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Addressing Racial and Ethnic Health Disparities During a Pandemic

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Presidential Advisory Council of Combating Antibiotic-Resistant Bacteria January 25, 2023

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COVID-19 Health Equity Workstream

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SUB-STREAM	OBJECTIVES
Effective Communication	Effectively communicate COVID-19 risks and preventative strategies to: • Individuals at risk for health inequities – minoritized racial/ethnic groups, socioeconomically disadvantaged, people w preferred language not English • Employees: including nutrition, maintenance, environmental services
Equitable Testing	• Provide/facilitate timely testing • Report aggregate test results by key demographics including age, gender, race/ethnicity, preferred language, and ZIP code
Equitable Care	• Provide high quality care that does not vary by race/ethnicity, gender, SES • Effectively communicate post-discharge and facilitate transitions of care • Report aggregate outcomes by age, gender, and race/ethnicity, ZIP
Inclusivity in Clinical Trials	• Increase awareness of importance of clinical research for COVID-19 given there is no proven effective therapy • Engage/enroll racial/ethnic minorities, others socially disadvantaged
Inclusive Implementation of Telehealth	• Effectively use telehealth to provide care for patients including those with limited health literacy, English proficiency, internet access • Increase adoption of telehealth among racial/ethnic minorities, patients with, limited English proficiency, and underserved rural communities

NEJM Catalyst | Innovations in Care Delivery

ARTICLE

A Systems Approach to Addressing Covid-19 Health Inequities

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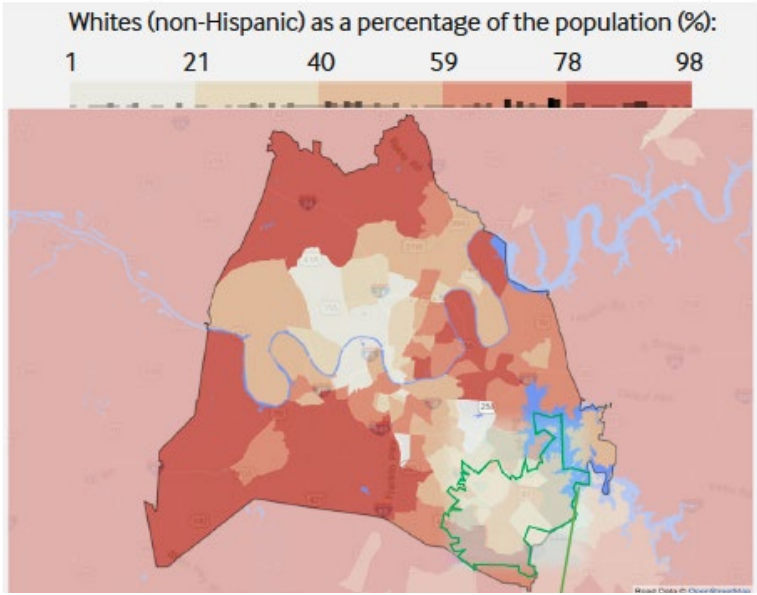
Most Covid-19 Cases at Vanderbilt University Medical Center (as of July 1, 2020)



Socioeconomic Data of ZIP Code with Highest Number of Covid-19 Cases Compared with Nashville Metropolitan Area

	ZIP Code 37013	Nashville, TN Metro Area
Population	97,819	1,932,099
Vanderbilt Covid-19 cases (7.1.20)	381	2,470
Black/African American	35%	15%
Hispanic/Latino	16%	7%
Asian/Asian American	4%	3%
High school or equivalent	87.2%	89.5%
Language other than English spoken at home	30.3%	10.3%
Foreign born	25%	8%
Median home value	$167,900	$217,500
Household size	2.8	2.6
Adults employed	73.1%	67.6%
Per capital income	$25,568	$33,606
Persons below poverty line	15.7%	12.4%

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Source: Socioeconomic data from Census Reporter. 2020. Accessed November 14, 2020. http://censusreporter.org/profiles/86000US37013-37013/ and https://censusreporter.org/profiles/31000US34980-Nashville-Davidson-Murfreesboro-franklin-tn-metro-area/.
Map from Statistical Atlas. Demographics. 2020. Accessed November 14, 2020. https://statisticalatlas.com/county/Tennessee/Davidson-County/Race-and-Ethnicity#data-map/tract

VUMC SARS CoV-2 Tests by Race, Ethnicity, Language – 1.12.2022

	Population	SARS-Cov-2		(+)SARS CoV-2		Within-group (+)
	% Nashville MSA population total: 1,933,860	n (% of 340,645)		n (% of 49,180)		
RACE/ETHNICITY						
White	76.7%	225,767	(66.3%)	28,699	(58.4%)	12.7%
Black/African American	15.2%	41,249	(12.1%)	6,157	(12.5%)	14.9%
Hispanic / Latino	7.6%	19,686	(5.8%)	2,840	(5.8%)	14.4%
Asian	3.0%	6,340	(1.9%)	879	(1.8%)	13.9%
American Indian	0.2%	666	(0.2%)	95	(0.2%)	14.3%
Other	2.4%	10,568	(3.1%)	1,411	(2.9%)	13.4%
Unknown Race	N/A	56,055	(16.5%)	11,939	(24.3%)	21.3%

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Data includes all patients tested for SARS-CoV-2 at Vanderbilt University Medical Center from March 9, 2020 – January 12, 2022.
Total tested 340,645; total positive tests 49,180,. *Population demographics for Nashville metropolitan area includes Davidson, Williamson, and Rutherford Counties. Data from American Community Survey 2019. https://censusreporter.org/profiles/31000US34980-nashville-davidson-murfreesboro-franklin-tn-metro-area/

VUMC SARS CoV-2 Tests by Race, Ethnicity, Language – 1.12.2022

	Population	SARS-Cov-2	(+)SARS CoV-2	Within-group (+)
	% Nashville MSA population total: 1,933,860	n (% of 340,645)	n (% of 49,180)	
Preferred Language				
English	88.3%	322,576 (94.7%)	46,161 (93.9%)	14.3%
All Languages other than English (102)	11.7%	16,749 (4.9%)	3,019 (6.1%)	18.0%
Spanish	6.4%	10,482 (3.1%)	1,632 (3.3%)	15.6%
Arabic	1.0%	3,472 (1.0%)	660 (1.3%)	19.0%
Nepali	< 1%	334 (0.1%)	93 (0.2%)	27.8%
Unknown language	N/A	1,320 (0.4%)	246 (0.5%)	18.6%

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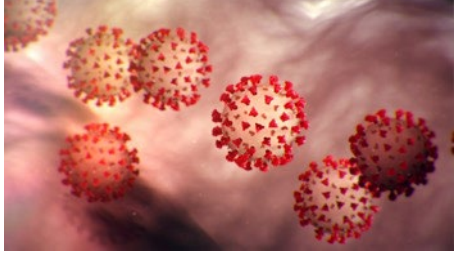
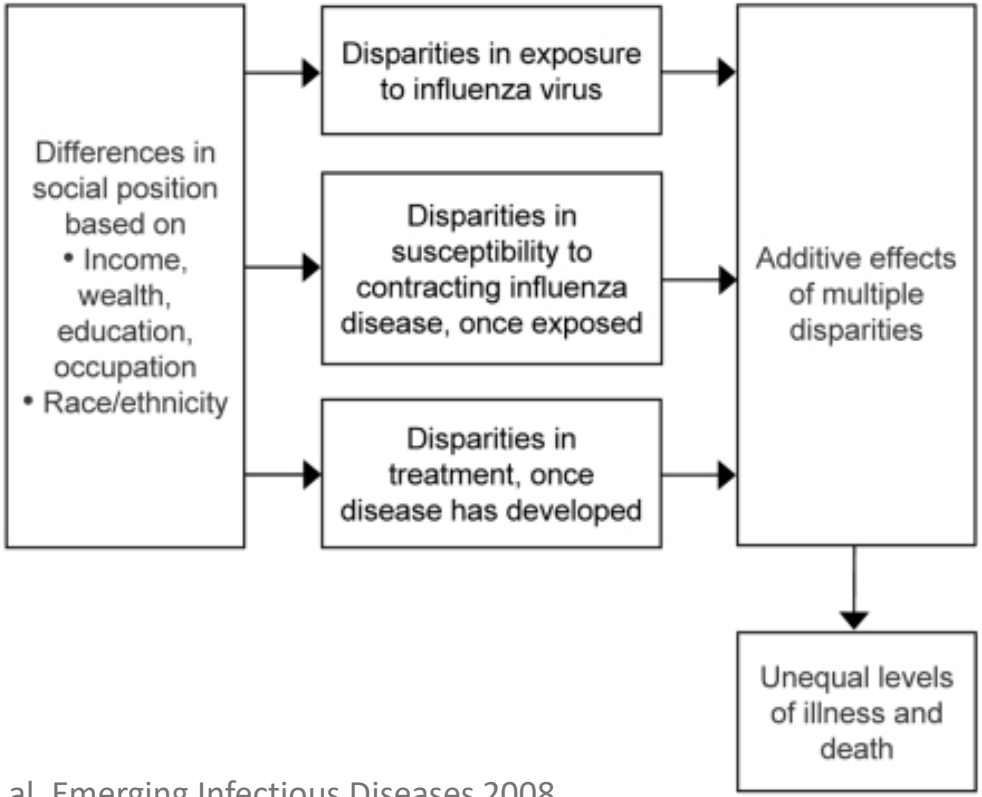
Why are minoritized racial and ethnic groups and people with limited English proficiency disproportionately impacted by COVID-19?





Blumenshine et al. Emerging Infectious Diseases 2008

Health Inequities & COVID-19

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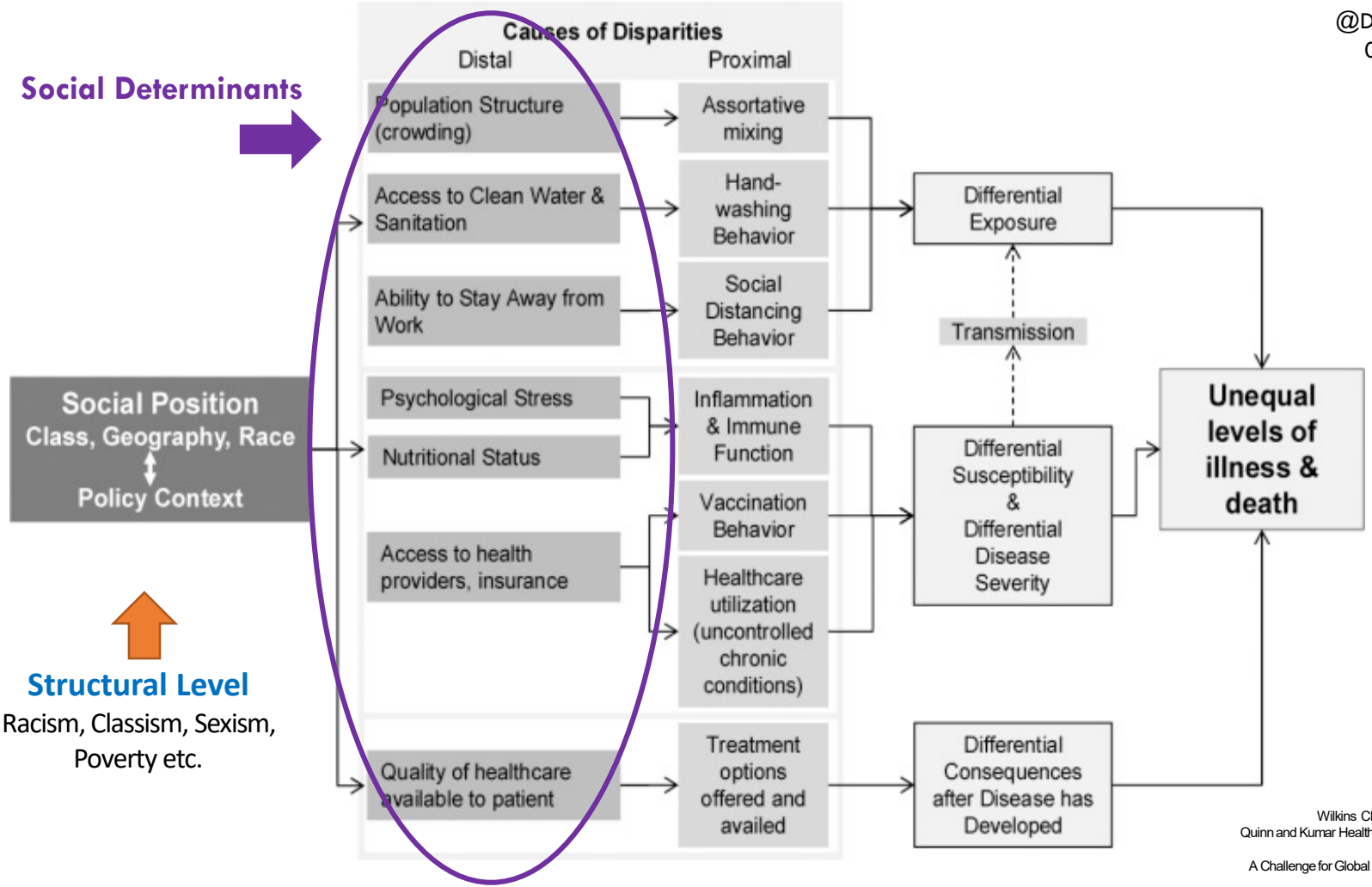
06.30.2020



Wilkins CH. Adapted 6.20.2020 from Quinn and Kumar Health Inequalities and Infectious Disease Epidemics: A Challenge for Global Health Security. 2014 DOI: 10.1089/bsp.2014.0032

Equitable Pandemic Preparedness and Rapid Response: Lessons from COVID-19 for Pandemic Health Equity

Journal of Health Politics, Policy and Law, Vol. 45, No. 6, December 2020
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FOCUS ON UPSTREAM FACTORS

Table 1 Essential Multisector Actions for Pandemic Health Equity Preparedness

Build strong public health infrastructure that includes:

- Stockpiles of essential materials to prevent exposure (e.g., high-quality masks, hand sanitizer, personal protective equipment, etc.)
- Stockpiles of essential materials for testing, diagnosis, and antibody testing
- Plans for the equitable distribution of stockpiled materials
- Access to rapid disease testing, antibody testing, diagnosis, and follow up
- Rapid contact tracing
- Increases in funding to local, state, regional, tribal, and federal public health agencies

Ensure the material conditions of health for all (as defined by the World Health Organization):

- Strong food access and security systems
- High levels of housing security and affordability
- Low levels of housing crowding
- High levels of air and water quality
- Prohibitions on evictions and significant rent hikes during epidemics and pandemics
- Prohibitions on water and other utility shutoffs during epidemics and pandemics
- Financial access to health care (health insurance coverage)
- Strong health care safety net system, including community health centers and public health clinics
- Sufficient health care providers (doctors, nurses, psychologists, community health workers, etc.) to meet all communities' needs

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FOCUS ON DOWNSTREAM FACTORS

Table 2 Pandemic Health Equity Rapid Response Tactics

Effectively communicate health risk:

- Engage trusted community organizations and leaders to develop and disseminate messaging
- Develop messaging that is relevant to socially vulnerable communities and recognizes the varying socioeconomic needs and differing levels of trust of health systems and government
- Create materials at the appropriate reading level for broad audiences
- Make information available in multiple languages using processes beyond translation that include a cultural understanding of specific communities with limited English proficiency
- Use channels viewed as trusted and credible by socially vulnerable communities

Implement socioculturally appropriate surveillance and risk reduction strategies:

- Create community-based surveillance programs that leverage community assets
- Use community health workers and public health educators to collect surveillance data and share risk reduction information
- Distribute information and supplies for risk reduction such as masks and hand sanitizer via community- and faith-based organizations

Ensure timely and easily accessible testing:

- Use community-level data such as social vulnerability indices, availability of transportation, and population density to determine location and hours of operation for testing sites
- Locate testing within the most socially vulnerable communities, ideally co-located with trusted community organizations
- Provide testing at no cost, regardless of insurance status
- Offer free transportation to testing sites
- Monitor testing access data disaggregated by race, ethnicity, and language, and rapidly shift or expand testing based on identified inequities
- Provide resources and post-testing information in multiple languages

Provide equitable and rapid access to quality health care:

- Broadly disseminate maps and location details of health care providers and clinics
- Deploy mobile testing and treatment units in communities with limited transportation access
- Engage trusted community organizations in messaging and ensure information is available in multiple languages

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Clinical Infectious Diseases

MAJOR ARTICLE

IDSA Infectious Diseases Society of America | hivma hiv medicine association | OXFORD

Socioeconomic Factors Explain Racial Disparities in Invasive Community-Associated Methicillin-Resistant *Staphylococcus aureus* Disease Rates

Isaac See,[1] Paul Wesson,[2] Nicole Gualandi,[1] Ghinwa Dumyati,[3] Lee H. Harrison,[4] Lindsey Lesher,[5] Joelle Nadle,[6] Susan Petit,[7] Claire Reisenauer,[8] William Schaffner,[9] Amy Tunali,[10] Yi Mu,[1] and Jennifer Ahern[2]

Table 3. Univariate Rate Ratios for Association Between Neighborhood Socioeconomic Factors and Invasive Community-Associated Methicillin-Resistant *Staphylococcus aureus* Incidence

Variable	Rate Ratio[a]	(95% Confidence Interval)	*P* Value
Low-income households	19.65	(14.78–26.12)	<.0001
High-income households	0.008	(.003–.02)	<.0001
Poverty	16.78	(11.92–23.62)	<.0001
Income inequality index	12.99	(6.54–25.82)	<.0001
Crowding	437.72	(173.16–1106.48)	<.0001
Expensive homes	0.46	(.31–.68)	.0001
Rural areas	0.36	(.25–.52)	<.0001
Low education	47.65	(33.96–66.86)	<.0001
High education	0.11	(.08–.14)	<.0001
Health insurance	0.08	(.05–.11)	<.0001
Medically underserved area	2.40	(2.16–2.68)	<.0001

[a]Socioeconomic status variables were coded as ranging from 0 (0% of the census tract with this characteristic) to 1 (100% of the census tract with this characteristic). As an example to assist in interpreting the rate ratios, the rate ratio of 19.65 for low income means that for each increase of 10% in households in a census tract with low income, we would predict an increase in the methicillin-resistant *Staphylococcus aureus* rate (cases/population) of 1.35-fold (the 10th root of 19.65).

Recommendations for Equity in Pandemic Preparedness

Consider: Health systems are built on structural inequities. What inequities might be embedded? How will you mitigate? What opportunities are there to address inequities?

- Recognize underlying social and structural factors that drive health
  - *Avoid assumptions of biological differences due to race or ethnicity*
- Develop strategies to address upstream and downstream factors
- Effectively communicate risk to minoritized groups
- Recognize hidden inequities
  - *lower rates of AMR among minoritized groups may be due to lack of access to care = higher rates of other conditions and death*

Image from democracyandme.org

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