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COVID-19 Hub

Healthcare Disparities and COVID19: The Story Behind the Headlines

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Learning Objectives

- Understand how COVID 19 has unmasked existing health care disparities
- Discuss how social determinants of health affect health care and health equity
- Describe opportunities to address social determinants of health with your patients

Speakers

- **Johanna Martinez, MD** – GME Director of Diversity and Health Equity, Zucker School of Medicine at Hofstra/Northwell
- **Robert O. Roswell, MD, FACC** - Associate Dean for Diversity and Inclusion, Zucker School of Medicine at Hofstra/Northwell
- **Herman A. Taylor, Jr., MD, FACC** – Director, Cardiovascular Research Institute, Morehouse School of Medicine

Moderator

Clyde W. Yancy, MD, MACC - Vice Dean for Diversity and Inclusion, Northwestern University School of Medicine

The color of coronavirus:
COVID-19 deaths by race and ethnicity in the U.S.

Updated May 27, 2020

- Race/Ethnicity data are known in 89% of COVID19 deaths
- Only 40 states are releasing public health data

"The latest overall COVID-19 mortality rate for Black Americans is 2.4 times as high as the rate for Whites and 2.2 times as high as the rate for Asians and Latinos."

Per 100,000 population

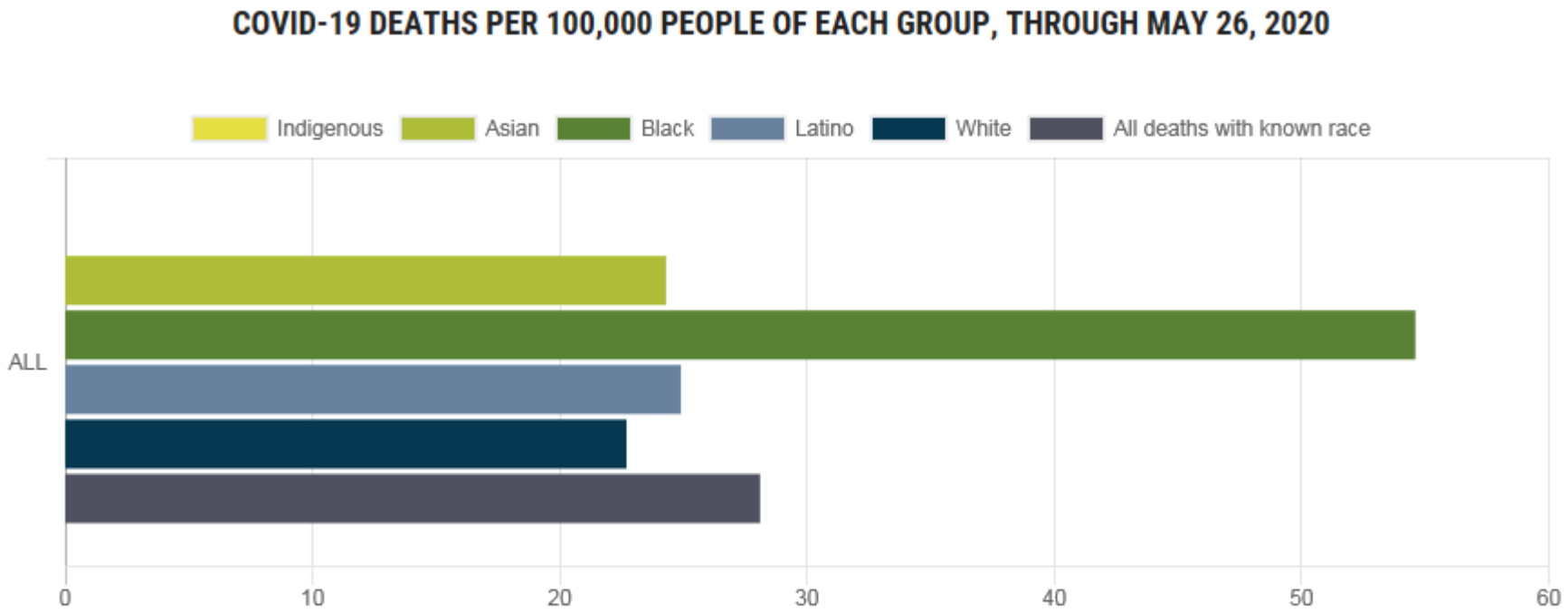
- **1 in 1,850 Black Americans has died** (or 54.6 deaths per 100,000)
- **1 in 4,000 Latino Americans has died** (or 24.9 deaths per 100,000)
- **1 in 4,200 Asian Americans has died** (or 24.3 deaths per 100,000)
- **1 in 4,400 White Americans has died** (or 22.7 deaths per 100,000)

- ***"If they had died of COVID-19 at the same rate as White Americans, about 13,000 Black Americans, 1,300 Latino Americans and 300 Asian Americans would still be alive."***

Data from: American Public Media Research Lab; accessed 06/02/2020

The color of coronavirus: COVID-19 deaths by race and ethnicity in the U.S

Data from: American Public Media Research Lab; accessed 06/02/2020



** Includes data from Washington, D.C., and the 40 states of Alabama, Alaska, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, New Hampshire, New Jersey, New Mexico, New York, North Carolina, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, Tennessee, Texas, Vermont, Virginia, Washington and Wisconsin. States employ varying collection methods regarding ethnicity data. Denominator is built from data aggregated from each state, aligned with their method. Comparable rates could not be calculated for Indigenous people, due to so few states reporting data.*

Defining a Crisis Point:

Viewpoint

April 15, 2020

COVID-19 and African Americans

Clyde W. Yancy, MD, MSc[1]

» Author Affiliations | Article Information

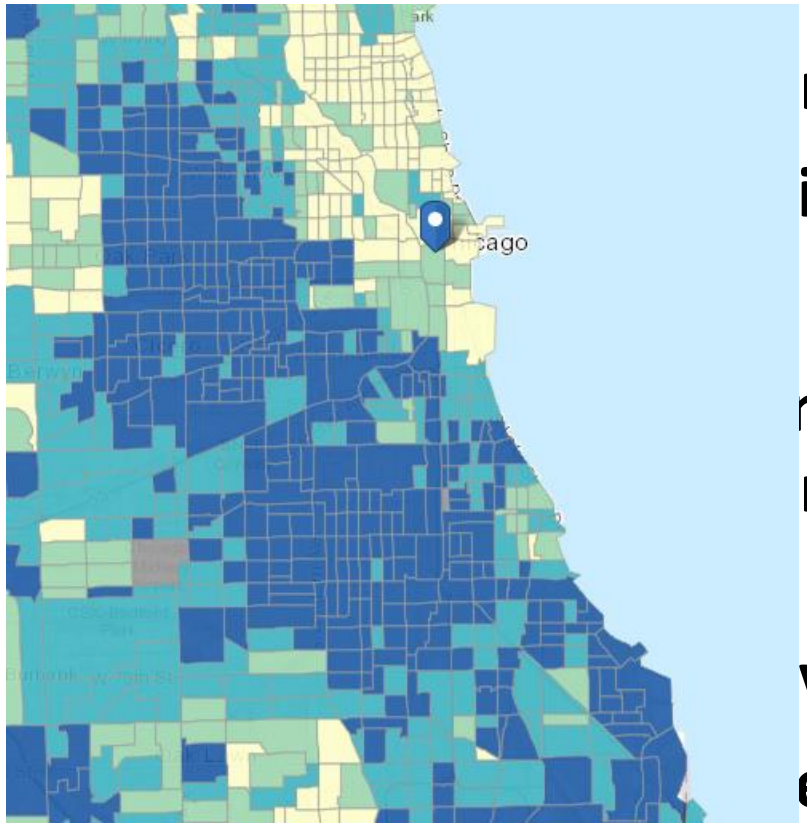
JAMA. Published online April 15, 2020. doi:10.1001/jama.2020.6548

The US has needed a trigger to fully address health care disparities; COVID-19 may be that bellwether event.

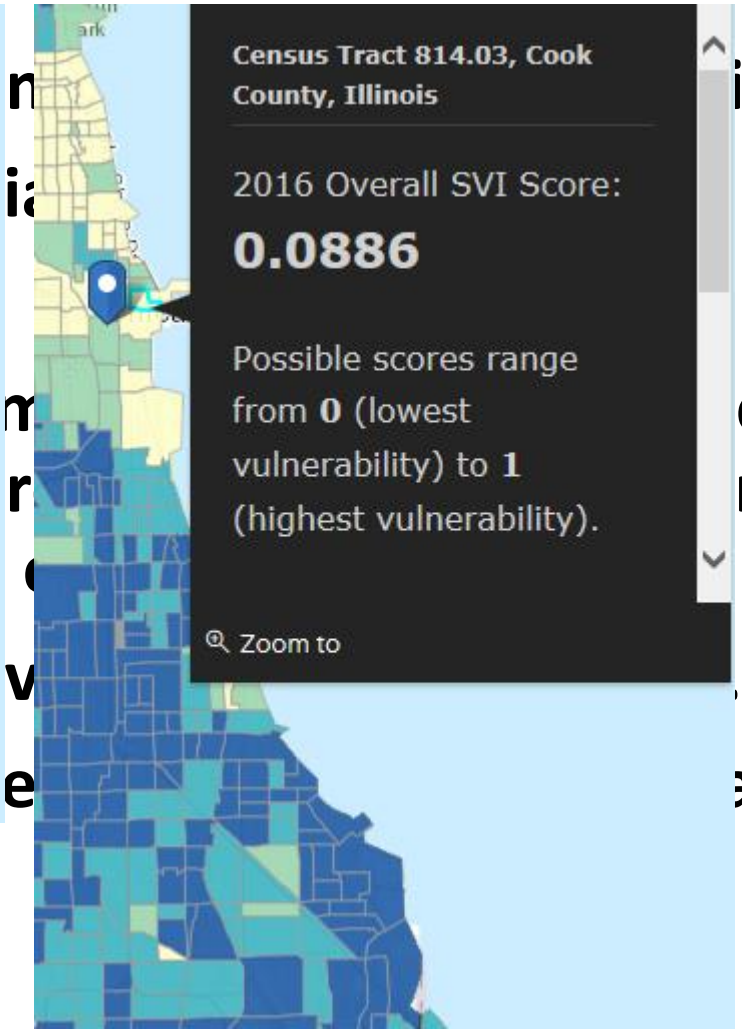
What Happens Next?

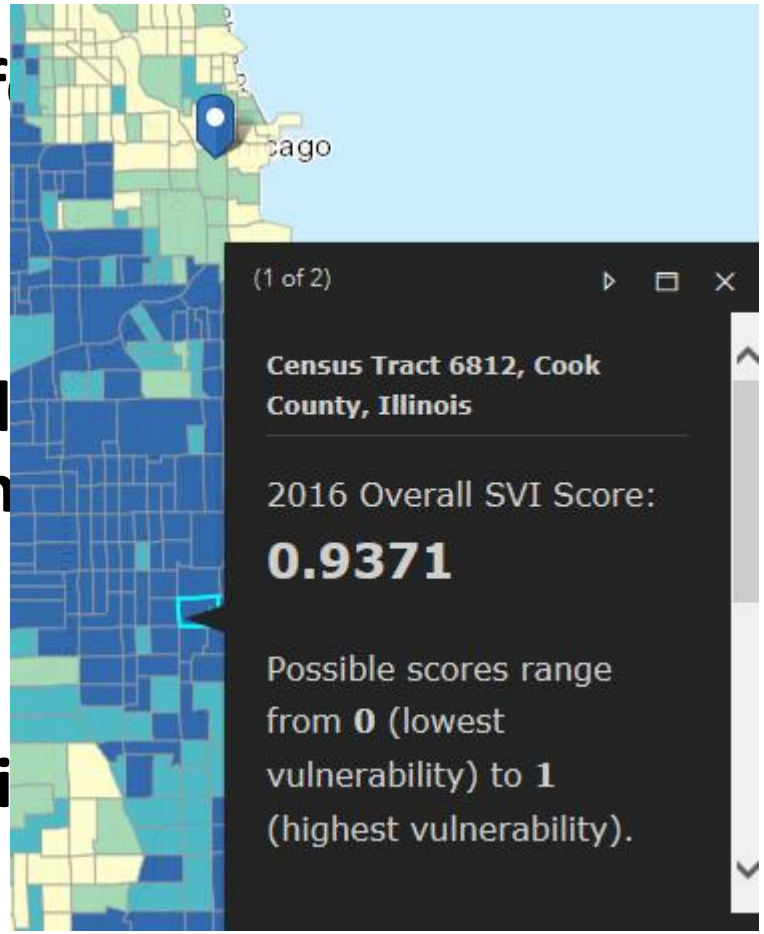
How do we level set at-risk communities?
Is race or ethnicity the issue?

Appropriate Public Health Initiatives; Ubiquitous Testing in High Risk Communities-



vulnerability).





COVID: Investing in black lives and livelihoods

The Economic Portrait: SUMMARY

- **"The COVID-19 pandemic is already a generation-defining crisis. Because it affects all social systems, it heightens preexisting structural challenges that black Americans face. But a trial can also be an opportunity. Our society can consider how we can respond to the COVID-19 crisis and fallout to fortify black communities and help them do more than simply recover. We can use the urgency of the pandemic to build more equitable systems that increase the long-term resilience of black Americans, communities, and institutions. As we progress toward this goal, the US economy could benefit to the tune of $1.5 trillion."[14]**

McKinsey & Co. April, 2020

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Healthcare Disparities and COVID19: The Story Behind the Headlines

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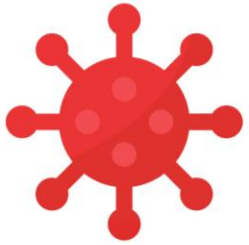
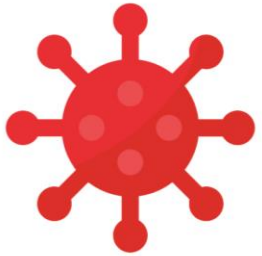
COVID-19 & Health Literacy



Overview

COVID-19(Coronavirus) can make your oxygen levels very low.



Descripción general

El COVID-19 (coronavirus) puede bajar mucho sus niveles de oxígeno.

Treatment

You must keep your oxygen mask on.

Tratamiento

Debe dejarse puesta la máscara de oxígeno.

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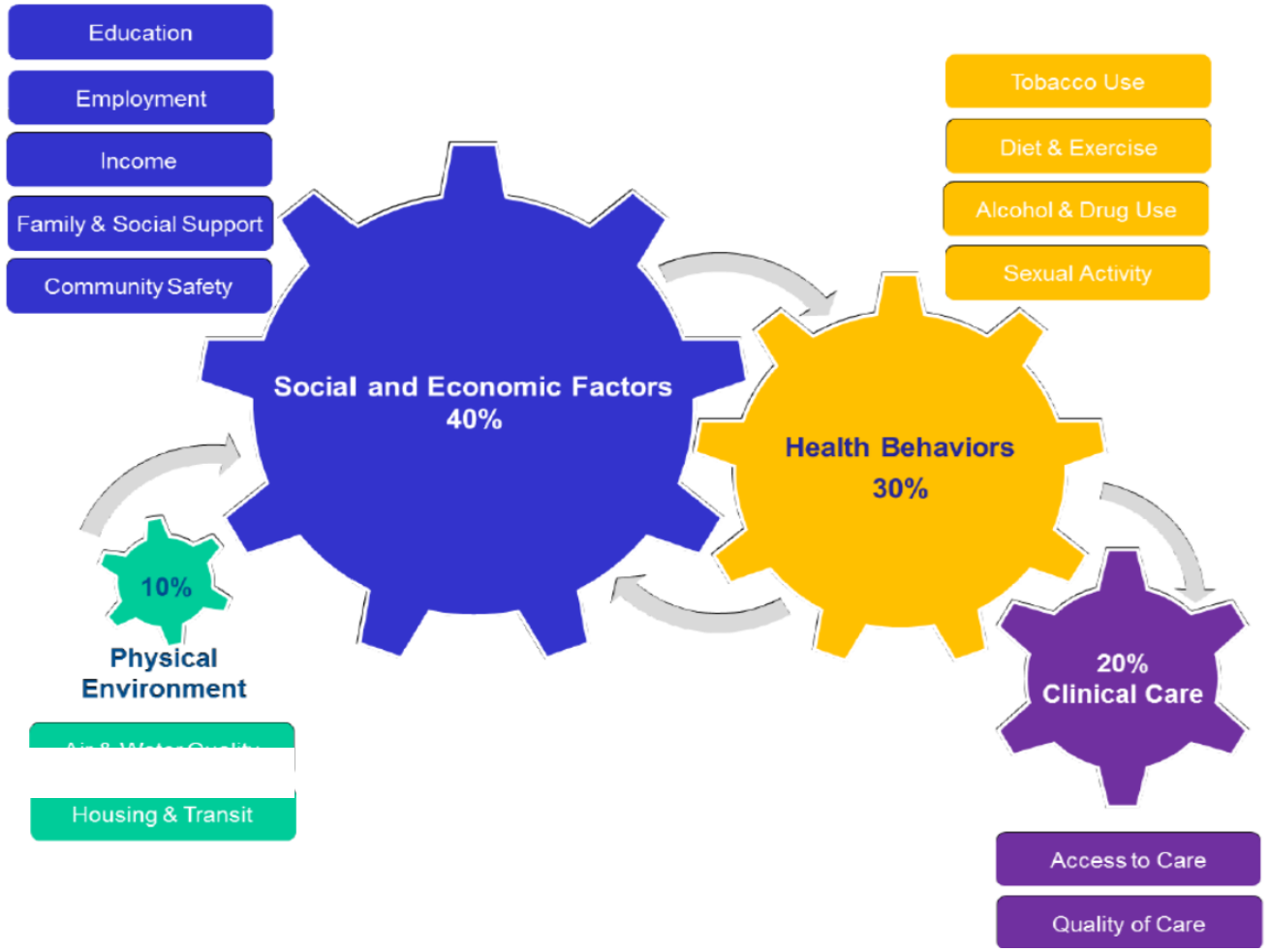
Downstream → Upstream Thinking

Total Health: Do We Address All Factors for Health?



Source: Kaiser Permanente, County Health Ranking Model

5 Broad Areas of Social Determinants of Health

What can I do as a doctor?

- As physicians, you'll pull many drowning people from the river.
- SDH play an important role in determining total health.
- "Upstream" factors are often relevant to individual patient care and outcomes "downstream".
- Physicians & other health professionals can and do advocate for structural changes to improve social and health equity, ACC Political Action Committee.

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Race, Risk and the Roots of Vulnerability

in the COVID-19 Pandemic

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Herman Taylor, Jr., MD, MPH, FAHA, FACC
Endowed Professor and Institute Director
Morehouse School of Medicine
Adjunct Professor, Harvard Chan School of Public Health
Director, Morehouse-Emory Cardiovascular Center for Health Equity

COVID-19 Outcome Disparities – The Unsurprising Tragedy

"…One thing we must of course expect to find, and that is a much higher death rate at present among Negroes than among whites … They have in the past lived under vastly different conditions and they still live under different conditions…"

W.E.B. Dubois, 1899
The Philadelphia Negro, Chapter X, page 148

"…independent of traditional risk factors, African American individuals …have a 2-3 fold increase in ..risk of developing clinically manifest CVD…

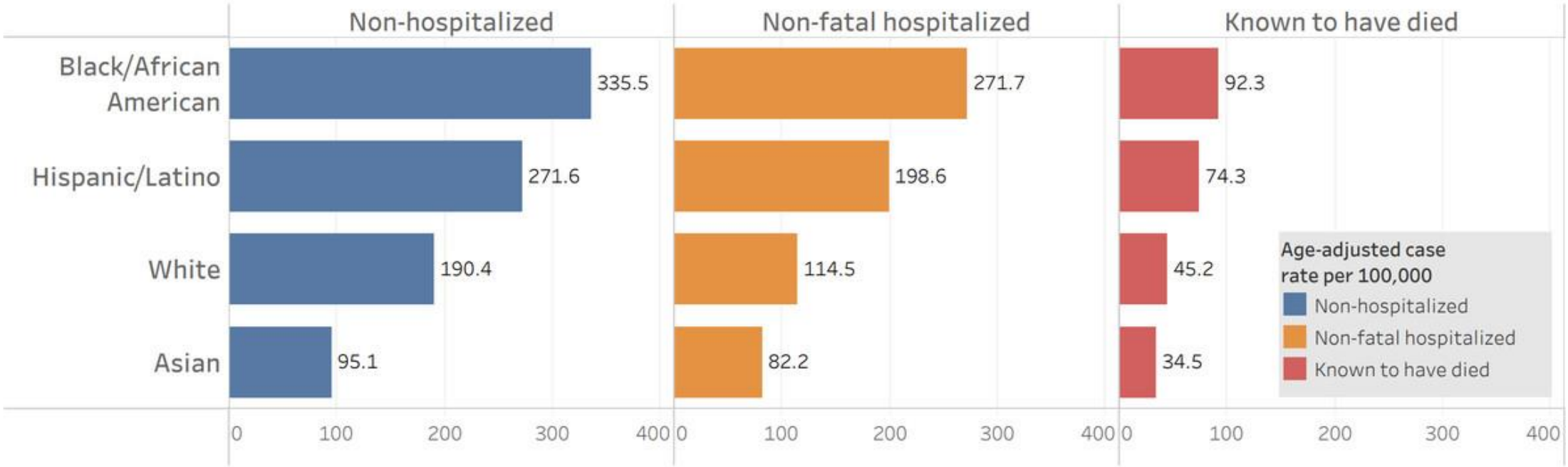
"..even **after adjusting for relevant** potentially confounding **variables…"**

"Black Americans are twice as likely to experience a stroke as non-Hispanic whites ..."

.... the relative risk of admission to a high-mortality hospital **after adjusting for** [relevant covariates]... in the logistic regression models an indicator **variable** for **black race**, was statistically significant...

"…even **after controlling for** TNM stage, ...adjusted for both disease- and socioeconomic-related factors, **black race** [equaled poorer outcome…]"

Age-adjusted rates of lab confirmed COVID-19 non hospitalized cases, estimated non-fatal hospitalized cases, and patients known to have died 100,000 by race/ethnicity group as of April 16,2020



COVID-19 Patients by Race-Hospitalized

Table 2. Clinical Characteristics of 1382 Covid-19–Positive Patients Hospitalized between March 1 and April 11, 2020.*

Characteristic	White Non-Hispanic (N=319)	Black Non-Hispanic (N=1063)
Age — yr	69.2±16.6	60.5±14.8
Female sex — no. (%)	127 (39.8)	578 (54.4)
Charlson Comorbidity Index score	1.0±1.8	1.3±2.2
Insurance — no. (%)		
Commercial		
Medicare		
Medicaid		
Self-pay or other		
Residence in low-income area — no. (%)		
Vital signs at admission		
Blood pressure — mm Hg		
Systolic		
Diastolic		
Respiratory rate ≥24 breaths/min — no. (%)	235 (73.7)	803 (75.5)
Temperature ≥38°C — no. (%)	176 (55.2)	741 (69.7)
Oxygen saturation <94% — no. (%)	278 (87.1)	895 (84.2)
White-cell count <4000/μl — no. (%)	81 (25.4)	198 (18.6)
Absolute lymphocyte count <1000/μl — no./total no. (%)	191/310 (61.6)	520/1040 (50.0)
Platelet count <150,000/μl — no. (%)	116 (36.4)	277 (26.1)
Sodium <130 mmol/liter — no. (%)	36 (11.3)	85 (8.0)
Creatinine >1.5 mg/dl — no. (%)	85 (26.6)	422 (39.7)
Total bilirubin ≥1.2 mg/dl — no. (%)	43 (13.5)	126 (11.9)
Aspartate aminotransferase >40 U/liter — no. (%)	176 (55.2)	659 (62.0)
	(38.6)	393 (37.0)
	3/266 (16.2)	139/848 (16.4)
	0/256 (23.4)	210/828 (25.4)
	9/232 (38.4)	177/794 (22.3)
	3/244 (29.9)	311/833 (37.3)
	1/247 (85.4)	801/848 (94.5)
	3/185 (74.6)	487/609 (80.0)
	(36.4)	407 (38.3)
Acute renal failure	34 (10.7)	163 (15.3)
Acute hepatic injury	2 (0.6)	2 (0.2)
Cardiomyopathy or congestive heart failure	0	2 (0.2)
Hypoxic respiratory failure	79 (24.8)	270 (25.4)

Among Blacks:
Younger; Female predominance; 2x Medicaid; Low income area(high SVI); high obesity, diabetes, hypertension; acute and CKD; fever, SOB, cough, abdominal sxs

Ochsner Health study on Race and COVID-19

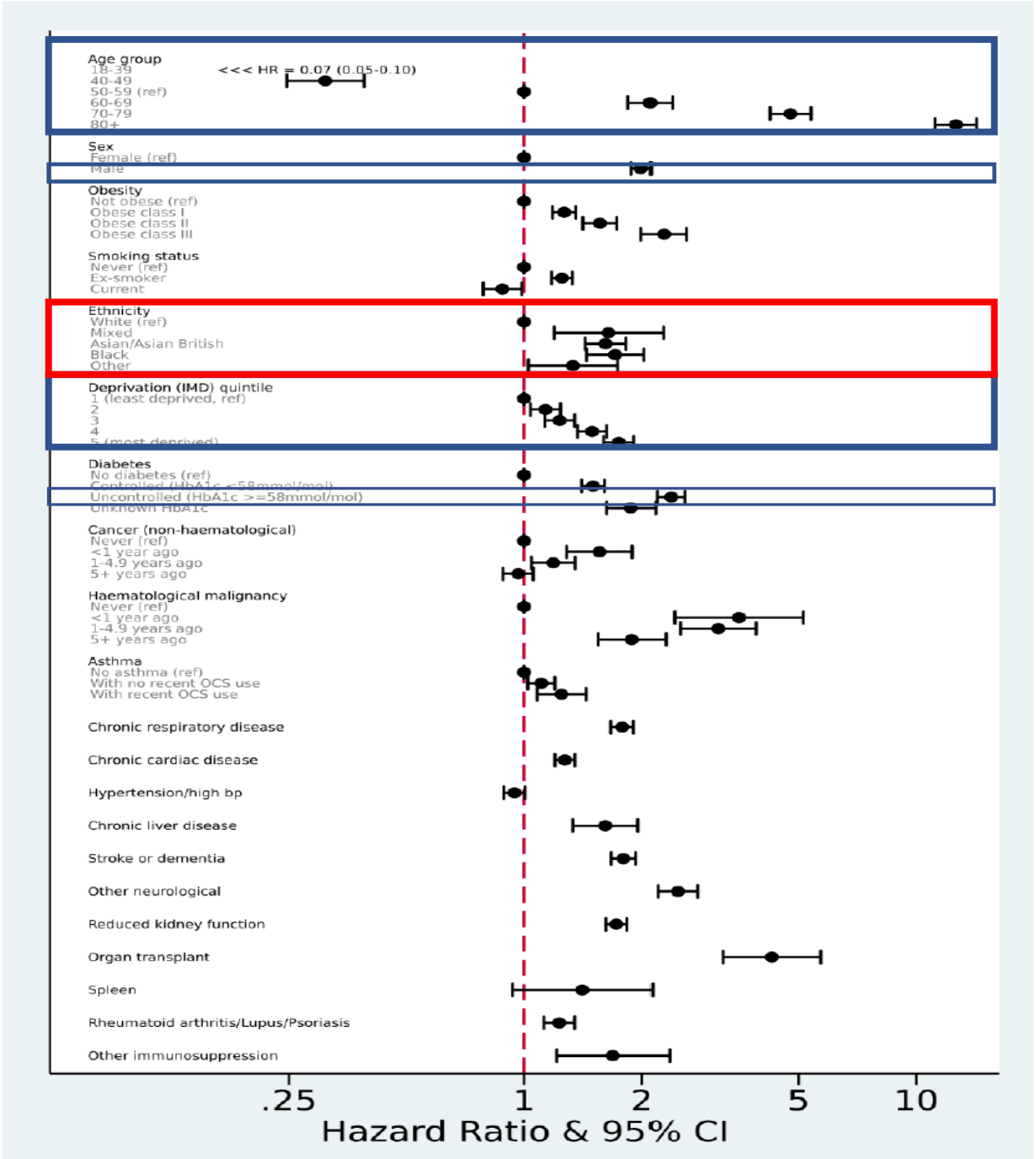
- Though Blacks represent 31% of the patients routinely cared for by Ochsner Health, they were76.9% of Covid-19–positive patients(through [date]) hospitalized
- Higher prevalence of obesity, diabetes, hypertension, and chronic kidney disease at baseline
- Black race, increasing age, a higher score on the Charlson Comorbidity Index, public insurance (Medicare or Medicaid), residence in a low-income area, and obesity were associated with increased odds of hospital admission.
- Blacks were overrepresented among all patients who died in the hospital (70.6%).

- *However, black race was **not** associated with higher in-hospital mortality than white race, after adjustment for differences in sociodemographic and clinical characteristics on admission*

Price-Haywood et al, NEJM, May 27, 2020

National Health Service (England) Study

- Over 17 Million patient records
- 5683 deaths attributed to COVID-19



medRxiv preprint,May 7,2020

National Health Service Study

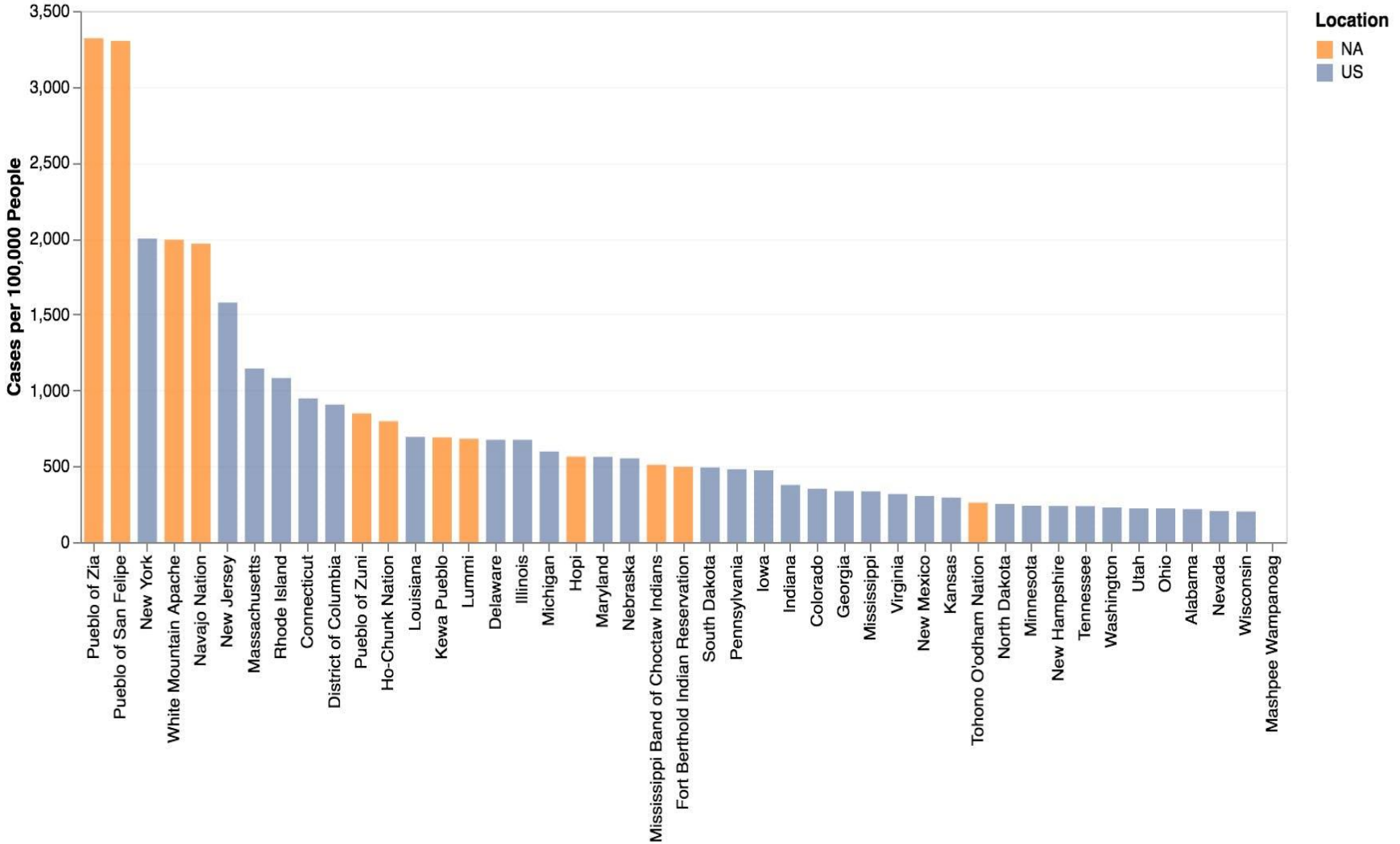
- *"…[others] have reasonably speculated that this[disparity] might be due to higher prevalence of problems such as CVD…. Our findings show that this is only a small part of the excess risk [of death in hospital]…."*

medRxiv preprint,May 7,2020

Ethnicity*	
White	1.00 (ref)
Mixed	1.83 (1.33-2.51)
Asian or Asian British	1.95 (1.73-2.18)
Black	2.17 (1.84-2.57)
Other	1.34 (1.03-1.74)

Case Rate by Select Tribal Nations and States

State rate data obtained from John Hopkins data for May 11, 2020. This figure displays tribal nations and states with a total of 200 reported cases or more per 100,000 people.



The question of biological bases for COVID-19 disparities

- Inflammatory response differences by race
- Sarcoidosis prevalence
- Sickle Cell Disease/trait
- ACE-2 receptor differences

- **Speculative**
- Emerging evidence
- Genetic heterogeneity of groups suffering disparate (worse) outcomes (Asian British, African American, Native American, etc.)

Concluding Thoughts

- All studies to date show race-related disparities in rates of infection and death
- Near equal in-hospital case-fatality rates
- Structural realities can deprive access as well as compel behaviors that put health at risk
- **Possible “super-spreader” events are occurring nationwide**
- **Focus on detection and reducing infections**
- Guideline-based care for co-morbidities along with up to date COVID-19 care
- Successful discharge not the end of the story (disparities can re-emerge in home and service-oriented work settings)

War bonds Parade September 18, 1918

"Two days after that parade, every hospital bed in Philadelphia was filled and it was a complete disaster and it was a disaster because the authorities ignored the advice to cancel this parade."

Demonstration to Save Black Lives

May 29, 2020

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Rethinking your social history: Tips to address health disparities at the bedside

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Associate Professor of Medicine
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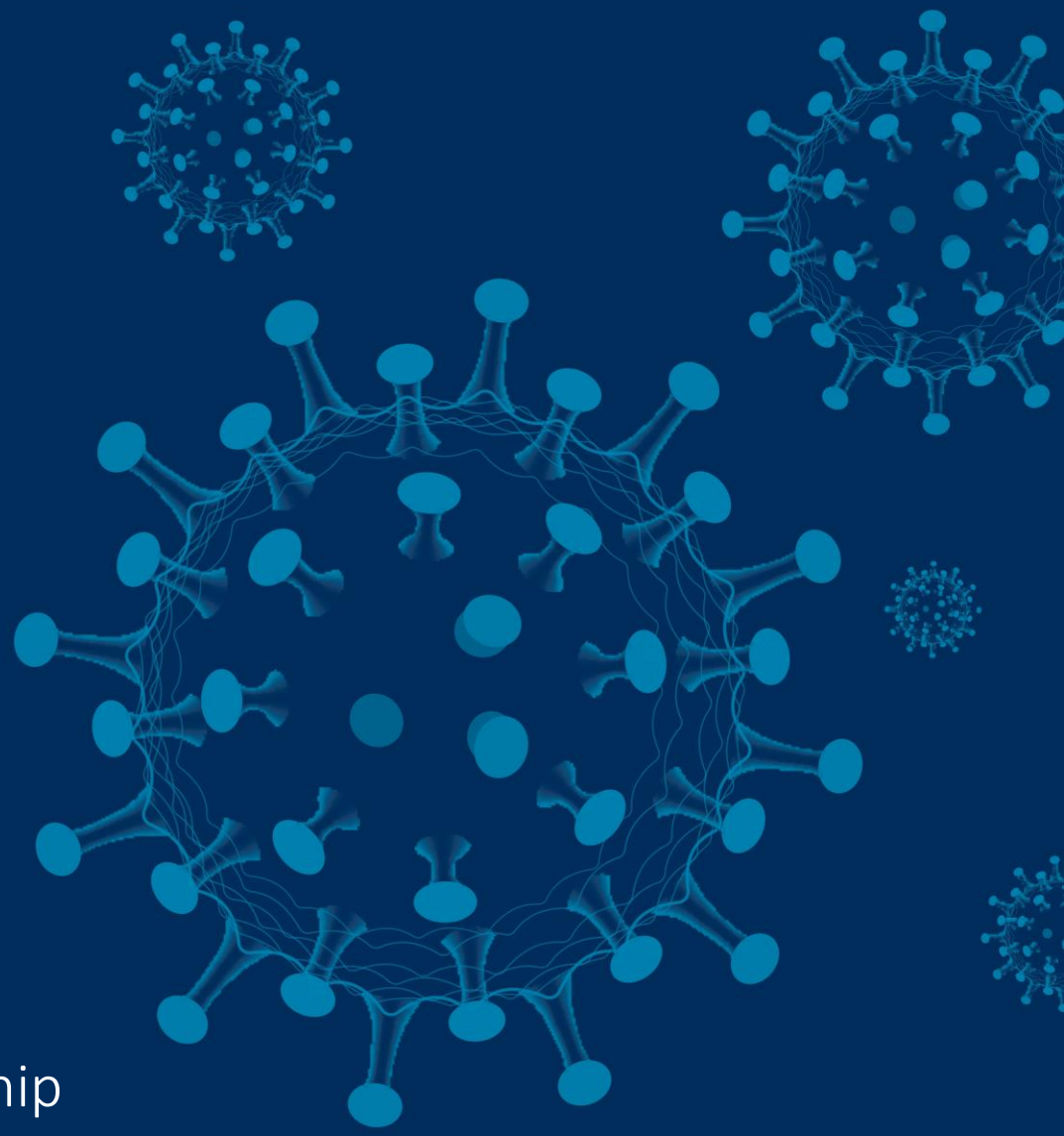
Director, Hofstra-Northwell Medical Legal Partnership



Case: Mr Brown (N=1)

58 yo, previously healthy man admitted with hypoxemic respiratory failure and chest pain. On admission he was an 100% NRB and was found to have multi-end organ damage. His presenting labs included:

Hyponatemia 115

Anemia 7.5

Troponin 904

CRP 185

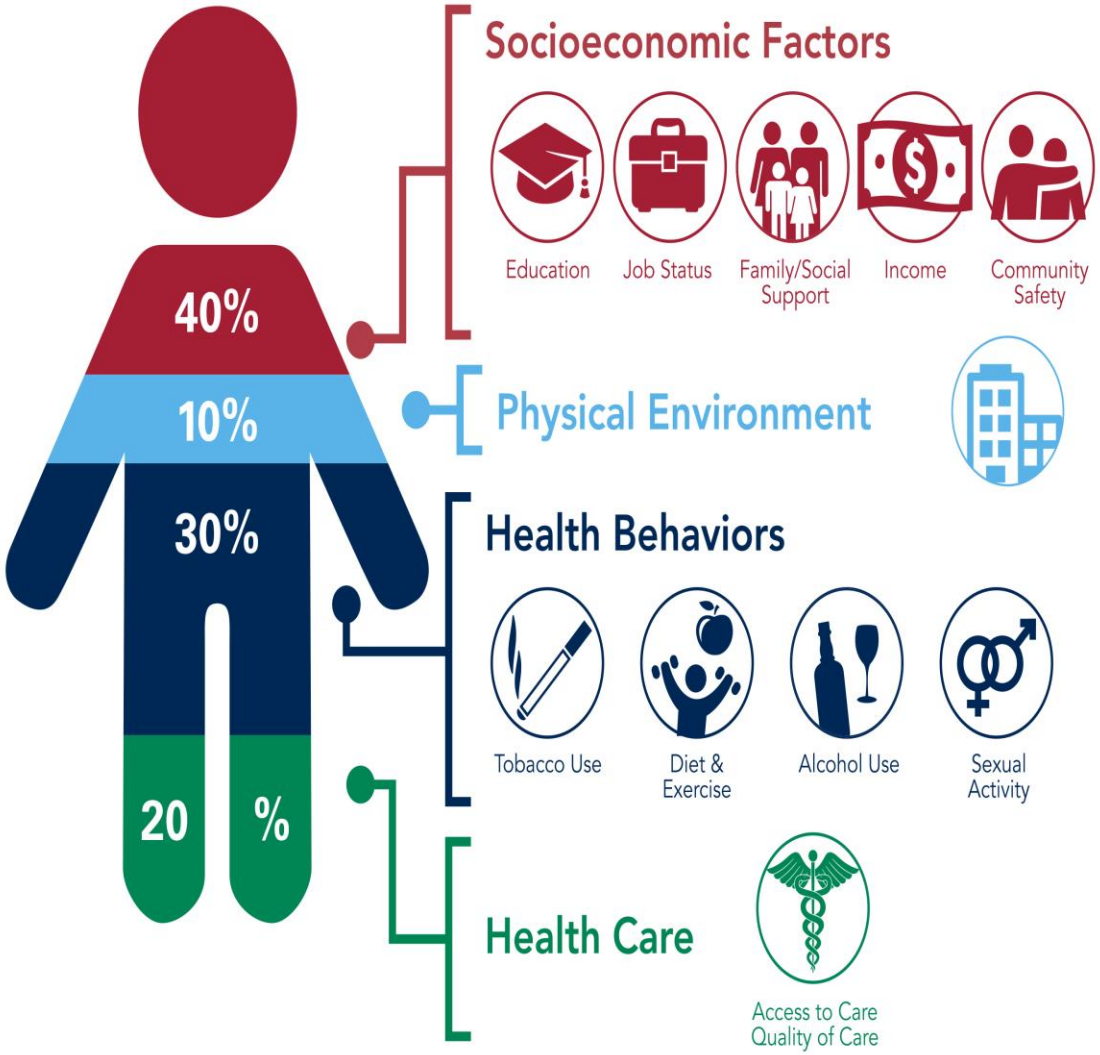
Hospital Course: Despite receiving hydroxychloroquine, steroids and hours of proning, oxygenation worsened. Offered Remdesivir.

Developed DVT required anticoagulation.

On discharge eager to go back to work. Unable to home quarantine. Possibly losing his job and health insurance.

IMPACT OF SOCIAL DETERMINANTS OF HEALTH

Social determinants of health have tremendous affect on an individual's health regardless of age, race, or ethnicity.

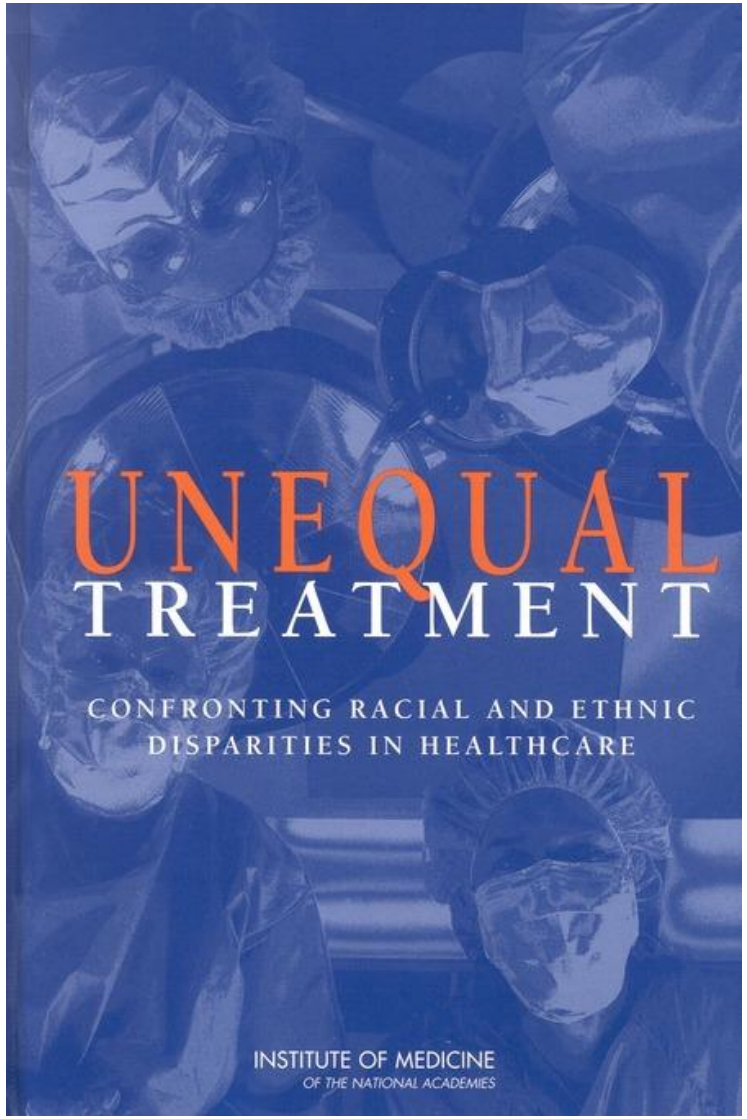


SDOH Impact

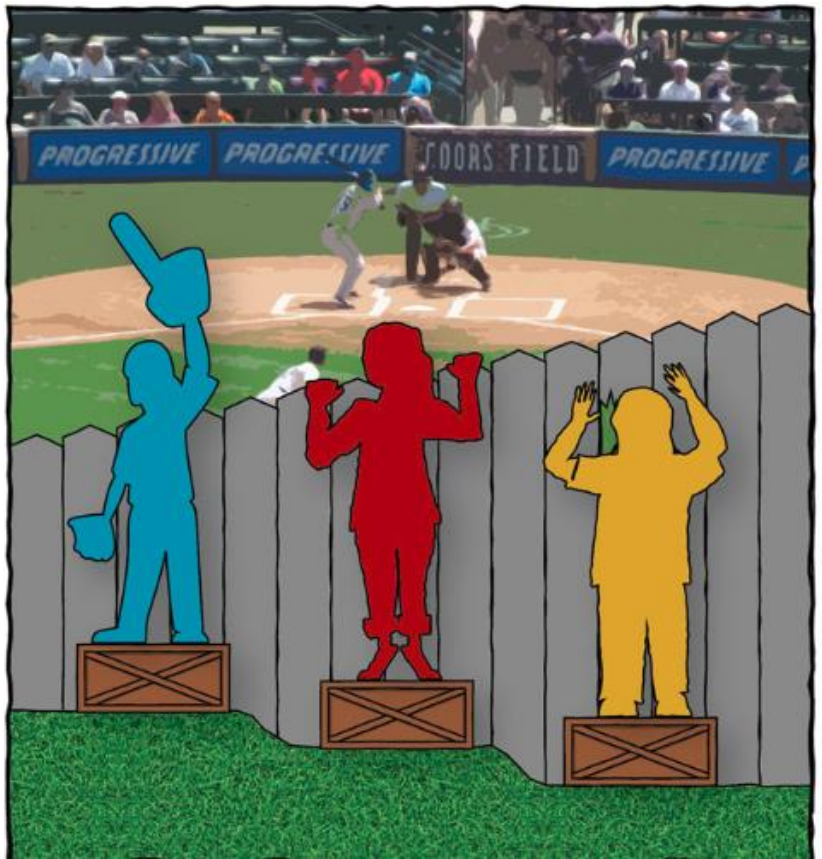
- **20 percent** of a person's health and well-being is related to **access to care** and **quality of services**
- The **physical environment**, **social determinants** and **behavioral factors** drive **80 percent** of health outcomes

Source: Institute for Clinical Systems Improvement; Going Beyond Clinical Walls: Solving Complex Problems, 2014 Graphic designed by ProMedica.

Contributors to Health Disparities



- **Genetics**
- **Individual Factors**
- **Provider factors**
- **Health Care System Factors**
- **Laws/Regulations**
- **Social & Environmental Factors, both current and historical**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Tips to address health disparities at the bedside

- Routinely ask about social needs and cultural preferences
- Check your assumptions, judgements and bias
- Don’t forgo using an interpreter
- Incorporate a patient’s social needs into your treatment plan
- Finish with teachback
- Leverage your power, you are in a position to advocate for your patient

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