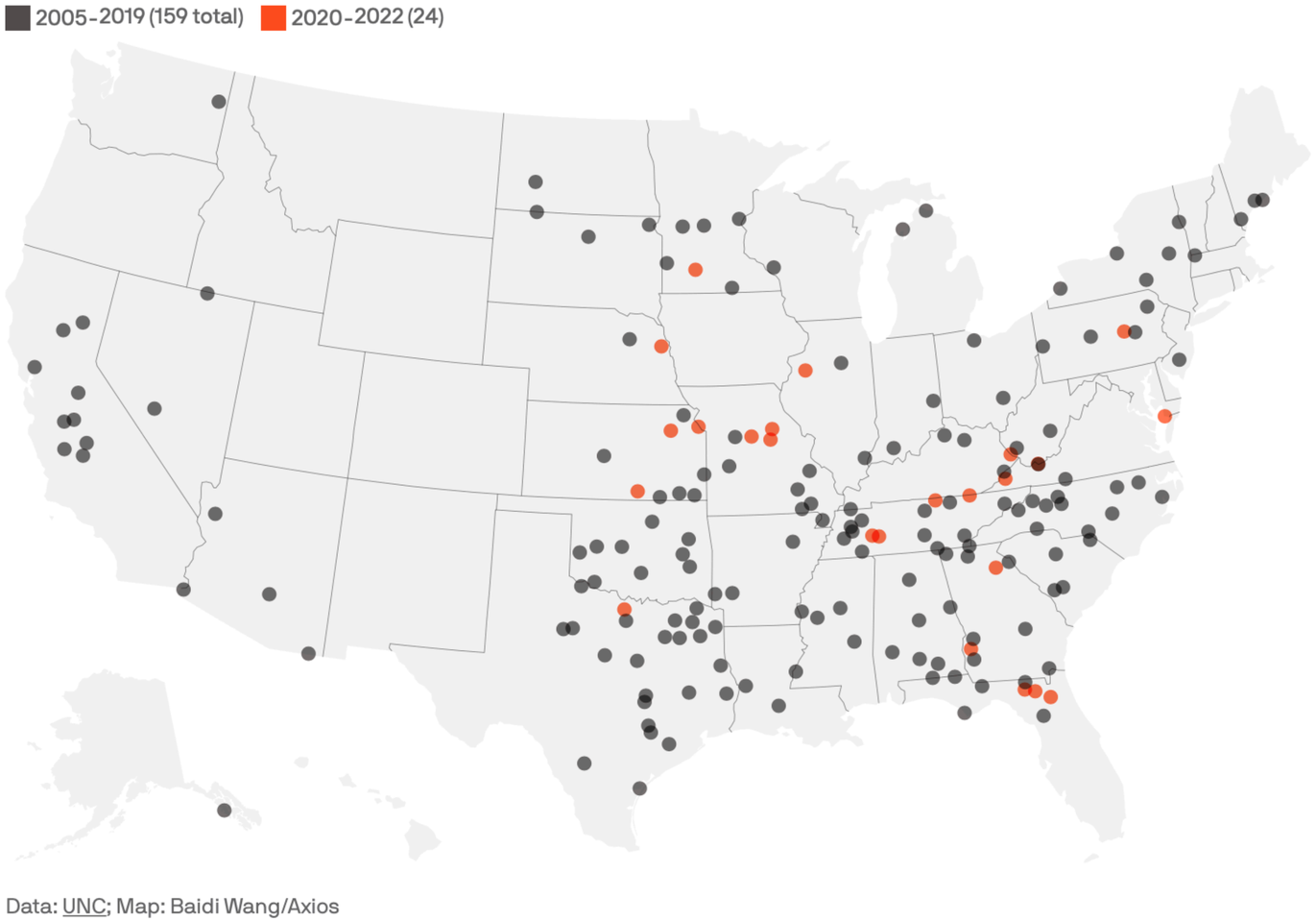
Figure 1 – Overview of Rural Hospital Closures 2010-2021

YEAR	FULL CLOSURES	CONVERTED CLOSURES	TOTAL CLOSURES
2010	1	2	3
2011	2	3	5
2012	5	4	9
2013	5	8	13
2014	8	8	16
2015	11	6	17
2016	5	5	10
2017	8	2	10
2018	9	5	14
2019	9	9	18
2020	10	9	19
2021	0	2	2
Total	**73**	**63**	**136**

Source: The Cecil G. Sheps Center for Health Services at the University of North Carolina at Chapel Hill

Source: TIME magazine, Rural U.S. Hospitals are On Life Support (left)
American Hospital Association, Rural Hospital Closures Threaten Access (right)

Rural hospital closures are on the rise



Data: UNC; Map: Baidi Wang/Axios

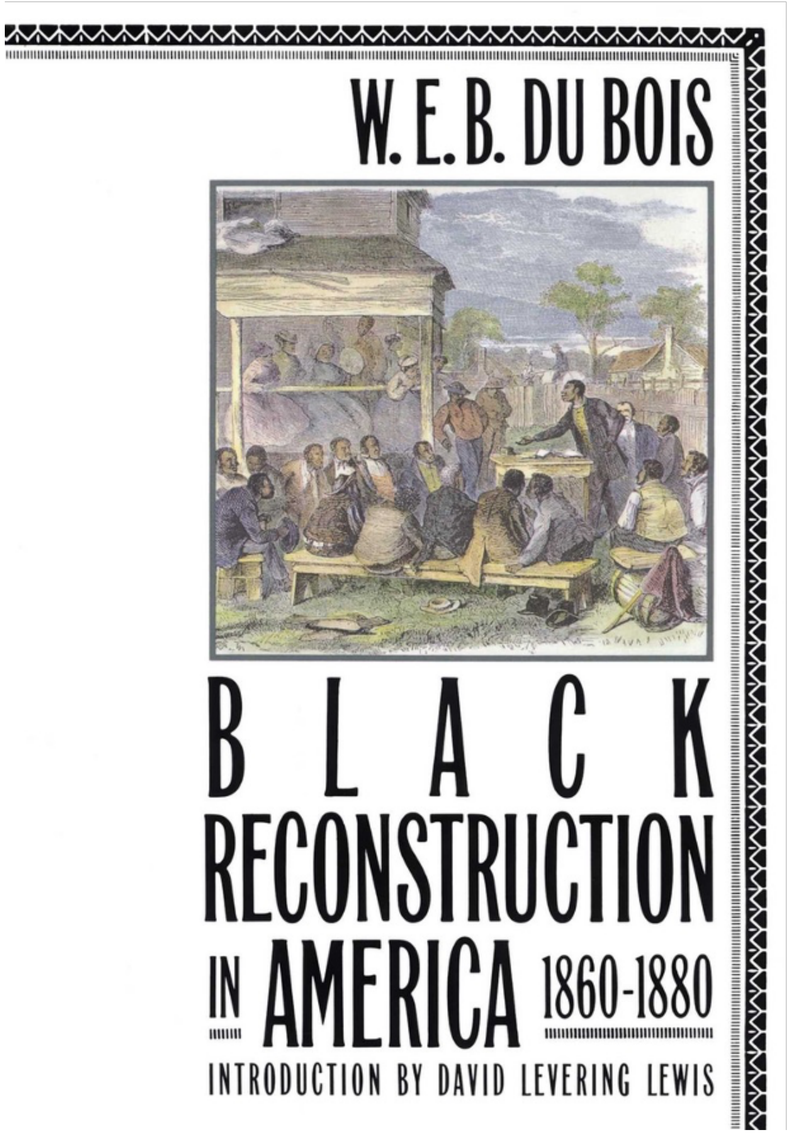
Source: Axios, Rural Hospitals Again Face Financial Jeopardy

Biological viruses attack social vulnerability

Especially the people and places that are redlined, subprimed, marginalized, and demonized.

Which kind of democracy?

The Abolition-Democracy as a Movement



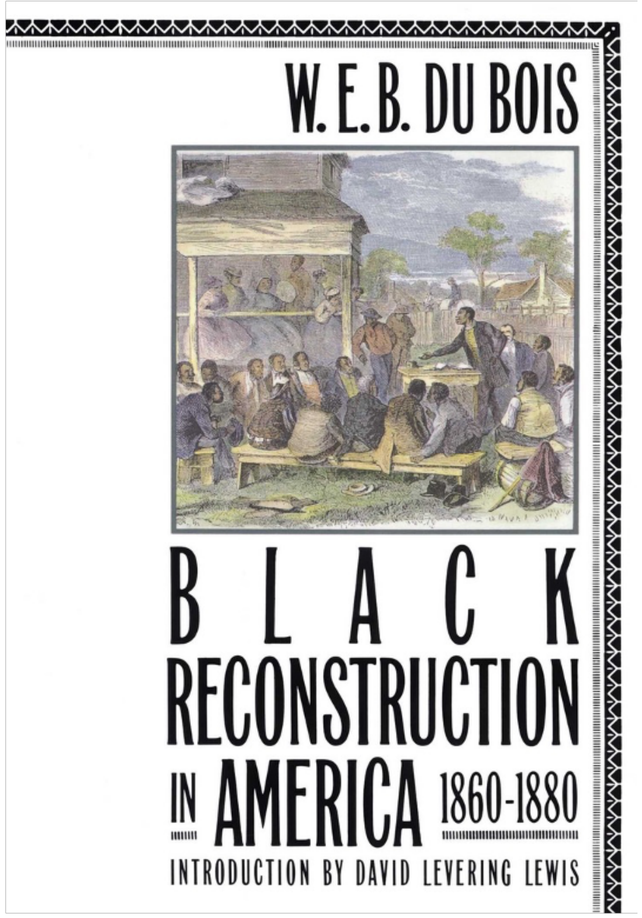
January 1, 1863, he declared that the slaves of all persons in rebellion were "henceforward and forever free."

The guns at Sumter, the marching armies, the fugitive slaves, the fugitives as "contrabands," spies, servants and laborers; the Negro as soldier, as citizen, as voter—these steps came from 1861 to 1868 with regular beat that was almost rhythmic. It was the price of the disaster of war, and it was a price that few Americans at first dreamed of paying or wanted to pay. The North was not Abolitionist. It was overwhelmingly in favor of Negro slavery, so long as this did not interfere with Northern moneymaking. But, on the other hand, there was a minority of the North who hated slavery with perfect hatred; who wanted no union with slaveholders; who fought for freedom and treated Negroes as men. As the Abolition-democracy gained in prestige and in power, they appeared as prophets, and led by statesmen, they began to guide the nation out of the morass into which it had fallen. They and their black friends and the new freedmen became gradually the leaders of a Reconstruction of Democracy in the United States, while marching millions sang the noblest war-song of the ages to the tune of "John Brown's Body":

Mine eyes have seen the glory of the coming of the Lord,
He is trampling out the vintage where the grapes of wrath are stored,
He hath loosed the fateful lightning of his terrible swift sword,
His Truth is marching on!

Comprehensive Abolition Requires Full Inclusion

"The abolition of slavery meant not simply abolition of legal ownership of the slave; it meant the uplift of slaves and their eventual incorporation into the body civil, politic, and social, of the United States. … The Negro must have civil rights as a citizen; [they] must have political rights like every other citizen of the United States" (p. 189).



Abolition Democracy is the Recovery

- Listen to people from all backgrounds, cultures, perspectives, and communities
- Provide restorative resources to the four geographic clusters and in redlined neighborhoods in hypersegregated metropolitan areas
  - Counties with Tribal Lands
  - U.S.-Mexico Border Counties
  - White Appalachian Counties
  - Southern Black Belt Counties
- Remove roadblocks to democratic participation
- Strengthen public health BEFORE the next disaster or pandemic strikes